





# GEOTHERMAL AGRI-FOOD APPLICATION

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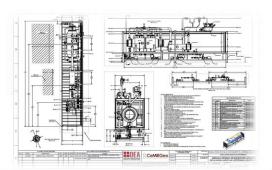
#### **MISSION**

TO PROVIDE SOLUTIONS IN A SUSTAINABLE WAY USING CLEAN ENERGY THROUGH TECHNOLOGICAL DEVELOPMENT, SPECIALIZED HUMAN RESOURCES TRAINING AND KNOWLEDGE DISSEMINATION.



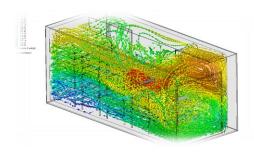
BE A MULTIDISCIPLINARY GROUP THAT PROVIDES INTEGRAL SOLUTIONS TO FOOD, WATER AND ENERGY SECTORS, THROUGH APPLIED RESEARCH. BY CONSOLIDATING MEXICAN TECHNOLOGY WE ARE LOOKING FORWARD TO BUILD THE FUTURE BY RENEWING IIDEAS.

















# IIDEA GROUP OBJECTIVES

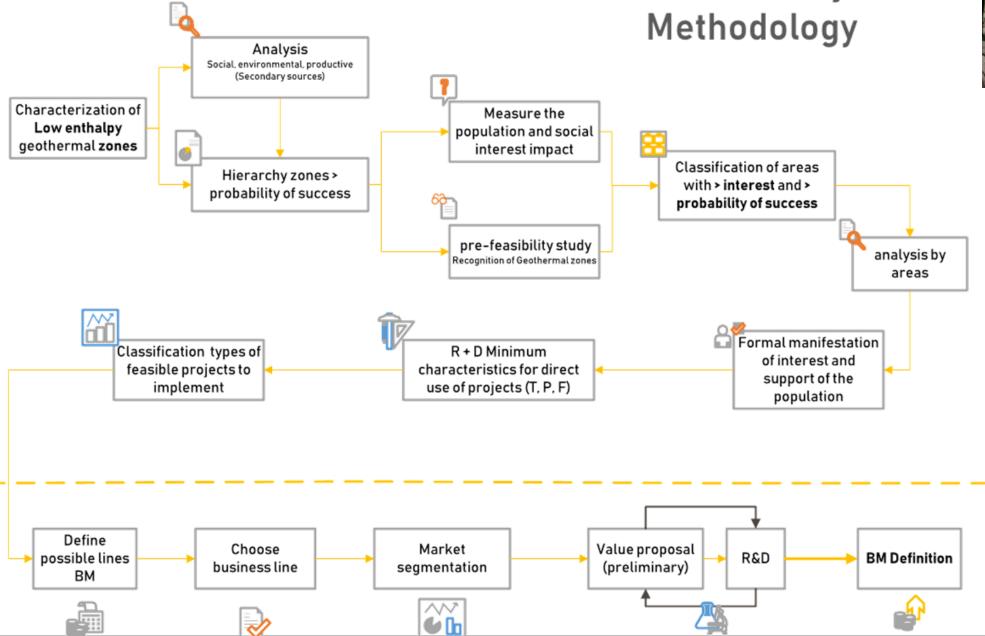


- To take advantage of the Mexican natural resources for the benefit of the communities, giving an added value to products.
- Mexican technology development, to be capable of providing a viable solution, technically and economically to the problems in our country.
- ➤ Generate innovative research, human resources, academic, scientific and technological linkage.
- > Promote entrepreneurs to generate new jobs



#### **Direct Use Projects** Methodology











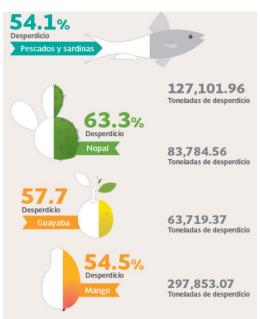
# Geothermal Food Dehydrator

MX/a/2015/007318 MX/a/2018/012733

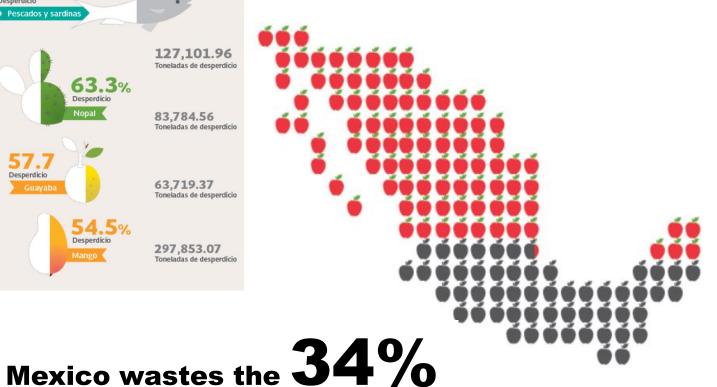


# ISSUE AND OPPORTUNITY





of the food produced



20 million 431 thousand tons of food per year

SEDESOR, 2017

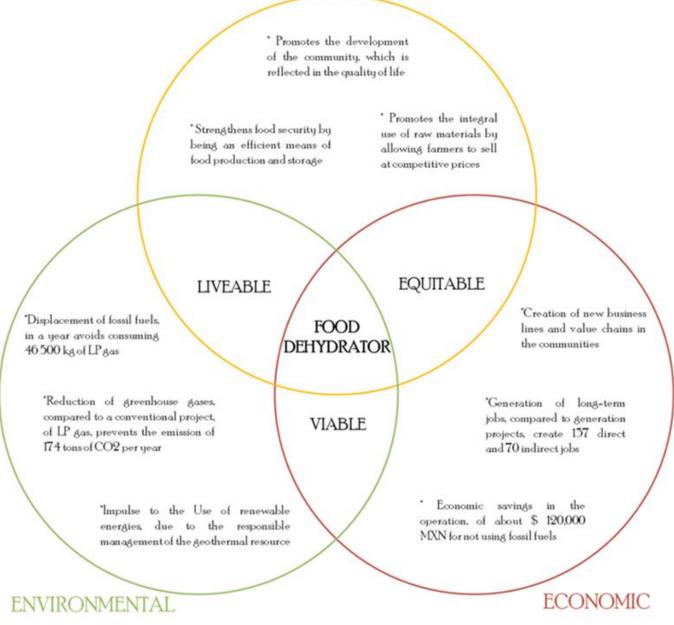












SOCIAL

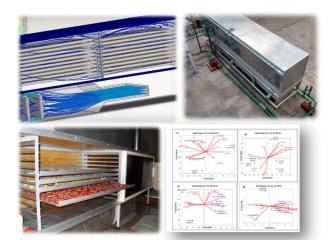
It is based on a plant with a production capacity of  $600\,\mathrm{kg}$  of delaydrated product per day that operates 4 months per year



## **HISTORY**



#### 2012-2016



#### DGA10 (prototipo)

Laboratory tests were carried equipment out. was characterized and operation curves were determined for each of the proposed products.

UNAM-iiDEA-CeMIE-geo





# 2018-2019 **DGA200**

iobs were generated The scaling approx. installation of a system of greater capacity, 200 kg of product per day was carried out.

iiDEA-INGENERA-CeMIE-geo

2020-2021

**DGA600** 

60 jobs are generated approx. It is expected to increase the production capacity, processing spaces and equipment installed in the DSP to dry 600 kg of fresh product



iiDEA-**INGENERA-PRODETES** 



#### 2017







#### DGA10

5 jobs were generated.

The DGA was installed in the field of the San Pedro Dome, with the capacity to dehydrate 10 kg of product.

UNAM-iiDEA-CeMIE-geo



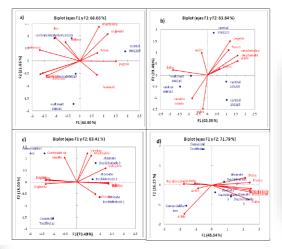
### LABORATORY PROTOTYPE OF THE GEOTHERMAL FOOD

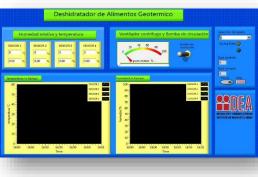


#### **DEHYDRATOR**

















# GFD200 TESTING

























# Deshidratador Geotérmico de Alimentos de Nayarit











#### **Deshidratador Geotérmico de Alimentos de Nayarit**



























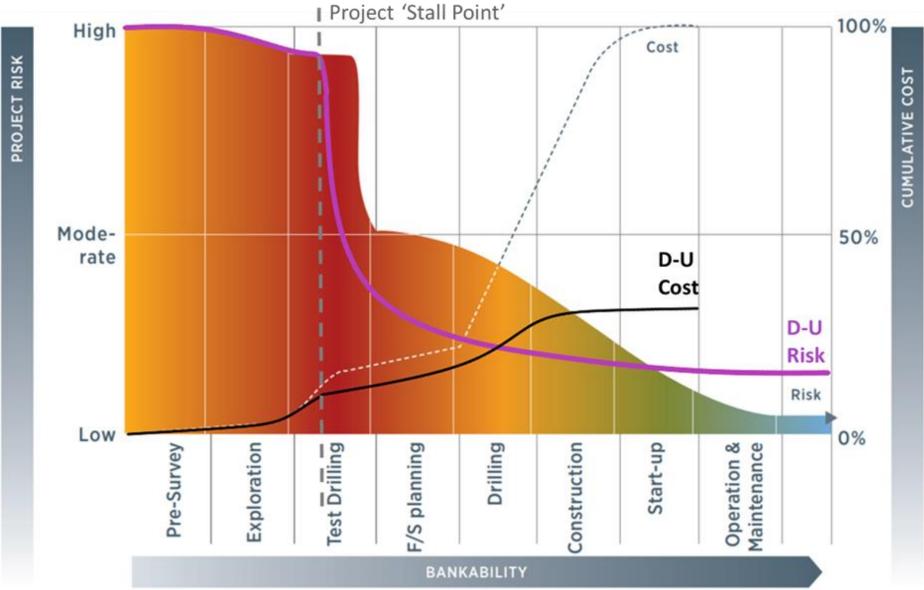






# PROFITABILITY







#### Companies created and associated in the generation of Research and **Technological Development at the Institute of Engineering**







Innovation, Engineering and Development in Alternative Energies





Innovation



**Human Resources** 



Research



Courses



Promotion



Scientist link





NGENIERÍA, ENERGÍA Y SUSTENTABILIDAD MEXICANA S.



- nversa





- Company dedicated to the implementation, exploration, consulting and dissemination of sustainable projects in the energy area. WINNER of the 2018 PRODETES Award together with the Engineering Institute UNAM.
- Company dedicated to the realization of basic and detailed ENGINEERING in the energy area.
- Company dedicated to the operation and construction of energy projects especially the use of geothermal energy.
- Company dedicated to the operation and marketing of the **Geothermal Food Dehydrator DGA**
- Distributor of dehydrated food in the DGA

