Challenge name	**Circular smart-tech horticultural replicable package**
Challenge owner	Seed2Feed & Planetary Service (facilitators) Growpact – Kenya (local organization)
	X *Company* □ *Research* □ *Student team*
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Brief summary	Do you want to contribute with your skills & knowledge to a more sustainable future in Africa? Yes?! Then this ISP is for you! In collaboration with Seed2Feed, Planetary Service & Growpact, develop a circular smart-tech horticulture package that can be easily duplicated in several environmental and socio-economical contexts. Be part of the promotion of sustainable agriculture practices and local community capacity building in Kenya and elsewhere. This is your chance to have a meaningful impact in the world!

About the challenge owner

Seed2Feed is a small-scale development organisation that supports sustainable agriculture and farmers entrepreneurship initiatives in the Global South, with a focus on sub-Saharan Africa. The mission is to connect local and Dutch enterprises in the agriculture value chain with governments, knowledge institutions and NGOs to exchange knowledge, support business development and promote international cooperation.

Planetary Service is a mediator for internships between education institutions and companies or foundations active in the Global South with a focus on food production and cross-cultural entrepreneurship.

Both organisations are working together to provide a list of international partners with promising projects and initiatives to higher education institutions, to stimulate enthusiastic and creative students to contribute with their solution-oriented ideas and knowledge to real-life challenges.

Challenge description

Growpact (https://growpactkenya.com) is a young Kenyan company that produces and supplies high quality, fast growing and high yield crop seedlings for commercial large scale, medium and small-scale farmers in Kenya.

The company has developed a replicable optimised seedlings production facility for a wide range of products including freshly germinated and grafted fruit seedlings (e.g. mango, pawpaw, passion fruit, avocado, strawberry, etc.), vegetable seedlings (e.g. cabbage, tomatoes, onions, zucchini, chillies, eggplant, etc.), and herbs (e.g. stevia, rosemary, mint, etc.).

Growpacts overall mission is to promote an all-round circular and replicable horticultural concept based on circular sustainable agricultural methods and aims to be affordable and profitable to farmers. To that purpose, the company needs to standardise and develop its system to be able to duplicate to other African contexts.

The challenge goal is to develop a horticultural concept product, with technological solutions and a business plan, that can be easily replicated in other countries.

For instance, some interesting ideas could be the introduction of a sensors system to optimise and control cultivation conditions (e.g. temperature, humidity, light, pH, oxygen, etc.); the design of solar and/or wind energy solutions for the greenhouses and farms; the analysis and improvement of the company workflow; the market research for emerging economies; the creation of an information system regarding cultivation parameters; product design & development (e.g. plant nursery, irrigation container, germination chamber); among any other suitable ideas that students have for such a company and context.

There is a previous Enterprise Resource Planning (ERP) project, from Delft students, that was found to be too complex and not user-friendly enough for the company employees from which important lessons can be retrieved.

Challenge Picture

Input and involvement of challenge owner

Seed2Feed & Planetary Service will support the student group by connecting them to Growpact for local context background and more detailed information besides providing the experiences from the Delft ERP project. Also, they can connect students with a Dutch and international network of relevant stakeholders that can provide their expertise and experience in this sector. Finally, both organizations have extensive experience in supporting students in similar projects so they can guide students in the ISBEP project management.

Resources

What resources are necessary for the students to work on the challenge?

Access to relevant literature and contact with experts in the field to a better understanding of the feasibility of the solutions found in literature.

What resources do you offer to students?

x *Expertise; ...*

□ *Materials; ...*

□ *Workplace; ...*

X *Other: Networking*