



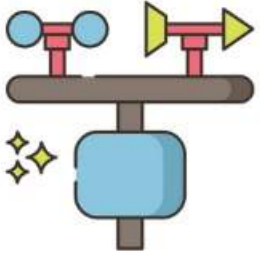
The
Future of
Agriculture
is here

YUKTIX TECHNOLOGIES

Agriculture intelligence

IoT and AI for crop management

December 2021



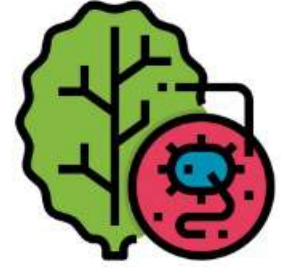
Meso and Micro-Weather



Data for Agronomist



Notifications and Alerts



Disease and pest forecasts



Solar Powered camera



Yuktix® GidaBits



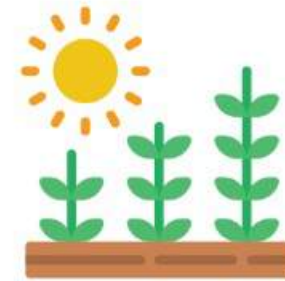
Interactive Visualization



Irrigation advisory



Summary and Report

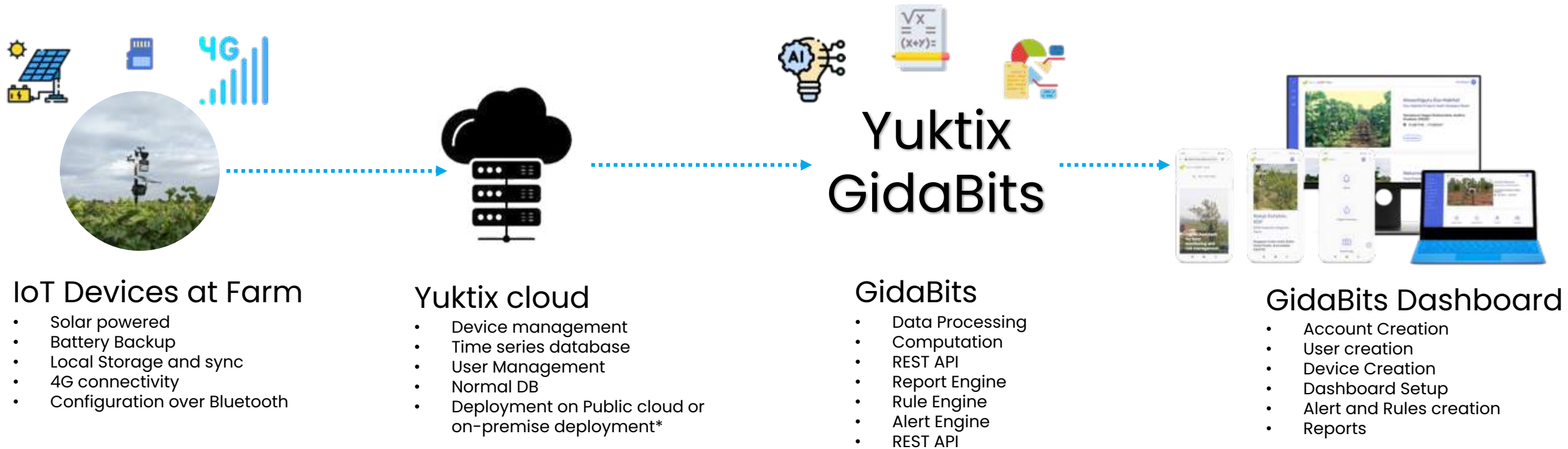


Crop Health Monitoring



NDVI Imaging

Technology – How does it work





Yuktix GidaBits® – Different users



Farmer



Agronomist



Management

Information for Better Production

- Soil Management
- Nutrient Management
- Disease and Insect Forecasting and Management
- Weather Forecast
- Spray Timings
- General Advisory

Singular View Into

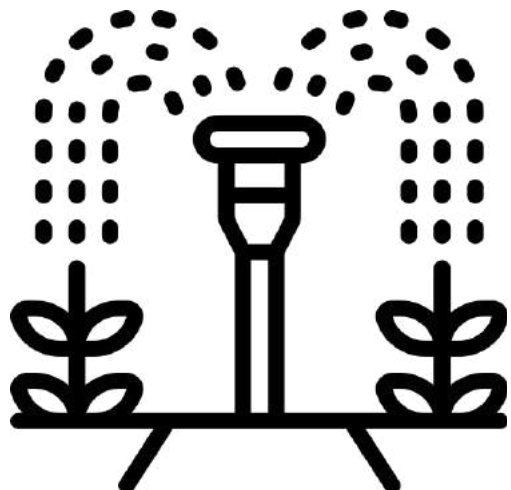
- Multiple Farm
- Interaction with farmers (Video + Audio + Textual)
- Time Savings via access to real time weather information
- Automation (Alert, advisory, image from fields, Reports, actionable insights from the system)
- Add new models (disease and Insects)

Get access to

- Singular view of the plantations
- Know if some action is required in specific plantation – Irrigation, spray
- Monitor the progress of the activities
- Growth of the crop
- Custom reports

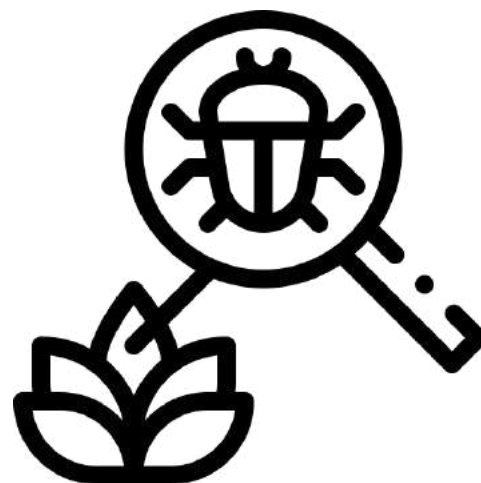






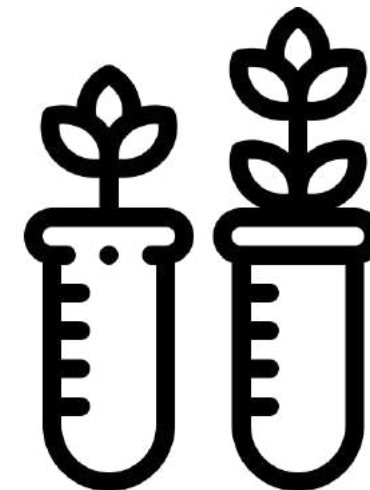
Water and Nutrition Management

- **20–35% reduction in water usage.**
- Irrigation advisory using Water balance equation, ETO, Crop Growth Stage, Sensor Data and Weather Forecast
- Fertigation advisory post leaching.
- Soil Fertilizer advisory based upon Soil testing.



Disease And Insect Forecast

- **20–25% reduction in loss due to insect and disease.**
- Disease and Insect Forecast using Micro-Weather Data captured using devices deployed in the farm / village
- Manual identification of disease and insect via Agronomist
- Advisory based upon the forecast



Agriculture Research Input

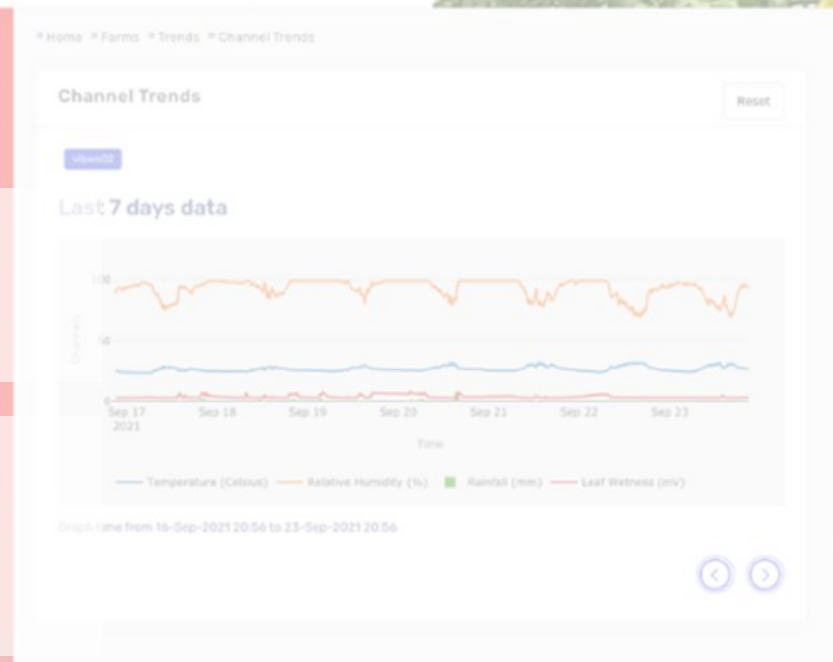
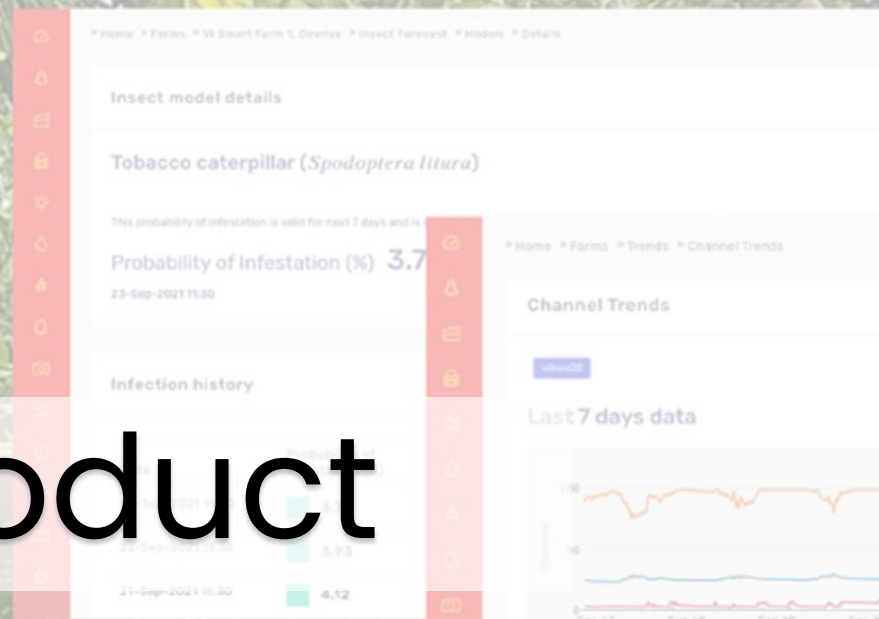
- **Upto 30% increase in production**
- Best Package of Practice for specific crops.
- Access to Agriculture Expert.
- Weather Forecast, General Advisory
- Making Agriculture research institute research available to the Growers.



Product

GidaBits™

An Agri intelligence platform
powered by IoT and AI





GidaBits IoT devices

- low powered devices
- Solar powered with battery backup
- Wireless Communication
 - 4G
 - Sub-Ghz ISM band (865 Mhz)
- Local SD card storage with data synchronization
- Configuration over Bluetooth
- Easy to install, operate and maintain.
- Plug the power and start receiving data on cloud.

Local Networking

- Low powered wireless devices operating at Open ISM band
- Node – Gateway concept
- 100+ devices per gateway
- Wireless range of 2-5 km.
- Solar panel with battery backup – total off-grid
- Deploy 1 sensor / acre and get the most granular data.

Yuktix Cloud (ankiDB) – Data analytics, AI, Report, alerts

Yuktix GreenSense nodes with Soil moisture sensor

Yuktix Solar powered gateway



Yuktix GidaBits app



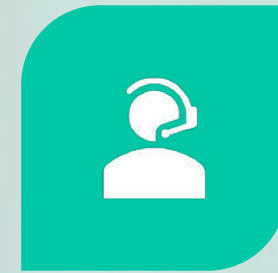
CONTROL APP FEATURES
VIA GIDABITS WEB-
DASHBOARD.



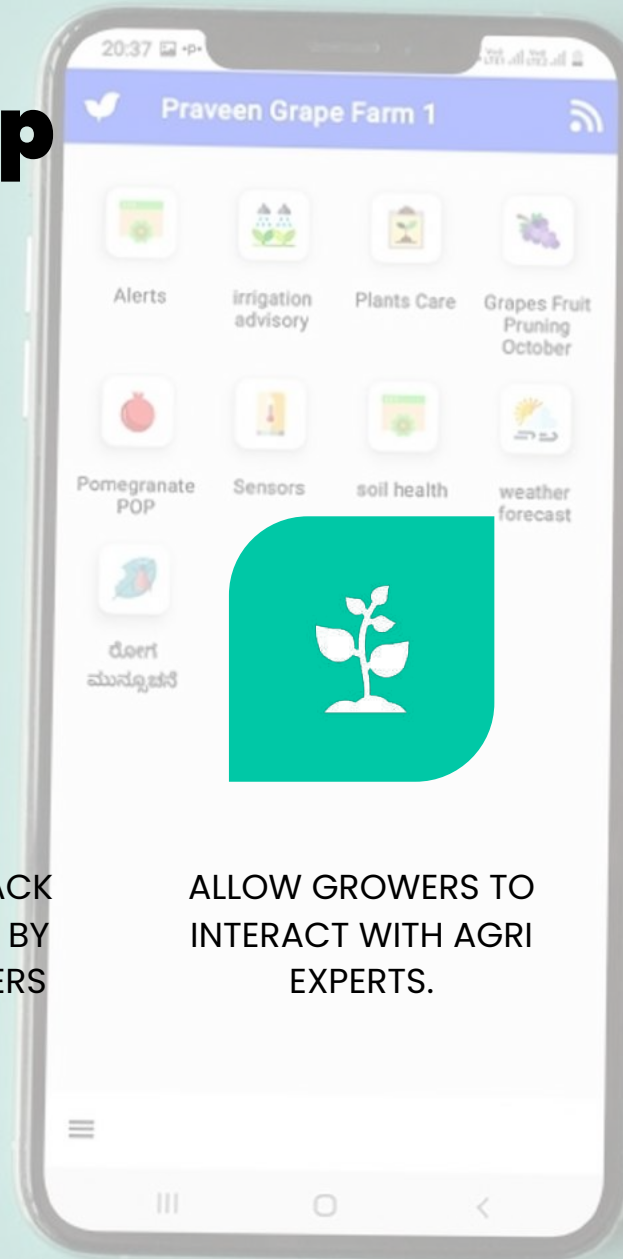
DELIVER POP AND TRACK
THE ACTIVITIES DONE BY
FIELD STAFF / GROWERS



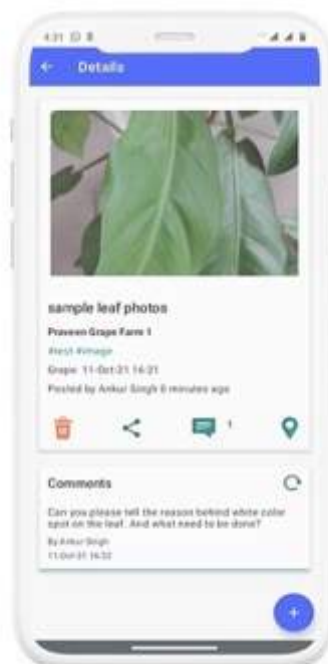
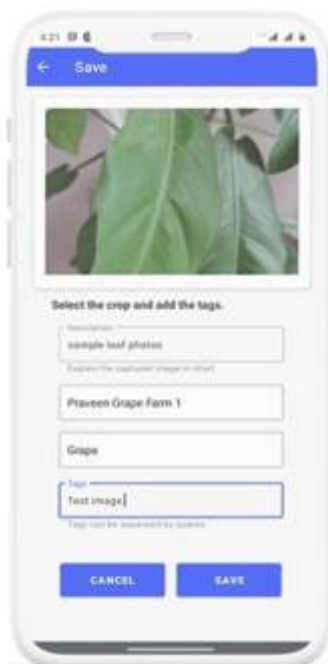
ALLOW GROWERS TO
INTERACT WITH AGRI
EXPERTS.



VERNACULAR LANGUAGE
SUPPORT



GidaBits Smart Phone app – Tool to interact with grower



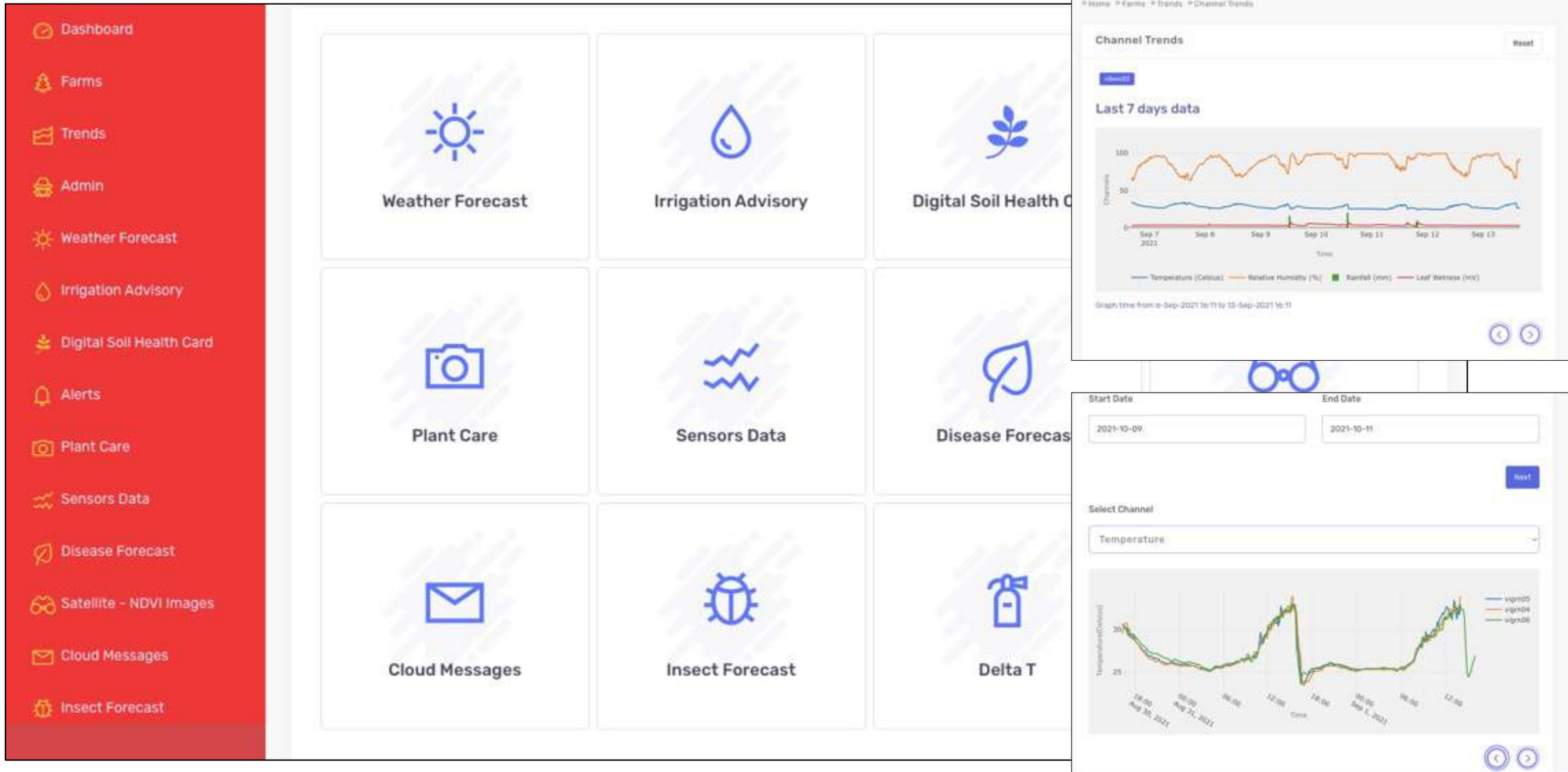
1 Add grower phone number on web-dash-board

2 Control what app grower can access

3 Deliver Weather, Pest, disease, Irrigation, PoP advisories

4 Allow Grower to interact with agriculture expert

GidaBits™ – A tool for effective decision making for growers





VI Smart Farm 1, Devriya
Shri Ramswroop Meena, Devriya

Devriya, Nainwa (Bundi-Rajasthan)

📍 25.688317 , 75.910335

🌡 13.00 💧 87.00

[View](#)



VI Smart Farm 2, Kheruna
Smart Farm, Kheruna

Kheruna, Nainwa (Bundi-Rajasthan)

📍 25.756615 , 75.919206

🌡 19.40 💧 60.00

[View](#)



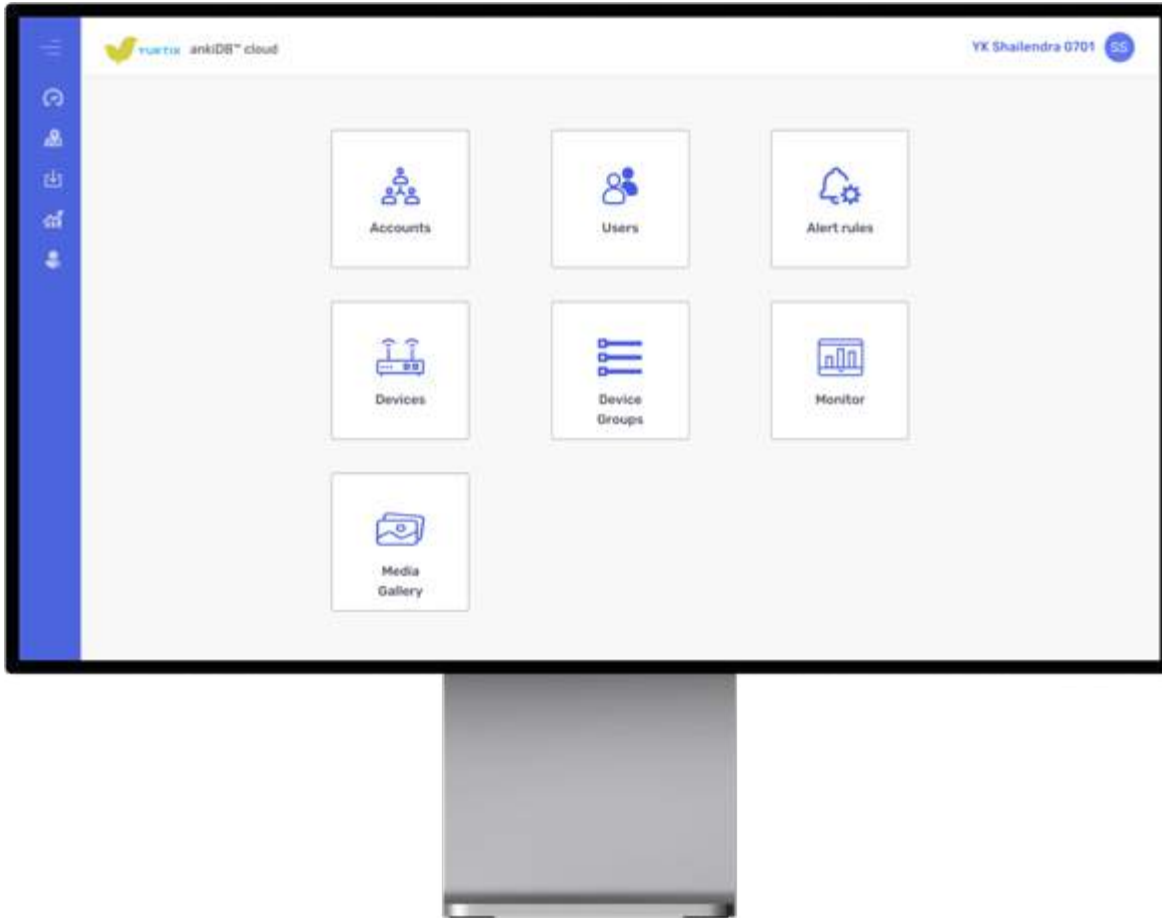
VI Smart Farm 3, Nathdi
Shri Bharatlal Meena , Nathdi

Nathdi, Nainwa (Bundi-Rajasthan)

📍 25.72592 , 75.907735

🌡 20.90 💧 55.00

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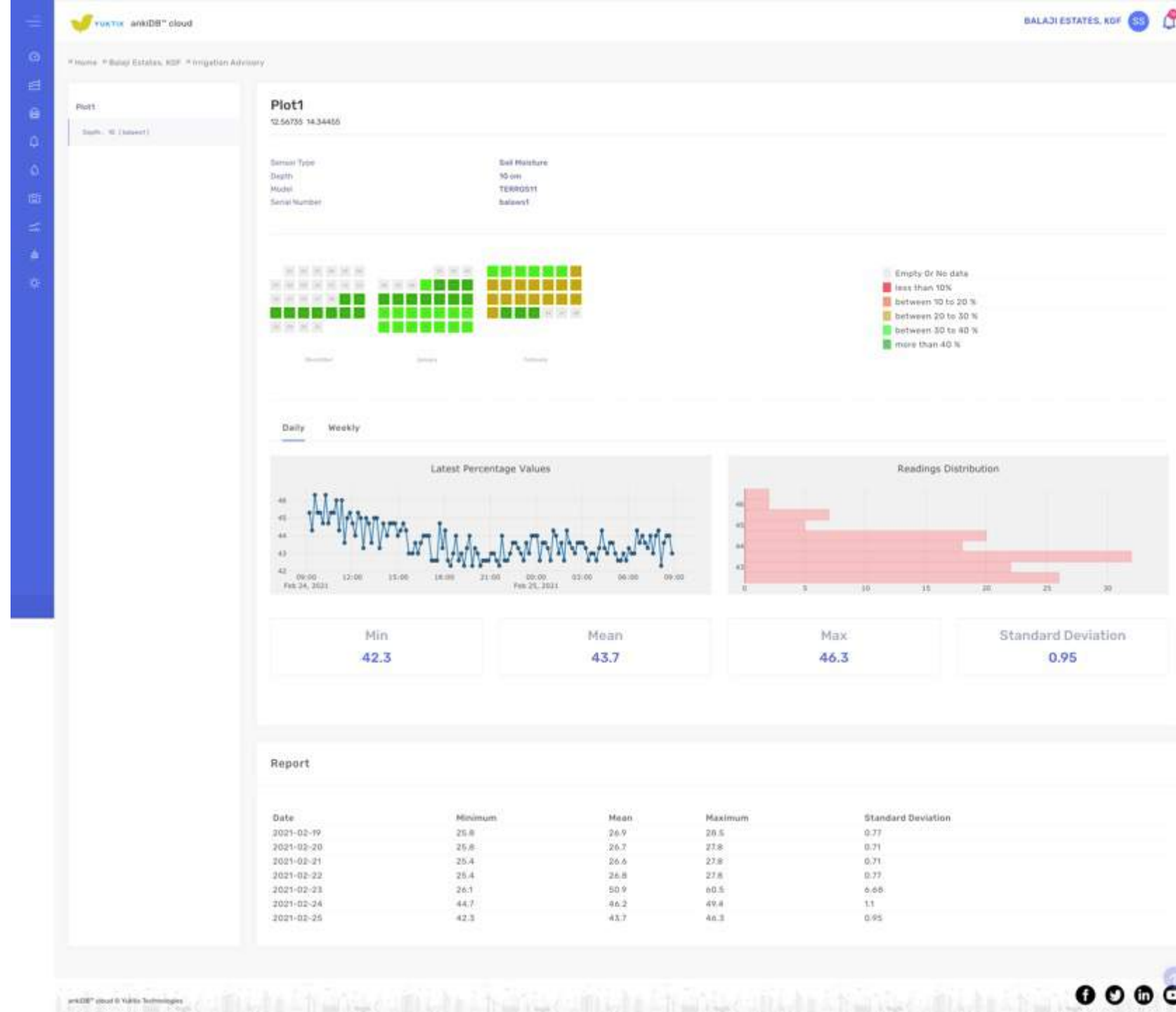


Yuktix GidaBits Cloud

- IoT cloud to manage device, data, user and account
- **REST API**
- **On the go data transformation and computation plugins**
- In-premise and cloud deployments
- Out of box analytics, reporting and alert rule
- Monitor backend process using the dashboard
- Role based access.
- Data download – report and computed
- Data tunneling

Data intelligence

- Image Analysis
- Machine learning algorithms for disease prediction
- Computation engine – provide real time computation over the data.
- Real time processing – consume real time sensor data and update the result.
- Integration in Google big data.

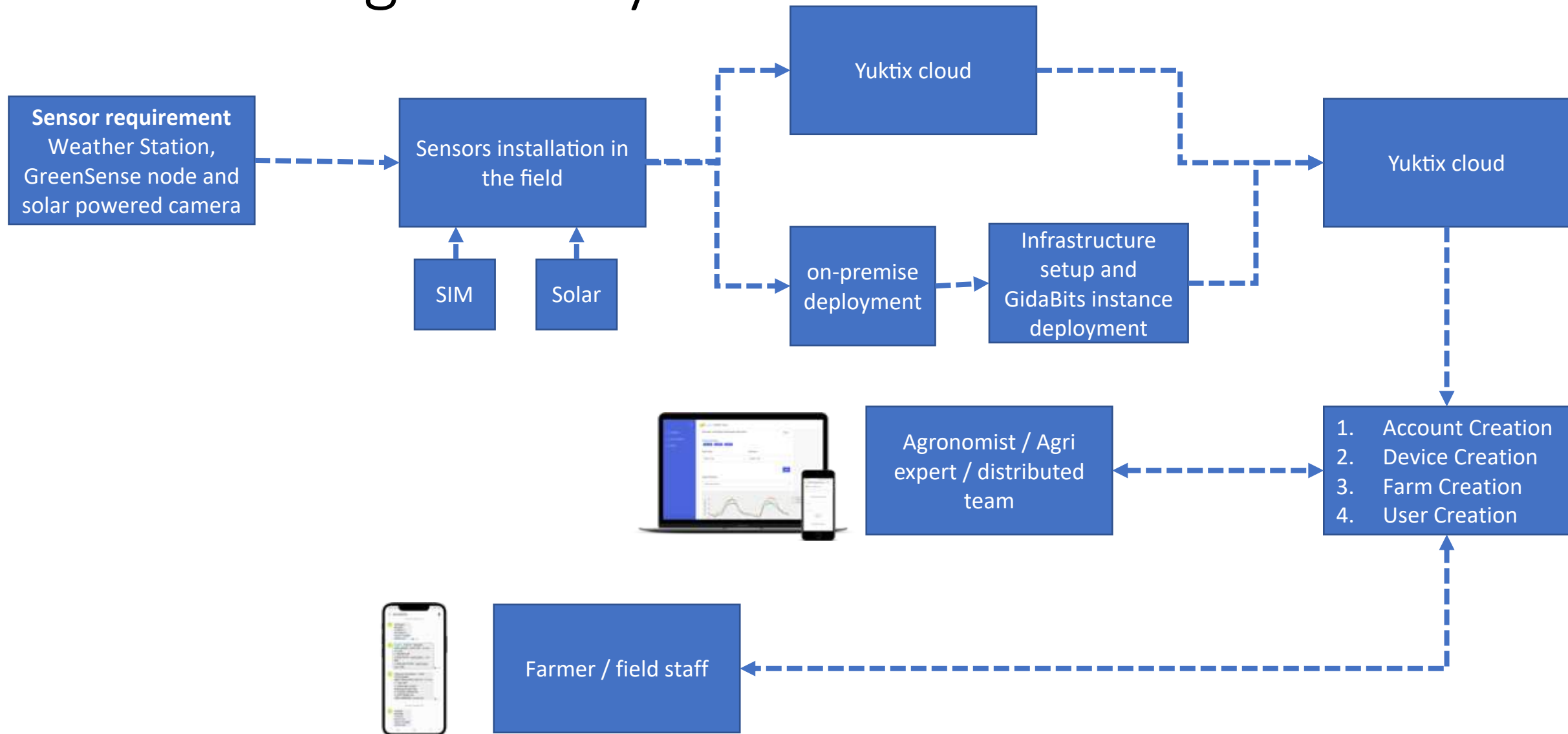




Yuktix advantage

- **Integrated offering** – Single platform for complete crop management. Manage sensors, activities and predictions at one place. A unique man and machine model.
- Plug the power and start receiving data.
- Out of box analytics, reports and alerts.
- Cost of delivery is low compared to competition (hardware IP).
- Extension possibility for R&D institutes and B2B companies (plug your own analytics)
- Digital tool for farmer interaction.
- On-premise deployment.
- Branding Option
- Custom reports and plugins

On-boarding Journey



Customers



Appendix

Case Study - Deployment for Leading telecom company (cont..)



IoT Devices

- Solar Powered with battery backup
- Proprietary Hardware and Firmware.
- Modular Design – different sensor combination and communication options
- Range of Sensors
- Yuktix GidaBits® Weather Station
- Yuktix GidaBits® Sensor Node
- Yuktix GidaBits® Crop View Camera
- Yuktix GidaBits® Insect Trap Camera



IoT Management

- Device Provisioning
- Account, user and farms provisioning
- Monitoring and diagnosing connected devices
- Alert and Report Engine
- Bulk Status of devices
- Local Networking



Cloud Software

- Analytics
- Personalization (App store)
- Farm creation.
- Assigning sensors to farm
- Configuring farms with apps
- Development of new forecasting models (20 Disease and Insect Forecasting Models).
- Reports

Case Study – International seed company

Seed Company

1. Work with Farmer for their seed replication
2. There is no way for them to dispense the PoP Manually
3. There is no way for them to track what farmers is doing apart from going to field.
4. There is no way for them to get the alert like less soil moisture, no fertigation (EC values going below a certain level).
5. No interaction with farmer apart from WhatsApp level

Seed Company now with Yuktix GidaBits

1. Create, edit their own farms. Add users
2. Publish their Own POP, edit them as in when required. Track when activities the user has done
3. Crop view camera to capture the growth of the plants in real time.
4. Sensor – soil EC, Soil VWC and Soil temperature, Sensor – temperature, Humidity and Lux
5. Analytics like irrigation planning, disease forecast
6. Image scouting app for farmers interaction.



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