

SMP Agro-meteo services for farmers in Africa

Wageningen University & Research, Weather Impact

Hendrik Boogaard & Fiona van der Burgt, 10 December 2020



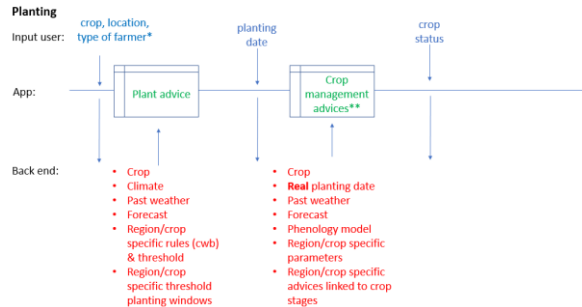
Aim SMP

- Possibilities to scale up agro-meteo services to larger regions following business and institutional models, assuring sustained and affordable services for local stakeholders in the agro sector
- So beyond projects

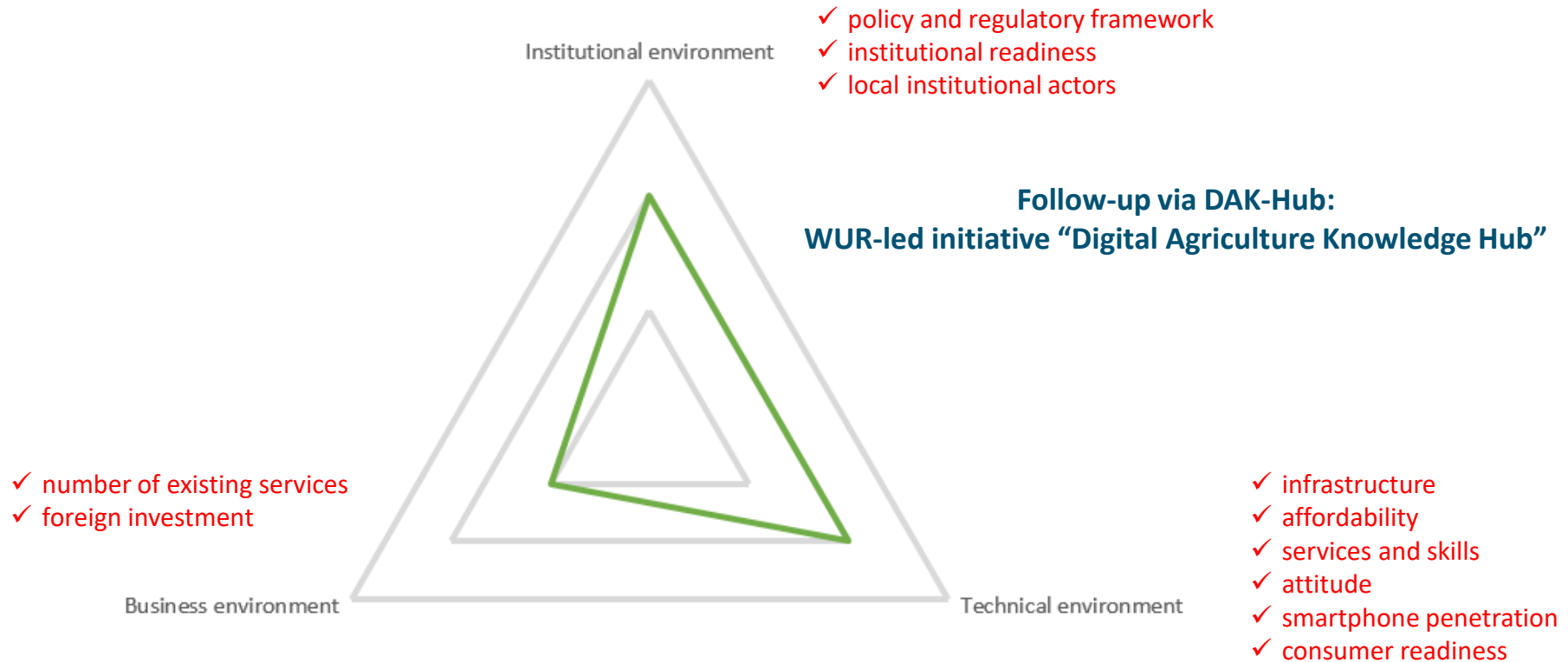


Action: scalability of agro-meteo services

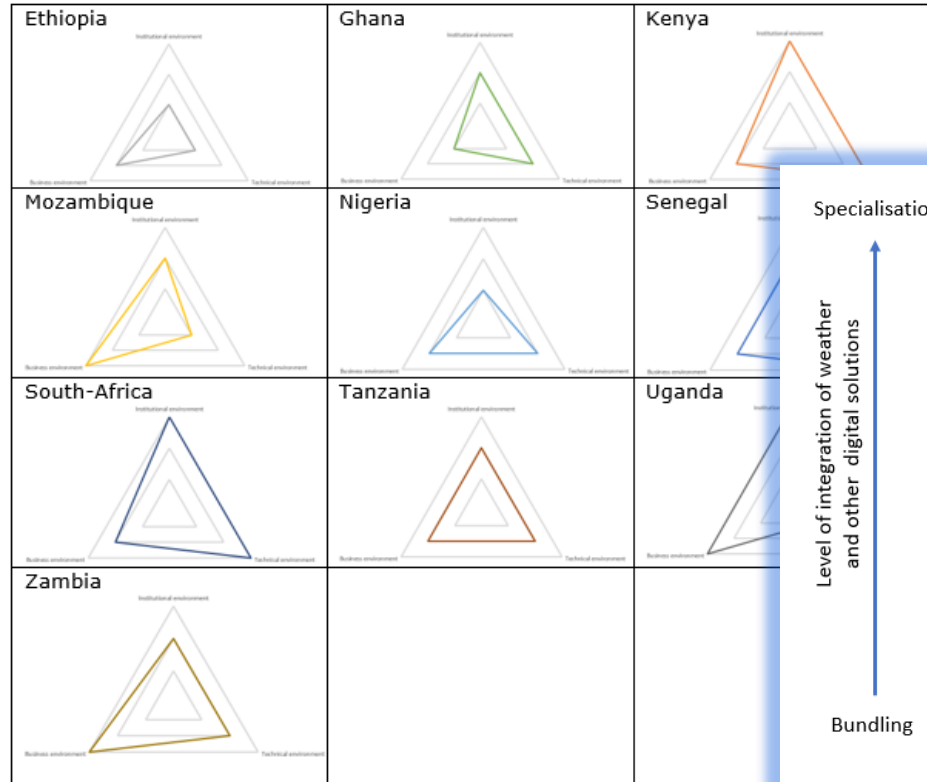
Scalability in terms of involvement of local partners (PPP), smart phone use, local data and also considering functionality and technique



Action: scoping countries for services



Action: scoping countries for services

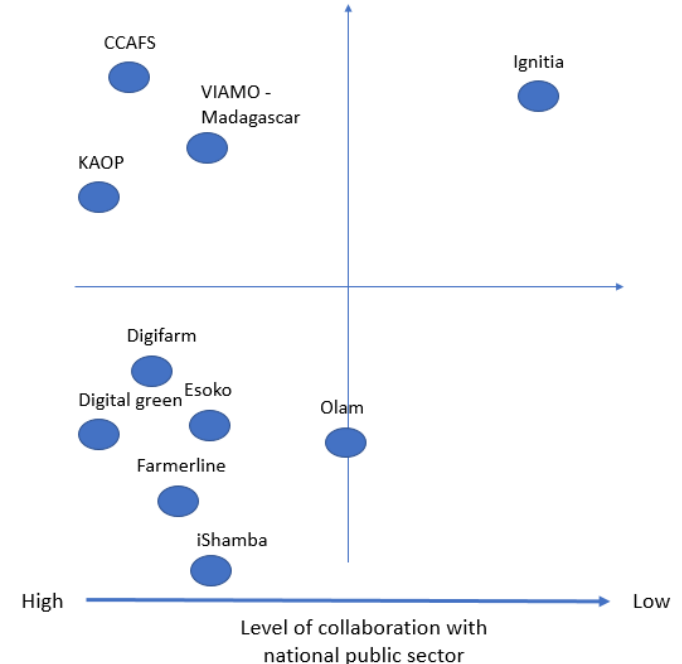


**Afrika
Strategie
Nederlands
bedrijfsleven**

Specialisation

Level of integration of weather
and other digital solutions

Bundling

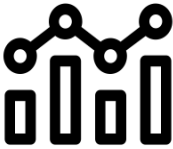


Possible partnership



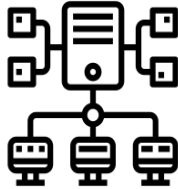
Knowledge provider

- Research institutes, universities, ...



Data provider

- NMHS
- Remote sensing companies
- ...



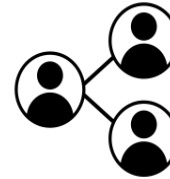
Platform provider

- Ag-tech companies
- Cloud solutions
- Mobile Network Operator
- ...



Service provider

- Ag-tech companies
- Input suppliers
- Weather companies
- App developers
- ...



Farmer connector

- Extension networks
- Local resellers
- NGO's
- ...



End-user

- Farmers
- Cooperatives
- ...

Co-operation between former G4AW projects

- The G4AW program has developed many meaning/impact full services, yet few projects have resulted in a sustainable business
- Initiative from Auxfin and Weather Impact on a on how a cross fertilization between different projects in East Africa can result in a better service portfolio and sustainable service provision
- Focus on last-mile implementation in East Africa

AUXFIN

Weather Impact

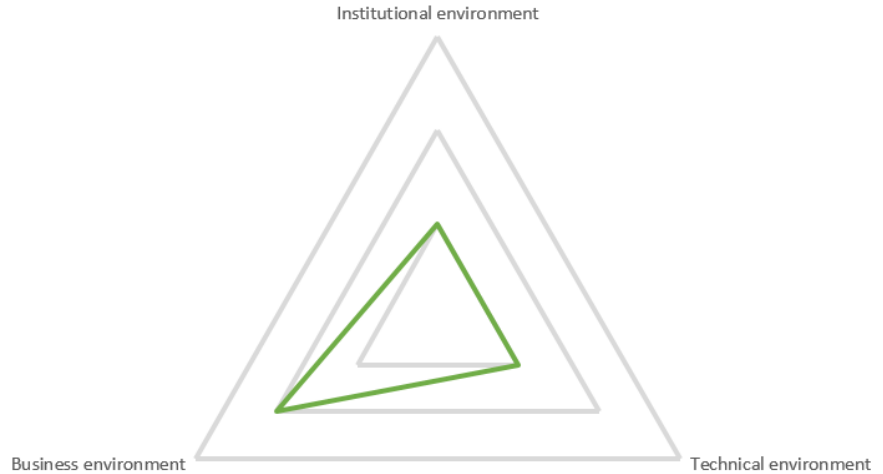


HydroLogic



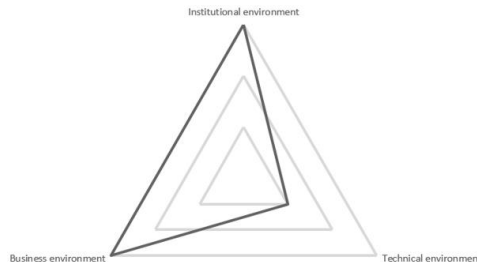
Scale-up Ethiopia

- Demonstration of agro-meteorological services is operational
- Invested in relationships and network;
Good network with institutions
- Ready to scale-up and bundle with other services (financial, platforms)



Potatoes Uganda

- Uganda good institutional & business environment
- Potato important food crop
- Dutch seed potatoes sector active in introducing new varieties (productive, resistant against pest/diseases)
- WUR studied climate change adaptation in potato production
- Holland Innovative Potato (HIP)



HZPC, AGRICO, Den Hartigh, Danespo, STET, Meijer with local government

Pootgoedbedrijven versterken Ugandese aardappelsector

De vraag naar aardappelen in Uganda groeit sterk. Dat is het gevolg van de groei van de stedelijke bevolking en het veranderende consumptiepatroon. Echter, de aardappelproductie per hectare is erg laag. Nederlandse pootgoedbedrijven introduceren nieuwe variëteiten. Met deze rassen gaat de productie fors omhoog.



Oogst aardappelen op proefvelden

De stijgende welvaart in de steden van Uganda resulteert in een toename van de consumptie van frites en chips. Dit komt mede door het groeiende aantal restaurants en fastfood-kiosken.

Ondanks het marktpotentieel van aardappelen is de opbrengst laag: circa 7 ton per hectare. De inschatting is dat een productie van 25 ton per hectare mogelijk is. Door gebruik van kwalitatief slechte en zieke pootaardappelen, maar ook slechte agrarische praktijken, is verhoging van de productie een forse uitdaging.

Adaption strategies (examples)	Factors hindering uptake or implementation of adaptation strategies (examples)	What can be done? Potential Business cases
- use of drought tolerant/resistant varieties, appropriate climate information for timely planting, - use of early maturing varieties, soil/water conservation and conservation farming - use of weather forecasts for timely planting	- lack of appropriate climate, information, affordable sources of finance to invest in climate smart infrastructure, - insufficient sources of improved seed, unreliable input sources.	- supplementary water for production (irrigation), agro-input supply, - seed supply, - value addition to prolong potato shelf life, - climate information services and soil testing services.

Financing

- Sustainable revenue models:
 - Further scale-up of services
 - Partnerships for bundled services
- Additional funding to develop business cases:
 - Donor/project:
 - PPP
 - Topsector
 - Gates grand challenges
 - RVO-SDGP -> open?
 - Investors:
 - Private partner in the lead
 - E.g. impact investors
 - G4AW pitch fest

Conclusions & recommendations

- We now have a better understanding of:
 - Current agro-meteo services and trends in SSA
 - Market for agro-meteo services in SSA
 - Note: market for digital services for small-scale farmers is under development; sustainable business models have not yet matured
- We developed concrete ideas on next-steps
- Exploring possible PPP (no single partner solution)
 - Aspects: bundling services, partner roles, business models (custom country approach), funding...
- Need to better understand and monitor the impact at farm level

References

- New vision for Weather and Climate Services in Africa, UNDP (2016)
- WMO Country Profile Database Portal <https://cpdb.wmo.int/>
- EBA report <https://eba.worldbank.org/>.
- Usher et al., (2018). Climate Information Services Market Assessment and Business Model Review, USAID-supported Assessing Sustainability and Effectiveness of Climate Information Services in Africa project.
- CTA, 2019. The digitalisation of African agriculture report 2018–2019.
- CTA, 2019. Business models and key success drivers of agtech start-ups.
- MercyCorp initiatives see [Digital-Precision-CaseStudy](#) and [Agrifin-Ethiopia](#)
- [Internet World Stats](#), Internet Users Statistics for Africa
- [GSMA](#)
- Media (Deutsche Welle, China Global Television Network, Freedom House, New York Times, Washington Post, Quartz Africa, World Economic Forum,)
- [Deloitte](#), 2016, The economic impact of disruptions to Internet connectivity - A report for Facebook
- The [Alliance](#) for Affordable Internet
- [Internet Sans Frontières](#)
- WRI coordinated initiative on digital climate advisory (attended webinar “Climate-Smart Digital Advisory Services – Getting to Scale”, also Stewart Collis of the BMGF and Daniele Tricarico of GMSA were there)
- [CGIAR-CCAFS](#)
- [CGIAR-big data platform](#)
- [GODAN](#)
- Capterra: www.capterra.com/farm-management-software
- Vaughan et al., (2019). Evaluating agricultural weather and climate services in Africa: Evidence, methods, and a learning agenda