



PFLANZENTHEKE - Revolutionizing Agriculture Through Sustainable Urban Vertical Cultivation



Name of the Organisations Involved

- Pflanzentheke GmbH, Startup Company

Challenges Identified

Agricultural land is degrading, population growth is increasing, local cultivation is becoming more and more attractive not only for reasons of environmental protection, but also because of unstable supply chains. Climate change is making food production for vegetable growing more difficult due to a lack of rainfall and extreme weather events.

As a horticultural business, costs must be minimized while still producing high-quality products. With vertical cultivation in an urban environment, PFLANZENTHEKE contributes to all of these things at the same time. It makes it possible to revolutionize agriculture.

Goals and solution

By developing hydroponic plants and systems for the efficient, sustainable, decentralized, independent and local production of food for end consumers, organizations, and horticulturists, you save 90% of water and 85% of fertilizer compared to cultivation in soil. This not only makes the agriculture business climate-resilient, but also sets new standards in sustainable vegetable production and enables farming in urban environments.

Actions taken

PFLANZENTHEKE offers specially developed, tailor-made, soilless horizontal or vertical cultivation systems for herbs and leafy vegetables. They respond individually to wishes and concerns of vegetable grower. They also accompany them as a sparring partner through the ups and downs of vegetable production. With their data sets and our know-how, PFLANZENTHEKE can develop – for instance - cultivation planning and enable new unique selling points for horticultural business.

They also offer advice and hydroponic system construction in the urban farming/vertical farming sector. Thus, customers benefit from their data sets and modern measurement and control technology. Lack of precipitation in the summer months or mudding of the soil due to heavy rain shall be no longer a problem.

Benefits and Impact

- The hydroponic plants and systems not only produce vegetables in a resource-saving manner, but also cost-effectively. A high level of automation and ergonomically advantageous working not only reduce costs, but also make work easier for customers' employees. Users benefit from a clean

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harvest product and forgo weed control and increase the internal and external quality of products through complete fertilizer control. Customer values are:

- Transformation of horticultural/agricultural businesses
- Individual offers and services
- Scientific data-based cultivation
- Vertical and horizontal culture systems with measurement and control technology.



Source: PFLANZENTHEKE

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Application Area

☒ Plants

Digital Technology in the Value Chain

☒ Agricultural Inputs and Services

Digital Technologies

☒ Vertical Farming

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