CHALLENGE 2:

Realize efficient soil and land management through shifting business operations in line with the principles of the circular economy.

STATUS QUO PROBLEM

- **Soil,** a non-renewable resource, sustains life on Earth by supporting around **95% of global food production** and providing ecosystem. Unsustainable management practices and climate change are threatening the natural capital of soils, particularly in the Mediterranean region.

- According to UNWTO (2017), international **tourist arrivals** to the Mediterranean marine Basin is estimated to have grown from 58 million in 1970 to more than **349 million in 2015**, and are projected to reach 500 million by 2030. This **massive inflow of people** exacerbates environmental pressures and **risks of land degradation.**

DESCRIPTION OF CHALLENGE:

Land degradation is estimated to cost 37 billion euros per year worldwide, without considering the hidden costs of **increased fertilizer use,** loss of biodiversity, and unique landscapes.

Returning biological material back into the soil and implementing comprehensive strategies such as composting organic waste and vertical gardens will reduce the need to replenish it with additional nutrients. Recovering all the nitrogen, phosphorus, and potassium from food, animal and human waste streams globally could **contribute nearly 2.7 times the nutrients contained** within the volumes of chemical fertilizer currently used. Integrating innovations for the **revalorization of organic waste** and **realizing efficient soil and land management** through shifting operations in line with the principles of the **circular economy** is where the prior challenge lies for businesses.

Project examples: BIOTONOMY, ABONOKM0

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RES4CITY

DESCRIPTION GUIDING PRINCIPLES

(TO HELP YOU WITH YOUR RESEARCH, WE SUGGEST THAT YOU READ ABOUT):

- Collection and reverse logistics companies support **end-of-use products** being reintroduced into the system.
- **Product remarketers** and sales platforms that facilitate longer use or higher utilization of products.
- Parts and component **remanufacturing,** and product refurbishment offer specialised knowledge and services.
- Techniques to use soils in urban areas to **capture CO2,** taking advantage of the capacity of plants to absorb carbon.

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