

Challenge opportunity: High to low-tech



global specialist in horticulture

Background:

Can you design new technologies for areas with the highest growth potential? Then be sure to apply to this Challenge!

Horticultural growers in the Netherlands are able to produce 100+ kg of tomatoes per square meter. It is the most efficient in the entire world. There are however many areas in the world which are not even close to this number. The global average is 3.7 kg per square meter. This means there is a huge potential for growers worldwide to produce more. To do so, technologies are needed to support the grower in their crop management. The Netherlands is very high-tech in its management, which is too expensive for mid-tech & low-tech countries. But with simpler technologies, which might not be as precise as the high-tech, we might still be able to increase the yield for the mid- & lowtech.

One way of approaching this is to translate high-technologies to a more simple, more cost-efficient, technologies. New innovations like cheap computers (Raspberry PI, Arduino) and the rise of machine learning show a great potential to help growers in their farm management.

Royal Brinkman is looking for a student/start-up or enthusiast who is able to translate the high-tech to the mid- & low tech. A student with a creative mindset and a will to innovate. Can you make the next climate-computer? Or an easy way to monitor crop health? Do you want to automate irrigation or can you develop a simple way to treat water for reuse?

Research questions:

- *What high-tech is needed in mid- & low tech countries but not available at this moment?*
 - *What are the prerequisites of these technologies?*
 - *Design and develop a first prototype.*

The main goal is to develop new products which can be used cost-effectively by mid- & lowtech greenhouse growers in their farm management.

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