

# Greenhouse 4.0

All-round care for your plants

## Business Information Systems:

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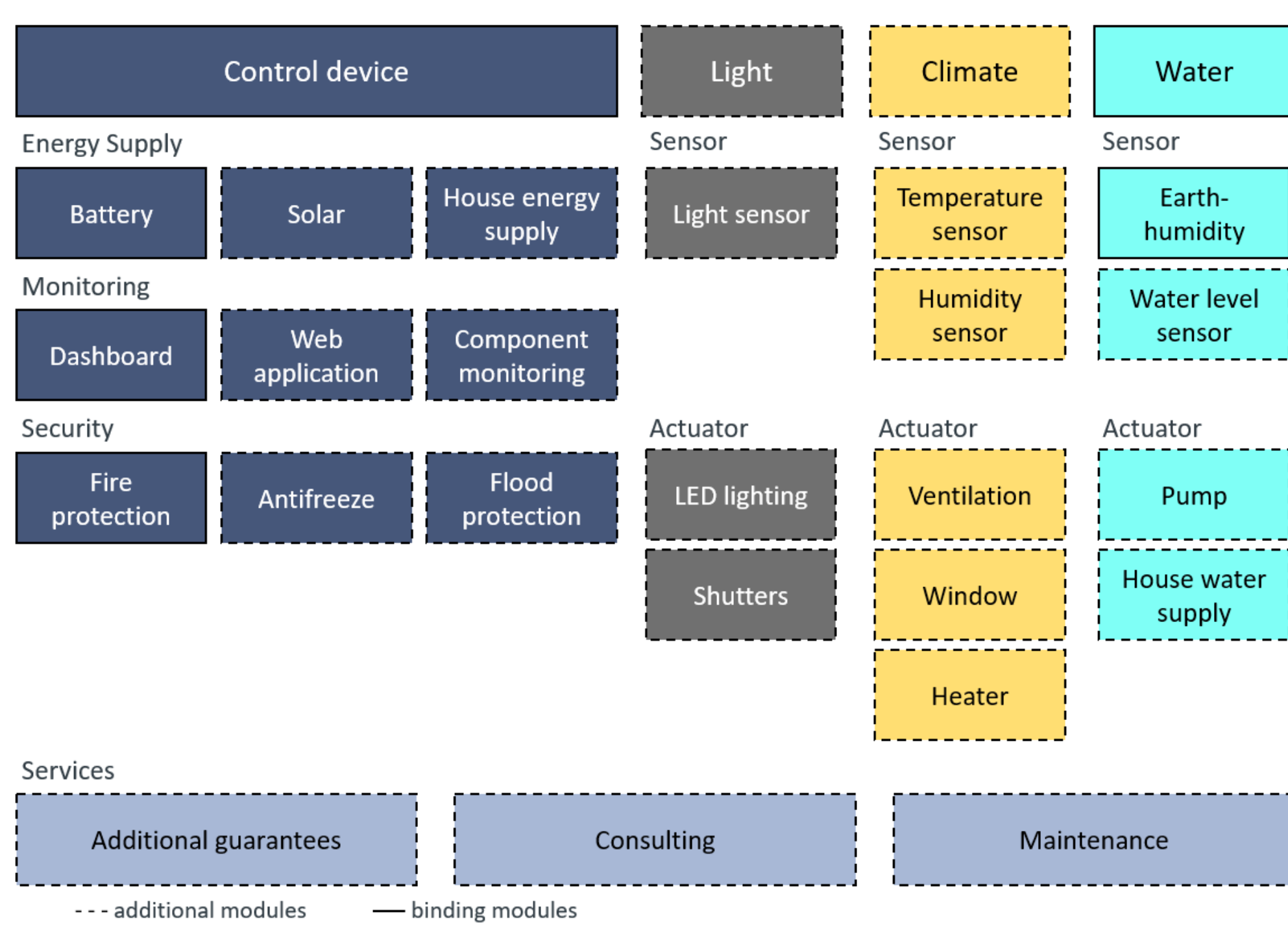
### Project description

- “Greenhouse 4.0” is an automated plant care system
- ensures the water supply for the plants and adjusts temperature and humidity
- regulates lighting for improved growth conditions



### Module concept

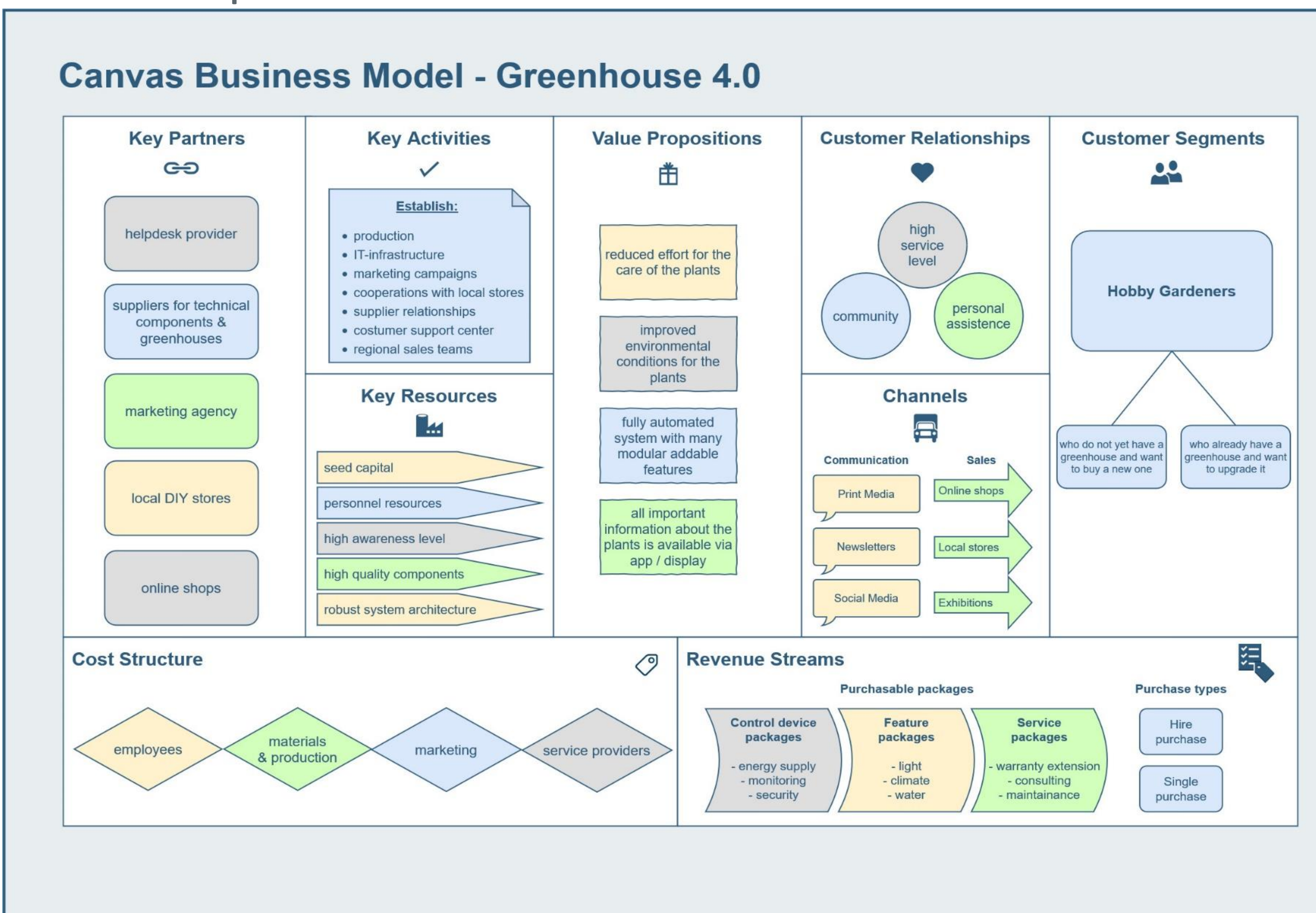
Different sensors, actuators and a central control device are used for the functionalities of automatic lighting, climate and irrigation management. The customer can configure an individual greenhouse by choosing from different modules shown in the figure below. The plants' and system's health state can be monitored via web app or integrated display.



### Technical specifications:

- basic structure consists of aluminum frames and acrylic glass panels
- all sensors and actuators are controlled by a ESP32 microcontroller
- logic is controlled by a Raspberry
- modularity of the components was not implemented in the prototype

### Business concept:

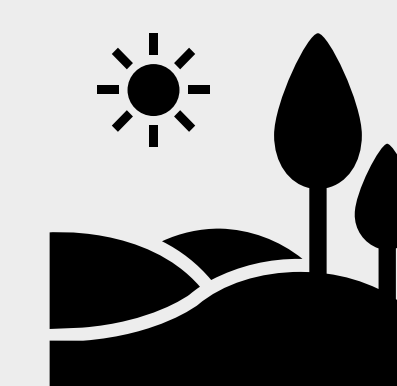


### Benefits

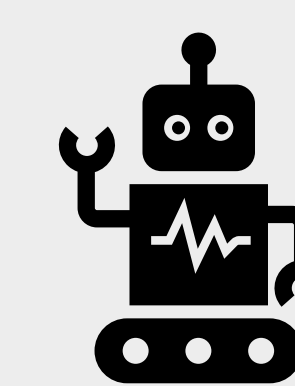
- Reduces user's workload for plant care
- Saves user's time
- All-round-care system that adapts to customer's needs
- Customer can choose desired modules
- User can grow own food without pesticides
- User can monitor and control plants' health from anywhere via web app

### Trends & Challenges

#### Trends



More garden owners



More smart devices

#### Challenges

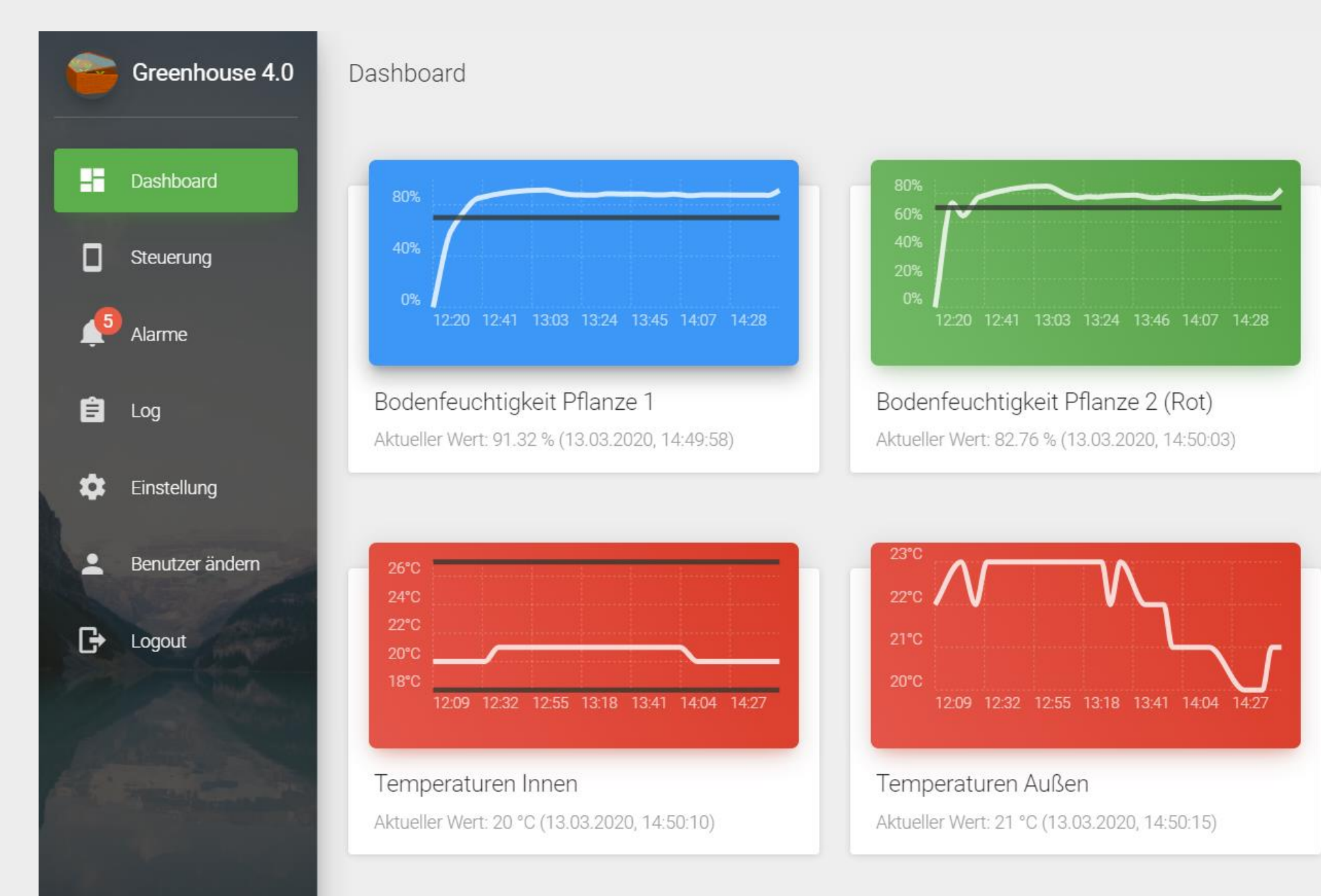


No space



Costs

### Website



### Contact

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