



AGBIZ GRAIN MOBILE APPLICATION RESEARCH REPORT

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1. Executive Summary

Mobile applications are taking over our way of life one application at a time. Globally it is astounding to understand how many mobile applications exist in the Android, Mac and web-based environments.

Mobile applications in the agricultural sector have also had a dramatic intake from

DESCRIPTION	SOURCE	MORE INFORMATION
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This statistic presents information on the projected mobile app store revenues from 2015 to 2020. In 2015, global mobile app revenues amounted to 69.7 billion U.S. dollars. In 2020, mobile apps are projected to generate 188.9 billion U.S. dollars in revenues via app stores and in-app advertising.

As of March 2017, there were some **2.8 million apps** available in Google Play, the world's largest app store, while the Apple Store, the second ranked, boasted some **2.2 million available apps** in January 2017. As mobile apps become more popular and mobile internet more widely available, **revenues generated**

people requiring information. No known statistics exist for the Southern African market, but globally the trend shows Facebook and WhatsApp at 90% of the usage while only 8% is towards farming related information websites and 2% is rated as other.

**** Statista.com – March 2017**

In order to understand the South African market - Agbiz Grain proposed a workshop with key stakeholders to understand how best to use mobile applications to help users in the grain value chain. The presentations were valuable as it proved our suspicions that the

applications that were being developed, duplicated information and resources. This resulted with relevant information being scattered in various isolated systems. This proved that no information to provide a holistic view of the farmer as a complete entity was being stored and could be used for analysis.

The grain value chain members in the workshop agreed that the application developers needed to work closer together, using their strengths to form one comprehensive application that could be used centrally. However, the workshop illustrated that this is unachievable as the respective teams have different goals and missions with their applications. It was further recommended that the applications integrate with each other to share valuable production information, e.g. weather station statistics and satellite imaging. This integration would need to be developed and this costing was not part of the existing budget.

The best way to create value for the farmer and ultimately all members in the grain value chain would be for Agbiz Grain to:

- i) Create an on-line library of known mobile applications for farmers;
- ii) Approve it with status ratings regarding information availability and
- iii) Recommend it to farmers via the Agbiz Grain network.

Agbiz Grain would have to create an integration portal to present individual data from isolated pockets of information and provide consolidated statics and pro-active trends to farmers. This would enable the grain value chain role players to assist farmers in reacting to problems. The value created from proactive statics needs to be defined by Agbiz

Grain for a better understanding of providing a valuable and targeted service to grain industry role players and especially farmers.

In conclusion, a different strategy is required to feed information to the various role

Questions and answers

❖ **Q:** Explain the difference between reactive, proactive and predictive safety strategies.

❖ **A:**

Reactive method
The reactive method responds to the events that already happened, such as incidents and accidents

Proactive method
The proactive method looks actively for the identification of safety risks through the analysis of the organization's activities

Predictive method
The predictive method captures system performance as it happens in real-time normal operations

Slide number: 22

Module N° 3 ICAO Safety Management Systems (SMS) Course

players in the grain industry. We have grown out of being told what happened in the past, to what is happening now based on integrating other key trends with the question, thus moving away from reactive to proactive. We need the farmers to define the predictive method (e.g. drought based on weather patterns) and they will use the application as it provides value to them and is an important part of running their businesses.

2. Focus

The most important focus of the workshop will be to:

- 1. Get all the role players to share information, ideas and collaborate*
- 2. Ensure a more effective and efficient use of resources;*
- 3. Provide some much-needed coordination and*
- 4. Ensure that there is synergy, but not overlap, between the various projects.*

In order to create a platform for the discussion at the workshop, Agbiz Grain sent out a questionnaire to all known members in the grain value chain. A total of 122 recipients were identified, but only 14 completed responses were received. Although limited, this information enabled insight into current availability and the extent of use of mobile applications in the South African agricultural environment.

To elucidate current app trends, Agbiz Grain identified seven (7) presenters, namely:

- Farmboek,
- Connected farmer
- AfriCultuReS
- Rain4Africa(R4A)
- Hydronet
- Viamo Non-smart phone alternative
- Reddi Tec

The presentations of these speakers are available on the Agbiz Grain website. The content of these presentations allowed the workshop participants to discuss each application, its uses, and its availability. This background created a platform for the

workshop participants to share ideas on what was best required for the grain industry and specifically farmers.

It was clear from the presentations that each company was focused on its own goals and objectives and did not share any consolidated vision for the farmer's needs. There was duplication in many areas and,

NO ONE APPLICATION could be chosen to address the entire need requirement.

It was agreed by all the workshop participants that co-ordination was definitely needed between applications so that the farmer could benefit from the information available. Interfaces that are efficient, portable, and simple to use should be considered when creating and implementing an application.

The applications that have already been developed and those currently being developed overlapped and information was duplicated in many areas. The applications need to be integrated to create one stream of accurate information that reduces blind spots of data and mitigates the existing risks for farmers. The costing needs to be affordable and have a different pricing model for levels of information available.

3. Vision

- ***To create a South African grain one stop application store for members in the grain SA value chain.***
- ***An easy to manage platform for all members to share common synergies on grain information.***
- ***Library of mobile applications:***
 1. ***Services.***
 2. ***Features.***
 3. ***Geographic boundaries.***
 4. ***Strategic alliances for consolidated information.***

The presentations by the various service providers provided an ideal background for the discussion as to what was best for the farmers. It was agreed that there were too many applications using the same input data and creating similar product offerings to provide information for the farmers.

An agreed application library or store is required to centralise all the standard information. This would result in cost saving and accurate information being presented by all shared services provided to the farmers. The shared platform should be easy to manage. One simple logon to access the information would be the ideal value-added service.

All persons have the right to privacy, including their private information which cannot be shared. The following act is very important and infringement of the rules will result in

legal action being taken against the offenders. Sharing is very important to an agreed degree, legal advice will be required to continue further with this aspect.

Sharing farmer information is sensitive and needs to be managed proactively, according to the

Act 4 of 2013: Protection of personal information act, 2013, Government Gazette, 26 November 2013:
https://www.gov.za/sites/default/files/37067_26-11_Act4of2013ProtectionOfPersonalInfor_correct.pdf

To promote the protection of personal information processed by public and private bodies; to introduce certain conditions so as to establish minimum requirements for the processing of personal information; to provide for the establishment of an Information Regulator to exercise certain powers and to perform certain duties and functions in terms of this Act and the Promotion of Access to Information Act, 2000; to provide for the issuing of codes of conduct; to provide for the rights of persons regarding unsolicited electronic communications and automated decision making; to regulate the flow of personal information across the borders of the Republic; and to provide for matters connected therewith.

PREAMBLE

RECOGNISING THAT—

- section 14 of the Constitution of the Republic of South Africa, 1996, provides that everyone has the right to privacy;
- the right to privacy includes a right to protection against the unlawful collection, retention, dissemination and use of personal information;
- the State must respect, protect, promote and fulfil the rights in the Bill of Rights;

AND BEARING IN MIND THAT—

- consonant with the constitutional values of democracy and openness, the need for economic and social progress, within the framework of the information society, requires the removal of unnecessary impediments to the free flow of information, including personal information;

AND IN ORDER TO—

- regulate, in harmony with international standards, the processing of personal information by public and private bodies in a manner that gives effect to the right to privacy subject to justifiable limitations that are aimed at protecting other rights and important interests,

Synergies with the scoping/design/implementation and target market of the mobile application would help the companies get the application to market sooner. The greatest win with this approach will be the cost- and time-saving when shared services provide standard requirements that do not have to be repackaged. The greatest risk is that companies do not share the same vision and goal per company strategies and the information is not used for its intended purpose.

The greatest win from the workshop was that the respective participants representing different companies agreed that a central application store – a library of applications - services / features / geographic boundaries would be far more useful to role players in the value chain. The farmers would have an approved list of applications that they could use, based on their individual information/services, to suit their farming requirements.

Currently no library of services exists and there is no approved board to make recommendations on what application the farmers should use. This is the step forward – to create value for the farmers, Agbiz Grain needs to build a library of applications that farmers want to use.

4. Goal

- 1. To understand what the full needs analysis is from the current value chain.*
- 2. An agreed standard for consolidated information.*
- 3. Have mobile application developers present the current business offerings.*
- 4. Understand what the shortcomings are and how best to resolve such.*
- 5. Platform for communication between application development and*
- 6. Users to provide end to end solution on application usage.*

The workshop provided the ideal platform for the participants to talk to each other and discuss what the actual needs for the grain industry could be. They had an opportunity to break-away in small groups and discuss the topics which would help them understand all the needs of value chain members that will have to be accommodated.

It was clear from all the group presentations that a formal structure would need to be put in place to capture all the needs, verify against actual system requirements and a solution be created to implement the needs. The sharing of information is a highly sensitive area and needs to be handled properly with legal advice.

The presentations provided adequate information to create the right environment for the different businesses to discuss with each other about what they shared and what would be good to make the applications work better together. The workshop participants were amazed at how much content they shared and they could clearly see where the strengths of their applications were compared to competitive software. The break-away sessions allowed teams to discuss the shortcomings and how best to resolve them.

Integration of information between applications assisted the teams in avoiding 'blind spots' of missing information. Using the strengths of the applications presented on the day, the consolidated information would provide 95% of the needs required by farmers. It would take specialised skills to bring all the information together and share it on a common easy-to-use platform. Strategic information regarding weather, known factors affecting production – e.g. pest or disease infestation, linked to satellite imaging – would enable proactive responses to farmers. They will be notified systematically based on statistical models – actual identified problem areas – that would save time, money and effort compared to current reactive measures which are always too late, too costly and not useful at all.

The best solution identified to resolve the shared services and information was the library of applications that was agreed on. Agbiz Grain would create and control the library giving the value chain role players and specifically farmers an easy-to-use portal to search and find applications to suite their business models.

5. Gap Analysis

The presentations at the workshop led to many discussions on how best to provide in the needs of the grain value chain. It was clear that not one application could provide the solution holistically and needed to be combined with shared services.

The current GAPS and proposals were identified:

- All the applications provided similar services.
The application development should work towards unity of purpose rather than structure.
- Availability of useful information.
Agbiz Grain has to create library of vetted applications.
- The ease of use of the application.
The user friendly, language specific, complete solution application would be far more usable.
- No common sharing area for topic specific questions.
A shared chat room that combined questions and responses from all applications for all users.
- The application must save time and money for the users.
A library of services that provides a one stop shop of help.
- Application cost could not be measured.
Agbiz Grain to validate costs based on quality of information and services.
- Reducing the cost of applications to grain value chain members.
Attracting big company sponsorships and advertising shared space for key investors.
- Grain value chain members have different needs for the same information.
A more structured – push or pull – system of reporting to various new categories of users.

6. Recommendation

Tasks that need to be done to achieve the library of applications for Agbiz Grain:

Project document

A complete project document of the user requirements. Software development / tools and technology usage need to be identified and documented.
Complete needs analysis needs to be signed off by key stakeholders.

Project Manager

A project manager needs to be assigned, that understands the user's expectations and requirements and can translate it to the development team.

Requirements plan

The current functional specifications need to be broken up into smaller divisional documents. Initial user requirements / current requirements and changes that need to be done to get user acceptance need to be documented and signed off.

Milestone program

A detailed program of dates / resources and comments needs to be created of who needs to do what and by what dates. This will be used in all project meetings and circulated to key stakeholders on the progress of the project.

Pilot and Live environment.

A plan of action needs to be created for these environments. Code in pilot needs to be according to signed user specifications, tested and sign-off. Code in live needs to per approval from Agbiz Grain project sponsor and signed off for live usage.

Training manual

A continuously updated document of what is in the live application being used by the users.

7. How to get there

The mobile application space has been flooded with applications providing similar services and information to all users. Agbiz Grain needs to form a body of representatives from the grain value chain to now create, design and document the full needs analysis.

A needs analysis will provide the framework for what needs to be done by whom by when. These needs have to be agreed upon by key stakeholders. Stakeholders must form part of the public and private sectors – organisations having a shared interest in making the application work for the grain value chain.

A project plan of the needs analysis will create structure as to how these needs will be achieved. Consolidated teams will be asked to bring forward best solutions for the grain value chain. The sharing of minds will allow farmers to gain access to superior information that is pertinent to their specific farming areas.

The library of services as a subset of the needs does not currently exist for any farmers. Agbiz Grain has to develop this as a simple, easy to use, accessible for all farmers. This will create a portal to services and generate user energies to provide momentum to get the application working within the grain industry.

The key stakeholders will be able to provide much needed direction to farmers on application usage. Shared information will be managed to make sure it does not infringe on the PoPi Act. Strategic information is required and will be created from combining all the services from different application vendors; this will create value for the farmers.

Agbiz Grain has now to invoke the correct representatives to start the process and get the needs documented.

Use the recommendations stated above as a guideline to create structure and for offering shared services.

Change is a hard process to manage. A shared change is nearly impossible to

**The people who are crazy enough
to think they can change
the world are the ones who do.**
—Apple's "Think Different" commercial, 1997

achieve. Like minds sharing the same vision for a better future can get change resolved sooner than later. As per the insert, Apple changed the world from being a slow starter to one of the industry leaders. A shared library service does not exist in the grain

industry and will have to be created to provide the best, easy to use, valuable solution to farmers.

This document serves only as a tool, one that must be collectively used by every user in order for it to be effective. It is my hope that every user will contribute to making this process better in an effort to make the Agbiz Grain project a highly valuable, sustainable application going forward.

Yours Faithfully
Ashley Naidoo