

Data Driven Agriculture - Empowering Smallholders via Technology



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Data in Ag?

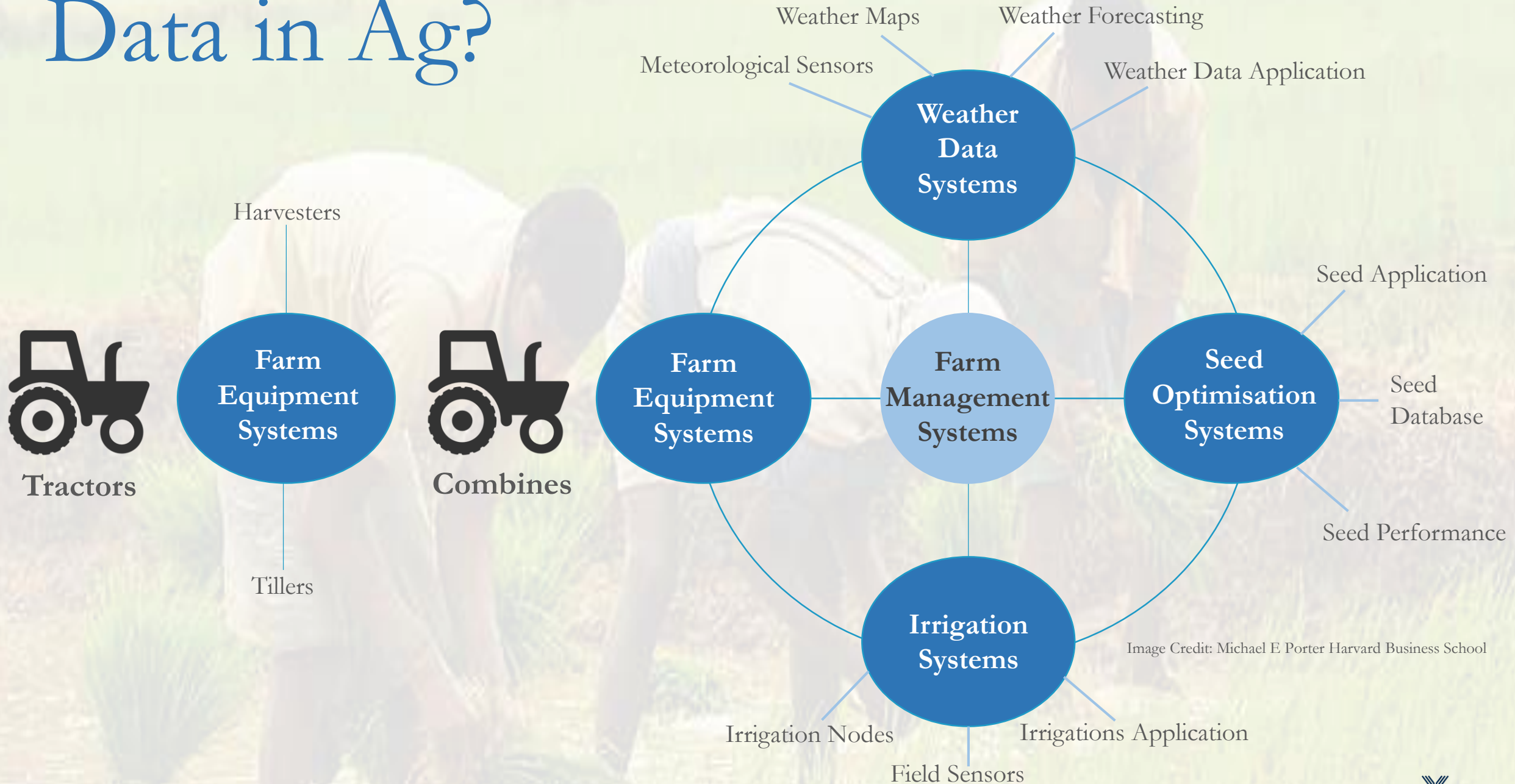


Image Credit: Michael E Porter Harvard Business School

Weather/Field Data Acquisition?



Drones

Area of application :

- High resolution
- Small localized survey
- Independent of Clouds (Monsoon season)
- Crop health (biomass production, NDVI)
- Soil moisture (topsoil)
- Asset monitoring

Area of application :

- Accurate microclimatic data and information
- All meteorological parameters measured
- Multiple depth soil moisture
- Easy to combine with models
- Continuous real time measurements
- Historical record keeping



Field Sensors



Satellites

Area of application :

- Resolution suited for regional and nation level
- Crop health (biomass production, NDVI)
- Soil moisture (topsoil)
- Water balance calculation

Services From Agro-Meteo Network



Weather Monitoring

Monitor environmental parameters, such as precipitation, air temperature, leaf wetness, solar radiation and more.



Crop Health Management

Disease modelling, insect monitoring, frost warning, field scouting and more.



Weather Forecasting

High precision, localized weather forecast calibrated with on-site data in collaboration with our Swiss partner Meteoblue.



Nutrition Management

Use your lab-on-a-chip to know exactly what your crop needs and optimize fertilizer use



Water Management

Improve water management by closely monitoring the status of your crop in the field.



Logistics Resource Management

Avoid empty tanks, monitor storage, plan farm logistics and manage labour.

What is Agro-Meteo Network?

 GPRS, EDGE, HSDPA,
CDMA, UMTS, 3G,4G

  Bluetooth®

  LoRa®



Field Stations




Data Centres

Government, Research and Development



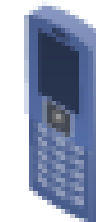
Nearly all government agencies depend on accurate and granular weather information for policy planning and operations. The R&D community will vastly improve research output with more accurate data.

Farming Corporates, Industry Partners



Large farming corporates are already existing customers. This model enables them to free up capital for more specialised equipment. Whole new industries like 'crop insurance' will emerge.

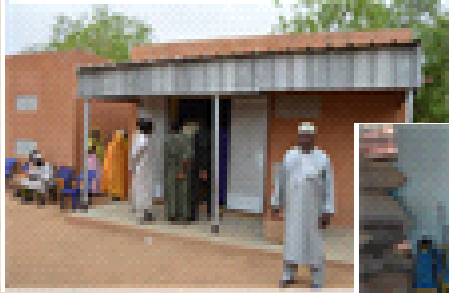
Smallholder Farmers, SME's



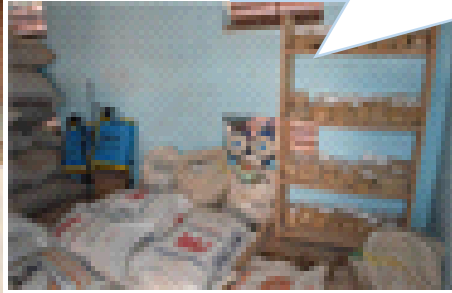
Smallholders whom previously are unable to access localised environmental data will now be able to improve their operational climate resilience. This is not limited to only farming, but any outdoor operations (sports, construction, etc)

Network of field devices installed to generate highly granular environmental data. Data acquisition and transmission is fully autonomous. From data centre – data is funnelled to the correct client via web interface or API's.

Smallholder Participation - Niger



Farmer registration at relevant Outlets (ie Fertilizer shops): to connect the agro-meteo information to farmers location and crop types



Farmers only needs to read simple instructions and alerts for only crop they grow in basic phone



**Cloud Based Network:
GPRS and 3G**



Agro-meteorological, Real time Pest, Crop status pictures: Solar powered on-site sensors installed and maintained by local distributor automatically transmit data so farmer do not need to type any inputs

Government/Local associations/NGOs have access to reports and data via Web

The Pilot Project in Buguais



KEY ACTIONS



METOS monitoring systems installed in the municipality of Buguais



Community fora for exchange of best practices



Localized mobile application and web interface for information delivery



Business model for project sustainability



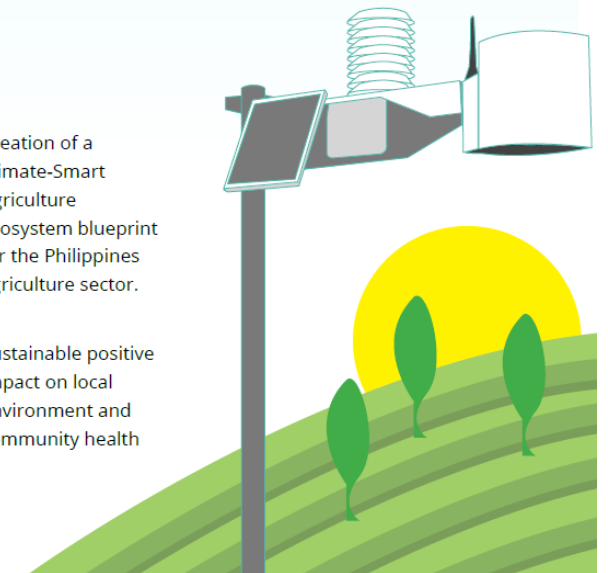
Training materials/ operation manual in local language



Case Study documentation

EXPECTED OUTCOMES

1. Reduction in usage of agricultural inputs (fertilizer, pesticides, water, etc) and improvement in farm yields.
2. Exposure to new farming methods driven by Climate-Smart concepts for local farmers, academic institutes, research institutes, etc.
3. Introduction of new skills training program for maintenance technicians and agricultural data scientists.
4. Creation of a Climate-Smart Agriculture ecosystem blueprint for the Philippines agriculture sector.
5. Sustainable positive impact on local environment and community health



Our Commitment to Data Drive Agriculture

Full integration of GEOSYS Platform via API
Satellite imaging (Optical/Radar)
Global Crop Forecasting (Health/Yield/Price)
Global Climate Monitoring

Local Ground Weather Monitoring (iMeteoPro+)
Local Weather Forecasting (radius 3 km)
Resource Planning – Work Planning
Plant Disease Risk Modelling

Plant Monitoring (CropView)
Insect Monitoring (iScout)

Soil Moisture Monitoring
Moisture Modelling
Irrigation Management

Fertility Monitoring (Fertimetro)
On Farm Rapid Soil Analyses (Metos NPK)





Thank You

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