

# Smart-Up: How to Start Your Own Green Business

ariema 

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# Who are we?

Leaders in Hydrogen technology



**30 years of experience**



**+100 projects**



**High qualified professionals**

To respond to the challenge of achieving a more sustainable energy model through hydrogen, promoting the circular economy and innovation as driving pillars of the society.



# Our History

- Solar H2 production. 2ª planta en Europa.
- H2 Storage: comprimido y en hidruros metálicos.
- Fuel cells: PEM, PAFC, AFC

**National Institute of Aerospace Technology (INTA), Huelva**



1990



## 12 years of experience in R&D

- FIRST. Proyecto europeo de energía solar fotovoltaica con hidrógeno y pilas de combustible para aplicaciones de telecomunicaciones.
- FEBUSS. Proyecto europeo de desarrollo de pilas de combustible para autobuses, tranvías y aplicaciones estacionarias.
- EIHP. Proyecto europeo para la normalización de los vehículos de hidrógeno

- INTA's Technological "Spin-off".
- Recognized with the **Innovative SME seal** by the Ministry of Science and Innovation

**ARIEMA Energía y Medioambiente S.L.**



2002

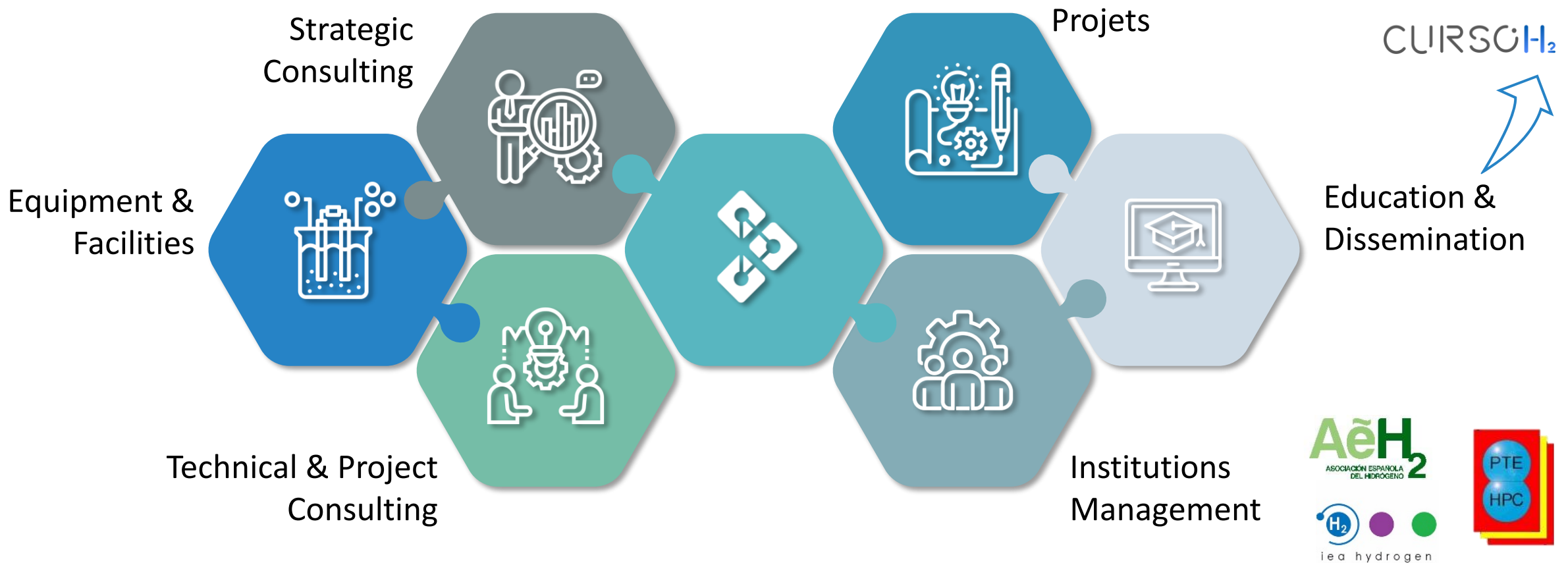


2021

## Leaders in hydrogen technologies

With decades of experience in the sector, participation in more than 100 projects, and highly qualified staff, **ARIEMA is positioned as the Spanish company of reference in hydrogen technologies and fuel cells**

# Business lines



**AeH<sub>2</sub>**  
ASOCIACIÓN ESPAÑOLA  
DEL HIDRÓGENO

**H<sub>2</sub>**    
iea hydrogen



# Projects



OCEANH<sub>2</sub>

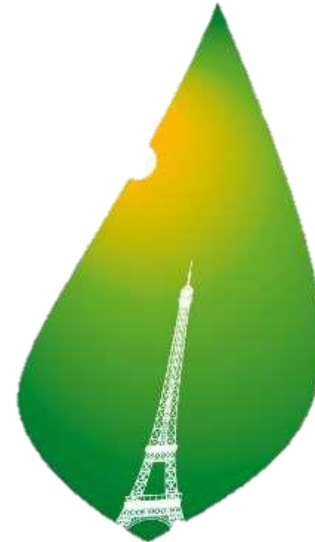
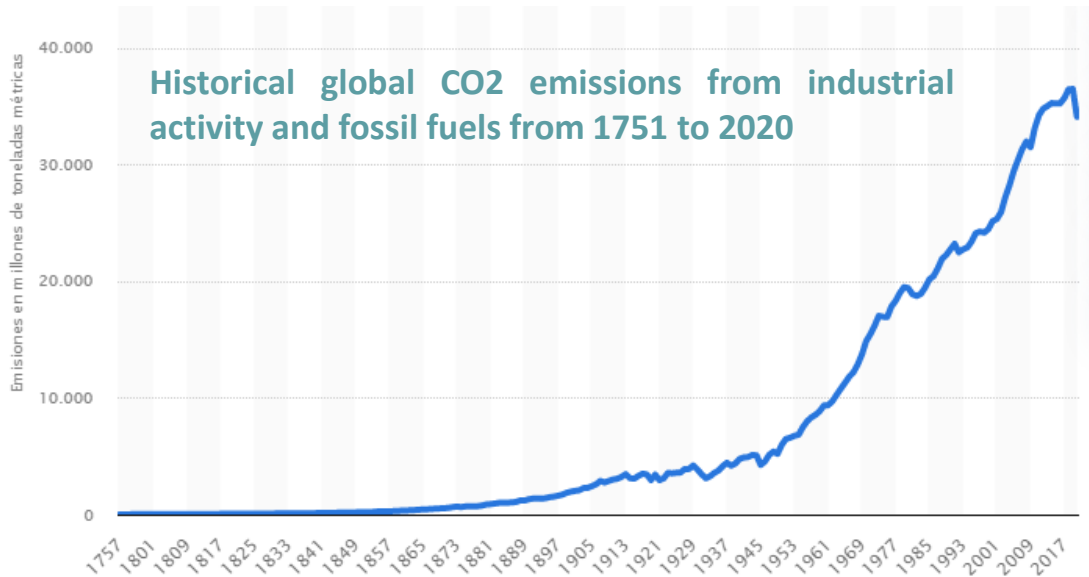


CARDHIN



Hy2Green

# Decarbonization challenge



COP21 • CMP11  
**PARIS 2015**  
UN CLIMATE CHANGE CONFERENCE

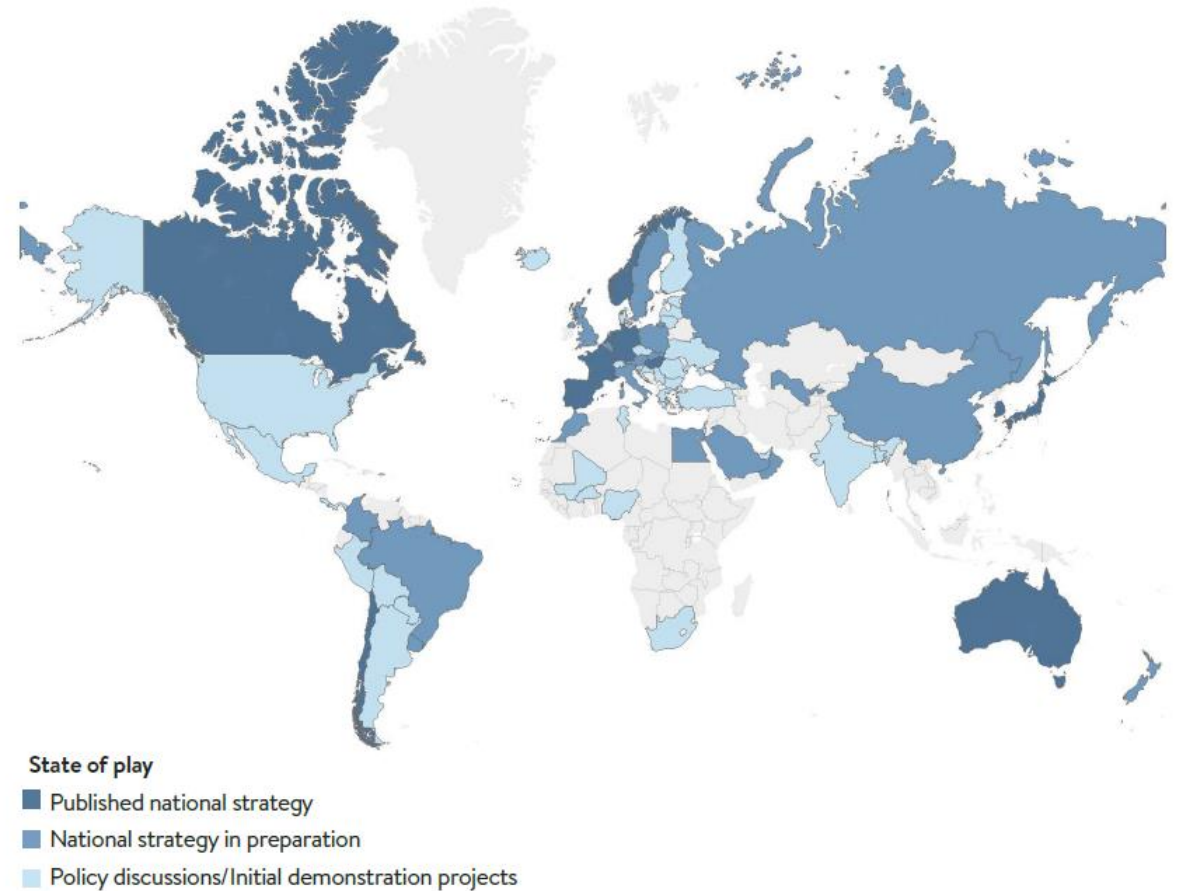


- Reduce 50% greenhouse gases by 2030
- Reach Carbon neutrality by 2050

## Hydrogen: global scenario

- ✓ Most abundant element in the universe, making up >90% of all matter.
- ✓ Hydrogen is both an energy vector and a fuel.
- ✓ No CO2 emissions.
- ✓ Diversity of energy supply.

Figure 1. Overview map of the countries activities towards developing a hydrogen strategy



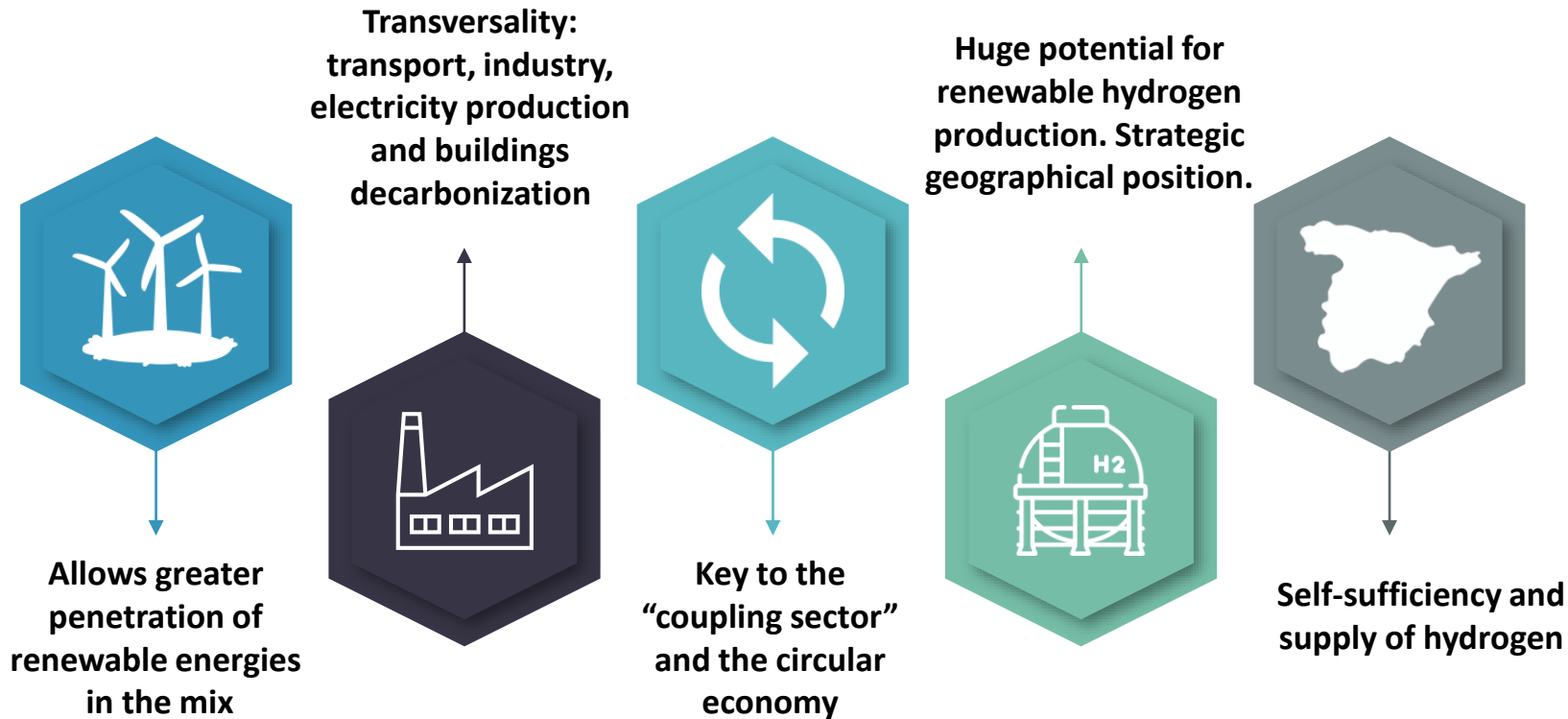
Source: *World Energy Council*

Source: [Working Paper | National Hydrogen Strategies](#)



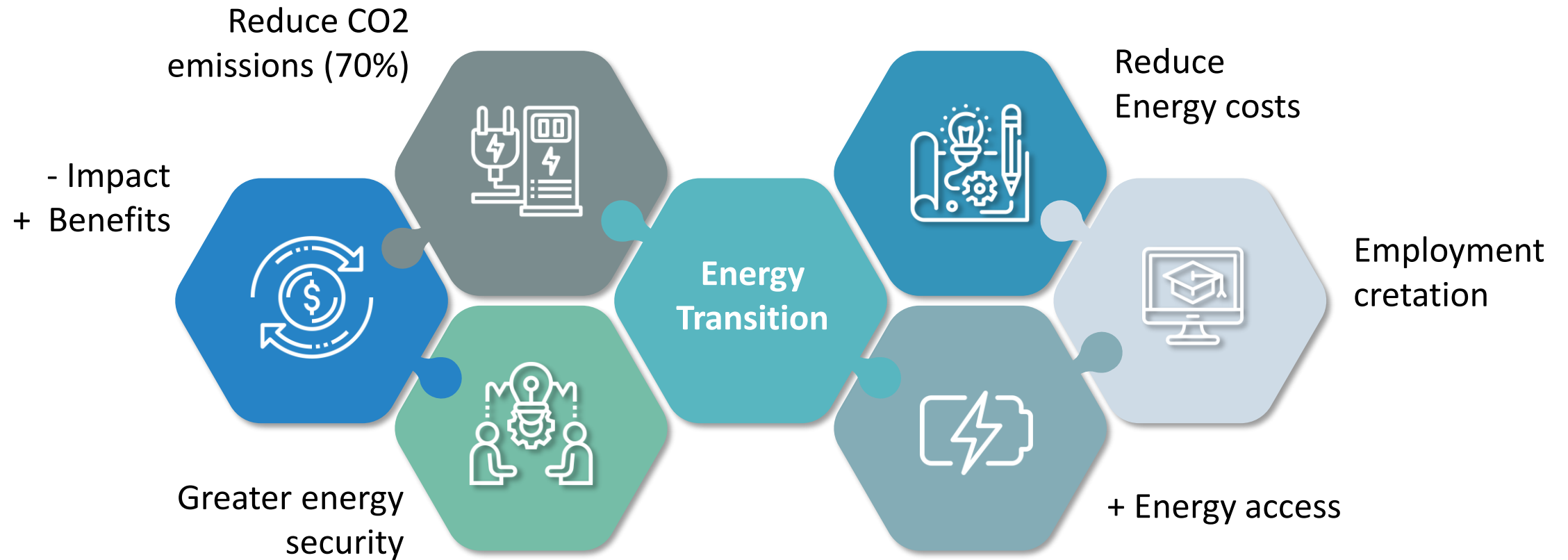
# Spain's Hydrogen Potential

Great opportunity for economic and in-house technology development



- ✓ 2030: reduce 23% CO<sub>2</sub> emissions.
- ✓ 2050: carbon neutrality & electric system 100% renewable.

# Benefits & Opportunities



# Opportunities

- Hydrogen as an industry will drag other industries to evolve, which will require **constant development and updating of knowledge**.
- Educate people, make **agreements** with universities, encourage **continuous learning**, seek **complementary technological alliances**.
- **Transfer of knowledge**.
- **Reconversion** and creation of new value-added jobs.



Employment  
creation

Thanks for listening

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