



# Eduardo Ramirez

## CMIC National President

2018 Annual Meeting  
July 18 to 22

Montreal, Canada



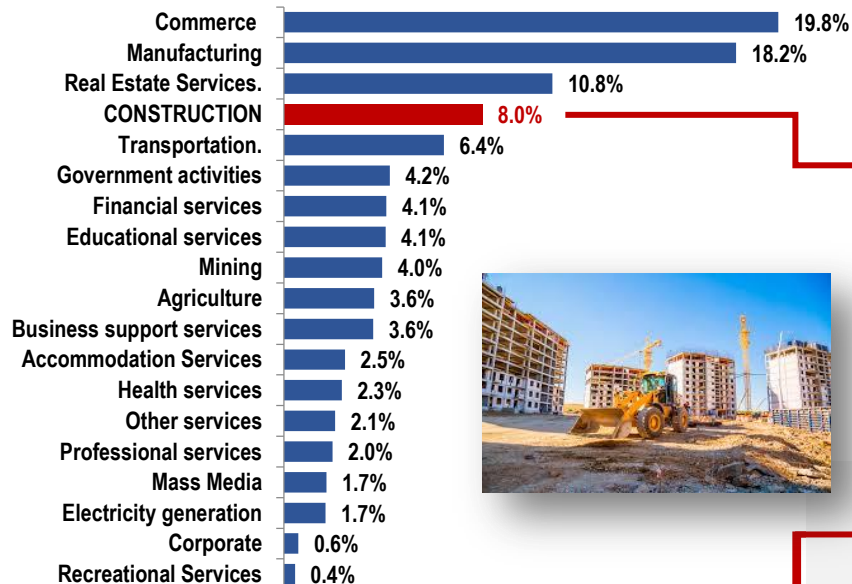
**Cámara Mexicana de la  
Industria de la Construcción**

## 2. Overview

**Industry Perspectives, Political Update and Main Priorities**

## 2.1.1 Representativeness of the Construction Sector in 2017

### Share % of the GDP <sup>1/</sup>

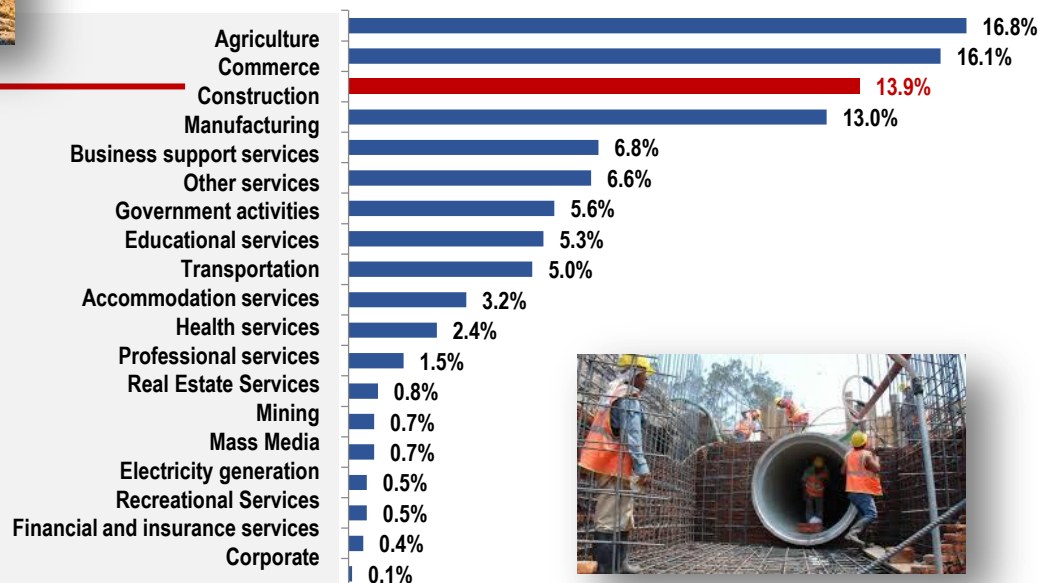


### Production:

- The fourth economic sector that generates wealth measured as a percentage of the total GDP of the national economy (2017).
- In 2017, the annual turnover of the construction sector reached US\$ 86.4 billions\*.

\* Average exchange rate applied in 2017: Ps \$ 18.92 per US \$ 1

### % Share of Total Employment <sup>2/</sup>



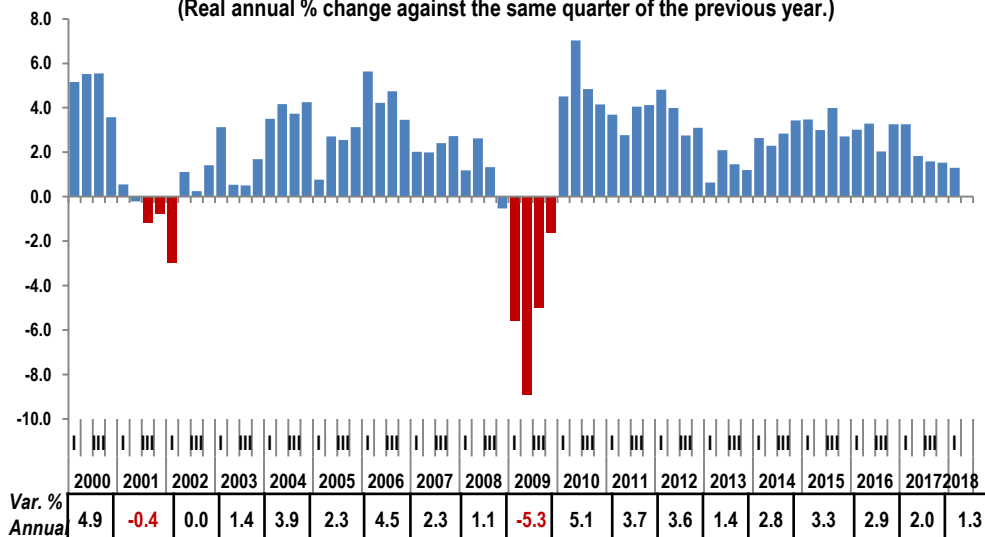
### Employment:

- It is the third economic activity with the greatest capacity for generating employment: of six million direct jobs.
- For every 4 direct jobs, 2 indirect jobs are generated in related sectors: 3 million indirect, totaling 9 million (Direct + Indirect).

## 2.1.1 Status of Productive Activity

### National GDP

(Real annual % change against the same quarter of the previous year.)



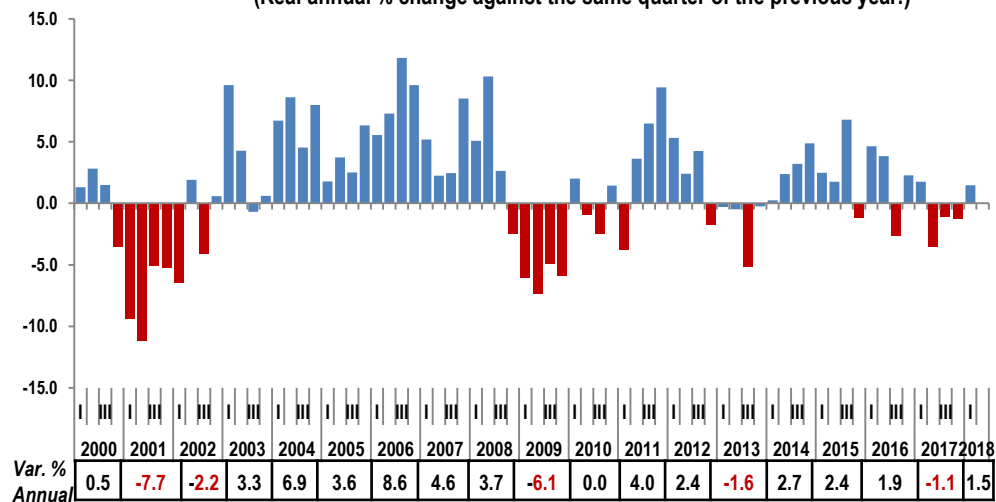
### Macroeconomic Scenario

Variable	2018 e	2019 e
Economic Growth 1/ (real annual %)	2.0% - 3.0%	2.5% - 3.5%
Nominal GDP (Trillions of dollars)	US\$ 1.152	US\$ 1.314
Construction Growth (real annual %)	1.0% to 2.0%	2.5 to 3.0%
Construction Nominal GDP (Billions of dollars)	US\$ 85.673	US\$ 97.400
Job positions (Millions of people)	6.1	6.2
Inflation ( Annual %)	4.5%	4.0%
Exchange rate (MX\$ per1US\$, Annual average)	Ps\$ 20.0	Ps\$ 19.5

1/ Secretary of Finance and Public Credit, the document "Pre-Criteria 2019"

### CONSTRUCTION GDP

(Real annual % change against the same quarter of the previous year.)



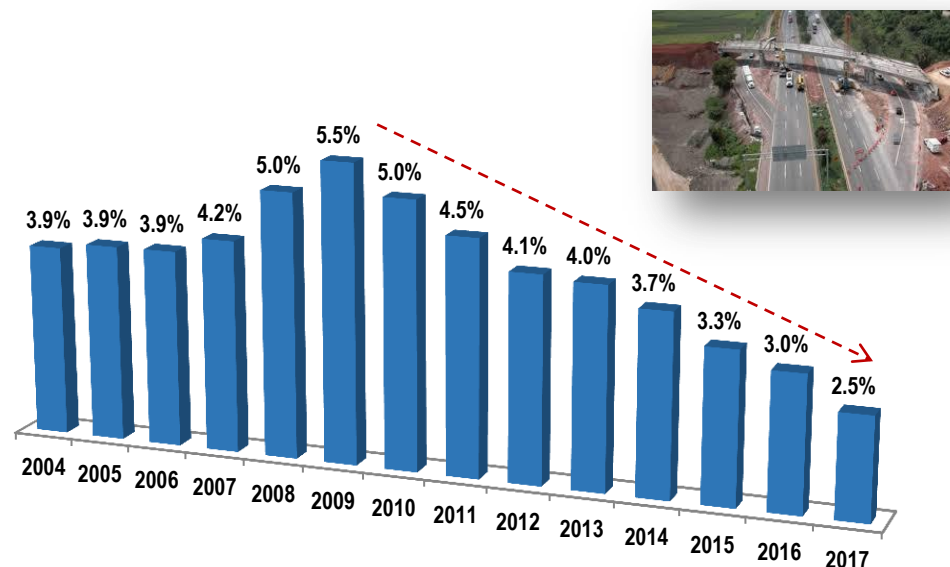
## 2.1.1 Public investment as a proportion of GDP

The reduction of fiscal resources for the construction and maintenance of public works is the most relevant cause of the decline in the quality of infrastructure in Mexico.

Public Investment as a percentage of GDP: 2004 -2017

Year	GDP (Current US\$ millions ) (A)	Public Investment (Current US\$ millions ) (B)	Public Investment/GDP (B / A)
2004	782,235	30,124	3.9%
2005	877,635	34,607	3.9%
2006	975,316	38,523	3.9%
2007	1,052,687	44,044	4.2%
2008	1,107,518	55,087	5.0%
2009	900,119	49,262	5.5%
2010	1,057,907	53,033	5.0%
2011	1,178,867	53,482	4.5%
2012	1,201,968	49,223	4.1%
2013	1,274,362	51,344	4.0%
2014	1,312,906	49,054	3.7%
2015	1,167,820	38,354	3.3%
2016	1,075,275	32,671	3.0%
2017	1,133,319	28,838	2.5%

### Public Investment as a % of GDP



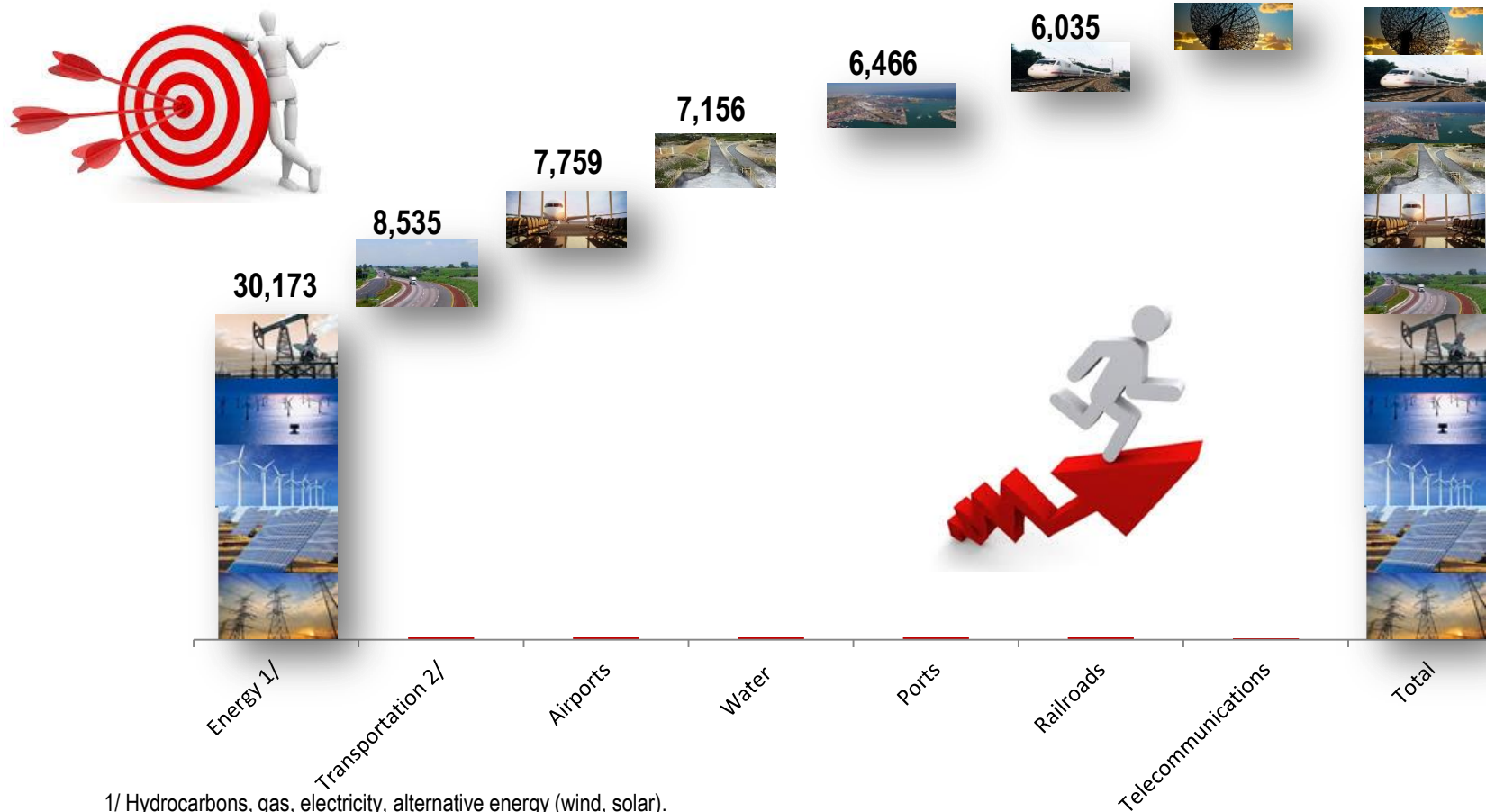
According to the World Bank, the minimum percentage of public investment that a country must invest for the development of infrastructure is 5% in relation to GDP.

## 2.1.1 Public Investment Needs 2018-2030.

5% of National GDP destined for Infrastructure.

Annual average requirements in public investment in infrastructure: 2018-2030 \*\*

(US\$ Millions)



1/ Hydrocarbons, gas, electricity, alternative energy (wind, solar).

2/ Highways, Roads, Rural roads, Urban roads and their maintenance..

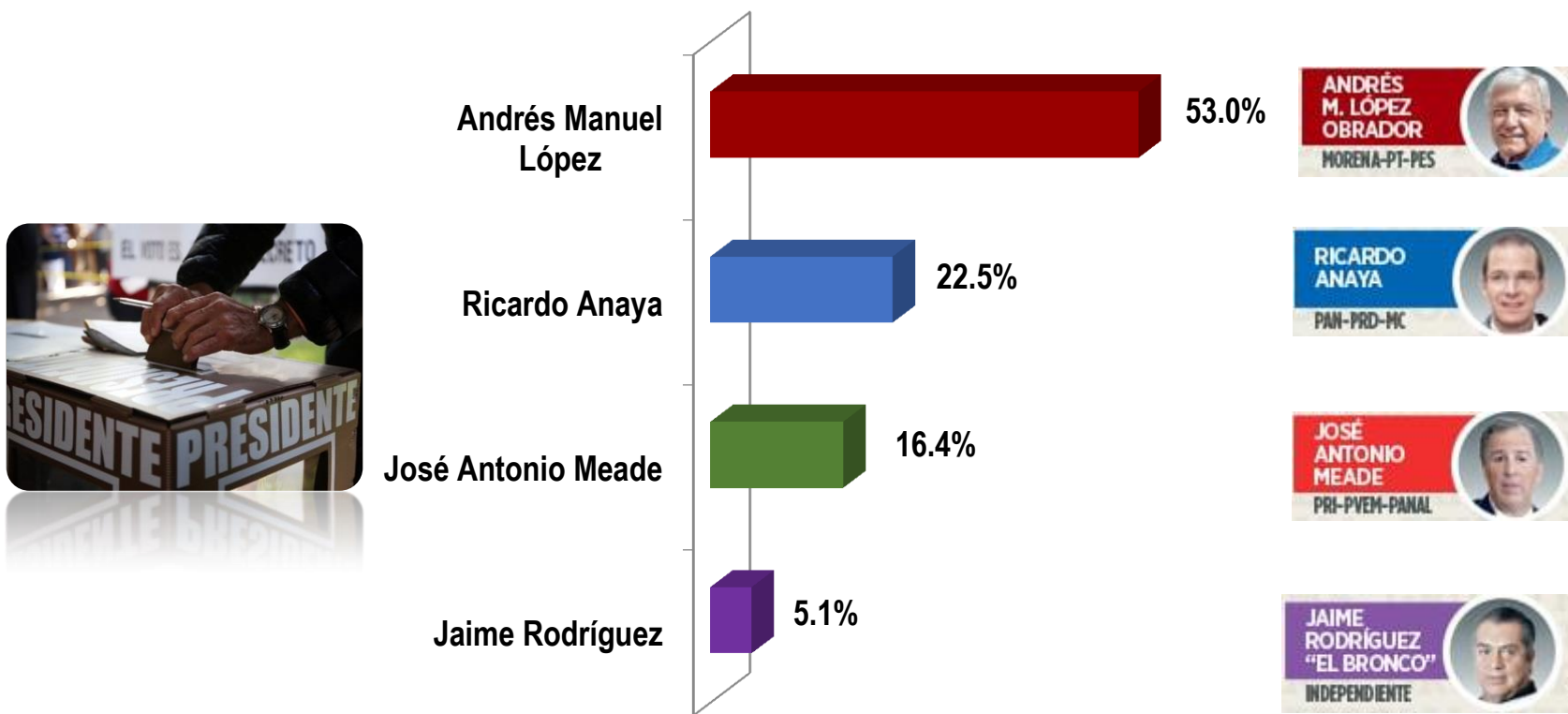
\*\* With an initial annual average growth of 2.5% and inflation of 3% in the period 2018-2030.  
Applying an average exchange rate in the period (2018-2030) of Ps \$ 23 per dollar.



## 2.1.2 Political Climate

### Electoral Results 2018: President of the Republic

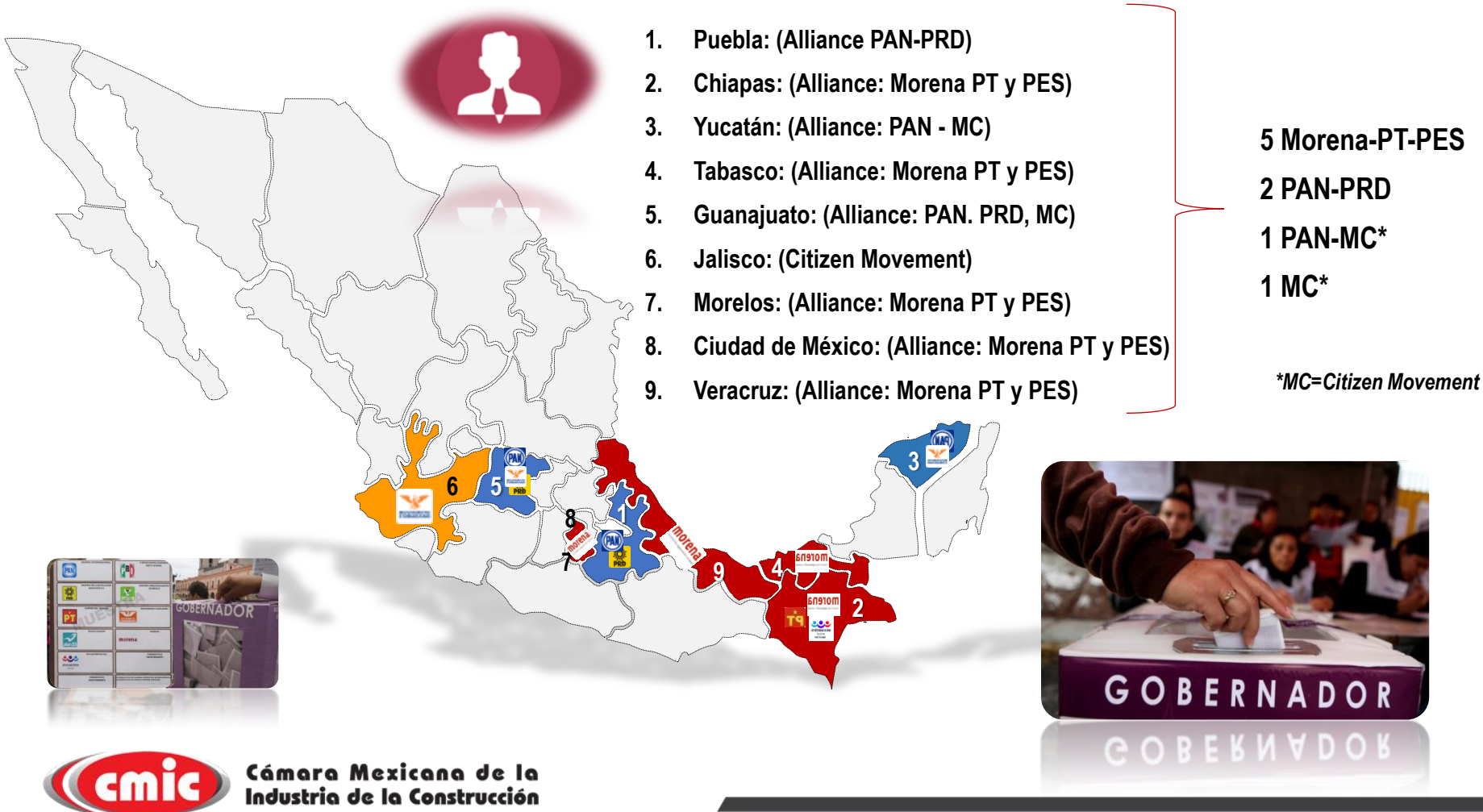
According to the results of the vote held on July 1 to elect the President of the Republic, the results were as follows:



## 2.1.2 Political Climate

### Electoral Results 2018: State Governments










According to the results of the vote held on July 1 to elect 9 governors, the results were as follows:





## 2.1.2 Political Climate

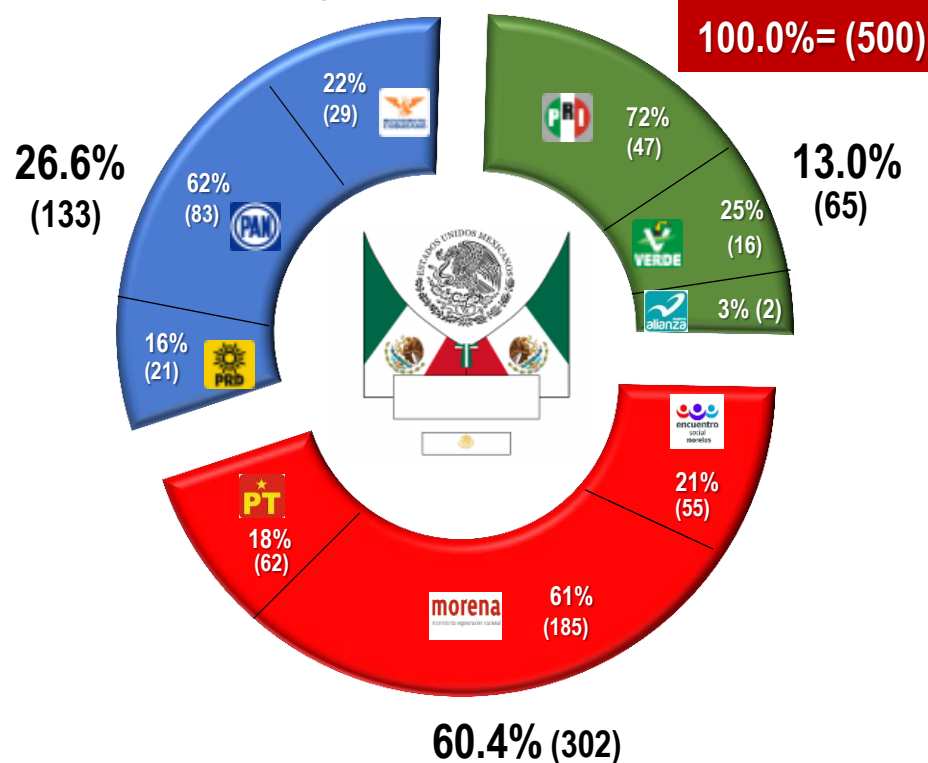
### Composition of the LXIV Legislature of the Chamber of Representatives

Party	Number of Representatives	Percentage (%)
 National Regeneration Movement	185	37.0%
 National Action Party	83	16.6%
 Labor Party	62	12.4%
 Social Encounter	55	11.0%
 Institutional Revolutionary Party	47	9.4%
 Citizen Movement	29	5.8%
 Democratic Revolutionary Party	21	4.2%
 Green Ecologist Party	16	3.2%
 New Alliance Party	2	0.4%
<b>TOTAL</b>	<b>500</b>	<b>100.0%</b>

To make any constitutional changes an absolute majority is required, meaning two thirds of the House of Representatives votes (333). For approval or other items a simple majority is necessary: 50% plus 1 of the representatives present at the session (251).












### Electoral Results 2018: Representatives (By Political Coalitions)



## 2.1.2 Political Climate

### Composition of the LXIV Legislature of the Chamber of Senators

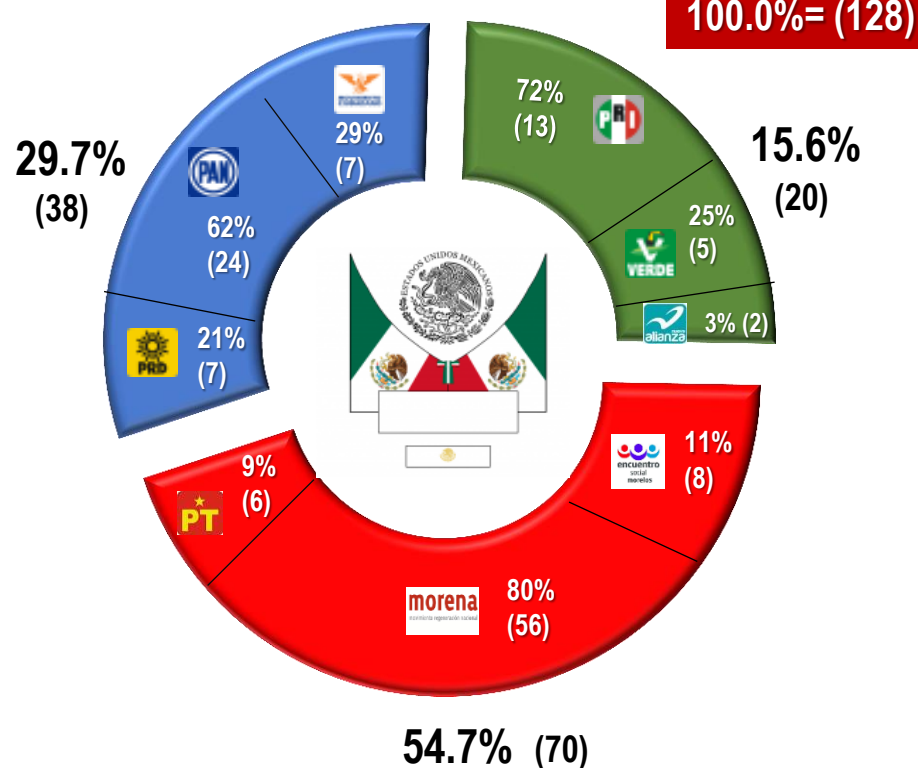
Party	Number of Representatives	Percentage (%)
 National Regeneration Movement	56	43.8%
 National Action Party	24	18.8%
 Institutional Revolutionary Party	13	10.2%
 Social Encounter	8	6.3%
 Democratic Revolutionary Party	7	5.5%
 Citizen Movement	7	5.5%
 Labor Party	6	4.7%
 Green Ecologist Party	5	3.9%
 New Alliance Party	2	1.6%
<b>TOTAL</b>	<b>128</b>	<b>100.0%</b>

To make any constitutional changes a majority is required, meaning two thirds of the Senate votes (86 senators).

For approval or other items a simple majority is necessary: 50% plus 1 of the representatives present at the session (65 senators).



### Electoral Results 2018: Senators (By Political Coalitions)



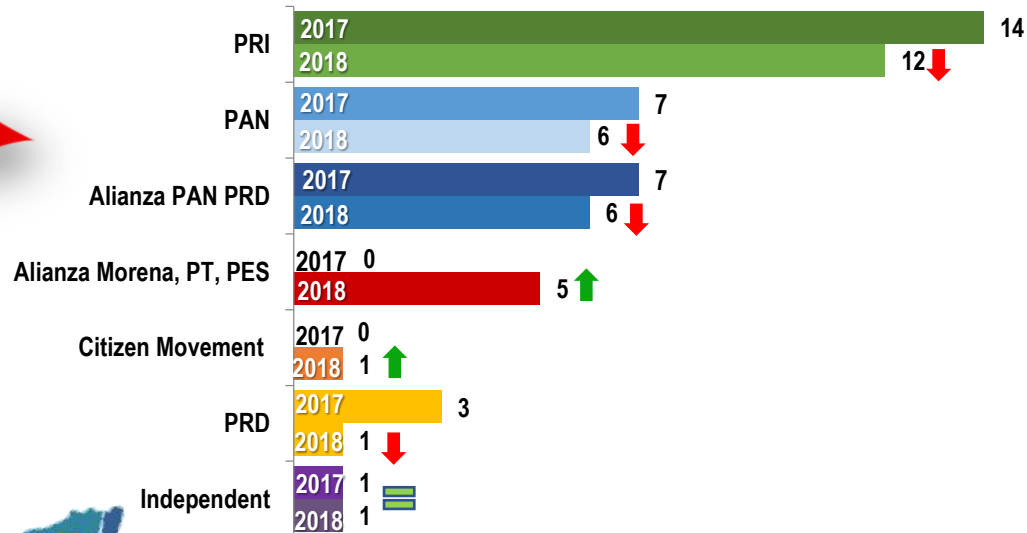
## 2.1.2 Political Climate

### Political Map 2018

### Political Forces and Social Participation



#### Number of Governors per Party 2017 vs 2018

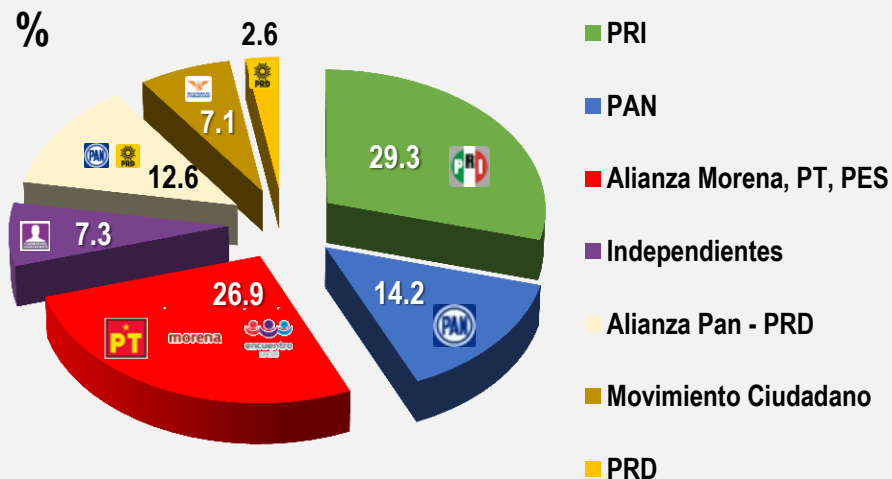


#### Percentage of Population Governed by Party Affiliation

	2017		2018	
	% of States	% of population	% of States	% of population
PRI	43.7%	45.2%	37.5%	31.0% ↓
PAN	18.8%	22.2%	18.8%	23.4% ↑
PRD	12.5%	14.5%	3.1%	3.8% ↑
Alianza Morena, PT, PES	0.0%	0.0%	15.6%	25.2% ↑
Alianza PAN – PRD	18.8%	9.4%	15.7%	6.2% ↓
PVEM	3.1%	4.4%	3.1%	0.0% ↓
Movimiento Ciudadano	0.0%	0.0%	3.1%	6.2% ↑
INDEPENDIENTE	3.1%	4.3%	3.1%	4.3%
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.0%</b>

## 2.1.2 Political Environment

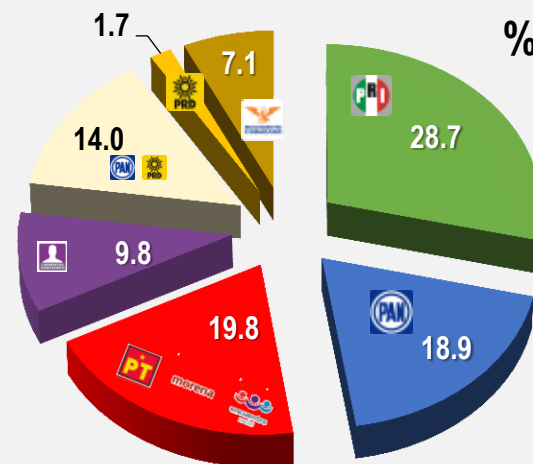
### Political Strength and Economic Weight



**Total National GDP  
2018:  
US\$1.2 trillion**



**Construction GDP  
2018:  
US\$85.7 billions**



## 2.1.3 CMIC's Principal Priorities

1. Timely commitment in the planning of infrastructure in Mexico, not tied to periods of government terms and reviewed by the National Council on Infrastructure with its Autonomous Planning Institute and with similar state entities.
2. Respect for the Rule of Law and a real context for impunity which ends corruption, that is transparent in any bidding process and in the face of insecurity.
3. Generate modifications and update the Federal Public Works Law fostering development of all Mexican construction companies with special attention to Micro and Small companies which require constant promotion and support.
4. Promotion of regionalization with greater infrastructure investment in our country; at least 5% of GDP.
5. Permanent programs for training and education directed to the Construction Industry to face the challenges of competitiveness, integrating the entire productive chain in the Country (Business Certification).



## **Specific Topics:**

### **3.1 International Trade and Investment Agreements.**



## 3.1.1 Discussion on the future of NAFTA and trade relations between Canada, Mexico and the United States

### Negative effects for the three countries with the possible cancellation of NAFTA:

- The end of NAFTA would spark protectionist policies which would probably have negative effects on the rule of law.
- Ending the agreement would have profound effects, not only psychological ones (hemispheric identity), but also the well being of North American citizens in general.
- Reinitiate the debate based on a model of import substitutions or a trade opening (especially delicate for Mexico).
- Production costs would rise due to increases in raw materials and intermediate goods which would elevate prices to the final consumer.
- Reduction in competitive and productivity levels.
- Destabilize financial markets (imbalance in exchange markets, increases in prices and higher interest rates).



### 3.1.2 What trade trends are being seen in your countries ?

Given the possible cancellation of NAFTA, Mexico has been intensifying its trade, economic and political alliances with other regions and countries, the most important are:

1. Modernization of the free trade treaty with the European Union (TLCUEM).
2. The signing of the Comprehensive and Progressive Agreement for Trans-pacific Partnership (CPTPP) that includes countries such as: Canada, Japan, Chile, Peru, Australia, Singapore, Malaysia, Vietnam, New Zealand and Brunei. The treaty is signed and awaiting congressional approval.
3. Fortify the Pacific Alliance, a regional integration initiative made up of Chile, Colombia, Mexico and Peru.



### 3.1.3 What areas are most probably going to be affected and what is your association doing in response?

The possible cancellation of NAFTA would affect investment in the country, since foreign companies view Mexico as an opportunity to set up and take advantage of NAFTA for direct entrance into the United States.

The sectors most affected if the United States left NAFTA would be:

#### 1. Automotive



#### 2. Agriculture



#### 3. Energy



#### 4. Manufacturing



#### 5. Aerospace



#### 6. Pharmaceutical



Transverse Effect Construction



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## **3.2 P3s. (Public-Private Partnerships)**

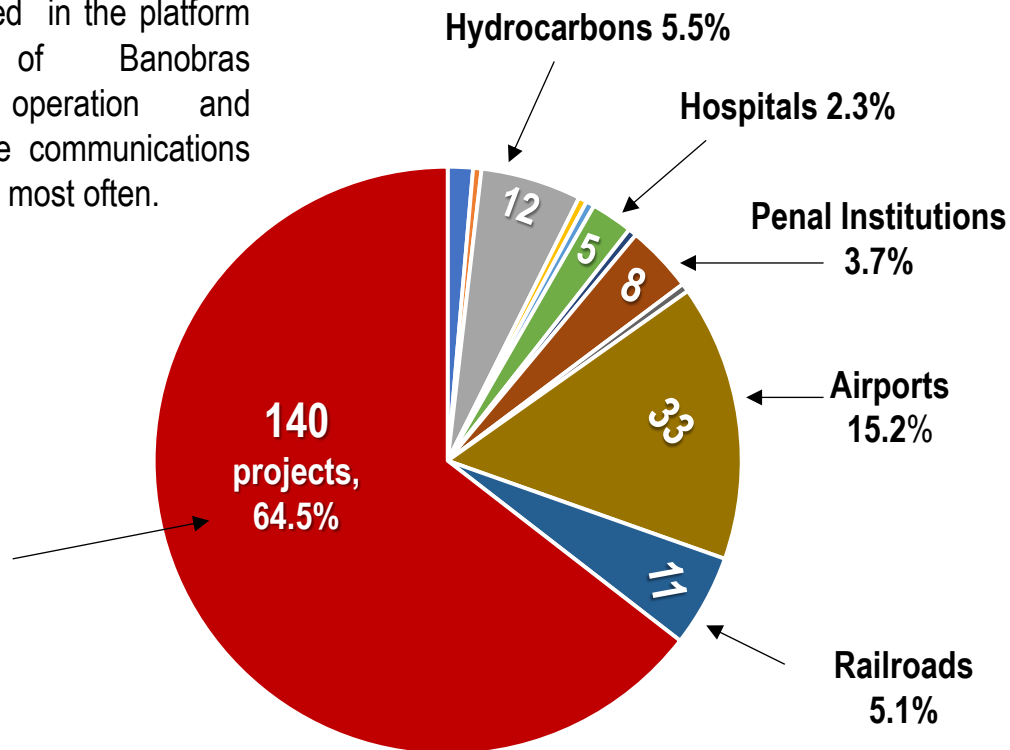
## 3.2.1 Construction Sectors with the major number of PPA's

Of the **217** projects registered in the platform **"Mexican Projects"** of Banobras (Concessions, leasing, operation and maintenance and PPA's), the communications and transportation ones occur most often.



**Bridges and  
Sections of  
Highways and  
Freeways**

- Water and Environment
- Hydrocarbons
- Telecommunications
- Universities
- Cultural Center
- Railroads



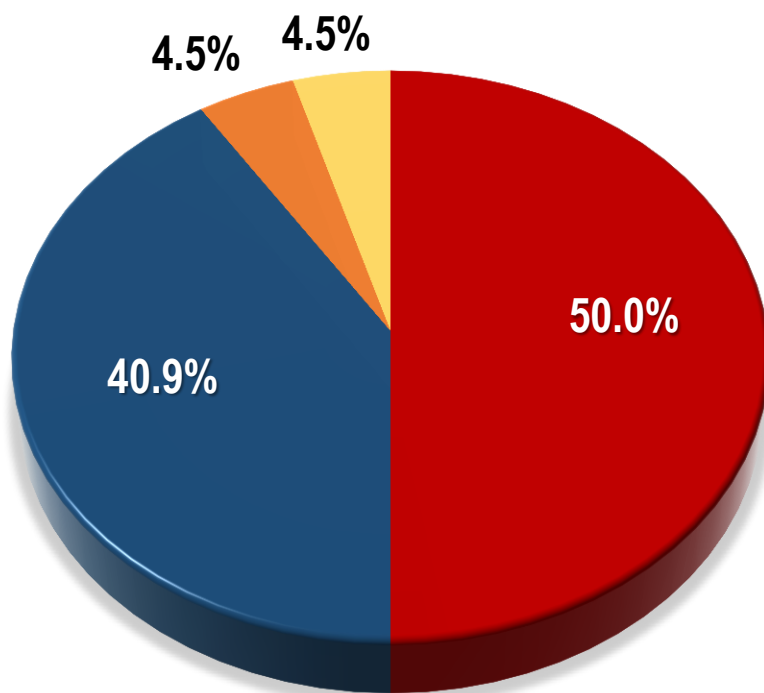
- Electricity
- Museum
- Hospitals
- Penal Institutions
- Airports
- Bridges and Sections of Highways





## 3.2 PPA's

Of the 21 projects approved for the year 2018, the investment distribution is as follows:



Highways and Bridges



Hospitals



Penal Institutions



National Weather Service





### 3.2.2 Short Term Priorities for the PPA's

#### CMIC promotes the creation of a Mexican Council on PPAs:

Seek to create an independent entity with the participation of private and public institutions with the objective of facilitating decision making and establish guidelines, priorities and characteristics of the PPA's projects.

- Allow the separation of the formulation of public policies from its implementation.
- Act as a specialized consulting center in the preparation, negotiation and execution of PPA projects.
- The centralization of consulting could generate savings for the government.
- Help to ensure that PPA projects comply with the fiscal savings requirements, value for money and optimal transfer of risks.
- Allow contingent private liabilities to be evaluated by an independent supervisor.
- Generate trust and solid relations with the private sector to invest in infrastructure.



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## 3.3 Community Benefits



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## 3.3 Benefits to the Community

Currently, Mexican legislation (Public Works and Related Services Law) does not contemplate that a Public Works contract includes a clause requiring that obliges the constructor to carry out a specific work for the benefit of the community.

There are no such clauses in the contracts.



Benefit - agreements can be done.



Agreements to acquire goods and services to socially responsible companies



Also, there is the possibility of reaching agreements with the community. Examples include PEMEX's Program for Supporting Communities and the Environment (PACMA), and it is currently working with the Airport Group to generate training programs and courses for the benefit of the communities surrounding Mexico's New Airport project.





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## **3.4 Technology & Innovation**

### 3.4.1 What are the current trends in technology for the Construction Industry?



## BIM

Building Information Modeling

BIM represents a new paradigm for construction, by facilitating the creation of digital models of the work to optimize construction projects.



## “LEAN CONSTRUCTION”

Lean construction / Construction Without Waste

Philosophy based on continuous improvement: Integrated disciplines, Just in Time, Delivery, Close Programming, Last Planner, Teamwork, Permanent communication and Pull.



## SUSTAINABLE CONSTRUCTION

Environmental Impact, "LEED", Energy Efficiency

Spread the culture of Environmental Care, through the reduction of greenhouse gases, the use of materials with a longer life cycle and a lower amount of embedded energy, optimization of water use, measurement of carbon and water footprints, etc.

## 3.4.2 What does your association do to improve innovation in the construction industry?

The CMIC, through the FIC, coordinates an Interdisciplinary Technological Development Group (CDT).

The objective of this group is to keep a continuous and direct communication channel with the main Technological Innovation Centers, allowing updating with innovations in this matter.

- Instituto Mexicano del Petróleo (IMP)
- Instituto Mexicano del Transporte (IMT)
- Instituto de Ingeniería de la UNAM
- CIITEC - del Instituto Politécnico Nacional
- Asociación Mexicana de Directivos de la Investigación Aplicada y el Desarrollo Tecnológico (ADIAT)
- Alianza Fiidem
- Facultad de Ingeniería de la UNAM
- Centro de Ingeniería y Desarrollo Industrial (CIDESI)
- Instituto Mexicano de la Propiedad Intelectual (IMPI)
- Instituto Mexicano del Cemento y del Concreto (IMCYC)



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Industria de la Construcción**

## 3.5 Workforce

## 3.5.1 Situation of the Workforce

### Job Offer and Training Program for Work with Values

- Currently Mexico has a sufficient supply of labor. However, there are still shortcomings to get personnel in technical areas (welding and specialized jobs).
- The CMIC solves these needs by the training done through its institutions.

#### Objective:

Train the worker to support the strengthening of the construction company:

- Carry out activities in an effective way.
- Have greater opportunities for personal and professional improvement.
- Contribute to increase the quality in the execution of the work.
- Increase the productivity and competitiveness of companies.



## 3.5.1 Situation of the Workforce

### Specialized Training



FORMATION OF WELDERS WITH SMAW  
PROCESS



PIPELINE WELDING WITH SMAW PROCESS



TRAINING OPERATORS IN TRACK DRILL TO BANKS OF  
MATERIAL, WATER WELLS AND MINING APPLICATIONS



OPERATION OF THE MOBILE CRANE BASED ON  
ISO-15513-2000 STANDARD



OPERATION OF THE TRENCHER  
FOR A SPECIFIC FIELD WITH PERFORMANCE ANALYSIS



TRAINING OF OPERATORS IN MACHINE.  
PAVING OPERATION

## 3.5.2 How CMIC is working to help educate workers in technology.

- The CMIC through the FIC has by promoting Seminars, Diplomas and Congresses taught the implementation of main technological megatrends;

In this way, they have given:

- BIM Manager Graduate Courses
  - BIM 5D Diploma Course
  - The BIM 4D Diploma Course is being designed
  - 1st BIM Congress in July 2017 and 2nd BIM Congress July 2018
  - Graduate Courses in "Lean Construction"
- The CMIC also coordinates a multidisciplinary group representing the "Stake Holders" of Mexico's BIM Forum industry. This group is focused on accelerating BIM implementation in Mexico similar to that of the USA.
- In the framework of BIM Forum México, the preparation of the first BIM standard in Mexico is coordinated; NMX-C-527-1-ONNCCE-2017 "Modeling in Information in Construction".



PLAN DE MANEJO  
DE RESIDUOS



BIBLIOTECA  
TECNOLÓGICA



BIBLIOTECA DIGITAL  
(ITC)



PADRÓN DE  
EMPRESAS VALIDADAS



## 3.5.3 Labor Integration in the Construction Sector

### Training Program for Work with Values Background and Achievements 2012-2018

#### Main Goal

Train the most vulnerable sector of society for work by providing more humane and comprehensive solutions:

- Unemployed people
- Women as the Head of the Family

PCTV

## 3.5.3 Labor Integration in the Construction Sector

### Training Program for Work with Values

Background and Achievements 2012-2018

## Implementation

National ICIC

Central Office Mexico City

Regional ICIC Delegations



Training  
Classrooms



Mobile Units