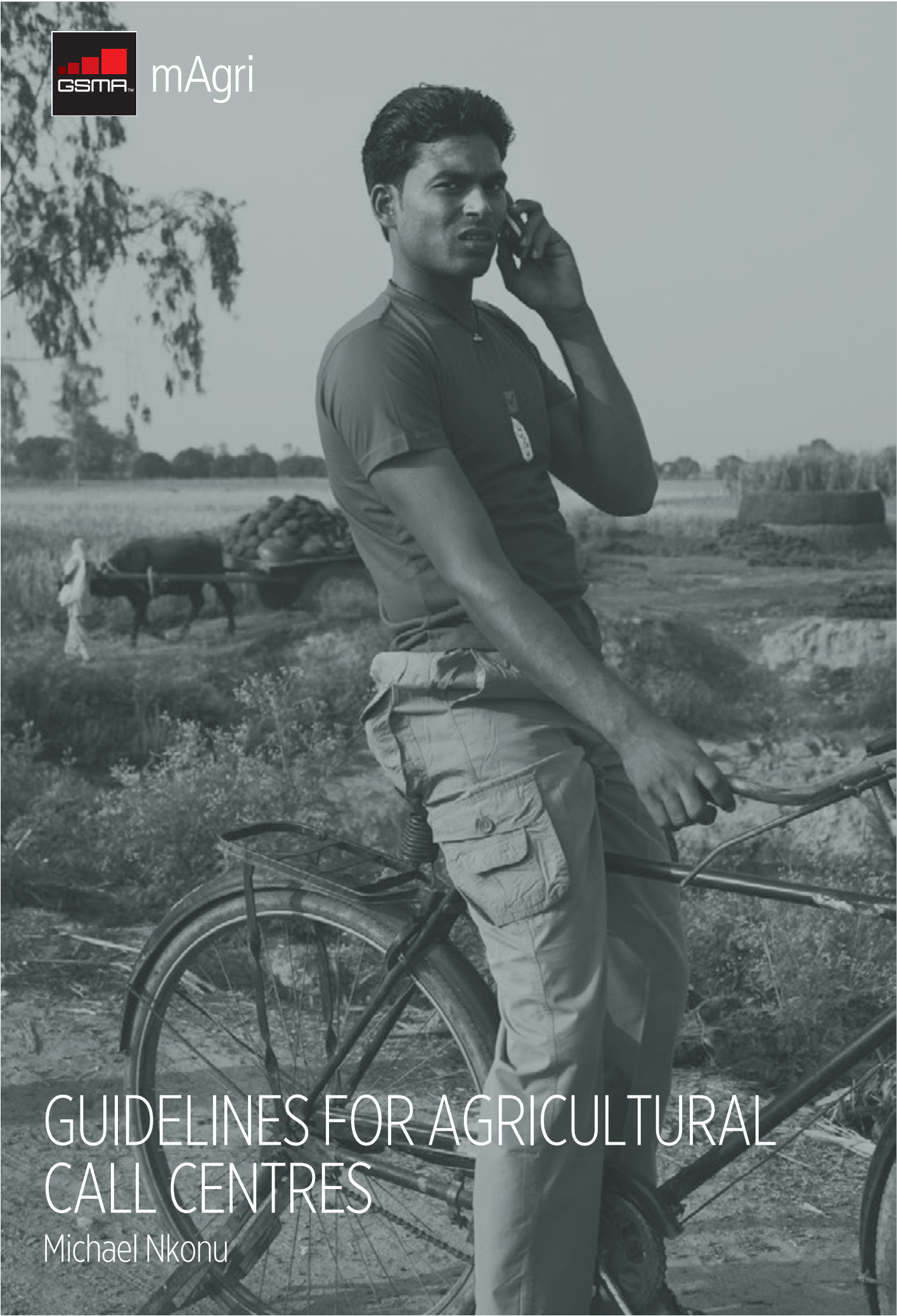




mAgri



GUIDELINES FOR AGRICULTURAL CALL CENTRES

Michael Nkonu

Table of Contents

Introduction	1
Objectives of Agriculture Call Centres	1
User Needs and Quality Services	2
Establishing Agriculture Call Centres	3
Establishing the Operational Mechanisms	3
The Call Flow	4
Call Centre Technical Requirements – Planning the Infrastructure	5
Resource Planning	6
Agriculture Content and Knowledge management	8
Developing and Formatting Content for Call Centres	9
Some Practical Issues to Consider	9
Customer Relationship Management (CRM) Tool	9
Call Handling Procedures	10
Monitoring and Measuring Performance Success	11
What to Monitor and Measure	11
Internal Performance Indicators	11
External Performance Indicators	11
Conclusion	12
Appendix	13

Introduction - Agricultural Call Centres

Agriculture remains a major economic activity for many developing countries. In some countries in Africa, agriculture contributes up to 30 – 65% of the national Gross Domestic Product (GDP)¹. However, agriculture remains mainly a subsistence undertaking in many countries with millions of farmers holding between 0.5 to 2 acres². The high number of smallholders in the sector, geographical spread and limited national resources to support extension services results in limited or no access to relevant technical support.

Extension farmer ratios in many countries are alarming. In countries such as India, it is documented that on average only 6.8% of farmers³ receive extension support, often resulting in low productivity, low income and poor livelihoods. The proliferation of mobile telephony particularly in developing countries is providing new opportunities for delivering timely and relevant agricultural information and advisory services to farmers. In this space, agricultural call centres are emerging as a major channel for supporting large number of farmers across wider geographical locations and with fewer technical resources. Through their phones, farmers are able to access timely and relevant technical support at reasonable costs.

These guidelines will aid organisations and individuals working to establish agricultural call centres. Though not exclusively designed for smallholders, they remain a major target for agricultural call centres. This document is designed to guide the reader to understand the importance of agricultural information and advisory delivery via call centres. It then lays out a step by step process to follow in establishing a call centre. It is highly recommended that readers new to Agri Value Added Services (VAS) will as a start, review the [Agri VAS Market Entry Toolkit](#) and the [Guidelines for Creating Agri VAS Content](#) developed by the GSMA mAgri programme.

Objectives of Agricultural Call Centres

The primary objective of an agricultural call centre is to provide timely and relevant information and advisory to facilitate decisions along the agriculture value chain. A call centre may be specifically established to:

- **Improve agriculture information and advisory services** – augment existing information and advisory services such as SMS (USSD) and IVR (Interactive Voice Response).
- **Improve national agricultural extension system** – to maximise scarce resources and reach more farmers efficiently.

Regardless of the primary objective, call centres should:

- improve access to timely and relevant information and advisory services;
- advise callers on agricultural technologies and techniques to improve productivity;
- link farmers to relevant services including input and output markets.

¹ <http://www.quandl.com/economics/agriculture-share-of-gdp-by-country>

² <http://www.ifad.org/events/agriculture/doc/papers/livingston.pdf>

³ http://www.farmingfirst.org/wordpress/wp-content/uploads/2012/06/Global-Forum-for-Rural-Advisory-Services_Fact-Sheet-on-Extension-Services.pdf

TIP	A clear objective of the agriculture call centre must be set-out from the beginning as this will impact on the overall strategy for the call centre
-----	---

User Needs and Quality Services

Majority of users of an agricultural call centre are likely to be farmers, but there may be other users such as extension and field officers. Farmers may differ based on farm sizes, crops cultivated or livestock produced, agro-climatic zones or other factors. It will be necessary to carry out a detailed needs assessment to fully understand the needs of the different categories of users in the target area. A well planned survey will help identify the different services required by the different categories of users.

TIP	Consult GSMA's Guidelines for Creating Agri VAS Content which provides useful hints on conducting user needs assessment.
-----	--

The needs assessment to be undertaken for the purposes of establishing a call centre should cover: 1) agronomic information and advisory needs and 2) technological capacity (e.g. telephone infrastructure and availability; and technological literacy and usage by target users) to deliver information through call centres. Table 1 provides details on each of these categories. Well-defined user needs will support the design, testing and establishment of a call centre with the following basic qualities:

- **Accessible** - Easy to access, easily memorable short code e.g. 5454 or 6565 and information provided in languages most users can understand. Also based on the organization's strategy, an IVR based call-flow can assist to best utilize the call centre resources. It can help in answering most commonly asked questions and can reduce the cost involved in running the call centre resources.
- **Accurate and up-to-date information** - Information has to be highly accurate with regards to the intended implementing environment. Locally proven knowledge delivered through trained and experienced staff will enhance the accuracy of local content.

TIP	Consult GSMA's Guidelines for Creating Agri VAS Content which provides useful tips to maintain standard KPIs of a call centre.
-----	--

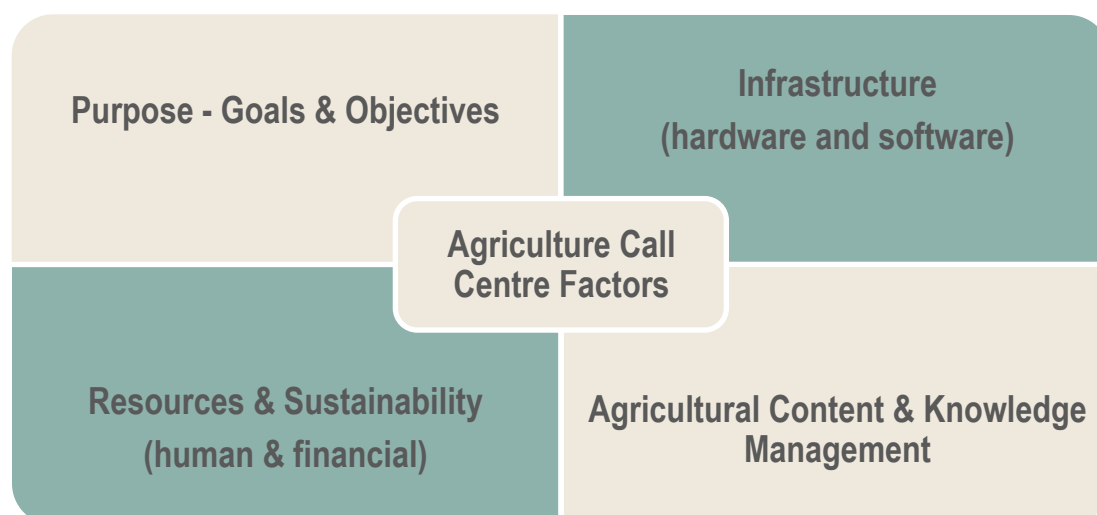
- **Relevant information** - Call flow should be designed with user needs in mind, and information and advisory services structured along users' general communication style.
- **Timely response to queries** - Outbound calling facility can be particularly helpful if timely response cannot be given because of unavailability of information. Set a target time within which queries should be responded to. To ensure better output, a combination of SMS (Short Messaging Service) and OBD (Out Bound Dialling) can be used along with the call centre service.

Table 1: Specific Factors to Consider During Call Centre Needs Assessment

Agronomic Factors	Technological Factors
Key crops cultivated in the target area	Extent of mobile network and infrastructure
Major farming problems in the area	Phone network availability in rural areas
Current sources of information and advisory	Reliability and efficiency of mobile network
Most preferred channels for information	Phone ownership amongst target users
Level of access to extension and marketing services for key crops and livestock	Level of phone usage among target population
Key educational and demographic characteristics of users	Key Mobile Network Operators (MNOs)

Establishing Agricultural Call Centres

Agricultural call centres consist of complex ICT infrastructure combined with competent human resources to efficiently and effectively provide information and advisory services to users. In establishing an agricultural call centre, several factors (as indicated in Figure 1) should be carefully considered. This section focuses on issues such as the operational mechanism, call centre infrastructure (hardware and software), human resources and financial sustainability.

Figure 1: Key Factors for Setting-up Agricultural Call Centres

Establishing the Operational Mechanism

The operational mechanism of the call centre defines how information is received and responded to. Significantly, the operational mechanism should effectively define:

- **Procedures and processes** (inbound and outbound calls) – indicate if IVR is integrated into the call process or if inbound calls will be received directly by call centre agents.

- **The different levels of problem solving** - how and when agricultural problems are escalated to provide satisfactory information and advisory to callers (see Figure 2). Details should include definition of the level of agronomic expertise required at each stage.
- **Call language** – establish language(s) of operation. Language(s) may influence call processing and expertise required to handle process calls. A multi-lingual call centre may increase the complexity of operations.
- **Geographical or Agro-climatic zone coverage** – geographical coverage of the call centre should be clearly defined. It has impact on language, content, human resources and call-flow.
- **Data capture and knowledge management** – determine when, how and which data to capture and respective functionality required from the Customer Relationship Management (CRM). Define the content sources, and supporting tools available for agents as well as a process for internal knowledge sharing.

The Call-Flow

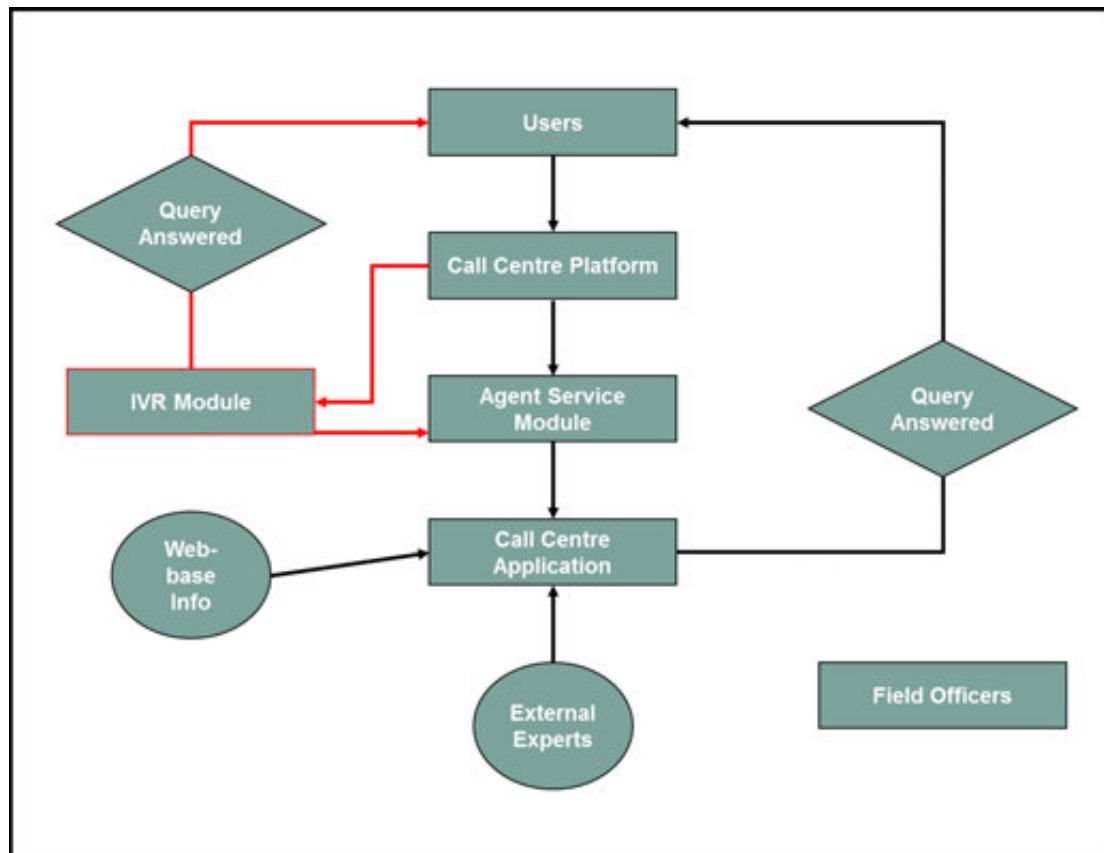
The call-flow should define the process(es) through which calls or queries are received and information and (or) advisory is provided. These processes are known as the operational mechanism (OM) and this is critical to developing a comprehensive call-flow. The call-flow will affect infrastructure, human resource estimations and overall efficiency of the call centre. It is critical that the call-flow is sufficiently based on the operational mechanism.

If well defined, the call-flow will support the following key processes:

- identifying specific hardware and software requirements for the centre;
- interoperability between different sections, actors and resources of the call-flow;
- the flow of processes such as playing of a menu and transfer of calls from IVR to the agent and from agent to a higher level support;
- delivery of information and advisory services in line with call centre objectives.

Typically, two types of call flow architecture are available for agricultural call centres. The difference is whether IVR is integrated (as depicted by the red lines in Figure 2) in the call-flow or not. In addition, there may be variations in the services provided particularly with regards to when calls are terminated. For example, a call centre may limit calls to be answered by agents only. Others may escalate calls to experts within or outside the organisation.

Figure 2: An Example Call-Flow Typology



The typology in Figure 2 indicates that callers can access information by calling agents directly or a call-flow may be designed such that initial point of contact is the IVR (red arrows). After exhausting the IVR solutions, callers will be able to reach agents for further support. In case queries require higher levels of expertise, agents will normally route calls to field agents or experts to either directly provide the solution to the end-user or through the centre agents.

Call Centre Technical Requirements - Planning the Infrastructure

The call centre platform interacts between different ICT infrastructures. The platform uses both IT hardware and software infrastructure to communicate between the telecommunication link and the call centre software.

Software infrastructure and requirements

It is always better to use a proven call centre solution that has an inbuilt CRM and reporting facility. In case a standalone solution is used, it should be considered that, the solution should have open APIs to be linked with separate CRM and reporting solutions.

Hardware infrastructure and requirements

In determining the technical solutions, put in place a scalable solution which can handle any incremental capacity needs in the future. If Ethernet (E1) link based connections are used, technical capacity should be calculated

Carefully and allocated. In case of IP based connectivity, voice channels should be available and the call centre solution should be able to scale up on demand.

Resource Planning

Human Resources

Efficient human resources (HR) are key to the success of the call centre. Persons manning the call centre are the custodians of the information and direct point of contact for users. It is therefore worthwhile investing in quality agents. A comprehensive staffing plan should be developed to ensure all HR needs are identified and budgeted for accordingly. Consider the factors indicated in Table 2 when planning HR for the call centre.

Table 2: Factors to Consider for Call Centre HR Planning

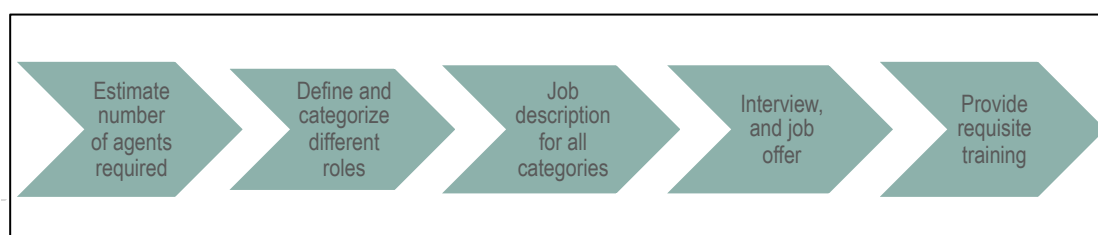
Factor	Details
Call-Flow	The call-flow should necessarily determine the technical expertise and number of persons required to successfully run the call centre
Interactive Voice Response	IVR – if IVR is integrated it may reduce the number of agents required. Some of the frequently asked questions (FAQ) and simple queries may be automated using IVR.
Expected call volume	Expected call volume will determine number of agents required to ensure callers are adequately attended to.
Expertise	From the call-flow, determine the different type skills and level of experience required of agents to successfully run the centre.
External Expertise	Consider the calibre and number of field agents and (or) external expertise required to effectively support the call-flow. Geographical coverage and language of the call centre should be considered here.
Language	Consider the language of the operating environment. Ensure persons manning the call centre can communicate in the local language.
Cost of HR	Consider cost of employment and retention of quality call centre staff.

Recruitment and Training

Call centre agents need to be properly recruited and trained to function effectively. Figure 3 provides a simplified HR planning and recruitment process for call centres. The following steps should be observed when recruiting call centre agents.

- Define and categorise the different roles in the call centre where agents may be required.
- Clearly and concisely develop job description for each category of role identified. The job description should necessarily include specific roles of the job, academic qualification, personal qualities and work experience.

Figure 3: Call Centre Agent Recruitment and Training



Key Call Centre Roles

Establish clear leadership for the call centre to ensure operations are in line with set objectives. The size of the call centre will determine the number of team leads and supporting roles. Support roles could be externally sourced but must enhance the operations call centre. Table 3 indicates key positions, functions and qualification for the various positions.

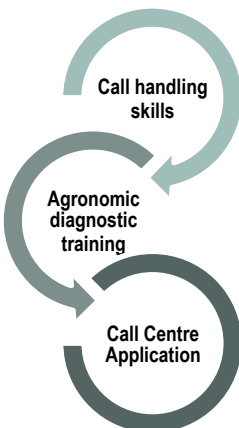
Table 3: Typical Agricultural Call Centre Roles:

Position	Key Functions	Key Qualifications
Call Centre Manager	Overall management of the call centre; Planning and budgeting; Decisions regarding staff, call centre processes, technology etc.; Strategy development, implementation and evaluation; Liaising with other teams such as technical, HR and IT.	Call centre management experience Financial and HR expertise Business and relationship management skills Organisational and leadership skills and experience Motivational skills
Agricultural Team Lead	Technical leadership; Lead recruitment, development and coaching of technical staff/ agents; Performance targets setting; Reporting on technical issues.	Agricultural background and experience; Agricultural extension knowledge and experience; People management experience.
HR/ Operational Manager (may be combined with call centre manager)	Human and Financial resources planning; Link between different teams; Support recruitment and training; Training and continuous education of agents.	Strong HR skills and experience; Operations management skills; Strong knowledge on HR issues; Effective planning, scheduling, forecasting and reviewing skills; Analytical skills.
Call centre Agents (with agricultural background)	Frontline staff of the Centre - receives and make calls; Provide information and advisory. Escalate inquiries to the next level; Provide other services as required. Call centre agents will likely have different levels of expertise and qualifications.	Agricultural knowledge and experience; Good communication skills and telephone etiquette; Computer proficiency.

Staff Capacity and Training

To achieve sufficient capacity for success, adequate training is required in the following 3 key areas: call handling; agronomic problem diagnosis and advisory and call centre application (CCA) handling (see figure 4). Allocate sufficient budget and time for staff capacity improvement is advised.

Figure 3: Call Centre Agent Recruitment and Training

Call Centre Agent Training Focus	Call Centre Agents' Training Details	
	Training Category	Objectives
	Call Handling skills	<ul style="list-style-type: none"> Improve capacity to use call centre equipment effectively; Improve capacity to receive and make calls; Improve communication skills and call handling etiquette; Familiarize with call-flow of the centre.
	Agronomic and Diagnostic Training	<ul style="list-style-type: none"> Improve agricultural extension and communication skills; Improve understanding of the scope of information and advisory services of the centre; Improve diagnostic skills using available tools at the centre.
	Call Centre Application	<ul style="list-style-type: none"> Train agents on CCA available at the call centre; Improve ability to navigate and effectively use the CCA to provide information and advice callers; Build agents capacity to input and retrieve data from the CCA.

Agricultural Content and Knowledge Management

Content is the engine of any agricultural call centre and good quality content will improve patronage, impact and repeat usage levels. Content has impact on long term sustainability of the centre. Greater understanding of user needs is important for providing relevant and useful content. For further information on developing good content refer to GSMA's [Guideline for Creating Agri VAS Content](#) and also User Needs and Quality Services section of this document. Content is useful if easily accessible. A well-designed call centre application (CCA) is key to making content more accessible at call centre agents and for responding to queries.

Developing and Formatting Content for Call Centres

Content formatting style will depend on the call-flow. Two or more content formats may be employed and integrated seamlessly based on the design of the CCA. Note the following:

- **Content structure** should facilitate easy access to information by agents.
- Use a simple and clear **format** to categorise your content.
- Produce **factsheets** for all crops and livestock covered by the centre.
- **IVR** - Where IVR is integrated into the call-flow, audio tips should be generated from factsheets.
- **Decision support tool** - a customised photo pest and disease decision tool may be useful.
- **Call Centre Application (CCA)** - a good CCA will serve as a repository for agricultural content and facilitate information and advisory services. There are customised and off-the-shelf CCAs. Customised CCAs are usually more designed to meet specific needs but could be more expensive. Carefully consider factors indicated in Table 4 when customising your CCA.

Table 4: Factors to Consider in Customising CCA Platform for Agriculture Call Centres

Factor	Details
Call-flow design	CCA must be designed to support the established call-flow.
Caller Needs and CCA Architecture	Consider the established agronomic needs and technological constraints and ensure the CCA is designed with these issues in mind
Search engine/information retrieval	The CCA must ensure quick searches with greater accuracy. A wiki-styled search tool with hyperlinked words may be useful.
Additional information sources	Consider linking your CCA to other trusted information sources such as websites and feeds which may serve as additional sources of content.
Secondary level support	Integrate secondary level access for field officers and external experts back-stopping for the centre to access the platform for assigned tasks.
Platform testing	Spend sufficient time testing the CCA to ensure it is user friendly and information is easily accessible within very limited time.
Learning and feedback loops	Incorporate feedback, knowledge and experience sharing mechanisms.

Some Practical Issues to Consider

Customer Relationship Management (CRM) Tool

Customer Relationship Management (CRM) is a model for managing interactions with current and future callers of the call centre. It includes the use of software to track calling history and synchronize it with call centre support. Often the CRM software records or tags the customer details manually or automatically. The tagging requirement should be determined based on the requirement of call handling strategies. See Appendix 1 for examples of

tagging matrix that might be helpful in designing a CRM model for an agricultural call centre. All call centres should possess CRM tool to effectively manage callers to the centre.

Call Handling Procedures

All call centres must take time to develop general guidelines and own in-house call handling procedures to guide staff in responding to callers. It is important that even in cases where one is using off-the-shelf guidelines; these are tailored to the particular situation of the call centre and the communication style of the expected callers. Below are some general guidelines which should be factored into call centre procedures.

- understand the **socio-cultural environment** of your catchment area and ensure that these are factored into your call handling procedures accordingly;
- cater for **different levels of understanding** of callers and ensure procedures support the likely different categories to be encountered at the centre;
- take care of **language differences** in the catchment area and ensure the call centre is adequately equipped to take care of this;
- establish **clear procedures** for call opening and closing in ways that keep the caller in focus ensuring they feel both welcomed, heard and have clear solutions or directions to solve their problems;
- include clear **step by step problem diagnosing** procedures but allow flexibility to take care of non-conventional problems and circumstances staff should be accordingly trained on this;
- detail **communication procedures** for call centre agents to ensure uniformed call management quality across the call centre;
- focus on **listening skills** of call centre agents as possible. Train all agents on listening skills.

TIP

It is significant to state that a customised CRM is likely to be more expensive than open source and off-shelf CMS in the short term but more useful and beneficial in the long run.

Some Call Handling Tips for Call Centre Agents

- Speak clearly and enunciate.
- Be patient and show interest in your callers.
- Be a good listener, resist distraction and focus on the call.
- Don't rush callers – if they need to explain their problems, allow them to do so.
- Guide the call to keep it 'on topic' – agents need to be coached on how to do this.
- Don't assume that you know what the caller needs – allow them to state their problem.
- Clarify your understanding at every point by posing a question.
- You might know what your customer will say, but let them finish anyway.
- Remember active listening is an art and includes listening to what your customer is saying and what they are not saying.
- Interrupt the caller only when it is necessary to do so.

Monitoring and Measuring Performance for Success

Call centre monitoring and performance measurement is very important for better service delivery. It is helpful to identify and establish key metrics and indicators for tracking performance during the planning process. Performance indicators must be tracked and analysed regularly with clear mechanisms to incorporate changes for service improvement.

What to monitor and measure

There are no standard metrics that agricultural call centres must track. It is proposed that monitoring should focus on **internal performance** (call-handling/ operational performance) and **external performance** metrics (quality of the advice provided to the end user).

Internal performance

Metrics for internal performance will measure internal productivity and effectiveness of the call centre. The principle is that achievement of the internal productivity indicators will generate user satisfaction. The internal performance should be clearly bench-marked against either industry standards or agreed targets. This will become the **Call Centre Key Performance Indicators (KPIs)** which will allow rating of the call centre. The following metrics should be measured in this category.

Internal performance indicators

- Percentage of time spent on calls;
- Average call duration;
- Average call handling time;
- Average call wait time;
- Call drop/ abandonment rate;
- Cost per transaction;
- Agent attendance rate/ availability;
- First call resolution rate;
- Staff turnover.

TIP

Internal performance indicators measure output of the call centre which could then facilitate measurement of the effectiveness and efficiency of general service delivery.

External performance

The aim of efficient and effective call centre is to meet caller needs. Operational efficiency must translate into customer satisfaction. Metrics for external performance will focus on user satisfaction with regards to services offered by the call centre and quality of the content provided.

External performance indicators:

- Percentage of monitored calls assessed as scientifically correct and accurate;
- Percentage of monitored calls assessed as relevant to the question and actionable;

- Highest turn-around time (longest time within the reporting period required to get back to the customer with the resolution);
- Percentage of surveyed customers that report finding the information easy to understand;
- Percentage of surveyed customers that report finding the information accurate and trustworthy.

Additional metrics should focus on ascertaining the level of financial sustainability of the call centre by measuring key factors such as monthly revenue, number of users, cost versus revenues ratio, Average Revenue Per User (ARPU), etc. It is important to define in detail metrics to measure for each area of external performance identified. Ensure that indicators are accurately defined and are measurable.

Conclusion

Agricultural call centres are becoming a necessary addition and step in the application of mobile technology in agriculture. Call centres provide the much needed human interaction required for complicated agricultural problems that require deeper and detailed analysis. To harness the full potential of agricultural call centres, ensure key procedures are followed from the onset.

Technology is required to run the call centre and it is key to managing calls and providing timely solutions. However, as the technology is managed and used by human beings, ultimately, the quality, relevancy and timeliness of information provided to callers will depend on the quality and capacity of call centre agents. Providing the requisite training and emphasise on continuous quality improvement and monitoring for the call centre will help ensure success.

Appendix

CRM requirement for the call centre solution:

Tagging matrix 1.

Theme and topic of the query should be based on the subject matter. Agent would select one topic from the tree to record the type of problem.

Weather & Climate

Short-term forecast

Long-term forecast

Agro-climatic advice

Market and prices

Prices

Markets

Buyers

Crop agronomy

Planning - "how to start new type of farming?"

Irrigation

Planting & sowing

Pests and diseases

Growing/ production

Harvesting

Post-harvest handling

Services and schemes for farmers

Extension services

Government schemes

Financial services

Inputs

Fertilizer

Seeds

Pesticides

Equipment

Soil

Soil management

Soil testing

Tagging matrix 2.

Crop name or livestock name that is the object of the query.

Crops

Rice

Cassava

Banana

Irish potato

Onion

Tomato

Orange

Sweet potato

Cabbage

Sunflower

Cashew nuts

Livestock

Cattle

Goat

Sheep

Pig

Rabbit

Fish

Camels

Donkey

Silkworm

Bee

About the GSMA Association

The GSMA represents the interests of mobile operators worldwide. Spanning more than 220 countries, the GSMA unites nearly 800 of the world's mobile operators with 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in industry sectors such as financial services, healthcare, media, transport and utilities. The GSMA also produces industry-leading events such as Mobile World Congress and Mobile Asia Expo.

For more information, please visit the GSMA corporate website at www.gsma.com. Follow the GSMA on Twitter: @GSMA.

About Mobile for Development - Serving the underserved through mobile

Mobile for Development brings together our mobile operator members, the wider mobile industry and the development community to drive commercial mobile services for underserved people in emerging markets. We identify opportunities for social, economic impact and stimulate the development of scalable, life-enhancing mobile services

About the GSMA mAgri Programme

mAgri catalyses scalable, commercial mobile services that improve the productivity and incomes of smallholder farmers and benefit the agriculture sector in emerging markets. The GSMA mAgri Programme is in a unique position to bring together mobile operators, the agricultural organisations and the development community to foster sustainable and scalable mobile services that improve the livelihoods of smallholder farmers.

Contact

For more information on the GSMA's mAgri Programme, please contact us on magri@gsma.com

For queries relating to the mFarmer Initiative, please email us on mFarmer@gsma.com

Follow us on Twitter @GSMAmAgri

<http://www.gsma.com/mobilefordevelopment/programmes/magri>