

Responses to Reviewer Questions

Hi Dr. Holland,

The Amplify team and our experts have some feedback for you:

Where would people view the videos? Is this an already established product? If so, what could Amplify add? How will the multiple partners described here work together? How will responsibility be shared?

Very fresh idea. Love the direction of distributed info tools that can scale. Plus the agricultural insights around crop management and defense.

This service will be competing with many others -how will farmers understand the unique benefits of your product?

How is this better/different to other agricultural extension services? Will it eventually be replaced as precision agriculture technologies become cheaper/more widely available?

Latest research (Mary Meeker) shows smartphone penetration slowing (India is the exception). Will video be supported sufficiently in the contexts where this is being piloted? Is video a more effective channel than other lower cost channels (e.g., SMS) or more personalised/trusted (visits from agricultural extension experts)?

Looking forward to learning more!

[linkreport](#) [Reply](#)

Team

[Dr Simon M Holland](#)

Edited on 03:59, Jun 12, 2016

Dear Chioma,

Some great questions thanks, will try my best to answer them where we've thought through the answers & add some ideas where you've raised new questions. Let me take the questions one by one:

Where would people view the videos?

There are a few answers to this question, the first is that many of them will be embedded in the App flow itself, introducing topics or questions by way of an education section and then a choice, this would help the farmers to make choices about their farms and their preferred way of working. The outcome of this is a set of practices options, so here they can view more detail (videos) on some of the options to make their final choice.

Once choices are made a calendar of events is created and an overview given, with detailed how to refreshers closer to the time of activity if the farmers choose to watch these.

Our mode of operation is to embed the content in the App from the start (although there will obviously need to be updates over time as we add more crops and practices), this way the content is viewable without the need for connectivity.

In terms of choices, once the initial profiling is done we create a farm / farmer profile in the phone which is used to moderate solutions to the particular conditions. This can be done at a high level without connectivity but a low bandwidth data exchange will allow further processing in the cloud and then a more refined parameter set to be transferred back to the phone for decision support.

There will also be discovery mechanisms for farmers to explore good agricultural practices without having to define a crop first.

Finally, the Talisman is the direct to farmer version, we also have an AgXpert version that we've worked on with different NGOs and agribusinesses and this takes the knowledge direct to farmers via tablets or mobile phones of the extension workers. To enable this we've been looking in detail at how the different types of content support the delivery of field work and 1 piece of content can then be re-purposed into many different delivery mechanisms depending on the type of training / sharing mechanism to be deployed, this is a particular area where we feel OpenIdeo will be able to add significant value-add to our efforts as there's so much still to learn and discover about how to do this effectively.

Is this an already established product? If so, what could Amplify add?

We have mainly launched extension worker products to date where we can implement 1 part of the solution at a time and have also learnt how to improve and simplify the interfaces.

Making screens work without the need for reading requires a lot more efforts than for literate extension workers and we've done the first run-through of the screen designs and content to make this work. However, there are a number of screen types for which we know we can do a lot better with the support of the OpenIdeo project as although we think

about the ergonomics of screen design a lot we haven't got the same level of expertise we could access from this project.

As mentioned in the answer above also, the types of content and reasons for using these in different training / engagement models is an area where a massive amount of work needs to be done and we need all the support we can get to do this better and in ever easier ways to digest.

How will the multiple partners described here work together? How will responsibility be shared?

We've been working the concept with the idea of taking in multiple geographies right from the start and as such the share of working roles has always been embedded in the design.

At the highest level Barefoot Lightning is responsible for the Application design and build with enabling science delivered in partnership with prestigious institutions (eg The Stockholm Environment Institute / Hutton Institute for Soil-Climate-Crop models, In Africa ICIPE for Insect ecology and Agro-Ecosystem Design, etc).

The next level requires a local delivery partner which is frequently an NGO, they will typically have a number of roles including getting feedback on localising the service design and also translating content to local language.

Another important role of the local partner is in agriculture local practices data capture from Farmers, NGOs and research Institutes in the area so we can combine the best of local and global practices.

Finally there is an outreach role which requires getting to farmers, directly, via NGOs, Inputs companies or mobile service providers and then adding market linkages, all of which needs to be designed/built locally.

Very fresh idea. Love the direction of distributed info tools that can scale. Plus the agricultural insights around crop management and defense.

Thanks, we've been working on the design and science for a long time to try to bring this all together in ways which can be accessed by farmers of all literacy levels and appeal to different communities such as women farmers.

This service will be competing with many others -how will farmers understand the unique benefits of your product?

We realize that this is one of our biggest challenges we face to scaling and also one of the areas where we believe we can benefit significantly from the support of the OpenIdeo project and network for ideas.

In terms of our own endeavors to address this we see partners and channels and one of the main ways to address this. Firstly, we've already been engaging with leading NGOs and our experience is that they often have sufficient expertise and insight to be able to see the benefits a science based system with individualization and rich media brings. Similarly for agribusinesses, so both of these are important channels to reach farmers and get the message across. Also, by incorporating value-chain partners we bring another pull which is that of market linkages which is a significant pull for farmers.

The next aspect is to work with mobile service providers and the response to date has been very encouraging, especially for those investing heavily in networks that want to showcase what can be achieved through mobiles. Even though our content doesn't need network connectivity to work, the media rich nature of the content helps to create a compelling marketing story for the service providers and we've had some very positive discussions with the GSMA as well.

The final element in this part of the story is to use farmer testimonials both in the phones, but then also as part of a wider marketing campaign. Although we see these primarily to encourage and drive adoption of the practices, they will also have value in developing trust and connectivity to the farmer communities.

How is this better/different to other agricultural extension services?

Traditional agricultural extension services require manpower to deliver services and as such can be both costly as well as of limited reach, for example across many countries they might reach 10-20% of farmers in a ten year period.

Our Talisman service can deliver very rich and tailored content to individual farmers no matter how remote they are and allow them to get answers to their questions when they need them not only when they come into contact with an extension worker.

In terms of our extension support tools (AgXpert), these focus on ensuring quality and consistency of the messages delivered as well as supporting extension workers to trial new ways of training and delivering tailored services. This is an area where we see OpenIdeo could also provide a lot of support in helping us define the different ways we re-purpose content for different types of training intervention which requires a lot of creativity and experience.

In terms of the support delivered, our solutions are science based and accessible to anyone regardless of their level of literacy or command of different languages. Not only that, they provide individualized answers based on the farmers soil fertility and preferences / capabilities for growing, eg A farmer looking for the maximum yield requires a very different set of practices from a rain-fed or organic farmer, although they would all benefit from protecting and enhancing their soil resources.

Will it eventually be replaced as precision agriculture technologies become cheaper/more widely available?

The current role of precision agriculture in the west is to identify and treat different areas of a large field with different levels of fertilizer using a significant degree of mechanization. In most low-middle income countries farm sizes are very fragmented (less than 1/2 acre (1/4 Ha)) with very limited farm mechanization. Mechanized service provision is being developed in many regions but the uptake and reach is very slow and the appropriateness for very small fields can be debated.

Many of the mechanisms which work well for small farms such as ecological solutions (see animation above) are incompatible with mechanization yet can give yields above those of simple chemical based farming depending on the conditions. Also, scouting and understanding the different pests and ecosystem balances before taking a treatment decision certainly work better with a close-up field inspection than a remote analysis.

That's not to say that precision agriculture, GIS and mapping etc are not important and developments in areas such as vegetation index based insurance pay-outs are proof that remote sensing can have a number of very useful roles to play.

Our expectation is that the combination of localized practices choices, effective training content, on-ground observations and remote sensing are the ultimate evolution of these types of services in Low & Middle Income Countries and we look forwards to being in a strong position to lead this with large practices and content databases and simple interfaces to deliver choice and decisions support. Of course the other integrating element is value-chain linkages which we expect to evolve with our services.

Latest research (Mary Meeker) shows smartphone penetration slowing (India is the exception). Will video be supported sufficiently in the contexts where this is being piloted?

The very first work we did to incorporate video and animations was on a feature phone (before smartphone OSs existed) where the choices were governed by numeric input from the keyboard. The challenges we faced then were lack of memory in simple function phones and lack of standardized OSs, fortunately both of these have changed for the better so we know it is possible to use function phones to deliver these type of services if needed.

However, our view is that if compelling content which is not only interesting and useful but also provides an effective connection to buyers and enhanced income then this in itself can support a more compelling reason to choose a smart-phone vs a function phone, especially with the price differential being minimal and smaller every month.

In terms of the levels of penetration already, unless we set unrealistic market penetration rates above 50% market share, there are more than enough smart-phones in nearly all markets to allow us to deliver our services with many more smart-phones left untouched.

The final element to this is that we're not reliant on smart-phones only for delivering services, it's just that these let us deliver a better service as well as to establish learning and profiling loops, thus we can expect some farmers to benefit from this content through profiling and subsequent calendared actions.

In terms of seeing how to undertake best practices in their field there are multiple options depending on the context, for example they might view content on another farmers phone or be linked to an extension worker / extension group that can share content or demonstrate practices in the field with the aid of our AgXpert solutions.

Is video a more effective channel than other lower cost channels (e.g., SMS) or more personalised/trusted (visits from agricultural extension experts)?

"A picture tells a 1000 words", and yet a video can explain concepts not visible in an image and an animation can bring simple concepts to life through magnifications and other techniques to help get messages across.

In terms of cost, this is completely dependent on the market and in many markets SMSs are the most expensive form of data transfer due to their historic delivery mechanism. However, if they are cheaper then our application can use these for data transfer instead of 2.5/3G data transfer.

Remember because our content is embedded in the App on installation we don't use bandwidth for service delivery and in fact a machine coded message can convey far more information than a linguistic text with the same number of characters. So SMS is not necessarily or even likely to be a lower cost channel than our service delivery unless it's free (in which case we can make use of that also).

The other area of importance is that SMS is only effective for literate farmers and there are large communities of farmers without the skills to access this type of information and they're frequently the ones who need it most.

In terms of agriculture extension experts, there's no doubt that experiencing a training event is likely to embed learning better and the reason we're working on extension tools (AgXpert) is that we consider effective extension to be the gold standard for farmer

knowledge sharing. It does however have an associated cost and suffers from the quality and motivation of the individual trainers / organisations delivering service.

So in summary, we believe Talisman and AgXpert to be important tools in the delivery of knowledge and extension services to as broad a farmer population as possible and also see them as a way to improve upon and enhance premium extension services by making them more tailored and consistent in their delivery.

Thanks Chioma and hope that's a reasonable first attempt at answering your questions, by all means let me know if you'd like me to clarify any points further.

Chioma Ume

Edited on 13:14, Jun 15, 2016

Hi Simon,

Thank you for your very comprehensive answers! As a follow up, I wonder if you can include some of the points that you think are most important for an evaluator to know about your idea within the body of your contribution.

Second, I appreciate that you are working with NGOs who will 'localize' the information. What I'm a little less clear about is what work your team has done to determine whether small scale farmers find this desirable and would access this type of service. How do you know that this app will contain the type of information they want, or that they want to access this information in an app or video?

Thanks!

Team

Dr Simon M Holland

Hi Chioma,

In terms of the type of content that we're making available for farmers we've been working directly with small-holder farmers on real projects for years and taken their input all along the way as to what they need as well as conducting global secondary research on what farmers in different regions want to know in terms of priorities.

In terms of the types of content and ways of sharing, we've found the most important thing is to share knowledge that helps farmers to really learn about the subject closest to their hearts ie agriculture and when we can do that you can see the thanks on peoples faces as they are given an opportunity to really learn.

I've just emerged from a major project proposal which is working with groups of farmers and again the feedback on the content and ways of communicating is all very positive as we look to help them take a farmers producer group to the next level.

Below are some images from a farmers convention which hopefully convey the level of interest from this group also

