OPEN TALKS

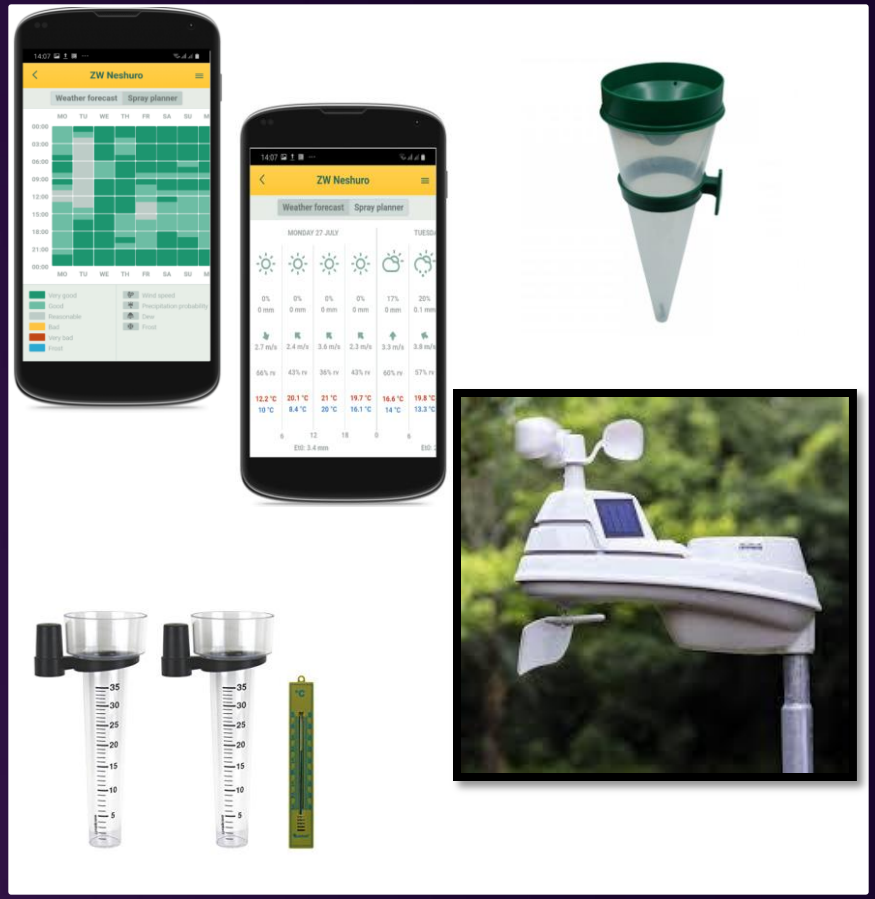
Data Science for International Cooperation: Good practices from the World 2021

Data for Development

01

Agriculture 2.0 – promoting a hi-tech approach to agricultural development in Zimbabwe

Technology vs Rural



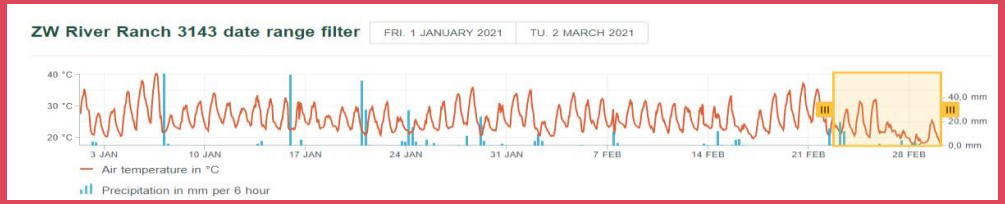
What Data has been collected for the Project?

Automated Data

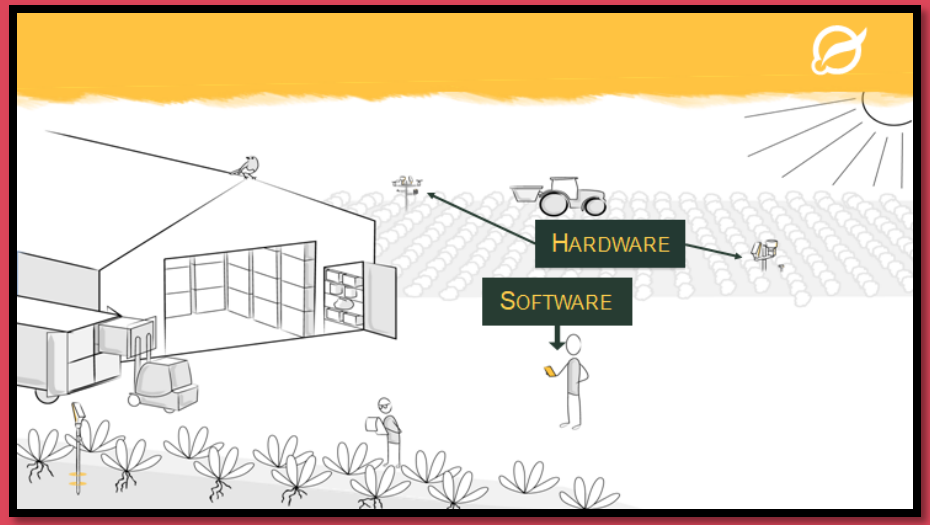
- Hourly Weather Data
- Hourly Irrigation Data
- 10 Day Spray Planner
- 10 Day Weather Forecast for region

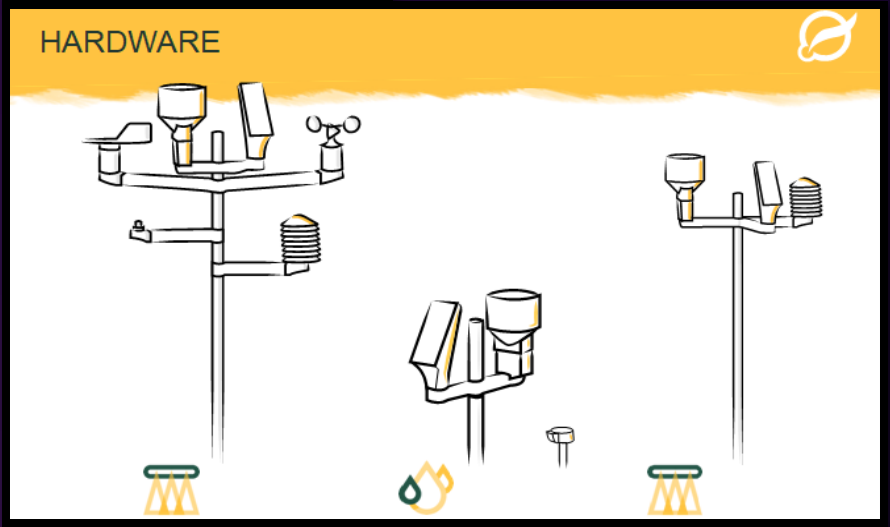
Manual Data

- Soil Analysis Data
- Precipitation
- Temperature data


ZW River Ranch 3143 date range filter
FRI. 1 JANUARY 2021
TU. 2 MARCH 2021
40 °C
30 °C
20 °C
40,0 mm
20,0 mm
0,0 mm
3 JAN
10 JAN
17 JAN
24 JAN
31 JAN
7 FEB
14 FEB
21 FEB
28 FEB
Air temperature in °C
Precipitation in mm per 6 hour

Weather data development
MON. 22 FEBRUARY 2021
TU. 2 MARCH 2021
Export
40 °C
35 °C
30 °C
25 °C
20 °C
TU 23
WED 24
TH 25
FRI 26
SAT 27
28 FEB
MAR
TU 2
Air temperature in °C
100%
80%
60%
40%
400 J/cm²
300 J/cm²
200 J/cm²
100 J/cm²
0 J/cm2
Radiation in joule per square centimetres per 1 hour
Relative humidity development
6,0 mm
4,0 mm
2,0 mm
0,0 mm
MON 22
Precipitation in mm per 1 hour


HARDWARE
SOFTWARE



How is the Data collected?

Manual Data

- Soil Data is collected in the field through soil sampling for analysis in the Lab
- Precipitation and Temperature are recorded at Schools and selected points

Automatic Data

- Satellite imagery
- Automatic Weather stations
- Soil Moisture sensors

How is the Data collected?

Application Data

- Individual users searching and/or contributing
- Traders/input suppliers/buyers searching and/or contributing
- Companies/Market Traders

How is the Data conveyed to Stakeholders

01

USSD

Text or SMS based information. Basic information such as weather and irrigation forecasts.

02

WEB BASED

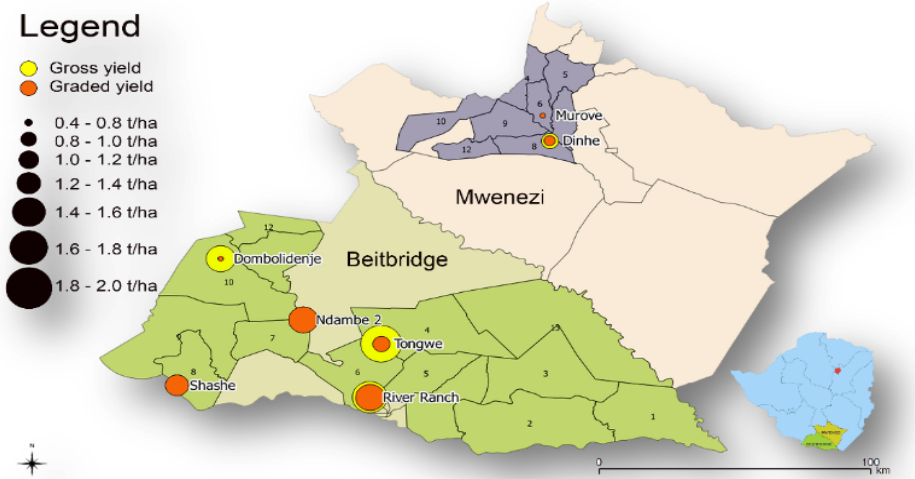
Simple and practical web based platform for easy access.

03

MAIN APP

In-depth and interactive information via multimedia platform

How is data conveyed to the Stakeholders



- All data presented online in a simple and practical format
- Data then used in various means and format

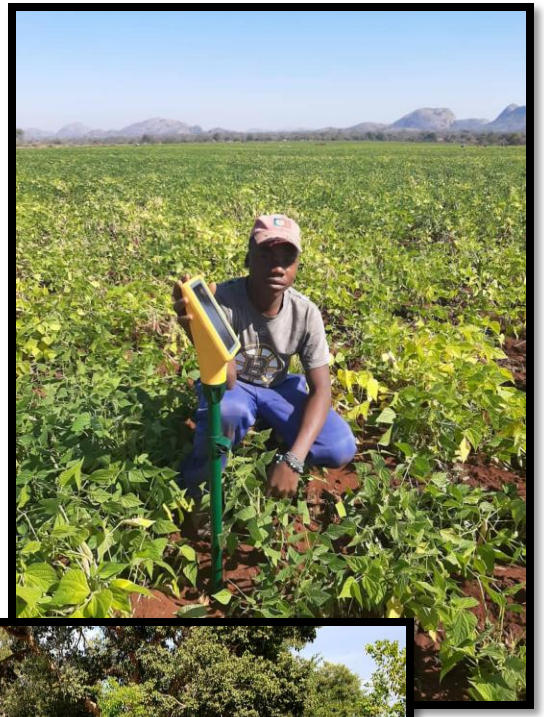
Important issues

- Educating and training of key stakeholders on the use of the equipment.
- Irrigation schemes utilise tablets
- District stakeholders access data
- In close liaison with the Weather and climate information centre (District level)

Training

Workshops

INNOVAZIONE PER LO SVILUPPO

How do Farmers use the Data to improve production capacity?

- Applying the correct amount of water at the right time(huge water saving)
- Forecast on natural calamities that can damage crops in their vicinity e.g. frost, floods and wind
- Correct spray timing (efficacy in chemical efficiency)
- More crop for every drop
- Disease warnings
- Planting advice
- Insurance issues with contractors
- Global gap accredited for export potential