



## AGRF 2016 – CROSS CUTTING WORKING SESSION REPORT

Day 5 - Friday, September 9

11:00- 12:30pm

Cross Cutting Working Sessions

Data Revolution

### SESSION BRIEF

**Context:** Over the past decade mobile telephone penetration in Africa has significantly increased. Along with this coverage, innovation in how ICT can be used as a constructive tool in many sectors – including agriculture – has helped fuel a mobile and data revolution on the continent. The emergence of “smart” feature or basic phones has further expanded penetration and ushered in an era of Big Data - and the use of cell phones as indispensable tools for banking and finance, market analysis, weather forecasting, procurement and supply chain management. For smallholder farmers, these trends have increasingly helped change the way that they operate – and helped them move into the era of “doing business” through agriculture. However, there are nowadays so many ICT tools and applications for the agricultural sector that a critical look needs to be taken at the relevance of these solutions with a special focus on digital platforms that seek to capture comprehensive farmer data with the intention to 'monetize' this data as a key source of revenue for the company.

**Session Objectives:** The session sought to understand when and how digital platforms can be relevant to smallholder farmers and to identify do's and don'ts when establishing platforms for smallholder farmers.

#### Key Issues/ Questions:

- What problems do platforms like DFAP and e-Granary try to address by collecting data? What is the main usage of the data collected
- Who collects and owns the data captured in the platforms? With what intention?
- How are data protected and how do farmers know that the data are being used to their benefit?
- Is it possible to standardize the data to be collected? How do you balance between research and commercial objectives?
- How do we deal with 'Farmer Fatigue' and mistrust with so many ICT4Ag solutions collecting data from farmers to provide 'solutions'?

#### Outcome Desired:

- Share key lessons learned from selected programs that are on-going across Africa aimed at promoting Digital Platforms to improve services delivery to the agricultural sector including smallholder farmers?
- Understand how digital platforms can serve farmers and respect data privacy while being relevant for improved service delivery to the agricultural sector?

**Organizer:** AGRF



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Name	Picture	Discussion
<p>Mr. Benedict Kanu, Lead Agricultural Expert, African Development Bank (AfDB)</p> <p>Role: Moderator</p>		<p>Mr. Benedict Kanu of the African Development Bank served as the moderator of this session and opened the discussion by providing the audience with a brief introduction of himself and the AfDB and a brief explanation of what “digital revolution” is all about.</p> <p>In calling upon his panelists to prepare for their presentations, he insisted that they keep top of mind the fact that the solutions we put forth from an ICT technology stand point must make sense and be relevant to the needs of farmers – who are the adapters and clients that we need to embrace the technology to achieve agricultural transformation and a green revolution in Africa.</p>
<p>Ms. Sara Menker, Founder and CEO, Gro-Intelligence</p> <p>Role: Setting the Stage</p>		<p>Ms. Sara Menker helped Set the Stage for this discussion by introducing her company, Gro Intelligence Technology. Gro Intelligence uses Big Data to promote global food security. Specifically, they develop products that serve as risk management tools resulting in better access to capital and higher productivity for agriculture.</p> <p>Ms. Menker stressed that the focus of furthering African agriculture transformation simply through the use of mechanized technology was akin to pursuing the same route as that which was followed by the US in 1930’s. She said that it would be impossible to succeed by simply adopting the technology, techniques and mindset used decades ago because the realities of today are quite different.</p> <p>Issues such as climate change and food nutrition are a huge concern and governments and the private sectors need to make sure that their investments are being made in the right place and for the right cause.</p> <p>She also mentioned that she was concerned that Sub Saharan Africa was not putting adequate investment and focus on research and technology. There are, she noted, solutions that the continent can adopt that would accelerate agricultural development but which require more analysis and emphasis at country levels of soil types, climate change impact (current and projected), crop optimization, and productive yield forecasting.</p>



## AGRF 2016 – CROSS CUTTING WORKING SESSION REPORT

<p>Mr. Ismael Sunga, CEO, Southern Africa Confederation of Agricultural Unions (SACAU)</p> <p><b>Role:</b> A Farmer's Experience</p>		<p>Mr. Ismael Sunga of SACAU provided another pre-panel intervention to share a bit about his organization and to discuss the importance of ICT in agriculture. In his view, ICT can help small holder farmers deal better with issues such as access to information, ad their relative fragmentation and isolation in rural areas, which is still a huge problem in the continent.</p> <p>He said that being able to aggregate purchasing power for inputs, aggregate output to secure better pricing, and leverage telephony access to send and receive money are but some of the ways that ICT has been revolutionizing how small holder farmers participate in Africa's agricultural markets and value chains. Accessing market prices and even extension services through ICT has helped farmers better understand where the market is in terms of pricing and demand, climate change, distribution etc.</p> <p>Mr. Sunga also shared with the audience information about SACAU's initiative where digital technology is being used to provide needed information to members. He further stressed that farmers' organizations had a duty to develop and try out new digital technologies for their members to remain relevant and optimally useful to the farmers.</p> <p>He added that the power of information was becoming a crucial source of competitiveness and a core aspect of investment decisions and strategic planning - about what and how to produce, in what quantities, at what cost. Technology, he continued, was also helping to improve management operations across all value chains.</p>
<p><b>Panelists</b></p>		
<p>Mr. Alex Zvoleff, Director, Data Science: Vital Signs, Betty and Gordon Moore Center for Science and Oceans. Conservation International</p>		<p>Mr. Alex Zvoleff was the first panelist and used the opportunity to introduce the program he worked for, Vital Signs, which is an evidence-based mechanism for establishing baselines, setting targets and monitoring progress toward high-level international, national and private sector objectives in agriculture.</p> <p>The company's technology is supporting countries in transitioning agriculture to practices that promote sustainable employment, food security and protect natural capital, while building the knowledge, data, and capacity, and policy networks to increase momentum for change.</p> <p>Vital Signs works with AGRA, the Post-2015 Sustainable Development Goals, Grow Africa, the G8 New Alliance for Food Security and Nutrition, Comprehensive Africa Agriculture Development Programme targets (CADDP) amongst many others. Vital Signs technology gathers information relating to areas such as climate impact, wood fuel, livestock, water, resilience,</p>



## AGRF 2016 – CROSS CUTTING WORKING SESSION REPORT

		<p>biodiversity, food security, poverty, soil health, agriculture intensification, nutrition, health, and sustainability.</p>
<p>Ms. Juliana Rotich, Co-Founder, BRCK Inc.</p>		<p>Ms. Juliana Rotich spoke next on the panel and shared with the delegates her insights about how data that comes straight from the weather station (and the indicators that can be availed from this information) can help to revolutionize planning processes relating to climate analysis among farmers.</p> <p>She also discussed how greenhouses can benefit from ICT technology and how mobile phones can be used to send instructions and information about what is going on inside green houses. With the emergence of cloud computing, data can be stored remotely and sent to farmers as needed to inform them on a variety of subjects related to markets, weather, farming techniques etc.</p> <p>Solar installations can also be managed remotely using ICT so it becomes easier to provide rural electrification to monitor all activities and systems in remote locations.</p>
<p>Mr. Paul Mbugua, Managing Director, Eclectics</p>		<p>Mr. Paul Mbugua of Eclectics added to the discussion his company's experiences using ICT in its work with the banking and financial sectors to conduct complex system audits and evaluations for purposes of recommending their effectiveness and deployment. They design ICT systems using technologies from renowned software engineering companies and help develop products that are compatible with the emerging trends and ISO standards in the local countries where they are to be deployed.</p> <p>Eclectics uses multichannel data source reconciliation systems that move content between the core banking system and other channels and that provides detailed aging analysis of reconciled, partially reconciled and non-reconciled items. The system also generates liquidity management reports that can be defined by their banking clients.</p> <p>This ability to develop agnostic switching technology has helped then design mobile money transfer systems that allow senders and users to originate and terminate transactions to parties who do not subscribe to the same cellular service providers – which helps rural dwellers receive funds from a broader community than previously possible.</p>



## AGRF 2016 – CROSS CUTTING WORKING SESSION REPORT

<p>Mr. Uziel Zotang, Co-Founder / Director, AgriLift, Rwanda</p>		<p>Mr. Uziel Zotang introduced his company, AgriLift's, technology to the audience and noted that he that uses data from the field, combines it with rigorous crop growth models, and delivers timely geo-specific advice to various end-users. This is an online portal that allows producers, processors and others to monitor crop growth in near real-time.</p> <p>Aerial imagery is collected, analyzed and delivered in the form of highly detailed maps, alerts and charts, helping each agricultural value chain player to improve decision making and ultimately increase yields.</p> <p>AgriLift's solutions ultimately help to increase yields by detecting water stress, disease, seasonal pests, and it also improves input use and addresses issues in supply chain planning by offering more accurate yield projections, for transport and storage optimization.</p> <p>The mobile service also helps expand marketing reach and optimize product use. In risk modeling, they use plot-level production data to create new insurance indices and lending models for smallholder farmers, leading to larger portfolios and reduced risks</p>
<p>Ms. Rose Goslinga, Founder, Pula Advisors</p>		<p>Ms. Rose Goslinga was the next panelist and she made her contribution by discussing her company, Pula Advisor's products – which are insurance solutions for businesses and financial Institutions at the macro-level and weather index insurance at meso-levels.</p> <p>She talked about the benefits and what the additional expected impacts can be for agriculture and how these larger scale macro programmes relate to and could support micro- and meso-level schemes.</p> <p>In analyzing the impact of climate change on agriculture, she notes that farmers, banks, services providers, and traders all face risk exposure and thus should be able to get benefit from an insurance solution to better management potential risks. Pula Advisor's belief is that their insurance products will allow banks to operate more efficiently and help them support agricultural service providers and allow them to more comfortably extend their reach and reduce their rates.</p>



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<p>Mr. Stephen Muchiri, CEO, Eastern Africa Farmers Federation, Nairobi</p>		<p>Mr. Stephen Muchiri of EAFF, was the last speaker and chose to share with the delegates his farming organization’s technology called an ‘E-Granary’. The E-Granary is a solution by farmers for farmers which helps facilitate farmer’s access to markets and helps create a credit history for members of the Federation.</p> <p>It also facilitates access to unique and affordable credit for farmers as it provides tailor made credit based upon each farmer’s expected production and sales/profit within a user friendly digital platform. The technology can provide data based on the farmer’s mechanization and other technology adoption, offers credit via mobile phones, aggregates harvests seasonally, aggregates data on farmers and registers individual information on farmers by group/gender/age/enterprise and by location.</p> <p>This technology also provides opportunities to the youth to learn about agriculture via smart technology and EAFF is encouraging the education of the youth by providing capacity building in financial literacy and lastly the solution offers agriculture extension using IVR (voice message), is a platform for the sale of agriculture insurance, and helps time and aggregate harvests seasonally, and aggregate input purchases each season.</p>
<p><b>Q &amp; A</b></p>	<ol style="list-style-type: none"> <li>1) Farmers need credit support to access the technology such as soil sensors– how are farmers expected to pay for such expensive technology to benefit from these products?</li> <li>2) Is there any policy as to how to use and access the information? Of so how does it work?</li> <li>3) There seem to be many products and solutions available to farmers and this is getting them more confusing. How can this information be streamlined?</li> <li>4) How do we use technology in an optimal way? How do we make sure to maximize potential of what we already have? How do we get the platforms of platforms?</li> </ol>	
<p><b>Responses</b></p>	<ol style="list-style-type: none"> <li>1) Development Partners such as AGRA, UNECA and AU are envisioned to come on board and support certain initiatives to make it easier for farmers to afford paying for the services and technology available for them.</li> <li>2) There are discussions on how to come up with extension services to better address the needs of the farmers from rural areas. That will be governed by existing regulations and policies in place.</li> <li>3) ICT industries will be engaged in this regard to discuss how to work in silos less. Market’s will be incentivized to promote the sharing of information, alignment of products and reduction in the fragmentation of the ICT technology market for farming.</li> </ol>	