

## CASE STUDY

# Treemanía



*"We use the 'Internet of Trees' to help tree owners and municipalities improve the symbiosis between soil life and trees"*

Didy Arnold, Co-founder of Treemanía



## PROFILE SNAPSHOT

Website	<a href="http://www.treemanía.com">www.treemanía.com</a>
Social channels	 treemanía
Contact us through Alliance	Didy Arnold ( <a href="mailto:info@treemanía.com">info@treemanía.com</a> )
Country	The Netherlands
Main sector	Private
Uforest thematic discipline	Information and communication technologies
Stage of development	Implementation



By using technology, Internet of Things, And soil life measurements in a laboratory.



By using recyclable PVC housing and rechargeable and replaceable batteries for soil sensors, and by improving local soils instead of replacing them with new soil.



By promoting soil quality for the sustainable management of urban forests and agricultural lands.





## START-UP

Treemanía is a private company founded in 2018 that develops smart monitoring tools for trees, combining soil-life and soil-quality measuring sensors with laboratory analysis to improve soil quality and reduce the distance between people and nature.

### TREEMANIA'S GOALS:

This project sets annual goals related to:

- Improve growing conditions for urban trees by upgrading soils and using smart technologies to offer ecological, economic and social benefits.
- Develop efficient, sustainable and cheaper methods for the cultivation, planting and care of trees and shrubs in urban areas.



## INITIATIVE MODEL

### MAIN ACTIVITIES:

**What does Treemanía do?**

- It develops lab tests to analyse soil life and soil quality (ex.: moisture, nutrient stalk), together with an assessment of trees' features (species, age, size) and the space they have available with regard to urban planning.
- Improve growing conditions for urban trees by upgrading soils and using smart technologies to offer ecological, economic and social benefits.
- It offers consultation services related to soil improvement.

### BENEFICIARIES:

**Who benefits from Treemanía's activities?**

1. **Greenskeepers, tree workers and farmers** that take care of trees and other plants.
2. **Public tree-owners**, such as municipalities and other public bodies.
3. **Private tree-owners**, such as estate and large garden owners.
4. **Green contractors and agriculture advisors** that offer council about soil care.

### PROMOTION:

**What is Treemanía's promotion strategy?**

Treemanía is growing organically and starting to build a network of municipalities, green contractors and agricultural cultivation advisors.

### GOVERNANCE:

**How does Treemanía implement its activities?**

- **The decision board** is made up by the four founding members. Each of them is a specialist in one of the following areas:
  - Trees, soils and nature management.
  - Sensors, Internet of Things and artificial intelligence.
  - Soil science and microbiology.
  - Soil, cultivation and innovation projects.
- **Strategic partnerships** which increase brand traction, help expand the customer base, provide access to additional resources, and stimulate revenue growth.
- **Product research and development** of soil-life and moisture sensors, and lab analysis methods for soil-life and soil quality.
- **Support teams:** advise and research, scientific advisory, technical assistance and lab tests for soil life and soil quality.

## FINANCES:

### What are Treemanía's main resources?

- **Commercial projects** to sell sensors that are already in the market and to perform lab analysis are the main sources of funding.
- **Public funding** from a European-funding programme, InterReg, that covers a small portion of development costs.
- **Founders' own resources** (25% equity).



## UNIQUENESS

### What makes Treemanía a one-of-a-kind project?

- The **use of soil life knowledge** allows Treemanía to focus on the symbiosis between trees and microorganisms that help them get their nutrients and water from the soil.
- The **multidisciplinary approach** that combines biology and ecology with sensor technique, artificial intelligence and data analysis works for sustainable urban trees and forests management.
- **An innovation management** that encourages and implements innovation procedures.



## EXPECTATION

By **2025**, Treemanía aims at openly digitalising knowledge about soil quality and how to improve it, so that lab analysis recipients can fully understand the results.

### What does Treemanía need to be successful?

- Establish a network of advisors and green contractors that can spread soil quality knowledge.
- Build brand awareness.
- Expand and organise the team to help the company grow.

### What are today's main challenges?

- Explain how to improve tree growing conditions, which is a complex matter, to tree owners and workers.
- Integrate four different backgrounds, histories and opinions into a single vision and strategy.



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