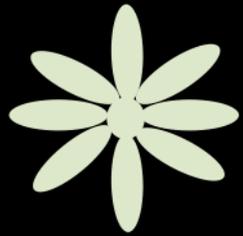


FLOTANICS



GROWTH, OPTIMIZED

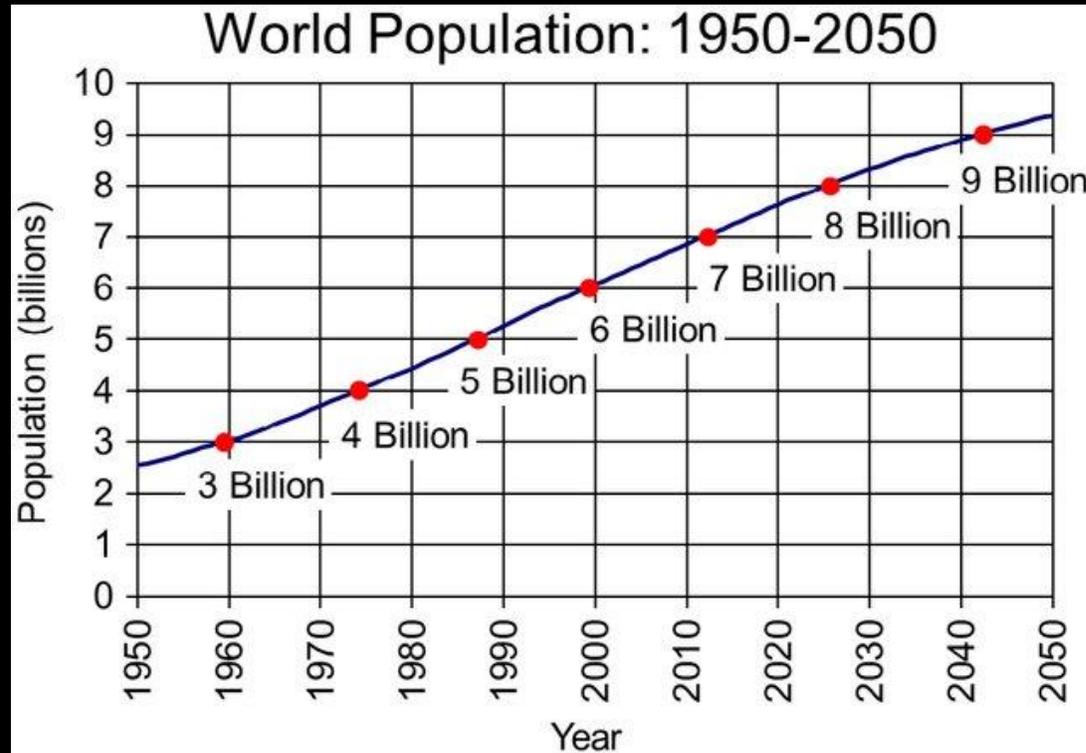
Scalable plant monitoring for vertical farming and indoor growing

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INAR / Department of forest Sciences

University of Helsinki

How do we sustainably feed the increasing population and minimize waste?



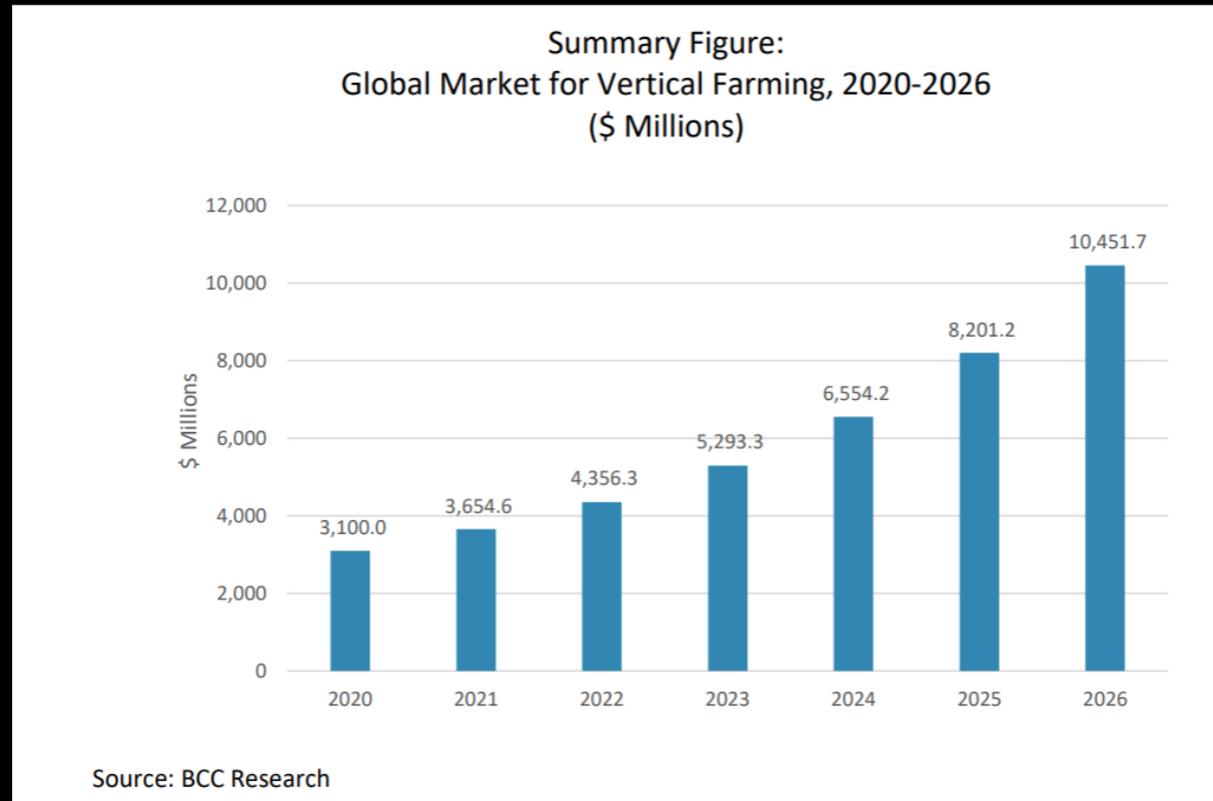
Global vertical farming



Source: wikimedia commons, [Lia Poland Wimons](#)

- 95% less fresh water usage
- Much higher yields
- Crops safe from extreme weather

Projected vertical farming market



The whole agriculture market size set to be valued over 13 trillion \$ in 2025

Source: The Business research company

Vertical farming challenges

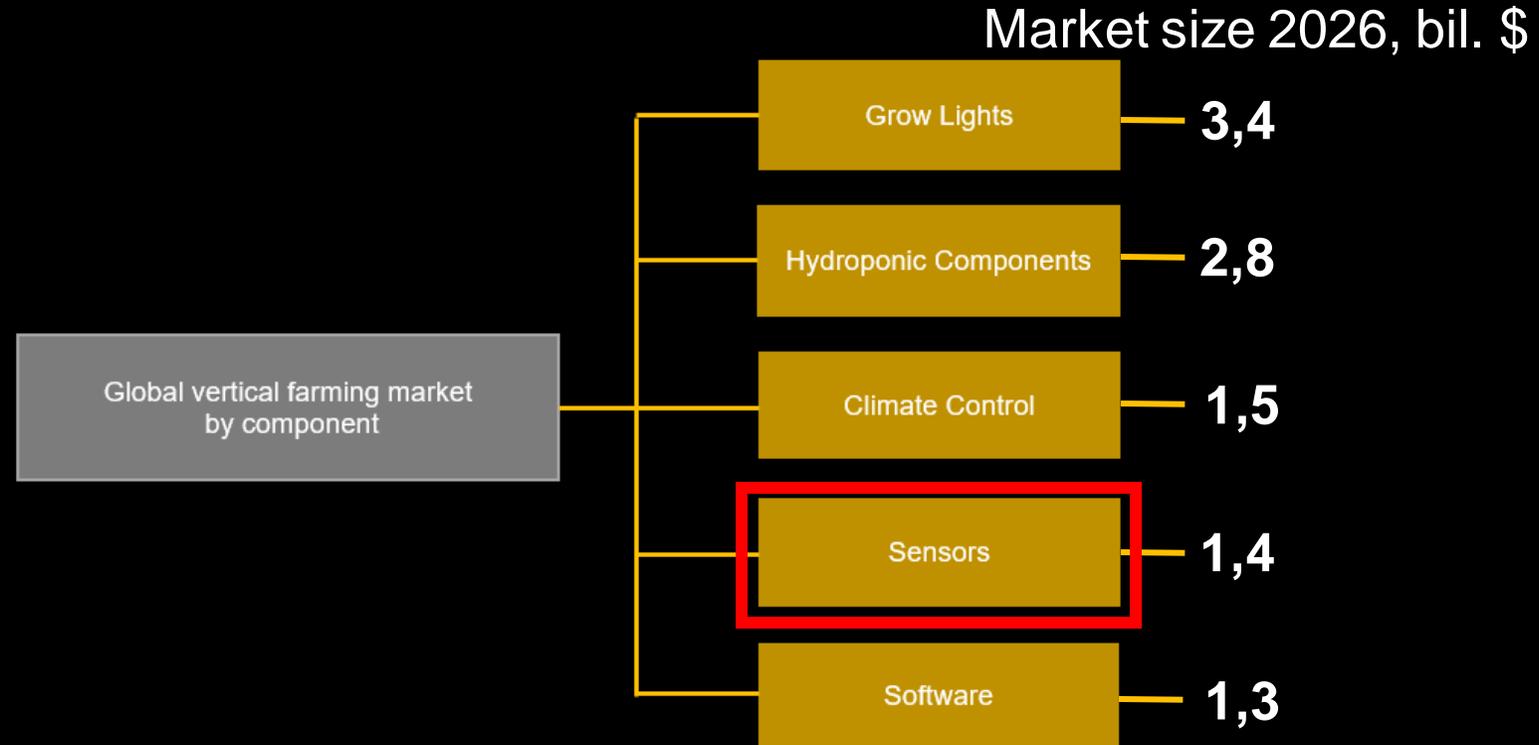
Vertical farming is much more energy intensive than traditional farming of greenhouses

"Indoor vertical farms typically spend [56%](#) of their operating budget on labor"

<https://puregreensaz.com/>



Flotanics within the vertical farming ecosystem



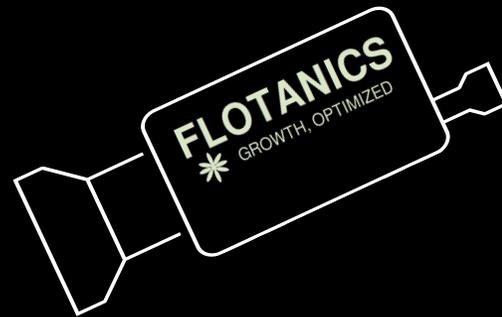
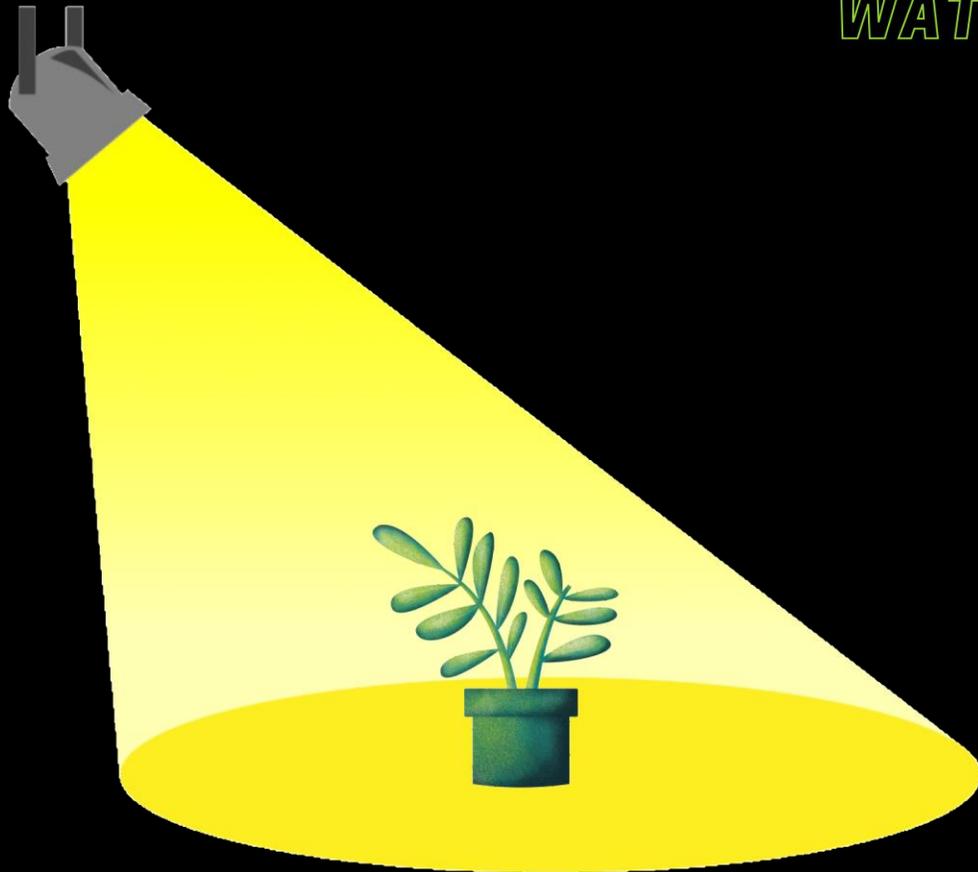
Source: adapted from BCC research

Flotanics uses chlorophyll fluorescence to monitor plant photosynthesis in near real-time

light energy

WATER + CO₂ => CARBOHYDRATES + O₂

FLUORESCENCE



FLOTANICS

* GROWTH, OPTIMIZED

* GROWTH, OPTIMIZED

