



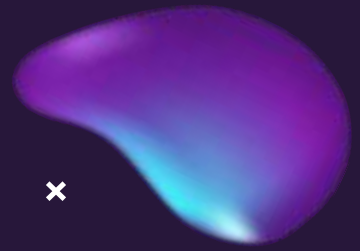
IoT PROJECT PROPOSAL

DTS KOMINFO 2024

“IoT for Agriculture”



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OUR TEAM



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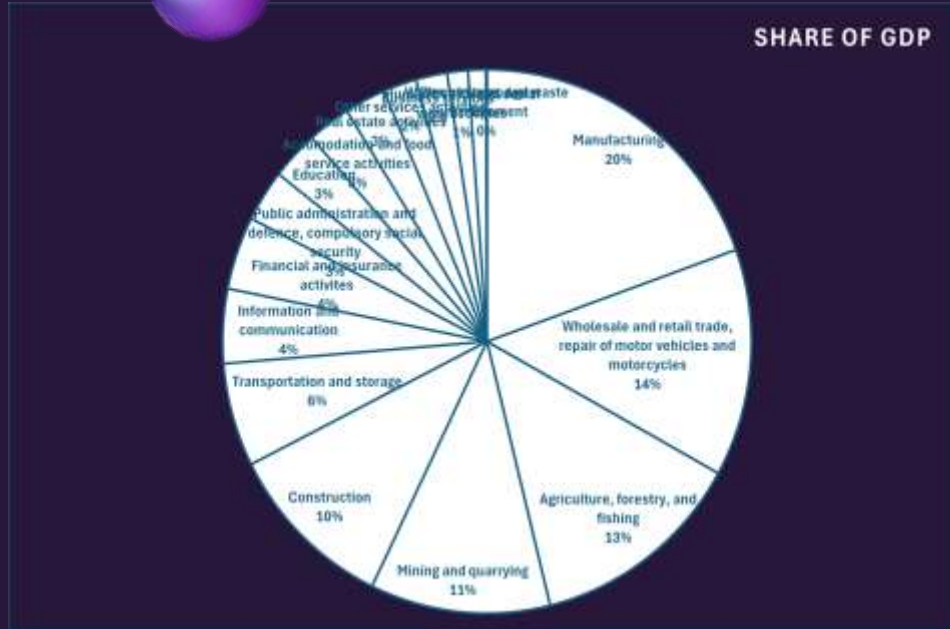
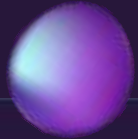


M^xFitrah R



Annisa Ismasyah

Problem Statement



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Agriculture in Indonesia



29.3%

Indonesia's total employment (2022)

77th

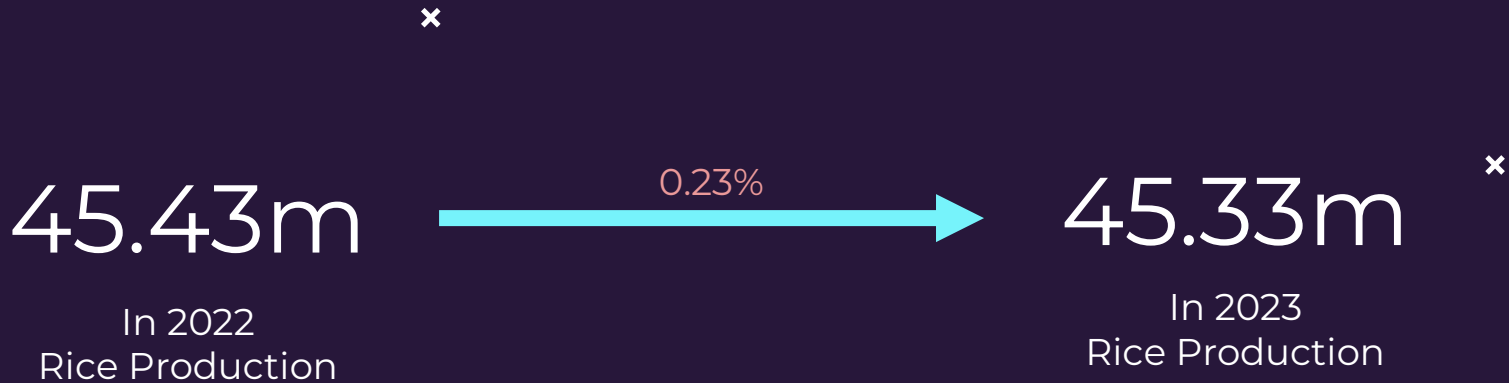
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Ranked in Global Hunger Index (2023)

68/513

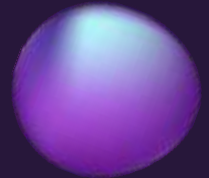
District remained vulnerable to food insecurity (2023)

Impact of Uncertain Weather in Indonesia



In 2023, The Indonesian government announced plans to **import 1 million tonnes of rice** from India to ensure a sufficient supply in **light of the long drought**.

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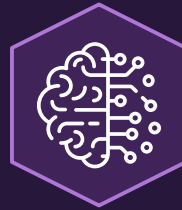


Increasing Agricultural due Climate Change



Proper Irrigation

By using irrigation and water conservation strategies, farmers can protect their crops from the effects of drought and increase their yields.



Accurate Weather Prediction

Smallholder farmers who want to safeguard their crops and increase their yields must rely on accurate weather predictions



Regular Scouting

From the planting stage to harvest time, farmers must regularly inspect crop health to find potential pest threats.

Solution

OUR ASPIRATIONS

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Crop Monitoring and Surveillance

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continuous field monitoring, capturing high-resolution images and data that help identify crop health and create detailed maps of fields



Pest Management

detect early signs of pest infestations and diseases, which are critical for timely intervention. Moreover, it apply pesticides only where needed

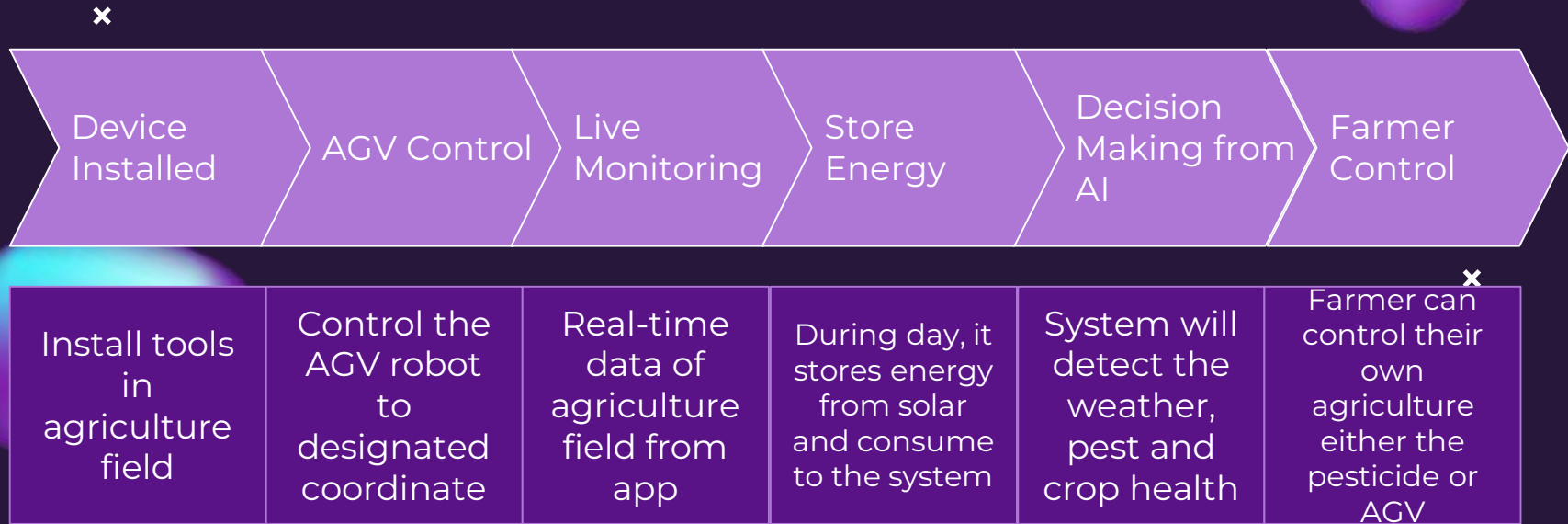
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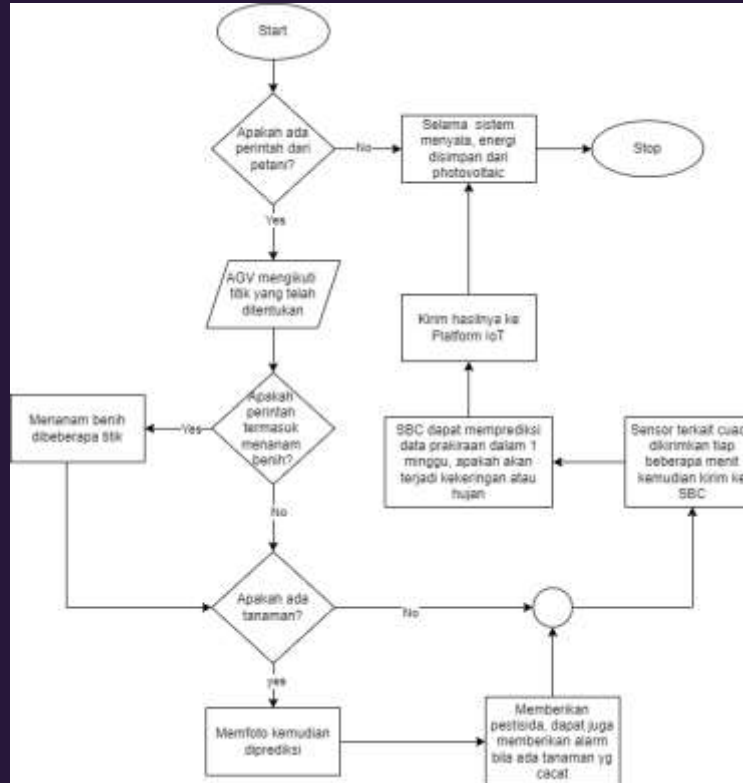
Management of Mites

monitor for specific pests like mites, providing data to apply targeted biological or chemical controls only in areas where they are present.

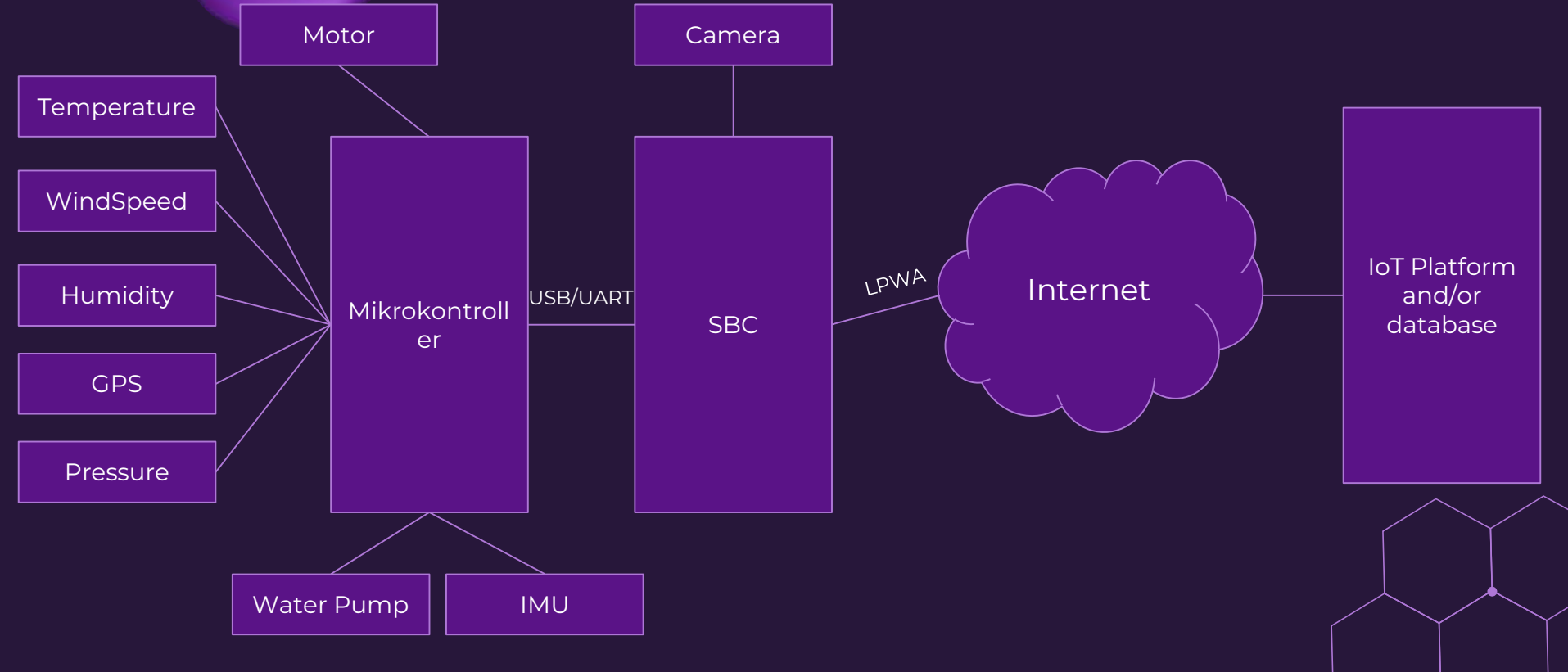
Product Workflow



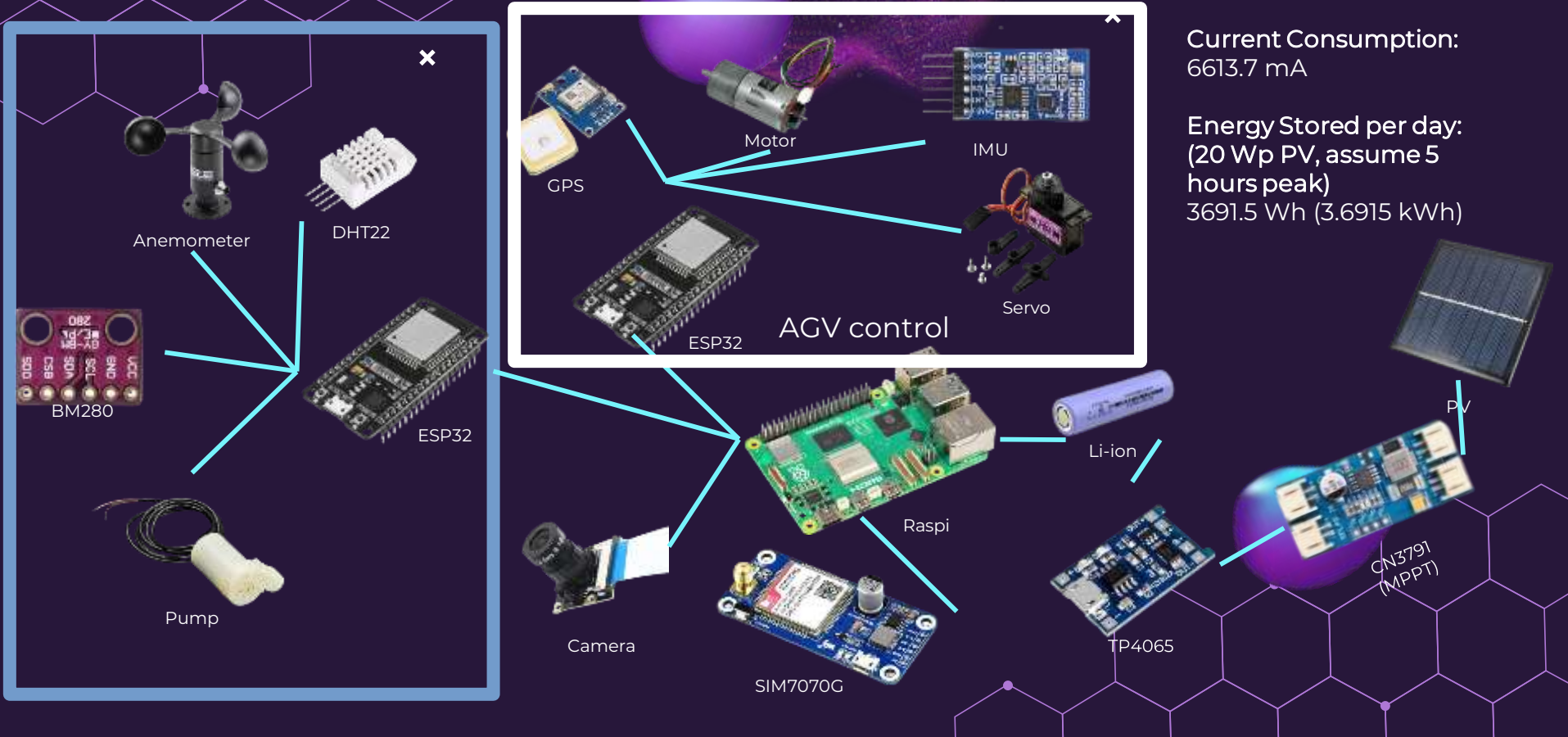
System Workflow and Design



System Architecture

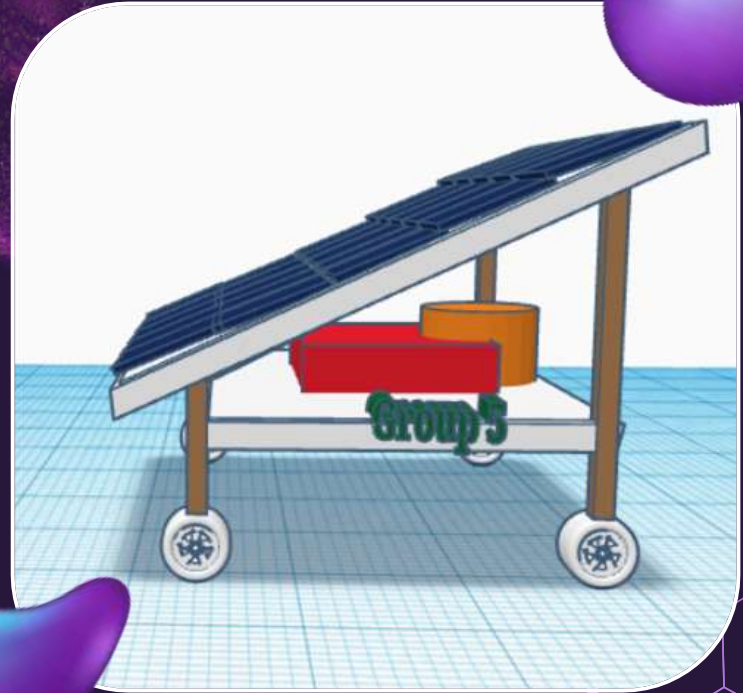


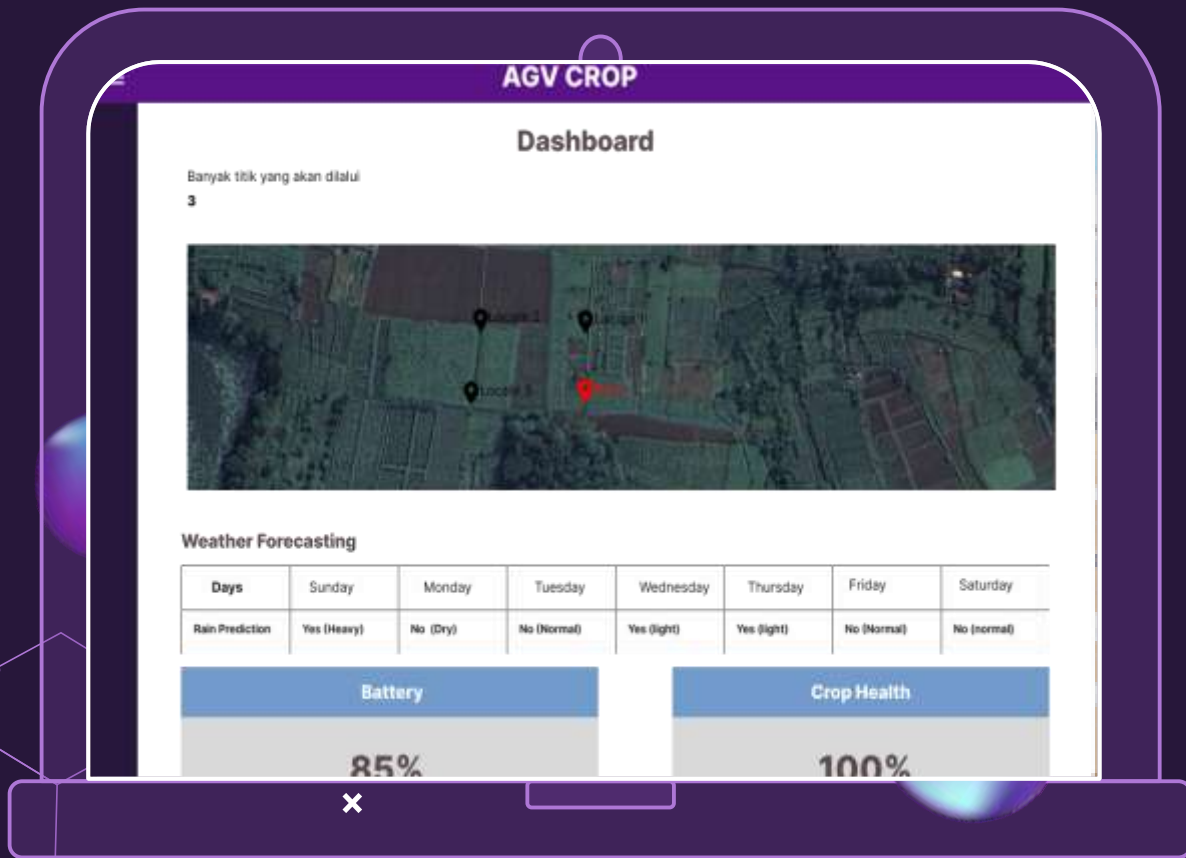
Main Components Block Diagram



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Casing & Mechanical Design





DESKTOP
MOCKUP



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THANKS!

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Reference

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