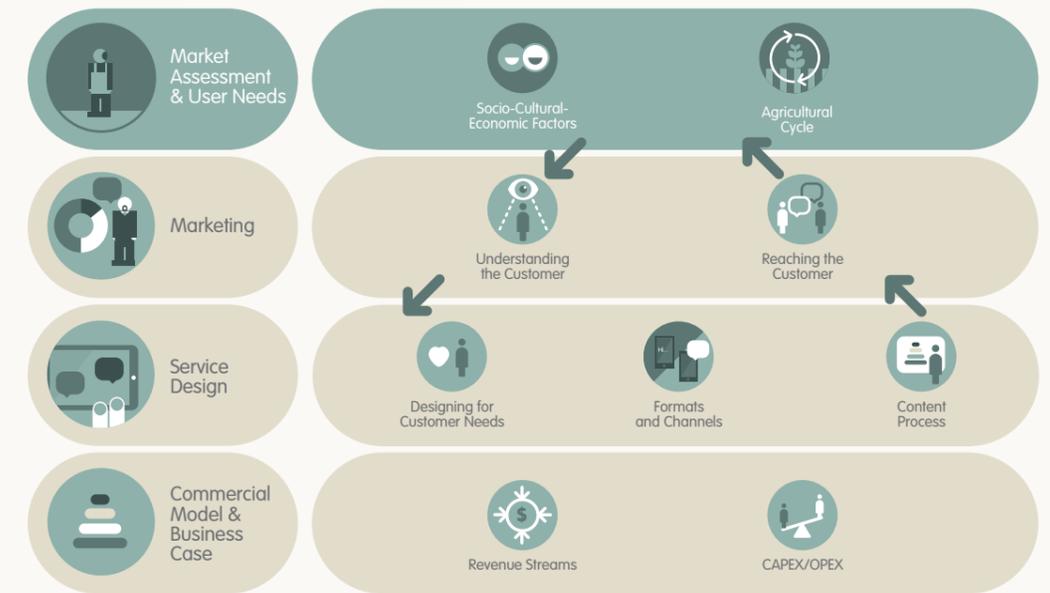


Chapter 2 Market Assessment and User Needs

The framework below outlines the components to consider when designing an Agri VAS, from understanding the customer at the outset (Ch. 2), marketing the service (Ch. 3), service design (Ch. 4) and finally, the underlying business model (Ch. 5).



At the design stage of any new product or service, it is critical to understand the user's needs and to identify the unique demographics that exist within the target market. This is especially crucial for Agri VAS as base of pyramid users tend not to be surveyed extensively. The danger posed by a lack of understanding of the target market is significant and can make or break a deployment, leading to products and services that serve no immediate user requirement; a solution in search of a problem. We advise prospective service providers to focus their efforts on the following key activities.

1. **Consumer Market Segments** Segmentation of the market is a crucial keystone of product design. Each demarcation may well have unique problems and needs. Identifying these is a logical first step.
2. **Market Research** Once segmentation has occurred, methodical market research and analysis need to be conducted for each.
3. **Agriculture Cycle** Consideration should be given to the fact that a farmer's activities are almost entirely governed by the overarching super-structure of the agricultural cycle. At different points in this cycle (planning, planting, growing, harvesting or selling) the farmer will have a uniquely different set of information needs. The Agri VAS must fulfil these.

Consumer Market Segments

Market segmentation is vital to understand the various categories of consumers in the target market, and ensuring the product or service is relevant to them. For rural smallholder farmers, it may be most useful to focus segmentation on agro-ecological zones, crop, language, gender, and attitude (especially proclivity to change).

1. Language/Culture

The boundaries of a language and a region's geo-political boundaries are often one and the same. However, this is not the case everywhere and care must be taken to identify the language(s) spoken in a market segment during the service's design phase. The service must be delivered in the local language and provide information relevant to that geography's agro-climatic characteristics, which determine the crops that can be grown there. Cultures in different geographies may well focus on specific types of crop or have developed specialised methods of cultivating them. Knowing these local traditions is a prerequisite for making information services pertinent and actionable.

2. Agro-ecological Zone

In larger territories, a market segment may straddle more than one agro-ecological zone. These zones present a unique set of challenges to a farmer and it is not uncommon for a maize cultivation technique to work well in one zone and fail in another. Even if the market segment inhabits a single zone, care must be taken to ensure that the service designers are aware of the information needs specific to that zone. This will be of particular importance where content generation is concerned.

3. Gender

To promote equal access and utility to both genders, it is important to understand the perceptions of gender and the role that they play in agricultural activities. It is a fact that the greater proportion of agricultural labour falls to women, and yet, women tend to earn less than their male counterparts and, generally, have less control over the business decisions taken on the farm. This divide remains significant³, although indications in Bangladesh suggest⁴ it is closing there, at least, as populations of male migrant workers move around the country leaving womenfolk at the helm of the agrarian businesses. The same phenomenon occurs when male workers decamp to urban areas in search of jobs.

Gender and cultural sensitivities should be borne in mind during the design, content generation and marketing phases of a product launch. Grameen Foundation found, through their Community Knowledge Worker (CKW) Initiative in Uganda, that female farmers were much more receptive to receiving assistance from female CKWs. This new information was obviously extremely valuable to them in their efforts to make the CKW programme equally accessible and useful to both genders.

4. Attitudinal Factors

Psychological or attitudinal segmentation deals with identifying groups of farmers who share similar attitudes towards farming and external interventions. Understanding and identifying attitudinal segments can provide powerful insights into how marketing messages should be customised to maximise impact.

A recent study⁵ by TNS Research International in Tanzania shed valuable light upon the make-up of that country's agrarian market as well as offering useful attitudinal demarcations within it.

Their findings suggest six broad distinctions within the mind-sets of farmers, ranging from 'Competent Optimists', to, at the opposite end of the scale, those who are 'Trapped' in farming and wish to leave.

We summarise their categorisations below, however it must be noted that these segments are not wholly distinct from one another and there will be some overlap:

1. **Competent Optimists** Seeks information and networks well with others. Enjoys farming, is open to new techniques and quick to try them out.
2. **Contented Dependents** Has a very positive attitude towards farming but needs the

assistance of others. Adopts new techniques after others have proved they work.

3. **Independents** Generally savvy, open to new information but not particularly engaged with farming. Will follow best practice but would never try new methods by themselves.
4. **Frustrated Escapist** Trying to make the best fist of farming but would change jobs if the opportunity arose.
5. **Traditionalist** Enjoys farming but does not seek out new methods and is resistant to change.
6. **Trapped** Does not enjoy farming and sees no future in it. Hopes children do not have to farm as a career.

For example, by identifying attitudinal segments, marketing agents can target initial messages on 'Competent Optimists' with the aim of getting them to influence the 'Contented Dependents' and 'Independents'. Agents can avoid wasting time and resources targeting 'Traditionalists' or the 'Trapped' until the service reaches critical mass, and the new technique(s) attain orthodoxy. As usage matures across each segment, marketing messages can be adapted, and made more efficient. Though attitudinal segmentation – by nature – is a complex task, the following steps seem to represent a logical approach:

1. **Scope** Survey a sample population to identify psychological/attitudinal segment members.
2. **Segment** Segment identifiers can be uncovered by finding common traits/characteristics (Contented Optimists, or, from a marketing perspective 'early adopters', tend to focus on cash crops while Traditionalists focus on staple crops).
3. **Assign** These identifiers can then be used more broadly and applied to segment the entire population (ie. we can assume that those who focus on cash crops can be grouped as early adopters while staple crop farmers are Traditionalists).
4. **Correlate** Map these findings against other indicators such as region or district. For instance, the TNS RI study discovered that 47% of farmers in the Iringa region of Tanzania were Competent Optimists (suggesting a high uptake of a new product or idea) whereas in Singida only 7% were Competent Optimists and 34% were Traditionalists (suggesting a correspondingly low uptake). By cross-referencing the segments in this way, a valuable picture begins to emerge which will inform decisions about which areas to focus on when promoting the service to ensure maximum uptake.

3 Food and Agriculture Organisation of the UN <http://www.fao.org/sd/ifsdirect/fbdirect/FSP001.htm>

4 Innovations in Rural Extension: Case Studies in Bangladesh, CABI Publishing, April 2005

5 Listening to the Farmer Voice: Overlaying macro-segmentation with micro-level data on farmer needs and attitudes. – TNS Research International, March 2011.

Market Research

Once the market has been segmented using the parameters outlined above, systematic research must be conducted in order to understand the users' activities and needs. When conducting the research, care should be taken to cross-tag each data set according to the attitudinal segments identified during the initial segmentation process.

Our research and findings suggest focusing on the following key components:⁶

1. Crop Types and Varieties

Understanding the agriculture focus and crop varieties grown (along with their associated seasons) will help determine which information services to provide.

Usage Case It may be useful first to select crops that the project team has the most data and experience working with. Then, from these crops, further prioritise based on their prevalence within the target market. Alternatively, start with a select few crops and develop deeply impactful, successful information services on those crops before growing the service portfolio by introducing additional crops as time and expertise allow.

2. Farming Techniques

Specific farming techniques vary by farming culture, crop type and agro-ecological zone. It is important to understand farming communities' existing in order to identify areas for improvement.

Usage Case If a community already benefits from a specialised, unique method of pest control that is proven and effective, advising them on alternative pesticides available on the market may not be seen as useful. In this case, it may be preferable to work with local organisations to learn their methods and incorporate them in the content management system for Agri VAS. The storehouse of global agricultural knowledge is still growing and a successful Agri VAS will seek to broaden its own knowledge as well as disseminate it. These new learnings can then be shared with other farming communities who face similar pest problems.

3. Existing Information Sources

There is usually a complex web of information service providers available to farmers although the degree to which farmers have access to this information will vary. Understanding what sources of information your target farmers are currently using and forming partnerships with

other information service providers can help when designing and marketing new services. Radio programmes, newspapers, oral tradition, extension workers and word of mouth are some of the typical information vehicles for remote, rural farmers.

Usage Case If the farming community knows and trusts particular radio programmes, it makes sense to partner with the radio show producers and leverage them as a delivery channel for Agri VAS. Furthermore, complementing existing communications channels with up-to-date agricultural information is an efficient way to fill the knowledge gap. This partnership can also play a role in marketing the Agri VAS and earning the faith and loyalty of the target market.

4. Finances

Many rural smallholder farmers are both poor and caught up in the poverty cycle. Thus, they may have an ultra-low (or non-existent) willingness to pay for Agri VAS. Efforts should be made to investigate their income sources and spending behaviours. A lot more work needs to be carried out to understand the farmers' ability or willingness to pay for particular products and services. However, limited-scope market surveys that we have seen suggest that farmers are willing to pay for information they deem to be relevant, helpful and actionable, for example agri-specific, localised weather forecasts that could impact growth or yield during the farming cycle.

Usage Case In the likely event that some target farmers (poor rural smallholders) will be unwilling and unable to pay for an Agri VAS, it will be incumbent on the service provider to secure revenue from other sources, namely other actors in the agricultural value chain who benefit from farmers having access to the Agri VAS. These alternative revenue streams can come from MFIs and insurers who wish to penetrate and transact business in the rural markets, contract farming companies who want to increase the reach and quality of their extension services, as well as input suppliers/dealers. Further details on these B2B revenue models can be found in Chapter 5.

⁶ Although this document focuses mainly on crop farming, it is important to conduct market research on other agricultural practices including livestock, fisheries and agro-forestry.

5. Gender

Any Agri VAS targeting rural smallholder farmers in less developed countries must be proactive in catering to the female populations. Indeed, due to the inescapable fact that the majority of farm work is undertaken by women and that women are slowly assuming more control over farming decisions, understanding their cultural environment and information needs is crucial.

Successful Agri VAS must:

- Carry out marketing / sales campaigns specifically targeting women.
- Design aspects of the service specifically for the agriculture roles and functions most women typically play.
- Ensure face-to-face interaction with women (by outreach workers, distributors or field agents) is conducted sensitively and in accordance with local custom.

Women do the majority of food production, processing and preparation in developing nations. Although women produce 60-80% of the food in the developing world, they earn 22% less than their male counterparts, have less access to resources and receive only 5% of extension services.⁷ These facts highlight a clear failure in the market to provide Agri VAS where they are needed most.

The Agricultural Cycle

The need for agricultural and marketing information amongst rural and farmer communities is part of a broader need for diverse information including health, natural resource management, and community services information as off-farm income activities are often integrated with farm production.

The information needs of farmers are diverse due to the fact that mono-cropping is uncommon amongst smallholders. In order to make best use of their resources available and minimize risk, farmers tend to diversify by planting multiple crops and keeping livestock.

Farmers' needs are governed by their progress through the agricultural cycle and change over the course of the year. It's important to understand that the cycle is dependent upon local growing seasons and will therefore vary from region to region. Consequently, although the focus areas we suggest below are broadly typical, their implementation period may well vary by agro-ecology zone.



Crop Planning

Before the farmers begin to plant crops, they must first decide which crops to grow in this cycle. In order to make this decision, a farmer must consider a range of factors including the demand and market price of specific crops, the cost of that crops' inputs, seasonal weather expectations and other crops to be grown on the same plot.

Access to finance can also play a vital role in crop planning. Farmers caught up in the poverty cycle lack proper resources to invest in quality inputs, thereby affecting long-term planning and reducing yields, productivity and ultimately income. This cascades into next year's crop planning and continues the cycle.



Planting and Growing

Once the land has been prepared and inputs sourced, the farmer plants his/her seeds or seedlings and begins monitoring and caring for the crop. If plants encounter any disease or pest infestation the farmer must quickly diagnose the problem and implement an appropriate solution before the crop is lost. At this stage, assistance with pest or phytopathology issues is required, along with an understanding of which pesticide to use and how and where to go about sourcing them.



Harvesting and Selling

When crops are ready for harvesting, farmers decide where, with whom and how to sell their crops. In order to reach a successful sale, the farmer will require access to accurate, up-to-date market prices to make the best decision possible for the business. Issues of transportation may also arise which a well-designed Agri VAS should bear in mind. Information about storage procedures and costing are also in demand.

⁷ Food and Agriculture Organisation of the UN <http://www.fao.org/sd/fsdirect/fbdirect/FSP001.htm>

Information Needs During the Agricultural Cycle

The following chart lists examples of possible information topics farmers may need at each stage of the crop agriculture cycle.



	 Planning	 Planting and Growing	 Harvesting, Post Harvesting and Selling
 Market Information and Access	<ul style="list-style-type: none"> - Expected crop demand. - Potential price fluctuations. - Cost and availability of transport of inputs. - Market contacts. 		<ul style="list-style-type: none"> - Accurate and competitive market pricing. - Potential price fluctuations. - Cost and availability of transport to market. - Marketing, sales or negotiation tips.
 Inputs	<ul style="list-style-type: none"> - Seeds/fertiliser availability, prices and location. 	<ul style="list-style-type: none"> - Pesticides. 	<ul style="list-style-type: none"> - Availability, cost and location of storage services. - Instruction for self-storage.
 Farming Advisory	<ul style="list-style-type: none"> - Crop and seed selection. - Land preparation. 	<ul style="list-style-type: none"> - Techniques to protect against and prevent disease and pest infestation. - Diagnose and treat disease and pest infestation. 	<ul style="list-style-type: none"> - What is the best time and method of harvesting.
 Financial Services	<ul style="list-style-type: none"> - Loans and insurance availability, rates and contacts. 	<ul style="list-style-type: none"> - Loan availability and rates for non-farming activities. 	<ul style="list-style-type: none"> - Savings account rates and availability.
 Weather	<ul style="list-style-type: none"> - Long term weather forecast. - Implication of local agro-environment. 	<ul style="list-style-type: none"> - Short-term weather forecast. For example, to know when to plant. 	<ul style="list-style-type: none"> - Weather forecast and implication for storage.

Collecting the Data

Typical methods for developing this market intelligence include surveying sample populations in the field, organising focus groups and desk-bound research of the demographic.

Collecting this information can be quite challenging and at times (depending on your level of resources) impractical. Working with agriculture organisations or NGOs who already have data in these areas or have the capacity to conduct extensive field research and sampling can help to expedite this process.