



Business Environment Reform Facility

Innovative Stakeholder Engagement ACIS (Associação de Comércio, Indústria e Serviços), - Phase 2

January 2019

About Business Environment Reform Facility (BERF)

BERF is funded by the UK Department for International Development (DFID) under the Business Environment for Economic Development (BEED) Programme. BERF is a central facility responding to demand from the DFID's priority Country Offices and stakeholders to initiate, improve and scale up business environment reform programmes. BERF is managed by a consortium led by KPMG LLP. The programme started in January 2016 and will finish in January 2019.

We provide expert advice, analysis of lessons learned, policy research about what works and what doesn't and develop innovative new approaches to involving businesses and consumers in investment climate reform.

BERF has a strong emphasis on strengthening the Business Environment for women and girls, as well as for young adults more generally. It is also aiming to improve the relationship between business and the physical environment including where relevant through linkage to climate change analysis. BERF recognises the need for appropriate political economy analysis in order to underpin business environment reform processes and interventions.

About this Report

Implementation for this assignment was conducted by Richa Sinha and Wonderkid Multimedia from July 2018 to Jan 2019.

The views contained in this report are those of the authors and do not necessarily represent the views of KPMG LLP, any other BERF consortium member or DFID.

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Acronyms and Abbreviations

ACIS	Associação de Comércio, Indústria e Serviços
ARPU	Average Revenue per User
BE(R)	Business Environment (Reform)
BEEP	Business Enabling Environment Programme
BERF	Business Environment Reform Facility
BMO	Business Membership Organisation
CO	DFID Country Office
CTA	Confederation of Economic Associations of Mozambique
DFID	Department for International Development
FCAS	Fragile and Conflict Affected States
GoM	Government of Mozambique
ICT	Information Communication and Technology
ICR	Investment Climate Reform
IFC	International Finance Corporation
IMF	International Monetary Fund
ISP	Internet Service Provider
M&E	Monitoring and evaluation
Mcel	Mozambique Cellular
MDAs	Ministries, Departments and Agencies
MNO	Mobile Network Operator
MoU	Memorandum of Understanding
PEA	Political economy analysis
PPD	Public Private Dialogue
PSD	Private Sector Development
QA	Quality assurance
QoS	Quality of Service
SME	Small and Medium Enterprise
SMS	Short Messaging Service
SPEED	Support Program for Economic and Enterprise Development (USAID)
TA/TS	Technical Support
TBC	To be confirmed
ToC	Theory of Change
ToRs	Terms of Reference
USSD	Unstructured Supplementary Service Data
VfM	Value for Money
WB(G)	World Bank (Group)
WEE	Women's Economic Empowerment
YTD	Year-to-date

1. Introduction

1.1. Background

The Business Environment Reform Facility (BERF) seeks to establish an innovative stakeholder Engagement work stream to provide support to Associação de Comércio, Indústria e Serviços (ACIS), a major Business Membership Organisation (BMO) with a Head Office based in Maputo and a management office in Beira, Mozambique. Leveraging on technology to strengthen engagement with its members, ACIS could more accurately and convincingly represent private sector views on the business environment to government and advocate for reform through effective Public Private Dialogue (PPD).

ACIS is a BMO that represents companies from major sectors of the Mozambican economy, including mining, agriculture, transport & logistics, telecoms, fast-moving consumer goods (FMCGs), manufacturing and services. Founded in 2001 in Mozambique's second city, Beira, and now based in the capital Maputo, ACIS has approximately 240 members.

ACIS members are distributed throughout Mozambique, from the capital Maputo in the south to the industrial hubs of Beira and Nampula up to 2,000 kilometres to the north. With a low intensity civil conflict being waged in Sofala Province (around Beira), face-to-face meetings are logistically difficult and costly.

Initiated in 2016 the project engagement is phased into two with the view to strengthen the engagement within ACIS vertically and horizontally:

Phase I: Identify, cost the development of and assess appropriate ICT mechanisms (e.g. internet, smartphones, SMS, etc.) for engaging ACIS members more effectively in Business Engagement dialogue; and produce Terms of Reference (ToR) for phase 2.

Phase II: Following development and testing of the chosen mechanism, provide a fully working technology-based mechanism for ACIS; and produce in partnership with ACIS an implementation and outreach plan to ensure effective use of the mechanism.

In consultation with ACIS, BERF proposed that Phase I centered on the organisation to re-establish and strengthen basic communications practices. To this end, BERF supported ACIS to draw up a Communications Strategy which includes the messages, tools and activities that should form the basis of its day-to-day communications function.

ACIS, successfully implemented its Communications Strategy facilitating the transition into phase II that sought to strengthen its communications function, with the design, development and implementation of an innovative technology-based platform of communication with its members.

Achieving the stated recommendations Phase II, the project kicked off and formed the basis of this inception report. The objective of the platform was to support ACIS in engaging its countrywide membership. The solution enhanced two way communications as well as facilitate structured feedback from members is indexed and prioritised into evidence based advocacy for lobbying through Confederation of Economic Associations (CTA) to Government of Mozambique (GoM).

The ICT platform is user friendly, scalable, affordable (preferably open source technologies) and fully customised to the ACIS requirements. The components of the platform include:

- a) Web application;
- b) Mobile application; and
- c) SMS & Email alerts integration.

Wonderkid Multimedia Ltd. was been sub-contracted by KPMG UK under the BERF Mozambique program to deliver and implement an innovative technology platform that enhanced the capacity of ACIS to effectively carry out its advocacy with government and the provision of relevant business information to members.

The technology platform provided a management portal for ACIS staff and a members-only portal accessed from the ACIS website. Both portals leveraged the data and feedback gathered by the online tools and channels BERF has recommended in the ACIS Communications Strategy.

1.2. Scope

The project duration covered four months commencing on 25th June 2018 up to 5th Nov 2018 including two months of additional user support and handholding. The Terms of Reference define project deliverables for Wonderkid as the following:

- System design, development, testing and configuration;
- User training;
- System go-live and user support.

1.3. Project Team

A project team was formed to work with the ACIS management team to deliver the project from inception to closure. Led by a project manager the obligations of the project team were as follows:

- Administration of the project implementation;

- Project reporting to the ACIS management and BERF teams;
- Coordination of training and other project related logistics;
- Liaising with relevant system service providers (SMS) to facilitate integration;
- Facilitate Wonderkid team to carry out technical set-up and configuration of the solution
- Support all project related tasks.

Table 1: List of project team members

Team Role	Name
Project Manager	Halima Murunga
Web Developers	Fredrick Kembo Nicholas Munyoki
Mobile Developer	Benson Machira
Quality Assurance Engineer	Dickson Marira
Project Support (Mozambican Nationals)	Bruno Nizio Moises Emanio

2. Implementation Methodology

Following the in-depth analysis and the resulting system design carried out in 2016, phase two involved system development, testing, user training, implementation and user support.

2.1. Milestone 1: Project Initiation

Upon the onset of phase 2, ACIS had appointed a new board and management team. The BERF and Wonderkid team held several meetings to introduce the platform that facilitated transfer of knowledge. Additionally the meetings served an opportunity to appreciate the ACIS President and Executive Director strategic objectives. This informed on additional features that aligned to benefit the organisation.

A project initiation meeting and user requirements exercise was carried out on 5th July 2018 at the ACIS offices. This opportunity built a foundation for business project creating buy-in and deeper understanding of the organisation processes, structures and challenges.

2.1.1 User Requirements Gathering

The user requirements process required interfacing with the users of the platform both the management committee and the members. Consultation held with the management committee involved:

- a) Group demonstration of system concept and compilation of feedback
- b) Systems and process review and
- c) Document collection.

Nine selected members were identified by ACIS for one-to-one interviews in person or over the telephone. This served to further validate the findings from phase one.

Table 2: List of ACIS members Interviewed in user requirements exercise

No.	Name of Company	Name of Interviewee	Date of Interview
1	Gondwana Lda	Mario Deus	5th July 2018
2	Ping Servicos	Roberto Mavume	9th July 2018
3	DHL	Daudo Vali	12th July 2018

4	Maersk	Xavier Chidawayika	12th July 2018
5	BCX	Luis Enoque	12th July 2018
6	Guano Fertilizers	Mulwelli Rebelo	13th July 2018
7	Bites & Pieces	Amad Seni	16th July 2018
8	AM Fermino	Augusto Fermino	16th July 2018
9	Bell Equipment	Maria Lourenco	24th July 2018

2.2. Milestone 2: System Development and Testing

The system development process leveraged on agile approach focusing on lightweight processes which allowed for rapid changes along the development. The process was designed to ensure end-to-end solution that met the user requirements in support of ACIS's strategic goals and objectives.

Built in a modular format table 3 details the modules and the design approach used.

Table 3: System modules delivery

Module – ACIS Management Portal (Back-end)	
Membership database	
Description	Manage membership data including business information, contacts, subscription payment, preferences of content, and participation in special interest groups. Review and approve/reject member applications. Historical membership data will be populated on to the module sourced from ACIS existing databases from 2016 – to date.

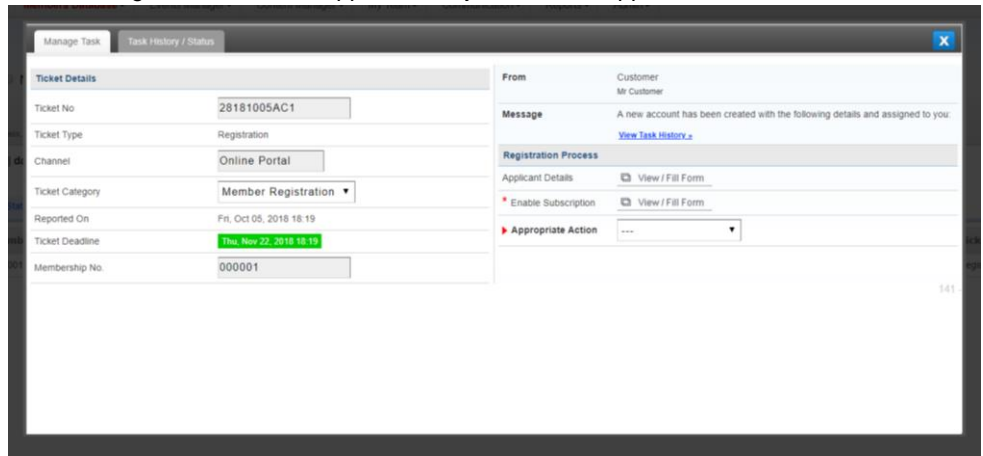
Status Delivery

Member database was stored on an excel sheet regularly updated by the ACIS communications officer. However problems around validity of member contacts was a problem.

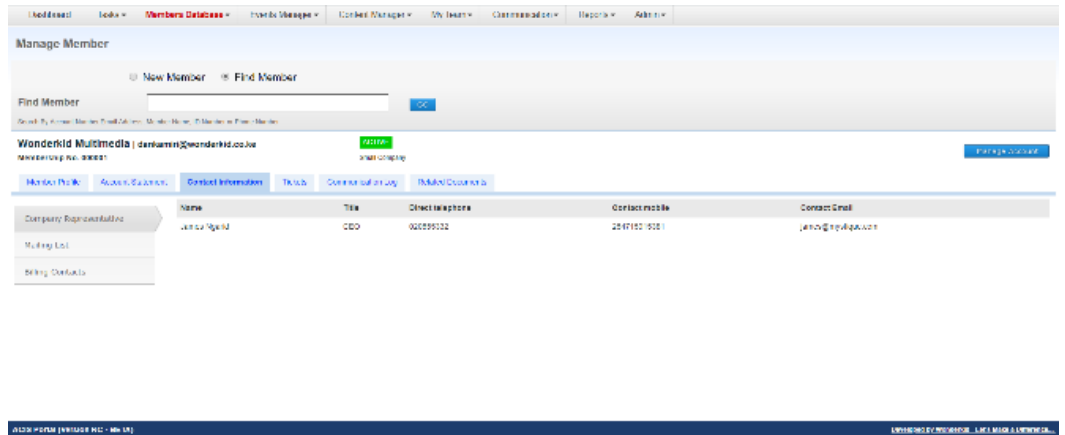
Opted to have link emailed to all members to have them register on the platform.

Unregistered members would be called for follow up, detailing instructions for registration.

ACIS management team can approve or reject member applications

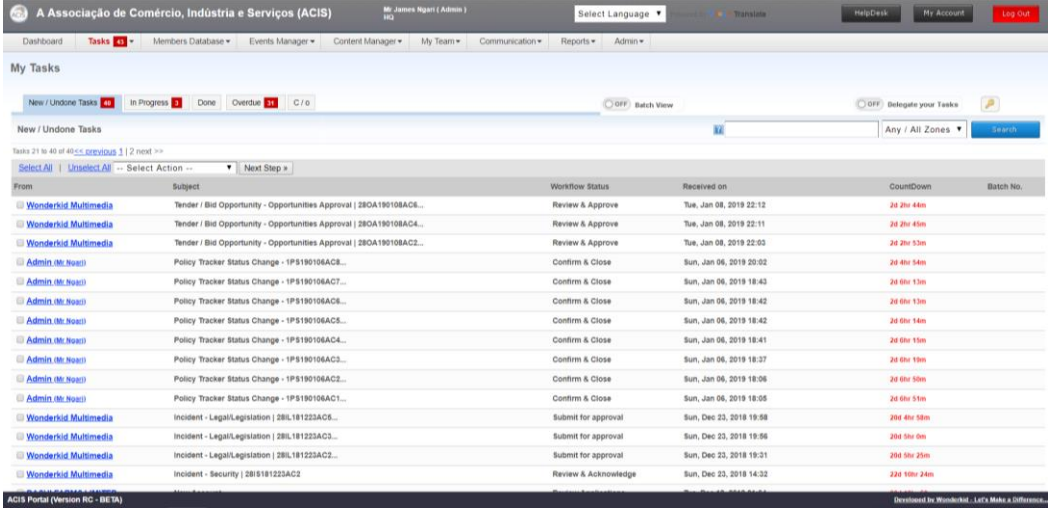


ACIS management team can view and edit member contact details.



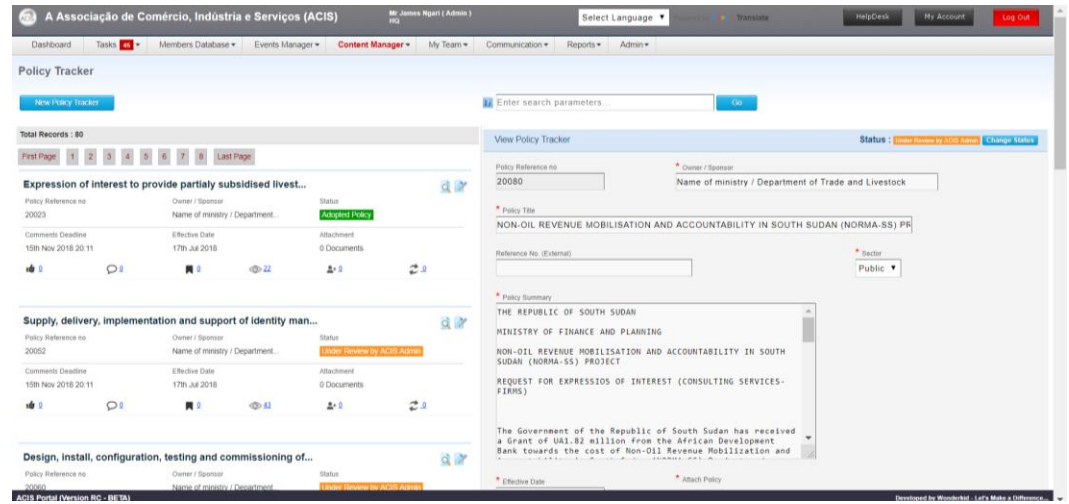
Incident reporting



<p>Description</p>	<p>The module enables ACIS to log, prioritise, index and assign incidents to relevant personnel. Powered by Task management engine to assign tasks to the relevant personnel for action</p>
<p>Status Delivery</p>	<p>Members can post an incident which will be categorised and issued with a unique ticket (reference) number. The categories can be expanded as ACIS continues to analyse data and identify new categories posted by members.</p>  <p>The screenshot shows the 'My Tasks' interface. At the top, there are navigation tabs: Dashboard, Tasks (4), Members Database, Events Manager, Content Manager, My Team, Communication, Reports, and Admin. Below this, there are task status indicators: New / Undone Tasks (48), In Progress (3), Done, Overdue (3), and C/O. A search bar and a 'Batch View' toggle are also present. The main area is a table with the following columns: From, Subject, Workflow Status, Received on, Countdown, and Batch No. The table lists various tasks, including 'Tender / Bid Opportunity - Opportunities Approval' and 'Policy Tracker Status Change', with their respective workflow statuses and received dates.</p>
<p>Policy Tracker</p>	
<p>Description</p>	<p>Online repository of indexed incidents (collated from Feedback module) are posted in the policy tracker as agenda items.</p> <p>In addition, ACIS can raise its own agenda items in the case of proposed legislation. The decision to post on the policy tracker is at the discretion of the ACIS team.</p> <p>Members subscribe and comment on agenda items based on their preference.</p> <p>Each agenda item is updated as per any engagement with agencies. Automated notifications will alert subscribed members on any updates posted. Each member will define how they wish to receive updates based on frequency and medium e.g. email, android application, SMS, Facebook etc.</p>

Status Delivery

ACIS management team has a content management tool enabling them to post, review and publish any policy related documents.



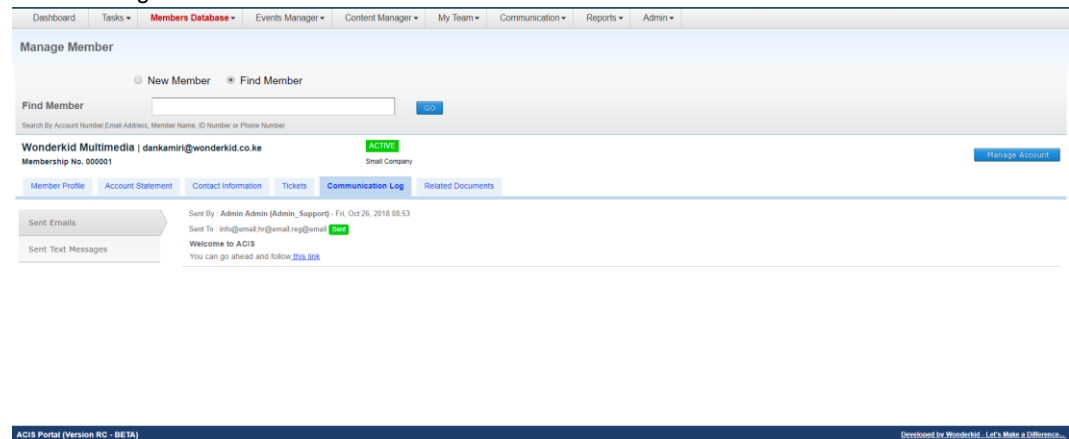
SMS/Email Broadcasting

Description

Ability to broadcast targeted messages to ACIS members. Moderators will have the ability to confirm if messages have been sent and received by recipients.

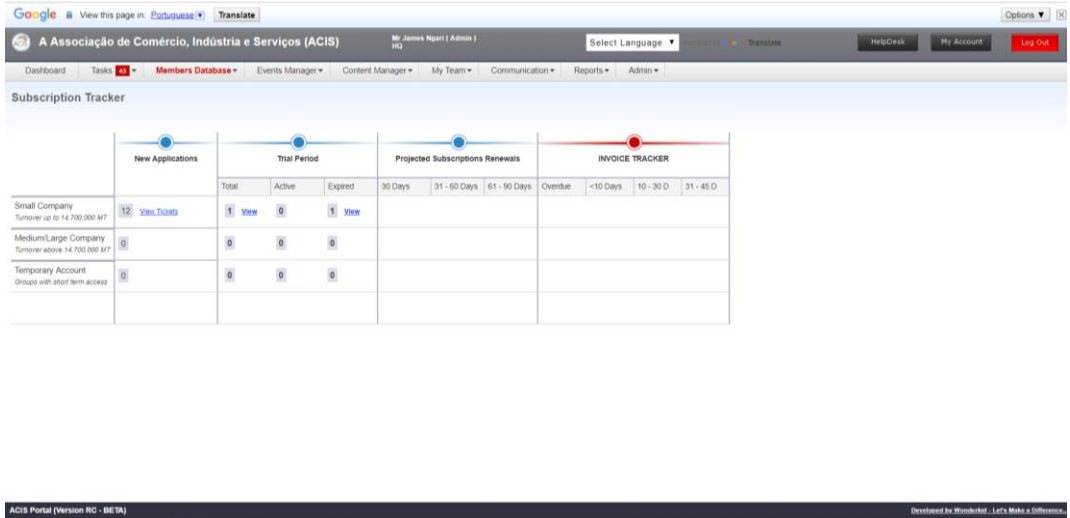
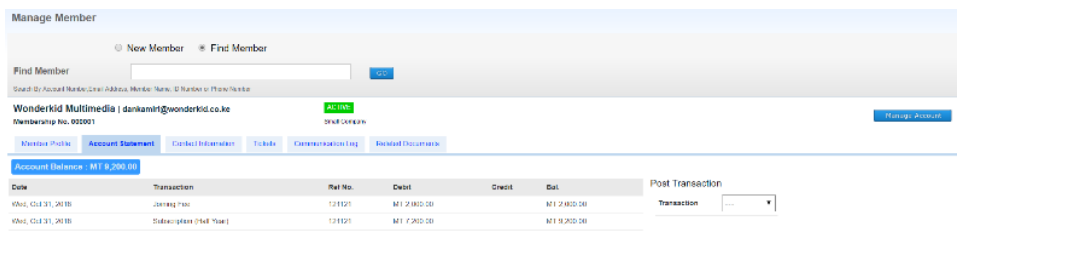
Status Delivery

This feature is functioning. Integration with SMS and Email providers was carried out to support the broadcasting function.



Subscription Tracker



<p>Description</p>	<p>ACIS can track and notify members on the status of their subscriptions. Additional functionality will include invoicing and receipting. Automated emails to members will include, renewal reminders and notification of payment.</p>
<p>Status Delivery</p>	<p>ACIS management team can track status of subscription with reports</p>  <p>ACIS management team can manage accounts posting debt and receipt notes. Automated notifications are sent to members on email.</p>  <p>Post transaction</p>

The screenshot displays the 'Manage Member' section of the ACIS portal. It includes a search bar for finding members, a profile for 'Wonderkid Multimedia' with contact information, and a table of transactions. The account balance is MT 5,200.00. A 'Post Invoice' form is visible on the right side.

Date	Transaction	Ref No.	Debit	Credit	Bal.
Wed, Oct 31, 2018	Joining Fee	12121	MT 2,000.00		MT 2,000.00
Wed, Oct 31, 2018	Subscription (1st Year)	12121	MT 7,200.00		MT 9,200.00

Help Desk

Description

Ability for members or non-members to inquire or request for a service from ACIS. Members will request for services by filling out a help desk form that will in turn generate an automated task for the Communication's Officer for appropriate action.

Status Delivery

Contact support form allows both members and ACIS management to request for help. All incoming request are ticketed and assigned for action.

The screenshot shows the 'Contact Support' form in the ACIS portal. It includes a header for 'A Associação de Comércio, Indústria e Serviços (ACIS)' and a navigation menu. The form contains fields for Name, Subject, Task Message, Urgency, and Your Mobile No., along with a 'Send' button. A green message box states: 'You can reach ACIS Support team via the form below. All fields are required'.

Modules – ACIS Members Portal (Front-End)

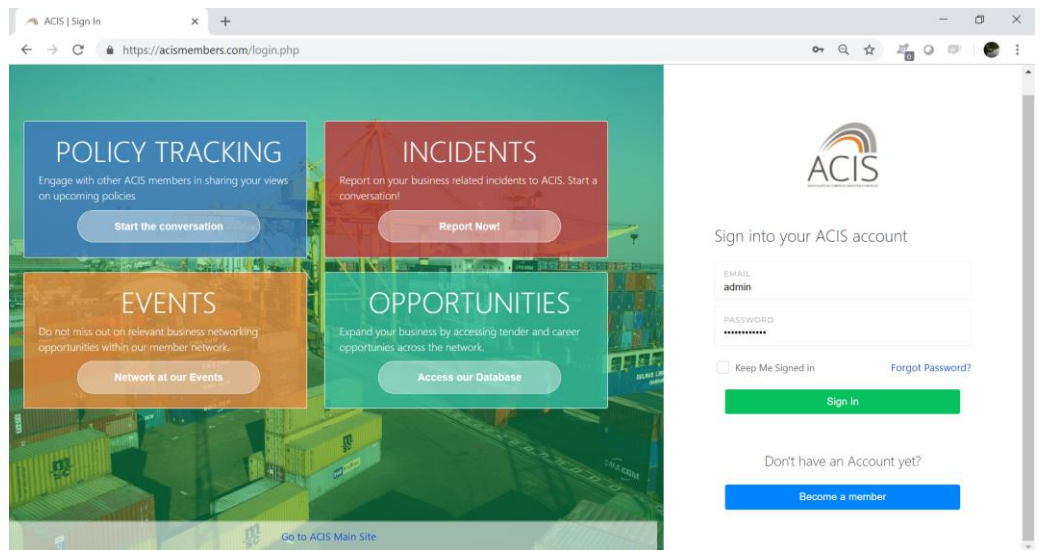
Website integration

Description

- Integrate with ACIS website to create a single log-in for members.

Status Delivery

Members access the platform via the link www.acismembers.com The link to the website, enables users to access the website www.acismoz.com
All members are issued with a log in user name and password to access the platform.



Member accounts

Description

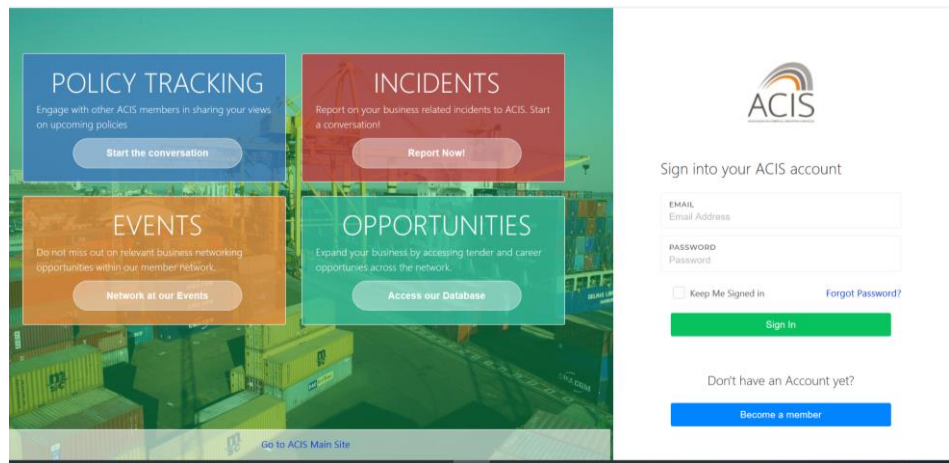
- Creation of temporary member accounts for non-member stakeholders i.e. Diplomatic community, universities etc.

Status Delivery

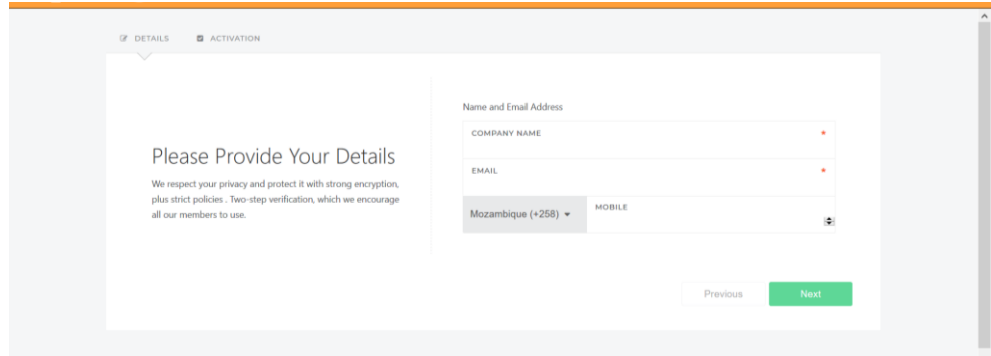
This service was requested by the ACIS management committee during the user requirements exercise. However the team removed this requirement due to facilitation of online payments. The cost of payment vis a vis the amount did not make economic sense.

Members can apply for new account by clicking on “Become a member” button.





Members fill in their details. Request are submitted to ACIS for review, approval or rejection.



Knowledge Database

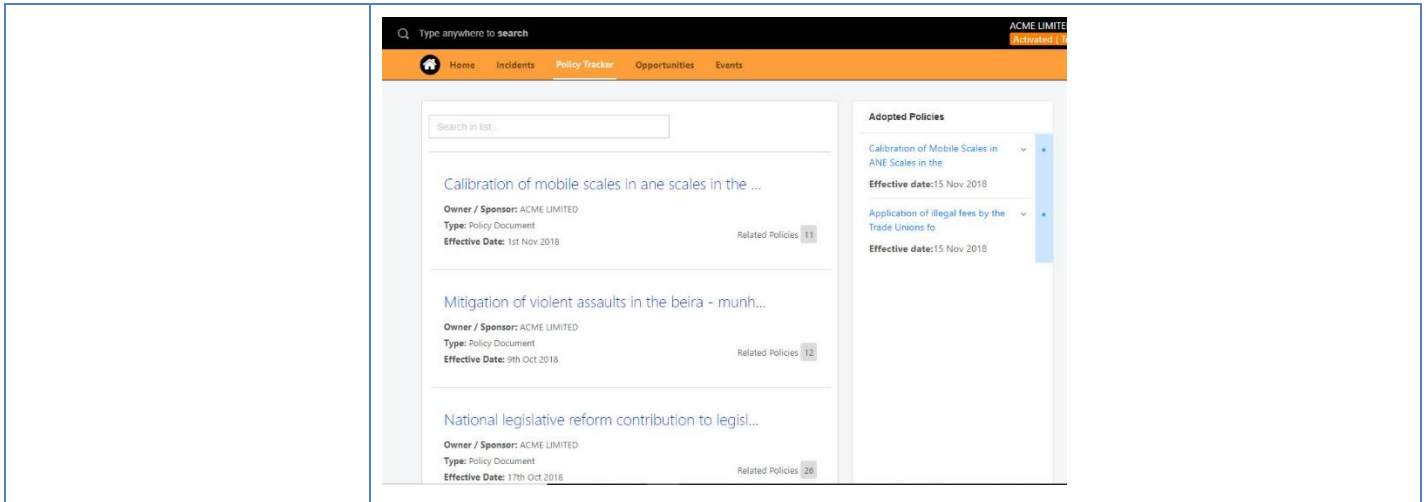
Description

- Access any policy related information can be accessed in both Portuguese and English

Status Delivery

The ACIS team will be able to upload all current and past policy related documentation via the platform to be accessed on the member's portal.





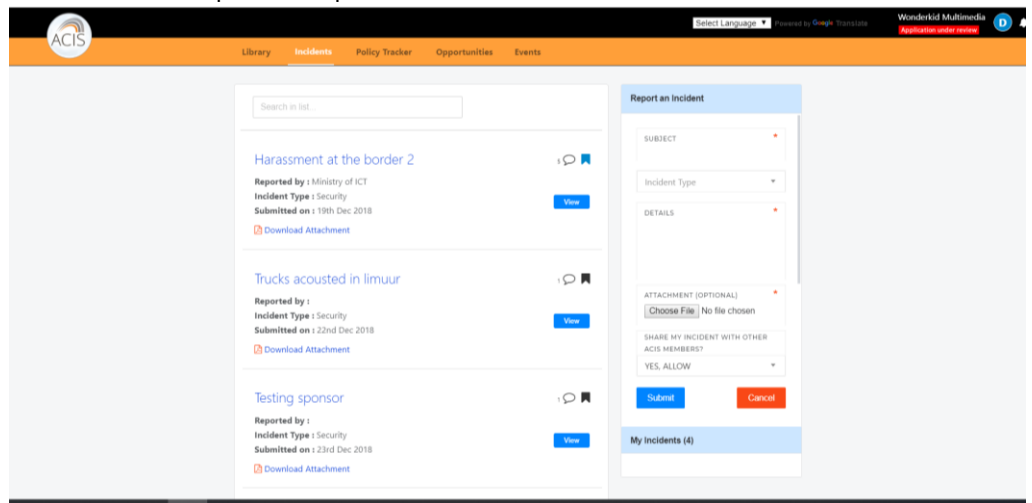
Incident reporting

Description

- Report incidents are ticketed and categorized to suite the relevant ACIS personnel for quick and efficient review and response.

Status Delivery

Members can view public or report an incident.



A member can participate in discussions on public incident

The screenshot displays the ACIS Policy Tracker interface. At the top, there is a navigation bar with 'Library', 'Incidents', 'Policy Tracker', 'Opportunities', and 'Events'. The main content area shows an incident report titled 'Harassment at the Border 2' with the following details: Incident Type: Incident, Date Posted: 19th Dec 2018. The description reads: 'My truck was held at the border point for over 8 hours by some greedy custom officials demanding for a bribe. This is unacceptable. We need protection from the cartels'. Below the description is a 'Download Attachment' button and a note 'Reported by: Ministry of ICT'. To the right, there is a 'Discussion / Comments' section with three comments from 'Daniel from Wonderkid Multimedia'. The first comment says 'test', the second says 'and haaf dsa fidas', and the third is a longer comment about flagging inappropriate posts. A 'Read all updates' link is at the bottom of the discussion.

Policy Tracker / member forums

Description

- Subscribe and comment on the policy tracker and member forums.

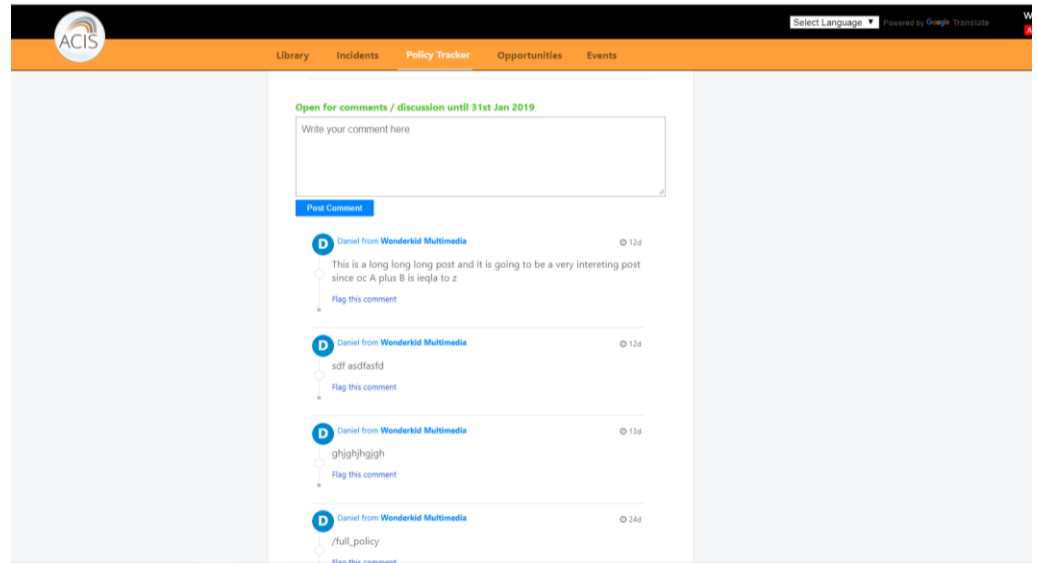
Status Delivery

Members can view, select policy related posts.

The screenshot shows the ACME LIMITED Policy Tracker interface. At the top, there is a search bar with the text 'Type anywhere to search' and a navigation bar with 'Home', 'Incidents', 'Policy Tracker', 'Opportunities', and 'Events'. The main content area features a search box 'Search in list...' and a list of policy documents. The first document is 'Calibration of mobile scales in ane scales in the ...' with Owner / Sponsor: ACME LIMITED, Type: Policy Document, Effective Date: 1st Nov 2018, and 11 Related Policies. The second document is 'Mitigation of violent assaults in the beira - munh...' with Owner / Sponsor: ACME LIMITED, Type: Policy Document, Effective Date: 9th Oct 2018, and 12 Related Policies. The third document is 'National legislative reform contribution to legis...' with Owner / Sponsor: ACME LIMITED, Type: Policy Document, Effective Date: 17th Oct 2018, and 26 Related Policies. On the right side, there is a sidebar titled 'Adopted Policies' with two entries: 'Calibration of Mobile Scales in ANE Scales in the' and 'Application of illegal fees by the Trade Unions fo', both with an Effective date of 15 Nov 2018.



Members can participate in discussions on any policy related documents on the platform.



Business Opportunities

Description

- Business opportunities – Members can post any business opportunities for other members to apply to.

Status Delivery

Members can post and access business and job opportunities.



Members can post events for approval or rejection by the county.

Events	
Description	<ul style="list-style-type: none"> • Notifications of any upcoming events

Status Delivery

Members can post, edit, view upcoming events, and RSVP attendance.

The screenshot shows the 'Events' page with a search bar and an 'Add / Edit Events' button. Two event cards are visible:

- Computer use security...**
 - How to avoid spam
 - Posted by: Wonderkid Multimedia
 - Dates: 28th Jan 2019 - 28th Jan 2019
 - Venue: Centro Internacional de Conferencias Joaquim Chissano
 - Charges: ACIS Members : FREE ACIS Non-Members : FREE
 - Availability: 15 spaces available
 - Contacts: info@wonderkid.co.ke 254722342084
 - Buttons: View Details, RSVP
- Php programming...**
 - Programming with PHP
 - Posted by: Wonderkid Multimedia
 - Dates: 20th Jan 2019 - 31st Jan 2019
 - Venue: Wonderkid Office Suites
 - Charges: ACIS Members : MT. 100.00 ACIS Non-Members : MT. 200.00
 - Availability: 20 spaces available
 - Contacts: info@wonderkid.co.ke 254722342084
 - Buttons: View Details, RSVP

The sidebar on the right is titled 'My Reservations & Bookmark' and lists:

- PHP Programing**
 - Starts on: 20th Jan 2019 18:12
 - Ends on: 31st Jan 2019 18:12
 - ACIS Members: MT. 100.00
 - ACIS Non-Members: MT. 200.00
 - Venue: Wonderkid Office Suites
 - Availability: 20 spaces available
- Computer Use Security**
 - Starts on: 28th Jan 2019 10:00
 - Ends on: 28th Jan 2019 13:00
 - ACIS Members: FREE
 - ACIS Non-Members: FREE
 - Venue: Centro Internacional de Conferencia Joaquim Chissano
 - Availability: 15 spaces available
 - Event Document: Download Attachment
- Security Training**
 - Starts on: 20th Jan 2019 17:37
 - Ends on: 7th Jan 2019 17:37

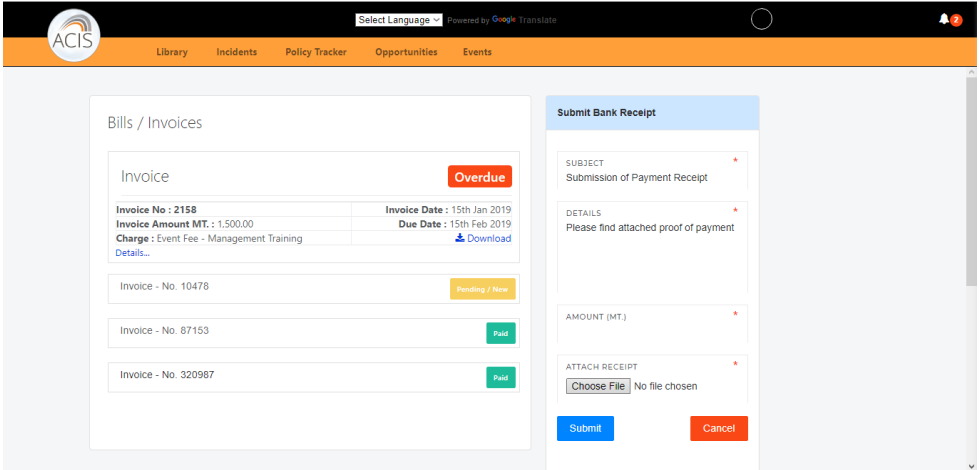
Members can RSVP to events, bookmark or share an event.

The screenshot shows a detailed view of the 'Computer use security' event. The main content area includes:

- Event title: Computer use security
- Posted by: Wonderkid Multimedia
- Dates: 28th Jan 2019 - 28th Jan 2019
- Venue: Centro Internacional de Conferencias Joaquim Chissano
- Event Document: Download Attachment
- Charges: ACIS Members : FREE ACIS Non-Members : FREE
- Availability: 15 spaces available
- RSVP button
- Contacts: info@wonderkid.co.ke 254722342084
- How to avoid spam

The sidebar on the right is titled 'Other Events' and lists:

- PHP Programing**
 - Starts on: 20th Jan 2019 18:12
 - Ends on: 31st Jan 2019 18:12
 - ACIS Members: MT. 100.00
 - ACIS Non-Members: MT. 200.00
 - Venue: Wonderkid Office Suites
 - Availability: 20 spaces available
- Security Training**
 - Starts on: 20th Jan 2019 17:37
 - Ends on: 26th Jan 2019 17:37
 - ACIS Members: FREE
 - ACIS Non-Members: FREE
 - Venue:
 - Availability: 500 spaces available
- Tax Law in Mozambique**
 - Starts on: 11th Feb 2019 13:22
 - Ends on: 14th Feb 2019 13:22
 - ACIS Members: FREE
 - ACIS Non-Members: FREE

Administration/Member Subscription	
Description	<ul style="list-style-type: none"> Receive subscription payment updates, notification, invoices and receipts.
Status Delivery	<p>ACIS members can submit receipts for payment. Receipts will be received by ACIS for action. Members will receive automated notifications of payment or debt notice on email and/or SMS.</p>  <p>The screenshot shows the ACIS web portal interface. On the left, there is a 'Bills / Invoices' section with a table of invoices. The first invoice is 'Invoice No: 2158' with an amount of '1,500.00 MT' and a due date of '15th Feb 2019', marked as 'Overdue'. Below it are three other invoices: 'Invoice - No. 10478' (Pending / New), 'Invoice - No. 87153' (Paid), and 'Invoice - No. 320987' (Paid). On the right, there is a 'Submit Bank Receipt' form with fields for 'SUBJECT' (Submission of Payment Receipt), 'DETAILS' (Please find attached proof of payment), 'AMOUNT (MT)', and 'ATTACH RECEIPT' (Choose File). The form has 'Submit' and 'Cancel' buttons at the bottom.</p>

2.2.1. System Testing

A test plan was developed outlining the objectives to be met for each of the stakeholders depending on their primary channel of interaction with the system that met the desired qualities based on the User Requirements. The test team highlighted all the defects / deficiencies found on the system clearly recording the severity of these defects. All the critical defects were addressed by the development team.

There were primarily three (3) levels of testing:-

1. Unit Tests – Mainly to be carried out by the development team, the purpose was to ensure that the source code performs optimally and inputs into the system result to consistent expected outputs. The platform was developed for three different frame works and operating environments on the web portal – Designed to work with any standard web browser.
2. Integration Tests – Individual modules were tested as a group to verify the functional, reliability and performance requirements. The test approach informed by test cases

designed and documented to simulate real life anticipated usage. The objective was to ensure that all assemblages are working perfectly and inform on possible future enhancements of the existing modules.

3. System Tests – This was the third and final level to evaluate the systems compliance. The tests were designed to reveal any deficiencies or defects within the assemblages or the system as a whole. The following tests were carried out at this stage:-
 - a. Graphical User Interface testing – By using a variety of test cases, the testers ascertained that system met the functional requirements for the target users.
 - b. Usability testing – The purpose was designed to see practical the user interfaces are for the respective target audiences using acceptable HCI standards. This again was achieved by simulating scenarios that would otherwise not have been envisaged at the GUI testing.
 - c. Software performance testing – The objective is to find out how responsive and consistent will the application be for all access from online portal. These tests were conducted using existing industry standard tools to perform load, stress, endurance, spike, configuration and isolation tests. The goals was to test the application limits with regard to concurrency/throughput and response times
 - d. Compatibility tests – As the platform was accessible across multiple platforms, the compatibility tests ensured consistency in both function and usability across various devices, web browsers and screen resolutions / sizes?
 - e. Error handling testing – The objective was to ensure that accurate feedback was given to the user in case of any errors as well as system-based exception handling in case of errors in program execution.
 - f. Security tests – This ensured that confidential data such as passwords are secure as well as secure transmission of such data, integrity of data from corrupt inputs, authentication and authorization mechanisms and safety from illegal access attempts.
 - g. Scalability tests – As transactions grow over time, the system must maintain optimal speeds both in data entry and information retrieval functions. These tests looked for concurrency with anticipated user base, increased transactions, report generation speeds etc.
 - h. Regression testing – As the developers worked on the reported defects, the test team ensured that new bugs were not introduced in the process. Reiterative testing (regression tests) revealed any new bugs that may have been introduced in the process.
 - i. Recovery testing and failover testing – The question to answer from these tests was how the application recovers from crashes or hardware / software (e.g.: browser) failures. This is not reliability tests but rather inform the team on how well the

application was able to restore its functionality in case of a major failure in communication protocols, hardware or software.

2.3. Milestone 3: User Training

A training plan was developed outlining the objectives, needs, plan and manual to be addressed when training users on the solution. It further presented the activities needed to support: development of training materials, coordination of training schedules, reservation of personnel and facilities, planning for training needs, and other training-related tasks including user support.

The training was purposely designed to ensure trainees understand the concept of the application; benefits accrued, and gain the necessary competency skills to use the platform.

Materials required for the training are listed

- Training agenda
- Demonstration PowerPoint
- Practical simulation guidelines
- Laptops

Table 4: Users trained

Roles Trained	Date Trained
ACIS Communications Officer ACIS Finance and Administration Officer	5 th November 2018
ACIS Executive Director ACIS Communications Officer ACIS Finance and Administration Officer	12 th December 2018

In addition to knowledge transfer the trainings serve as an additional space to collect more user requirements as personnel interact practically with the application highlighted below:

Table 5: System change requests

Change Requests	Status
1. Opportunities <ul style="list-style-type: none"> ▪ Change MANAGE OPPORTUNITIES to ADD/EDIT OPPORTUNITIES or ADD/EDIT MY OPPORTUNITIES 	DONE
2. Event <ul style="list-style-type: none"> ▪ Put contact information in event details; ▪ Option to display how many people will go or have interest in the event; ▪ Option for members to rsvp to events, with notifications to ACIS 	DONE



<ul style="list-style-type: none"> ▪ Ability to public post event through the website 	
<p>3. Membership</p> <ul style="list-style-type: none"> ▪ Change column view MEMBERSHIP NO to MEMBERSHIP NAME 	DONE
<p>4. Integration</p> <ul style="list-style-type: none"> ▪ Integrate primavera to the platform so the payment process can be automatic for validation 	ON-GOING This is a system enhancement that is considered larger scope than the TORs. The development team is working on with the accounting vendor.
<p>5. LIBRARY</p> <ul style="list-style-type: none"> ▪ Include library as a module in the member portal. 	DONE – Library added on the home page highlighting documents that a member can access with search function.
<p>6. User Interface</p> <ul style="list-style-type: none"> ▪ Changed back-end UI to suite ACIS colour scheme. Change front-end UI to suite colour scheme. Add logo to the front-end pages. 	DONE – ACIS Management portal colour scheme changed.
<p>7. Admin should update details of the members in the admin platform, such as:</p> <ul style="list-style-type: none"> ▪ name; ▪ contact; ▪ address and more related to the member 	DONE - Due to security of member data, the designed changed. Members initiate a service request to ACIS to edit contact details. Once request is received and reviewed, edit permissions are enabled. Member notified of edited changes.
<p>8. Search filter for member should be a list and other alternative ways to filter members using:</p> <ul style="list-style-type: none"> ▪ registration year; ▪ location (Province); ▪ alphabetic order; ▪ payment; ▪ or interesting area and others 	DONE – Search filter added
<p>9. Member Subscription:</p> <ul style="list-style-type: none"> ▪ Change Invoice to Debit note ▪ Change payment from Credit Note 	DONE - Terms changed

2.4. Milestone 4: System Go Live

The Go Live phase was divided into a pilot and roll out. The pilot was designed to enable the project team to roll out the application in real-world conditions to a small sample size of 15 members. This reduces the risk of an unsuccessful organization wide implementation later, enabling the team to identify all technical related changes to be made and give users a hands-on experience.

Numerous tools, criteria and procedures were developed by the project team to control the smooth execution of activities. Participating members were selected on the following criteria a) participants from the user requirements interviews and b) members selected by ACIS who are actively engaged. The project team provided on-site handholding support to users guiding them on navigation and collecting feedback on the system performance, design and functionality.

Table 6: Participants in User Acceptance Tests

No.	Organisation Name	Contact Name	Email Contact
1	Business Connexion	Paulino Posse	Paulino.Posse@bcx.co.za
2	Gondwana	Mário Deus	mariodeus@gondwana.co.mz
3	Maersk Line	Xavier Chidawanyika	Xavier.Chidawanyika@maersk.com
4	Gondwana	Etna Correia	etnacorreia@gondwana.co.mz
5	MZ&C	Jéssica Victorino	jjv@mzcc.co.mz
6	COWI	Sandra Roque	ivs@cowi.com
7	Empresa Moderna	Ricardo Portugal	Ricardoportugal64@gmail.com
8	MOZA Banco	Valdir Jetha	valdir.jetha@mozabanco.co.mz
9	Société Générale	Michela Nomboro	Michela.Nomboro@socgen.com
10	Société Générale	Ana Maria	ana-maria.jean@socgen.com
11	Sal e Caldeira	Elsa Sambo	ematlula@salcaldeira.com
12	CGA	Elisa Ali	eali@cga.co.mz
13	2iBi	Luis Leonor	luis.leonor@2ibi.com
14	2ibi	Karisma Boane	karisma.boane@2ibi.com
15	Deloitte	Katia Costa	katcosta@deloitte.co.mz
16	ACIS	António Monjane	Aciscoms@acismoz.com
17	ACIS	Ema Khushaldas	Acisadmin2@acismoz.com
18	ACIS	Fernanda Fazenda	acisdirec@acismoz.com
19	Malaika Ribeiro	MXR	malaika.ribeiro@tv cabo.co.mz

Official system roll out began on the 18th Jan to the ACIS members. Email broadcasts were sent out notifying users to be on-boarded to the platform. Picture below highlights the member registration test tickets generated for approval by the ACIS.

A Associação de Comércio, Indústria e Serviços (ACIS) Mr. James Ngari (Admin) HQ

Select Language HelpDesk My Account Log Out

Dashboard **Tasks 52** Members Database Events Manager Content Manager My Team Communication Reports Admin

My Tasks

New / Undone Tasks **49** In Progress **3** Done Overdue **40** C / o Batch View Delegate your Tasks

New / Undone Tasks Any / All Zones Search

Tasks 1 to 20 of 49 << previous 1 | 2 | 3 next >>

Select All | Unselect All | -- Select Action -- | Next Step »

From	Subject	Workflow Status	Received on	CountDown	Batch
WYTYTYT	New Account	Review Applications	Sun, Jan 20, 2019 23:33	0d 2hr 49m	
WONDER_TOY	New Account	Review Applications	Sun, Jan 20, 2019 13:39	0d 12hr 43m	
WONDERKID LAWYERS	New Account	Review Applications	Fri, Jan 18, 2019 12:58	2d 13hr 24m	
BABA_YAO	New Account	Review Applications	Fri, Jan 18, 2019 06:03	2d 20hr 19m	
MOISS	New Account	Review Applications	Fri, Jan 18, 2019 06:00	2d 20hr 22m	
XYZ LIMITED	New Account	Review Applications	Fri, Jan 18, 2019 05:44	2d 20hr 37m	
ABC LIMITED	New Account	Review Applications	Fri, Jan 18, 2019 05:36	2d 20hr 46m	
MOZAMBIQUE CAPITAL CONSULTING	New Account	Review Applications	Fri, Jan 18, 2019 03:24	2d 22hr 57m	
MXR SERVICIOS JURIDICO-FISCAIS EI	New Account	Review Applications	Fri, Jan 18, 2019 03:09	2d 23hr 13m	
COWI MOAMBIQUE LDA.	New Account	Review Applications	Thu, Jan 17, 2019 02:50	3d 23hr 32m	
ZIBI SOFTWARE	New Account	Review Applications	Thu, Jan 17, 2019 02:14	4d 0hr 7m	

ACIS Portal (Version RC - BETA) Developed by Wonderkid... Let's Make a Difference



ACIS Management team select and review each test registration for action.

The screenshot displays the ACIS Portal interface. At the top, the header includes the ACIS logo and user information: 'A Associação de Comércio, Indústria e Serviços (ACIS)', 'Mr. James Ngard (Admin)', and 'HQ'. There are navigation links for 'Select Language', 'Helpdesk', 'My Account', and 'Log out'. The main content area is titled 'My Tasks' and features a 'Manage Task' modal window. The modal shows the following details for a ticket:

- Ticket No:** 38MR190118AC2
- Ticket Type:** Registration
- Ticket Category:** Member Registration
- Channel:** Online Portal
- Reported On:** Fri, Jan 18, 2019 03:24
- Ticket Deadline:** Thu, Mar 07, 2019 03:24
- Organization Name:** MOZAMBIQUE CAPITAL CONSULTING
- Membership No.:** 000000

On the right side of the modal, there is a 'From' section identifying the customer as 'Mr Customer'. A 'Message' section states: 'A new account has been created with the following details and assigned to you.' Below this, a 'Registration Process' section includes links for 'Applicant Details' and 'Enable Subscription', both with 'View / Fill Form' options. An 'Appropriate Action' dropdown menu is also present. The background shows a list of tasks with columns for 'From', 'Action', and 'Status'. The footer of the portal indicates 'ACIS Portal (Version RC - BETA)' and 'Developed by Wonderkid... Let's Make a Difference...'.



3 Project Outputs

This section documents the timely delivery and uptake of the application across the utility. The terms of reference and consequent work breakdown structure and project team meetings yielded an expected timeline and set indicators of success. Divided into the project activity areas table 7 gives a summary of what was expected versus what was achieved.

Table 7: Summary of Project Outputs

Week	Action	Delivery Status	Owner
W/C June	25 TORs approved by ACIS and DFID and contracting	Done	KPMG
W/C July	2 Mobilisation	Done	Wonderkid
W/C July	9 1 st BERF team country visit	Done on 5th July 2018	Wonderkid
W/C July	23 Milestone 1 deliverables completed	Inception report submitted 2nd Aug 2018	Wonderkid
W/C Sept	24 Beta demo	Done on 29th October 2018	Wonderkid and KPMG
W/C Oct	15 Milestone 2 deliverables (system design and development) completed	Done on 18th Jan 2019. Further customisation and user support will be carried out based on any user needs.	Wonderkid
W/C Oct	22 Milestone 3 deliverables (user training) completed	All members of ACIS management team were training. Two user training held on 5th Nov 2018 and 12 th Dec 2018.	Wonderkid
W/C Oct	29 Draft of final report sent to ACIS & roll out of mobile and web portals	Final report submitted 18th Jan 2019	Wonderkid
W/C Nov	5 2nd BERF team country visit and presentation	Done on 6th Nov 2018	Wonderkid and KPMG
W/C Nov	5 ACIS sign off on final deliverables	Done on 28th Jan 2019	ACIS

3.1. Recommendations

Knowledge Transfer and Platform Maintenance

- Wonderkid will provide support to ACIS beyond the BERF contract period for one year. The following activities/items will be covered:
 1. User support and handholding
 2. On-demand training (on-site as well as remote)
 3. System upgrades within scope
 4. Primavera integration
 5. SMS Bundles (15,000 SMS). Which will cater for SMS for one year.
 6. Cloud hosting and email service for one year
- Upon the expiry of the one year engagement the ACIS will proceed to appoint a vendor who will support the maintenance of the platform after this period.

Third party vendors

The platform relies on third party vendors to provide SMS, Email broadcasting, cloud server services,

The table below tabulates the estimated running costs of the platform on an annual basis. Wonderkid has budgeted to meet the costs for 2019. ACIS should budget for these annual costs to maintain the platform thereafter beginning Jan 2020. Service maintenance contract fees will be added once the organisation selects its preferred vendor.

Budget Item	Description	Unit Name	Unit Qty	Unit Cost	Annual Cost
Cloud Server	Cloud hosting service for platform	Annual subscription	12	\$ 5.00	\$ 60.00
Email hosting (MailGun Subscription)	First 10,000 emails are free per month. If ACIS sends more than 10,000 emails per month, it will be charged \$10 for every extra 1,000 emails sent per month	Extra 1,000 emails per month at \$10	12	\$ 10.00	\$ 120.00



SMS Broadcasting	Budgeted for 1,000 SMS per month	Per SMS	12000	\$ 0.01	\$ 120.00
				Total	\$ 300.00



Annex 1: Scope of Services

Wonderkid will be responsible for the development and deployment of the solution including analysing the technology requirements, planning, system design, prototyping, testing and implementation along with training of ACIS principal users. The proposed timeframe is broken down into milestones agreed upon by the ACIS and BERF teams. Approvals to proceed from one milestone to the next is at the discretion of the ACIS and BERF teams.

Milestone 1 – Project initiation (2 weeks)

This preliminary milestone enables the contractor to orientate themselves with all existing technical and project related documentation, and engage with the ACIS team to gather additional system requirements. It is recommended that the contractor forms a project team in collaboration with ACIS and the BERF team to oversee implementation. The following project documentation should be produced during this milestone:

- Detailed project implementation plan
- User requirements document
- Software design document (SDD)

Milestone 2 – System development and testing (2.5 months)

The development process should be iterative so as to include all relevant feedback from ACIS that is within the scope of the assignment. Prototypes of the solution should be periodically reviewed by the project and BERF teams at various stages.

Illustrative user manuals should be provided with instructions for both portals (ACIS management and members) in Portuguese and English.

Additionally, a technical manual should be prepared for the system administrator (ACIS communications officer) on how to manage the portals post-implementation.

Testing will involve evaluation of ICT solution compliance with the specified requirements. Three levels of testing should be carried out and documented, namely: a) internal testing by the contractors' technical team and b) user acceptance tests with ACIS and the BERF team.

Milestone 3 – User training (1 week)

Comprehensive competence-based training for the ACIS team should be conducted upon successful completion of system tests. Further training for the appointed system administrator must be conducted to ensure continuity post project implementation. A comprehensive report should be presented to the project and BERF teams.

Milestone 4 – System roll out / go live

The system should be rolled out after successful training of selected ACIS staff. A final report should be presented for sign off by the ACIS and BERF teams. The contractor should provide off-site support for a period of two months after this milestone.

Additional requirements

- The proposed solution should be written in Portuguese and English to cater for the different linguistic needs of users.
- Recommend cost-effective cloud hosting services, open source platform for the application and database, affordable SMS services or service providers. Selection of services should be made in conjunction with the project and BERF teams.
- The platform interface should be responsive, fast and easy to load on computers and mobile phones.
- Project documentation including a detailed software design document, implementation plan, user manuals and test documents should be available at the closure of the project.

Place and Period of Performance

The contractor should have a project team comprised of individuals with the relevant technical and communication skills. The team is expected to work closely with ACIS to produce an implementation plan that outlines the responsibilities of both organisations.

The project should be undertaken in four months, with a two month contingency period for post-implementation support. Initial information gathering, consultation and analysis will be conducted in Maputo, Mozambique. Design and development of the application can be undertaken remotely at the discretion of the selected contractor. The contractor should have one or more personnel on site to participate in project review meetings and project-related activities.

Deliverables

Deliverable 1: Refined requirements analysis, system design and project timeline

- Detailed implementation plan and software design document;
- Presentation of initial system design to project and BERF team;
- Validation of membership data.

Deliverable 2: System design and development

- Fortnightly progress review meetings held with BERF and ACIS team. Critical agenda item will include system demonstration and review of the following items:
 - Creation of high-level and low-level design documents informed by user requirements;

- Creation of Graphic User Interfaces (GUI) and prototypes for the review and approval of the proposed project team;
- Database design conceptualization and RDBMS ERD generation;
- Migration of membership data;
- Finalisation of two portals' content in coordination with key users of the proposed application;
- API design and development for ACIS website integration;
- Application development as per international best practices;
- Presentation to project team on finalised processes and data flow diagrams.
- Produce final testing report detailing testing. The BERF and ACIS team should be availed with system log in details to track testing changes.
 - Configuration of the portal(s) for testing;
 - Testing on servers and release module wise beta versions for project team feedback;
 - Resolution of bugs and issues identified by the testers;
 - User Acceptance Tests carried out by BERF and ACIS members.

Deliverable No. 3: User training

- Development of training material for system users;
- Development of user manuals to proposed system users;
- Conduct training in Maputo for the ACIS management committee and board.

Deliverable 4: System roll out

- Roll out of the 2 portals (ACIS management and Members Portals);
- Presentation to ACIS and the BERF team of financial costing options for maintaining the solution post-implementation;
- Presentation of final system to project team for roll out;
- Presentation of final project report for sign off.



Annex 2: Implementation Plan

Implementation Plan		June '18				Jul '18				Aug '18				Sept '18				Oct '18				Nov '18				Dec '18				Jan '19			
Activities		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Deliverable 1: Refined requirements analysis, system design and project timeline	█	█	█	█	█	█																										
1.1	Detailed implementation plan and software design document;		█	█	█	█	█																										
1.2	Presentation of initial system design to project and BERF team;					█	█																										
1.3	Validation of membership data.					█	█																										
2	Deliverable 2: System design and development			█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
2.1	Fortnightly progress review meetings held with BERF and ACIS team. Critical agenda item will include system demonstration and review of the following items:																																
2.2	Creation of high-level and low-level design documents informed by user requirements;			█	█	█	█																										
2.3	Creation of Graphic User Interfaces (GUI) and prototypes for the review and approval of the proposed project team;			█	█	█	█																										

