

# DeserTech

Climate Technologies Community









# **Dry Lands**



46.2%

of the Global Land Area



20%

of the World Population











### **Desertification**



**Water Stress** 



**Habitat Degradation** 



**Drought Intensity** 

by 2025

1.8 billion people will experience absolute water scarcity

2/3 of global population will be living in water stress conditions











## The Negev

### **Living Laboratory of Science and Technology**



**Regional R&D Centers** 



**Academic Institutes** 



**Technologies** 



**Industry** 











# **Our Mission**

- Promoting the development of technologies that address global desertification challenges and that leverage the desert's unique assets
- Adapting existing technologies to the specific needs and unique assets of arid or semi-arid climates
- Positioning Be'er Sheva and the Negev region as a global entrepreneurial center of these technologies













### Who we are



### **Catalyst of Change**

Promoting DeserTech Ecosystem

**Connecting Stakeholders** 

Implementing Technologies in Real Life Setting



# National and Global Community

Based in Be'er Sheva, Israel



### **Growth Engine**

of The Innovation District in Be'er Sheva



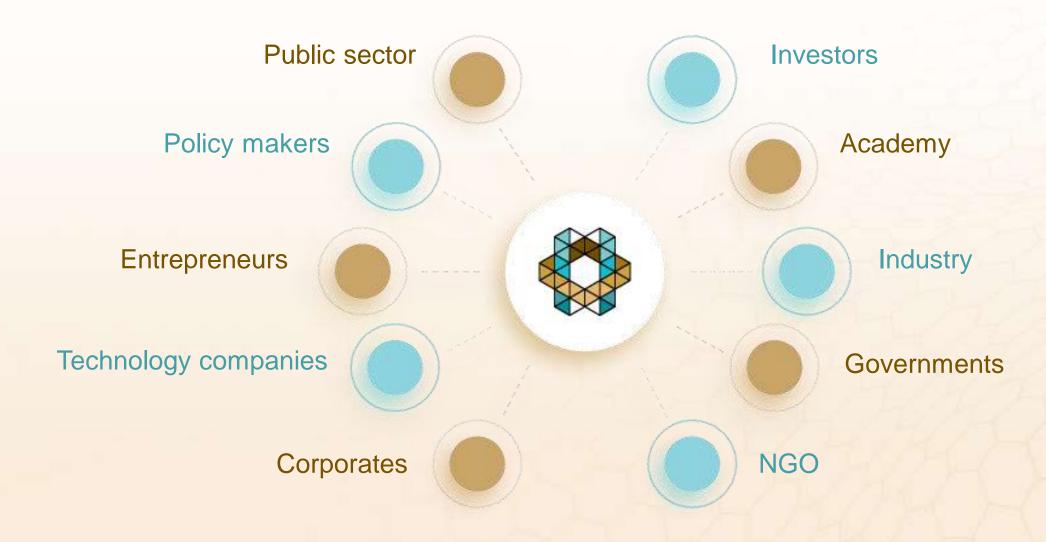








# **DeserTech Ecosystem**













## **DeserTech verticals**



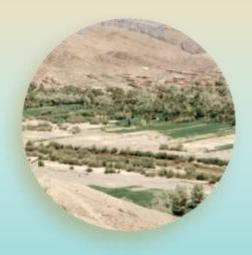
**Water Tech** 



Infrastructure



**Renewable Energy** 



**Desert Agriculture** 









# **Global Desert Challenges**



**Extreme Climate** 

Acute Temperature Shifts
Sand/ dust Storms
Wildfires (Semi-Arid)
Sun intensity



Water Scarcity & Availability

Water quality & quantity

Droughts

Water Contamination



**Land Degradation** 

Soil Salination

Erosion

Flash Floods

Soil Contamination



Remote & Marginal Living

Decentralization

Lack of access to basic

needs and livelihoods













#### **Extreme Climates**

Acute temperature shifts | Sand / dust storms | Wildfires (semi-arid) | Sun intensity

- Indoor farming
- Crop adaptation
- Desert aquaculture
- Livestock management
- Innovative foods desert novel ingredients
- Water reservoir management
- Solar energy generation
- Solar energy sites: management & efficiency
- Indoor climate control & energy optimization
- Energy storage
- Construction materials: thermal comfort | resilience | energy efficiency
- Bioclimatic urban planning: shading | cooling | urban nature
- Fire mitigation
- Sand / dust storms management
- Urban flash floods management
- Climatically safe open spaces
- · Extreme weather events forecast



# Water Scarcity & Water Contamination | Droughts

- · Brackish water irrigation and management
- Sustainable treated wastewater irrigation
- Smart irrigation
- Brackish water desalination
- Water disinfection
- Wastewater treatment and desalination
- Contamination rapid sensing and detection
- Groundwater contaminants management
- Fresh water generation
- Water saving systems
- Energy efficient brackish-water desalination
- Desalination-solar hybrid system
- Energy-harvesting wastewater treatment
- Freshwater storage and management
- Leakage prevention



#### **Land Degradation**

Soil Salination | Erosion | Flash floods | Soil contamination

- Soil restoration
- Land management
- Floods water usage
- Crop protection and nutrition
- · Desert forest management
- Soil water retention
- Water contamination treatment
- Agri voltaic systems
- Waste management of PV systems
- Conservation and revival of natural resources: water & biodiversity
- Flash floods management



#### **Remote & Marginal Living**

Decentralization | lack of access to basic needs and livelihoods

- Post-harvest logistics & supply chain
- Food security: self-sustaining production | agricultural diversification
- Off grid water and sanitation services (WASH)
- Water distribution systems management and maintenance
- Energy transmission capacity
- Energy networks: planning | operating | maintenance
- Non wire alternatives & off grid solutions
- Resilience against power outages
- Electric vehicle charging stations
- Access to services in rural & remote areas: health | education | culture | connectivity | transportation | communication

Agricult ure



Energy

W

Water

Infrastructur

е











### What We Do?

Community building events

Tailor made open innovation and technology transfer processes

International delegations and seminars to global corporates

Market Place

DeserTech CEO Forum

The Merage International DeserTech Competition





































## Catalyst of

# Ecosystem Development

Regional Complimentary Services

**Mentoring Program** 

Founder's Club

**Acceleration Program** 

**Branding Negev Ecosystem** 

Regional Network of Stakeholders Negev Ecosystem

Development

**Human Capital Social Capital** National Ecosystem Community Growth Development Raising Funds Regulation











## Catalyst of

# Innovation Implementatione Locally & Globally

Industry
Governments

Knowledge Assimilation Customers Knowledge

POC

Pilot Technology Adaptation Beta Site

**Technology Companies** 











### **Growth Engine**

### The Negev as a Global Hub for Desert Technologies

**International Conferences** 

Complimentary Services of Foreign Corporates

Global Center for Multinational Corporates Living Labs

Unique Training for Technology Adaptation

**Beta Sites** 











