

UNITED NATIONS/JORDAN WORKSHOP

"GLOBAL PARTNERSHIP IN SPACE EXPLORATION AND INNOVATION"

THEME 3 - *Developing open and inclusive global space exploration partnerships*

Amman, Jordan

25-28 March 2019

Mexico in the context of space partnerships

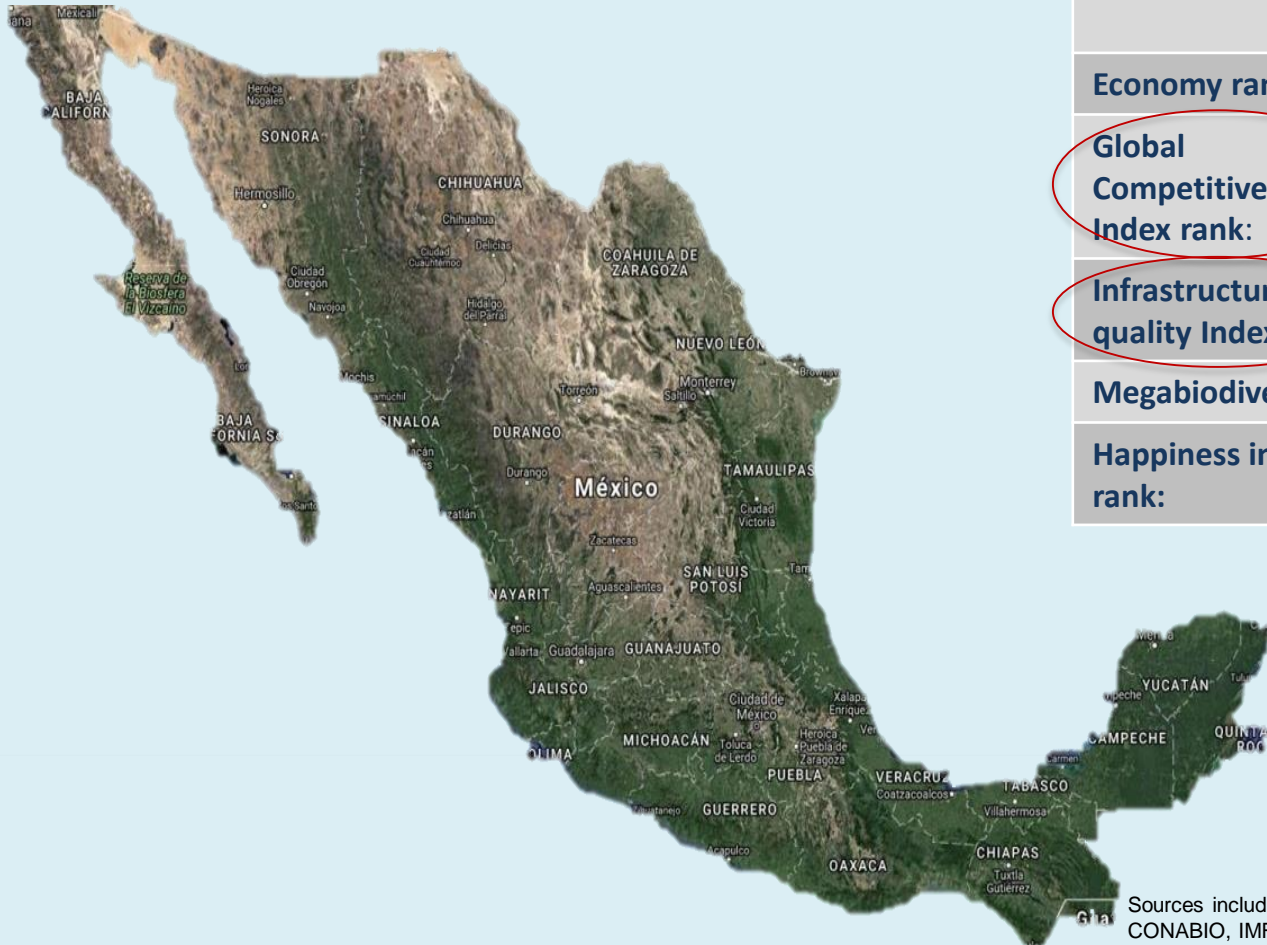
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MEXICO IN NUMBERS



National territory:	5.120.679 km ²	
Coastline:	11.122 km	
Mexico-US border:	3.152 km	
	2018	2017
Population:	131.452.016	129.678.021
GDP:	1.199.26 billion USD	1.151.05 billion USD
Economy rank:	no. 15 th	no. 16 th
Global Competitiveness Index rank:	no. 46 th	no. 51 st
Infrastructure quality Index rank:	no. 62 nd	no. 57 th
Megabiodiversity:	no. 5 th	no. 4 th
Happiness index rank:	no. 24 th	no. 25 th

Sources include: UN Department of Economic and Social Affairs, INEGI, CONABIO, IMF, WB

PARTNERSHIPS AT A NATIONAL LEVEL



WEAKNESSES

- Time and cost of projects
- Safe but linear investment
- Low support to R&D
- Lack of clear information
- Conflicts of interest
- Mindset

FINANCIAL

TECHNOLOGICAL

ORGANIZATIONAL

CULTURAL

STRENGTHS

- High specialization, although in very specific sectors such as aerospace, mainly aeronautics
- Competitiveness in crucial areas as mathematics, robotics, engineering and design
- Value-added services
- Adaptability and creativity

STRATEGIES

- Streamline processes
- Win-Win schemes
- **Capacity building**
- Technology transfer
- Strategic programs to minimize dependence
- Links between customers and suppliers
- Transparency
- Break paradigms

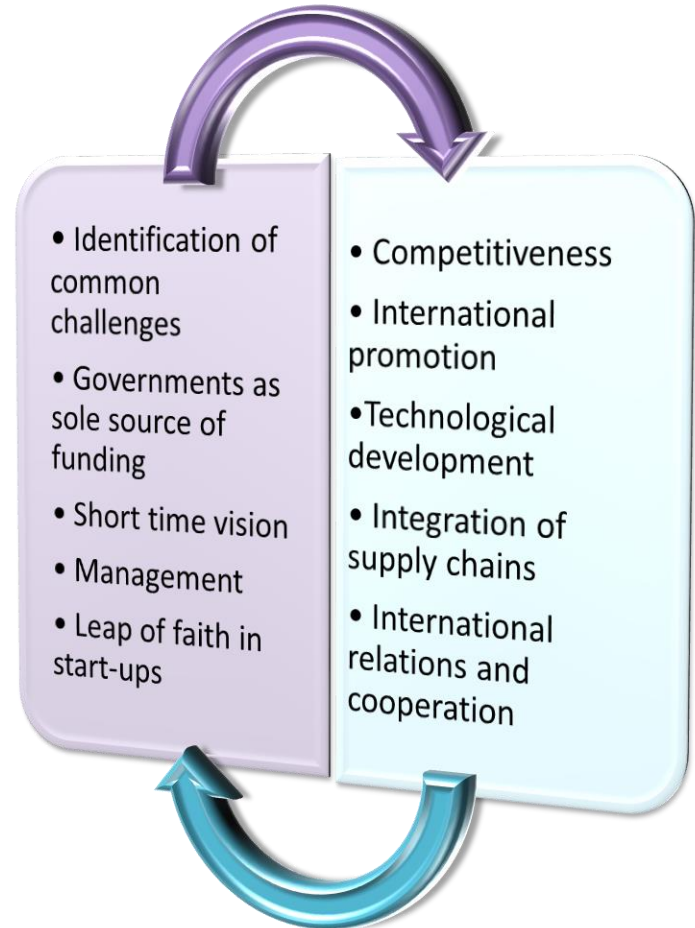
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PARTNERSHIPS AT INTERNATIONAL LEVEL

Challenges and Oportunities



- Identification of common challenges
- Governments as sole source of funding
- Short time vision
- Management
- Leap of faith in start-ups

- Competitiveness
- International promotion
- Technological development
- Integration of supply chains
- International relations and cooperation

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Taking into account this scenario, Mexico, an emerging country in space activities, seeks to use space to tackle these weaknesses and help macro indicators "look better".

Through the Mexican Space Agency, six years after its creation, these projects are being carried out:

- Precision Agriculture
- Reception Antennas for data accessibility
- Tele-epidemiology
- Quality education
- Promotion of the space industry
- Conservation, restoration and sustainable use of ecosystems
- Flood monitoring
- Possible development of a launching platform in the territory
- Establishment of Space Development Centers
- Measurement of space debris
- Development of public policies focused on space weather for civil protection
- Space medicine
- Programs: GIRLS AND BOYS "STEM"
- Cubesats development
- Fire management
- Possibility of the development of a Mexican Earth observation satellite
- Promotion of participation of young people in "Space BootCamps"

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PARTNERSHIPS focused on space infrastructure, the set of tangible and intangible assets needed for the study, access, exploration, use and exploitation of space, may be the backbone that supports the development of space programs for space emerging countries, which may open opportunities in key areas and projects such as:

- **Support in decision-making for acquisition of products and/or services, in line with social development and sustainability;** eg: the choice of raw materials and production processes
- **Monitoring of ecosystems,** i.e. marine fauna censuses to stop extinction of species, etc.
- **Configuration of agendas supported by information, measurements and indicators to combat the impacts of climate change and impulse "green investments"**
- **Support for the development of HUMAN CAPITAL, incentives for financing, generation and transfer of knowledge**
- **Access to low cost and quality in satellite data for interpretation and use in various sectors**
- **Support in the development of infrastructure for the implementation of public policies that guarantee security in its various forms (food security, disaster management, etc.)**
- **Support to develop competitiveness, attract investment and promote knowledge in high specialty areas**

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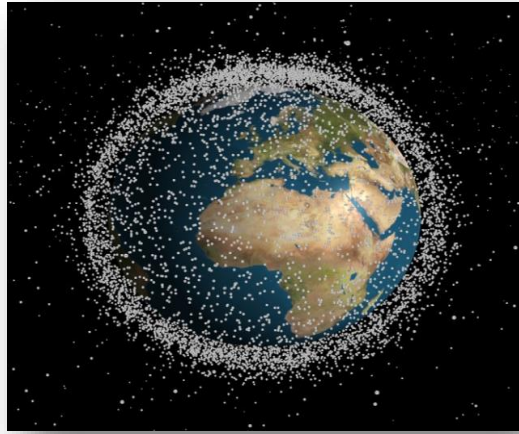
The Mexican Space Program envisages three mid-and-long-term objectives:

- To develop an early warning system that helps in the mitigation, prevention and rapid response to emergencies and disasters derived from natural phenomena.
- To develop a broadband infrastructure, incorporating new technologies and propitiating the construction of **national capacities** for the following satellite generations.
- To anchor Mexico in the international space community in the free, peaceful, effective and sustainable use of space, in order to take on national demands and share global challenges...

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To go from this:



To this:



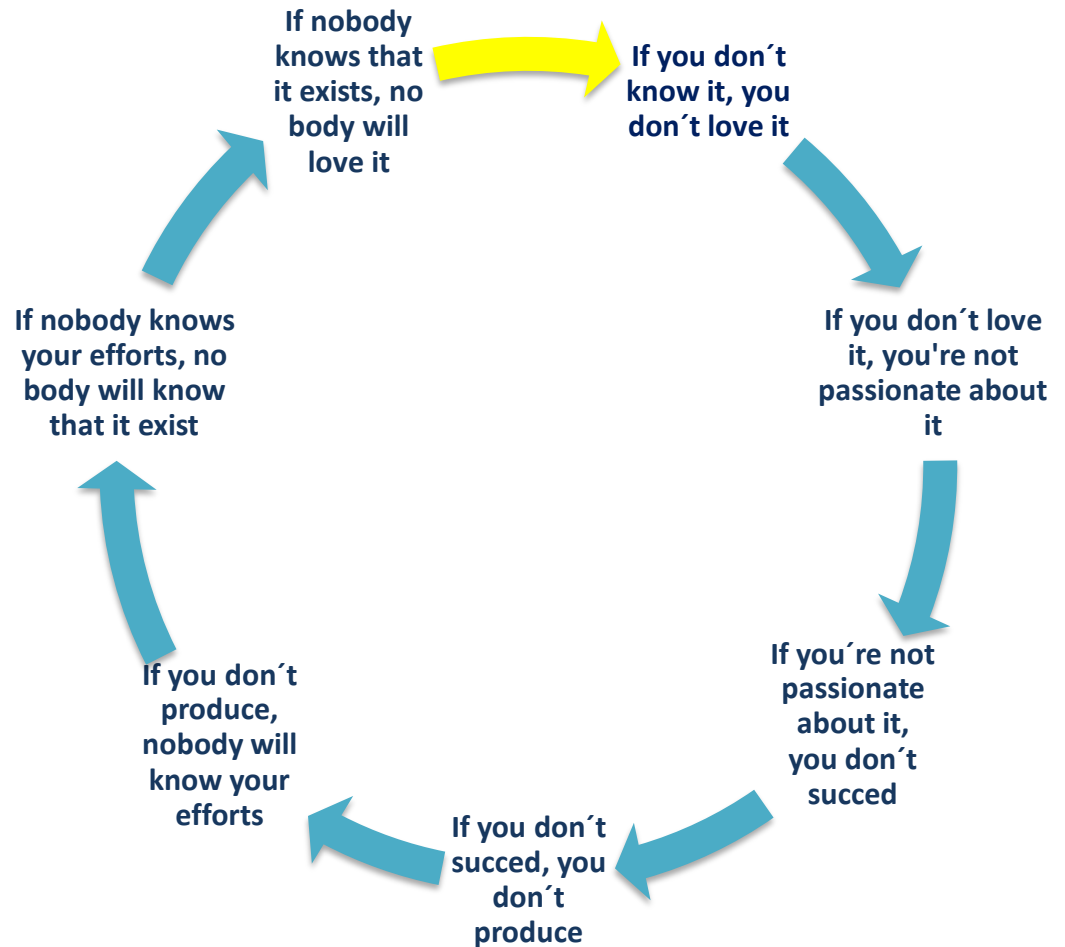
REMARKS

- In the dawn of a fourth technological revolution, when identifying weaknesses and strengths, emerging countries in space activities have the opportunity to insert themselves, through alliances as key tool, even more into the space dynamics, in order to help accomplish their national objectives and at the same time contribute to maintaining a safe and sustainable space environment, for the benefit of the global community and in support for the achievement of the UN SDGs.
- There are indeed challenges, as well as various elements that determine successful alliances. One of these challenges that has been identified by emerging countries is **Capacity Building**. As long as there is empowerment through knowledge and development of skills and dissemination of this new knowledge, there will be sources of inspiration that lead to innovation and competitiveness, key aspects to achieving success at all levels.
- Open-door initiatives should be built by governments and private sector in order to truly allow these associations to materialize, taking a step further in shaping a global agenda, supported by the resources from space and the willingness of space actors.

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Getting people involved in a new skill, in this case through **CAPACITY BUILDING**, originates an interesting virtuous circle captured in the following thought:



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GRACIAS

THANK YOU

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