AFRINIC

2016-2020
STRATEGIC PLAN

Consolidated by Adiel Akplogan, September 2014

Updated by the AFRINIC Board, July 2016

Approved for publication, May 2018

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2 Foreword

This strategic plan is defined with the key objective of AFRINIC's growth in mind, aligning its goal and mission with the very fast evolving environment in which it operates globally. As a self funded, membership and community driven organisation, AFRINIC has the unique challenge to always balance its capacity to growth sustainably with the expectation of its community (regional and global). Effective management of its resources in order to sustain that balance while continuing to be relevant will be key in the upcoming stage of its evolution.

Since its creation in 2004 AFRINIC has been through three phases defined successively by its business plan and its strategic plans:

2004 – 2008: Startup period with focus on Registry Setup and Operations transfer from the other RIRs serving the region prior to 2005. [Driven by 2004 business plan approved by the community].

2009 – 2012: Consolidation and stabilisation of the Organisation and its structure driven by 2009-2012 Strategic plan and related restructuring [2009-2011/12 Strategic Plan].

2012 – 2014: Scaling up the organisation's Operations to prepare the Company for further growth and anticipated changes in business environment [CEO Restructuring Memo July 2011].

2015 – 2020: Focus on revenue lines to sustain itself over the next years going forward, while reviewing the overall business model.

Started in December 2013, the process of defining this new strategic is based on input from our Member survey, the face-to-face consultation with the community during AFRINIC-19 meeting and the Board and staff retreat that took place in Mauritius in January 2014.

It is our hope that the execution of this new strategy will ensure a very sustainable future for AFRINIC by grounding the organisation in a cycle of performance at each and every aspect of its oversight and operations.

As any document of such importance, the outcome of this strategic planning process will be open for continuous evaluation and review so to ensure its alignment and relevance in the regional and global context. Although AFRINIC is a regional Registry, the scope of its mission and activities is global and that will be a key element of its sustainability.

3 ABOUT AFRINIC

AFRINIC is the Internet number registry accredited in 2005 to manage the Internet number registry for Africa region. AFRINIC's service region covers 56 economies organised in 6 sub-regions:

- Northern Africa
- Western Africa
- Central Africa
- Eastern Africa
- Southern Africa
- Indian Ocean

AFRINIC currently operates from Mauritius where it has incorporated its Headquarters. Our Offices are located at:

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Ebene Cybercity

Reduit, Mauritius

3.1 VISION, MISSION & VALUE

OUR VISION

To be the leading force in growing the Internet for Africa's sustainable development

OUR MISSION

To Serve the African Community by providing professional and efficient management of Internet Number Resources, supporting Internet technology usage and development, and promoting Internet self governance.

OUR CORE VALUES

We are a **Community Driven** Organisation, and our work is motivated by **Operations Excellence**, **Passion** & **Innovation** (**C.O.P.I.**).

4 2016-2020 STRATEGIC PLAN STRUCTURE

This strategic plan document is derived from the outcome of a strategic retreat held in Mauritius in 2014, by the Executive Board, Council of Elders, the Executive Team, the Managers and the staff. It covers three main areas:

4.1 Gap Analysis Report

The Gap Analysis Report is based on the Threats and Weaknesses identified during the data collection session of the strategic retreat in Mauritius. This will be followed by strategy recommendations and an action plan in order to address any identified gap per area. The outcome of the strategic retreat can be found in the report provided by the consultant.

4.2 Strategic Development

The Strategy Development process will focus on:

- Strategic Plan, Operational Action Plans and Financial Plan covering a three-year period.
- A Strategy Implementation Roadmap, consisting of proposed strategies to catalyse demand as a means of expanding membership growth and engagement and improving technical infrastructure capabilities including resilience. Further, the Roadmap will help ensure AFRINIC's financial sustainability and existence beyond IPv4 depletion – with the view that if the business model of IP addresses management changes (moving away from a scarce resources management to accurate registration management), AFRINIC can transition its involvement in related services as a critical survival path.
- Human capacity is critical to any organisational change. Management Processes, Personal Purposes, Team Alignment, Strategic and Leadership Awareness, Quality Management System (QMS), Documentation and Implementation Awareness are key competencies to reinforce for key staff. Capacity building on these competencies will help the preparation of the entire strategic implementation process, which will be embedded with a strong Quality Management System. Evaluation will determine success after the sixty month implementation period where an audit will confirm the success rate.
- Financial commitment and capital investment will be necessary to achieve the new strategy. These shall be developed and addressed by a Project Committees identified by the Board and the CEO with, when

and where needed, input from external resources. These committees shall comprise the respective heads of departments in technical, marketing, financial and human resource plus members of the AFRINIC Financial Committee.

4.3 Execution Plan

The Executive Plan will contain:

- **A tactical plan,** consisting of actionable and measurable plans that span a one to two year period to be prepared by management in line with this strategic plan.

- **Final strategies and budgets** for the matters referred to in 4.2 above which shall be prepared by the Project Committee.

- **Monitoring of the said Action Plan(s)** for the implementation of the final strategies based on a twelve month operations plan.

- **Responsibility structures and expectation targets for the Action Plan(s)** will be indicated in the framework and the organisation chart.

The CEO will determine the deadline for submission of the Proposed Way Forward Project Report.

5   Context of AFRINIC operations

AFRINIC in its current format was incorporated as an organisation in April 2004 under the Mauritius Companies Act, following the decision of the Board to make Mauritius its headquarters.

The main goal at the time for the organisation was to get its accreditation from ICANN as per the ICP-2[1] guidelines to become the regional IP addresses registry (RIR) for Africa. That objective was translated into the Business Plan submitted and approved by the board in 2004. AFRINIC formally submitted its application to ICANN in September 2004 and got its accreditation in April 2005.

In September 2007 the Board had its first Strategic Planning retreat in Durban, South Africa to review the achievements of the organisation as per the goal set in 2004 and submitted in its application for recognition. Based on that assessment, a new vision and objective for the following three years was set during a process that took over a year. The derived strategic plan document was aligned with the evolution of the organisation and the ambitions for the coming years.

6   EXECUTION OF the 2009-2013 STRATEGIC PLAN

The previous AFRINIC strategic plan was based on the current action plan that was executed at 90% as per the table below:

No	WHO	WHAT	PRIORITY	VALIDATION	Status
2	CEO	Redefine AFRINIC major Operations Ares for better Management performance	V. HIGH	BOARD/CEO	☑
3	CEO	Implement new Organisation Structure	V. HIGH	BOARD/CEO	☑
4	CEO	Improve Board performance	HIGH	BOARD/CEO	➜ Stalled
5	CEO	Consolidate all AFRINIC staff in Mauritius	HIGH	CEO	☑
6	MT	Reinforce Human capability to allow staff to cope with AFRINIC vision and environment effectively.	HIGH	CEO	➚ In Progress

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[1]   http://www.icann.org/en/resources/policy/global-addressing/new-rirs-criteria

No	WHO	WHAT	PRIORITY	VALIDATION	Status
7	CEO/HR	Recruit Key staff needed for efficient execution of 2009 Strategy plan Objectives	V. HIGH	CEO/MT	☑
8	MT	Improve Membership value	HIGH	CEO	↗ In Progress
9	TOA	Develop Research and Development in IP area in Africa in collaboration with academic Institutions	HIGH	CEO	→ stalled
10	TOA	Develop AFRINIC PKI Infrastructure	HIGH	CEO	☑
11	TOA	Contribute more efficiently to Internet Infrastructure development in AFRINIC service region	HIGH	CEO	☑
12	CEO	Setup and formalise a special fund for Research and Capacity building on IP technology	HIGH	CEO	☑
13	TOA	Better Integration of AFRINIC Information System related to service to members (Registration/Billing)	HIGH	CEO	☑
14	CEO	Provide AFRINIC with Appropriate Office space	HIGH	CEO	☑
15	MT	Process documentation	HIGH	CEO	↗ In Progress
16	CA	Reinforce AFRINIC's image globally	HIGH	CEO	☑
17	CA	Develop and Improve AFRINIC training program specially in relation with IPv6	HIGH	CEO	☑
18	CA	Develop long term relation with Academic Institutions	HIGH	CEO	✖
19	TOA	Increase ANIC contribution into the Global Technical community	MEDIUM	CEO	☑
20	MT	ISO Certification	HIGH	CEO	↗ In Progress
21	CA	Have an IP technology News Portal for Africa Region	MEDIUM	CEO	✖
22	CA/CEO	Develop and maintain close relationship with policy makers in Africa	HIGH	CEO	☑
23	CA	Increase the ratio of IPv4 usage in Africa to 3%	HIGH	CEO	✖

No	WHO	WHAT	PRIORITY	VALIDATION	Status
24	TOA	Be the reference organisation to provide Key Indicator for Internet development in Africa	HIGH	CEO	✖
25	CA/TOA	Increase the ratio of IPv6 usage in Africa to 15%	HIGH	CAM (CCO)	☑
26	FAA	Ensure AFRINIC financial sustainability	HIGH	CEO/BOARD	☑
27	**HRO**	Develop an efficiently reporting tool that will improve financial analysis	HIGH	**CEO**	↗ In Progress
28	**CA/TOA**	Review AFRINIC Web site to adjust with the company vision and progressive image.	HIGH	**CEO**	☑

Activities 8, 9, 15, 20, 27 are considered not fully delivered even though attempt have been made to work on them. These activities will be review in light with the evolution of AFRINIC business context and in view of the vision and mission set for the coming five years.

6.1 Lessons Learned

While we have set ambitious objectives for previous plans, the main lesson learned revolves around the capability of the organisation to self sustain its ambition and the expectations set by its community. As a registry, AFRINIC faces the challenge of delivering and keeping up with its counterparts - the other RIRs - in terms of service and as a community support base on the same metric. This requires an amount of investment that should come from our ability to generate sufficient revenues from member services and related activities. Another challenge is the ability to deal with the cost of attracting talent to our business from international market and bringing them to work in Mauritius. This challenge is unique for AFRINIC in this industry as the organisation operates in a region that is known to have shortage of human capacity and where most of the capable resources have to be hired either from the diaspora or from high profile operators/organisations in the region, which makes attracting and keeping talent harder.

6.2 New Business Contexts for AFRINIC

Since AFRINIC's setup and the last strategic plan exercise, the business context in our region has fundamentally evolved. The Internet has developed

significantly, with more than 1000% evolution of users in the region. Bandwidth availability around the continent has grown by more than 10000 falls as well.
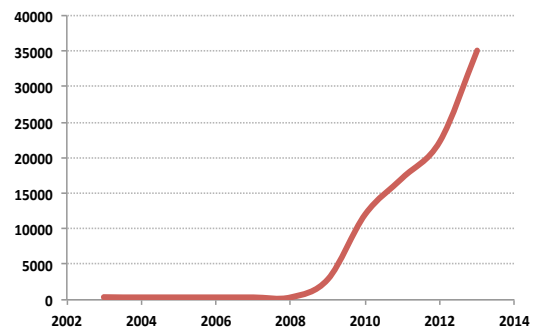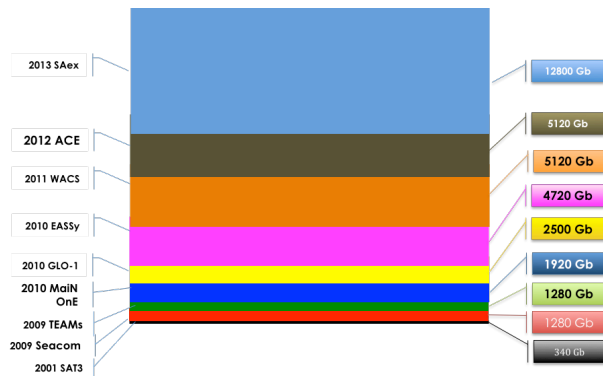
Several cables and infrastructure has been developed around and within the continent increasing the accessibility to bandwidth. However the content industry, online applications and utilisation has not followed the same trend. Africa unfortunately still consumes the majority of its content and applications from abroad, keeping us as simple consumers in this area or kind of extranets of the Internet.

2001 - 2008
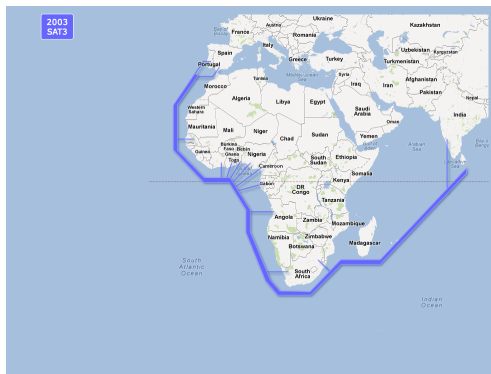
2009 - 2013
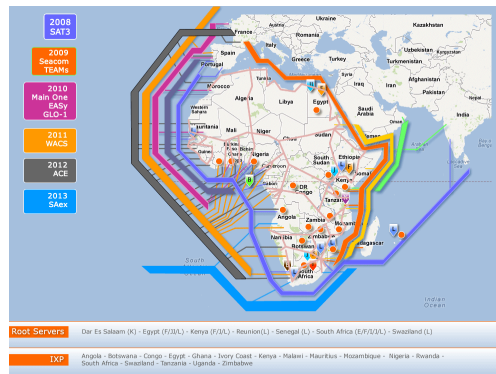
On the economic side a lot has changed as well. Today, 10 of the fastest growing economies are in Africa and ICT contribution to several countries' GDP is becoming more and more obvious and is increasing. All these factors project us, as the organisation in charge of managing critical Internet number resources, in the midst of a fast changing environment with a continual evolution of needs and expectations from users and operators. We will need to adjust to that.

6.3 Some Regional IP Address Indicators.

When we compare these economic and technical indicators to what has happened to IP number usage in Africa over the past 8 years (since AFRINIC was created), we can see a similar pattern and a global evolution of the landscape.

When AFRINIC started in 2005, there were only 40 countries in our region that had companies using their own allocated IP addresses. South Africa was using 83% of all IP addresses allocated/assigned in the region and only 2 countries had IPv6 allocations. Globally, IP addresses in use in the region have surged from 10 million (total in use from 1983 to 2005) to more than 58 million today.

IPv4 (/32)

10674432, 18%

47793920, 82%

■ 1983-2004
■ 2005-2013
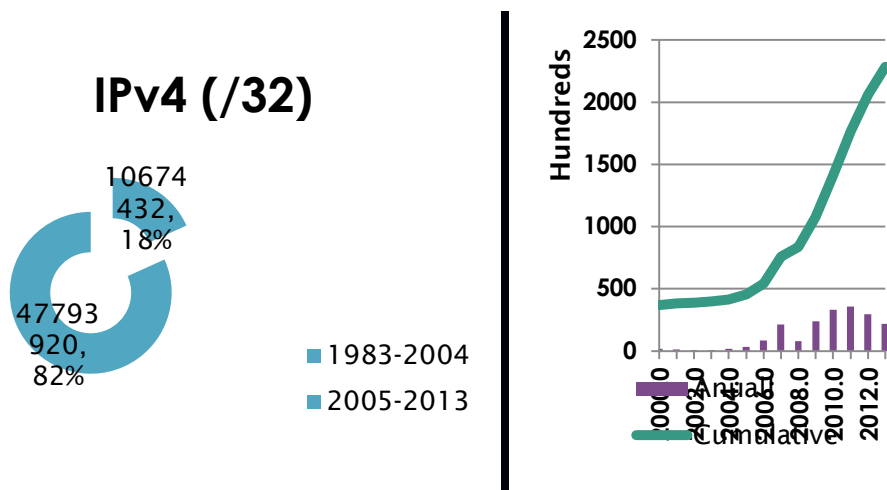
The same thing can be observed for IPv6. When AFRINIC started there were only five IPv6 prefixes allocated in the region to just two countries. Today IPv6 has been allocated to more than 48 countries in Africa with a membership penetration of 35%.

However if we look closely at the numbers, only 15% of networks (ASNs) in the region also announce IPv6 i.e. actually have IPv6-enabled networks. We think that this is where the challenge currently lies.

This graph shows the percentage of networks (ASes) that announce an IPv6 prefix for a specified list of countries or groups of countries
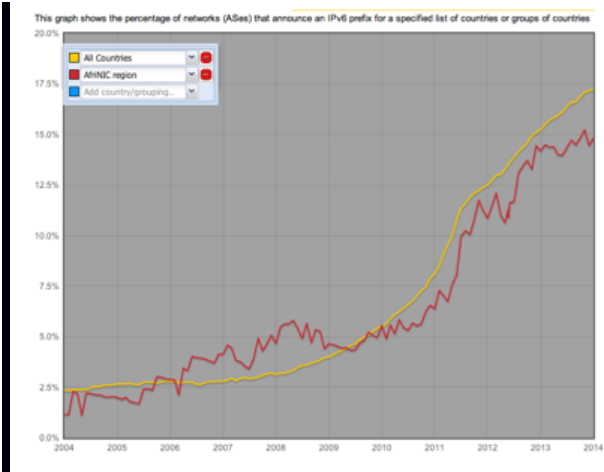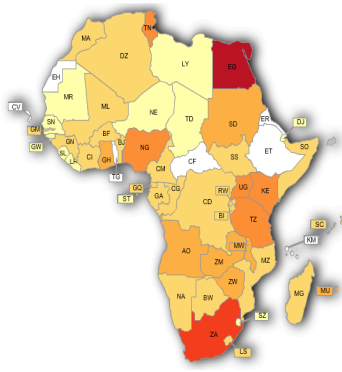
As globally recognised, IP addresses are not equally distributed around the world because of the need-based distribution model which put early adopters and countries with good economic factors at the top of the IP addresses usage tables. Within AFRINIC's service region, this observation is also valid. Today, the number of IP addresses per Internet user varies greatly from one sub-region to another as shown in the graphs below.
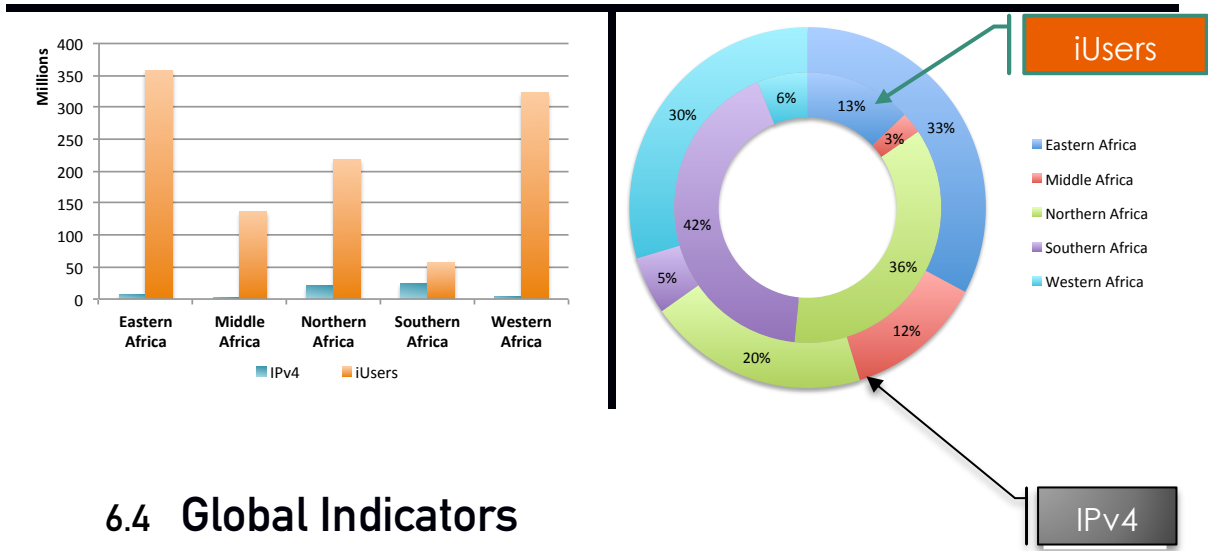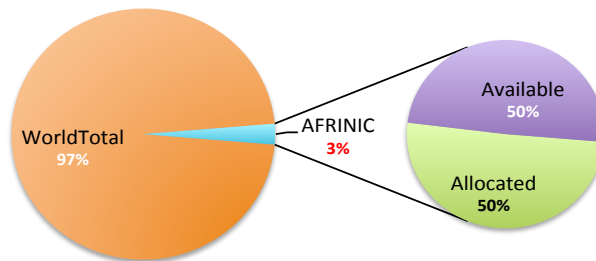
6.4 Global Indicators

Based on the above, we can get an accurate overview of our situation by comparing Internet number resources ratios with some macro economic and

social factors. For instance, while Africa's population represents 15% of the world's population, Internet users represent only 8% and just 2% of the total IP addresses usage (which is a ratio of 1.7 per user [average for the rest of the world] vs. only 0.3 in Africa).
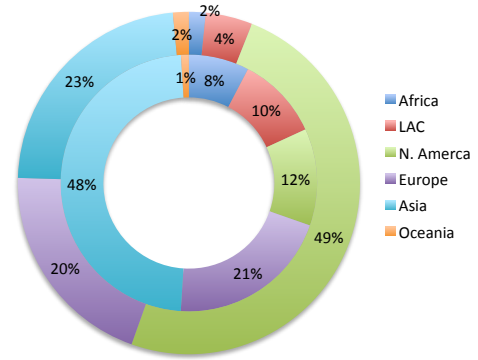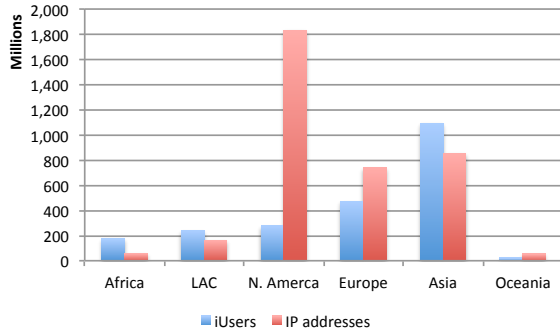
Below is some more data comparing Africa to the rest of the world in terms of IP address usage ratio

GDP Ratio Africa vs World

Africa, 3,438,612,904,183 , 4%

World, 81,513,592,917,817 , 96%

IPv4 in use

Africa, 58,534,912 , 2%

World, 3,474,202,424 , 98%

Population Ratio

Africa, 1,091,988,368 , 15%

World, 6,002,932,976 , 85%

iUsers Ratio

Africa, 173,714,488 , 8%

World, 2,104,511,341 , 92%
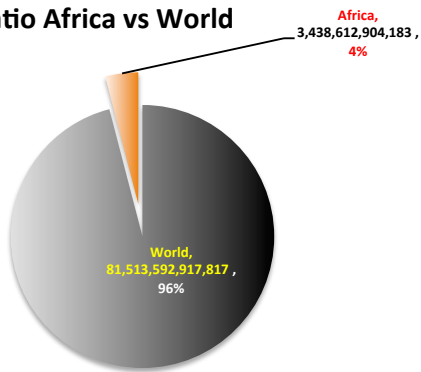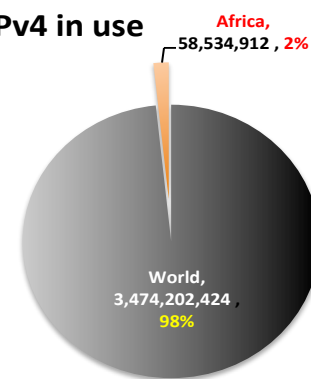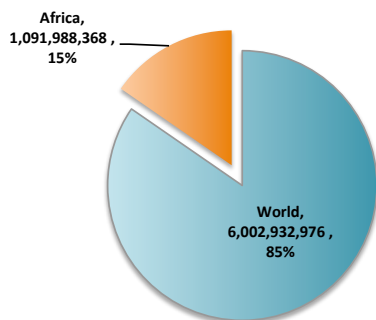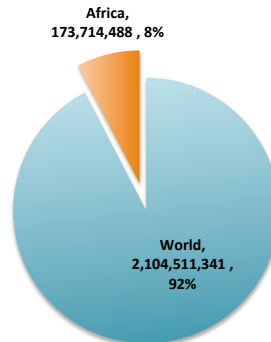
iPenetration World (w/Africa)

iUsers,
2,104,511,341 ,
35%

Non_Users,
3,898,421,635 ,
65%

iPenetration in Africa

iUsers,
173,714,488 ,
16%

Non_Users,
918,273,880 ,
84%
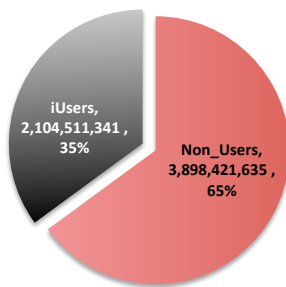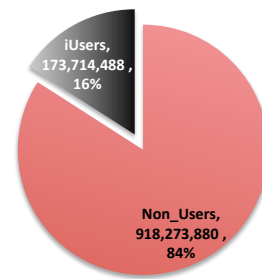
Coupling this data we can clearly confirm that our region is lagging behind but has a huge opportunity for growth and progress, especially based on the fact that Internet is becoming more and more pervasive and its usage will continue to grow significantly around the world, including in Africa. It is a fact that the population demographic between 15 and 35 years of age has the majority of Internet users in the world. If we consider that in 2050 more than 70% of the African population will be under 30 years old, we can be prudently optimistic for the region and the for the growth of the Internet and its industry.

6.5 Corporate Business Indicators

6.5.1 Membership & Community Support

AFRINIC, as a membership-based organisation, operates mainly (95%) using fees collected from its members. The membership fees cover all of the services provided by AFRINIC, not only to members but also, as per clause 7 of ICP-2, to the wider community. These services include those that are complementary to number resources management and ones that support the growth of Internet usage in Africa:

> *"Traditionally, the neutral and independent nature of RIRs have encouraged their use by their communities for wider support, communication, education and/or co-ordination purposes. Activities provided by existing RIRs in addition to registration services include: technical training, public mailing list maintenance, information services, database maintenance, meeting organisation, and general liaison and co-ordination tasks."* – ICP-2

One of the most critical aspects of the AFRINIC strategy plan going forward will be to look into how to diversify and optimise the organisation's financial resources in order to sustainably support its growth and its engagement with

the community as a key organisation involved in all levels of Internet technical coordination and overall Internet governance issues.

6.5.2 Membership Evolution

The data below gives a high level overview of our membership evolution along associated services over the past years.

Membership Evolution per Category

10 Year IPv4 Trend

10 Year IPv6 trend
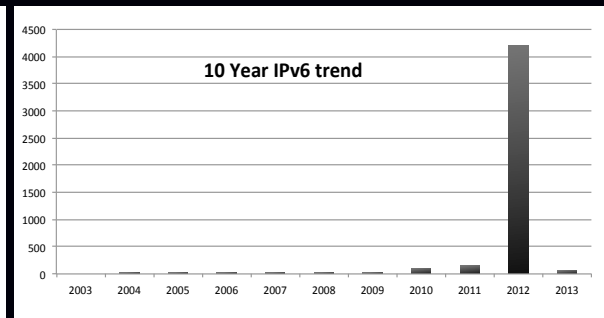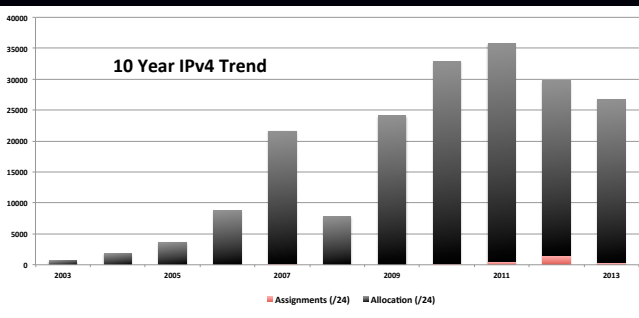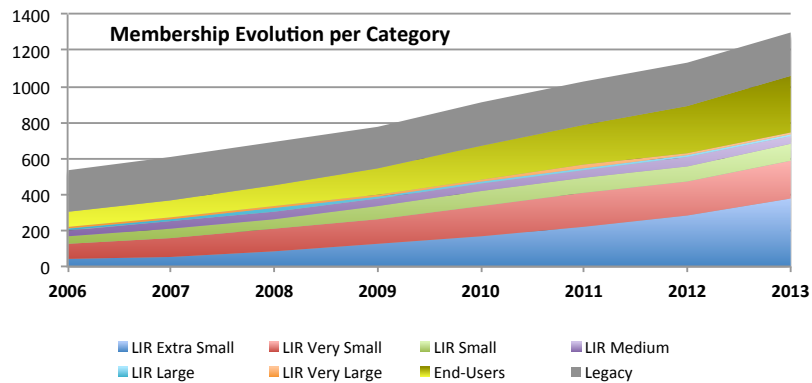
6.5.3 Training & Capacity Building

Participant to trainings
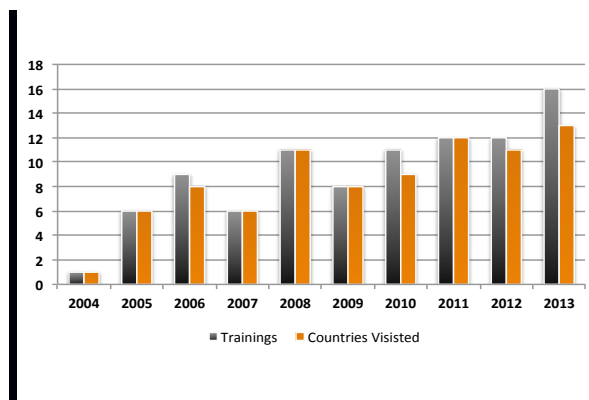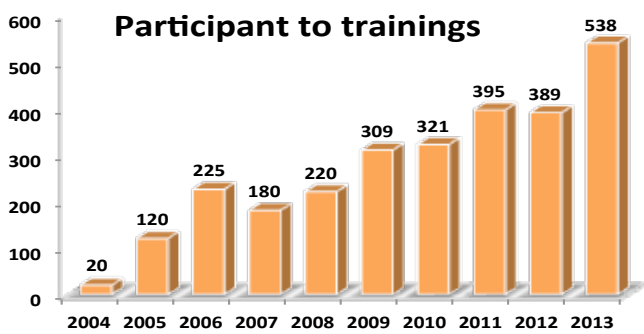
6.5.4 Special Projects & Community Support

AFRINIC is engaged in several community support programs in line with its mission to "Spearhead Internet Technology and usage in Africa region". Below is a list of major community support projects initiated by AFRINIC.

- **IPv6 program:** Formally launched as a separate programme in 2010, it aims to increase awareness on IPv6 not only technologically but also from the policy and general community engagement viewpoints. This programme has mainly focused on advocacy and training activities.
- **Root Server Copy Support Program**: Formally launched in 2008, it aims at increasing the deployment of Root Server copies in Africa, particularly at IXP locations. After the failure of the first deployments in 2009, the programme has been completely revamped and dedicated resources were assigned to it in 2011. This programme has encouraged root operators to come to the region with their Anycast solutions. There are currently **19 copies** of root servers in our region, five of which have been directly supported and co-funded by AFRINIC. There are still five more in the pipeline to be deployed.
- **Anycast DNS Support Programme**: Launched in 2011 to complement the Root Server Copy project, AFRINIC developed its own Anycast DNS service, originally to provide a secondary service to IANA for e.ip6.arpa. This infrastructure has evolved now to also offer secondary DNS services to ccTLDs in Africa. We are currently providing the service to more than 10 ccTLDs and expect to increase this through more active awareness and trainings/tutorials.
- **RPKI (Resource Public Key infrastructure):** A global project (in which all RIRs are engaged) to provide number resource usage certification. This project started back in 2006 but really picked up in 2010. We currently have the system up and running, the service is available to members. However we are still developing additional features and testing its interoperability. As a critical Internet Infrastructure programme, even though not part of the core services, this activity needs more dedicated resources to scale and support a wider population of users.
- **FIRE Programme (Fund for Internet Research and Education):** Co-funded by **AFRINIC, IDRC (Canada), SIDA (Sweden), Dr. Nii Quynor, ISOC and AFRINIC** this programme aims to encourage the use of the Internet to advance social and economic development in the region through innovation. FIRE has recently joined the SEED alliance (consisting of similar programs run by LACNIC and APNIC) in order to mutualise our efforts towards donors and also to improve overall communication about the projects.
- **Support to IXP deployment:** AFRINIC is providing active support to IXPs in the region through various initiatives. Since 2012, this has been mainly through a partnership with ISOC on the AXIS programme, which is funded by the Africa Union.
- **DNSSEC:** In order to encourage and set a good example in securing DNS in general, AFRINIC, like all the other RIRs, has deployed DNSsec on its own DNS

infrastructure and provides the service to members for their reverse rDNS zones.

o **Note:** Even though it is not very visible or noticeable, our rDNS service is one of the most critical public services (beside the WHOIS) that we provide to the community because of its absolute global nature. It is also the service that consumes more than 70% of our international bandwidth.

- **Fellowships Programme –** As part of our capacity building initiative, we offer fellowships to young talent on the continent by encouraging participation in our bi-annual meetings. The selected candidates become part of the crop of potential future leaders in the Internet ecosystem. In addition to these direct fellowships, AFRINIC also supports members of various committees to enable them to attend bi-annual meetings and other global events (Election Committee, NRO Number council Representatives (global representation) and Policy Development Working Group Co-chairs). This programme has been in place since the launch of AFRINIC.

6.5.5 International Cooperation

– **Engagement with Regional Organisations** – AFRINIC has signed MoUs and other bilateral agreements with a number of regional organisations with a view to provide support, logistics and assistance.

o AfTLD – AFRINIC resources are allocated to manage AfTLD's funds and to maintain their financial records, receive funds on their behalf, disburse funds as required and provide regular status updates to its Secretariat.

o AfRALO - AFRINIC resources are allocated to manage AfRALO's funds and to maintain their financial records, receive funds on their behalf, disburse such funds as required and provide regular status to its Secretariat.

o CTO – MoU for mutual collaborations and organising trainings and other mutually beneficial events.

o AAU – For mutual collaboration with regards to African Universities and matters relating to African educational Institutions.

o OIF – facilitation of the participation of delegates from French speaking African countries to regional and global meetings.

o IDRC/SIDA – managing of funds provided by IDRC & SIDA for the promotion of creativity and small projects by individuals engaged in ICT related innovations.

– **AfNOG –** AFRINIC works in close collaboration with the Africa Network Operators Group and holds a joint meeting once a year. The provision of conference spaces and some training officials and logistics in addition to

financial support by AFRINIC for a number of years is evidence of AFRINIC's commitment towards capacity building initiatives for the community.

- **NRO –** By virtue of being one of the 5 RIRs, AFRINIC is a member of the Number Resource Organization. Collectively, the NRO represents all five RIR regions, worldwide, in forums where number resources are discussed. AFRINIC contributes to the NRO annual budget according to the proportion of its IPv4 allocation and revenue.

- **ICANN –** Annually the RIRs contribute towards part of the operational costs of ICANN.

- **Discount for Educational Institutions –** The existing fee structure provides for a 50% rebate to all approved educational and research Institutions in the region. This gesture is viewed as assisting this group of members to provide cheaper/free Internet access for students.

6.6 Finance

Over the past 8 years, AFRINIC's finances have evolved with the growth of the organisation in line with the increase in expectations and the positioning of the organisation in the global context. One interesting aspect of our income is the gradual decrease of external funding (from hosting country support) from just over 35% in 2005 to less than 5% (mainly from events sponsorship).

	2013	2012	2011	2010	2009	2008	2007	2006	2005
Fee Income	3,342,512	2,636,032	2,453,781	2,258,867	1,754,902	1,365,891	1,346,027	832,131	457,336
Grants & Sponsorships	119,400	121,931	56,653	129,388	151,989	63,971	111,516	211,058	249,904
Total Operating Expenses	(3,551,960)	(3,161,186)	(2,389,663)	(2,321,408)	(1,767,422)	(1,311,707)	(1,042,925)	(682,028)	(419,732)
Finance Income and (Other Costs)	159,170	140,132	(116,949)	(27,500)	(125,312)	174,271	(140,757)	108,213	62,400
Variation (OPEX)	12%	32%	3%	31%	35%	26%	53%	62%	769,640
Surplus/(Deficit) for the year	69,322	(263,091)	3,822	39,348	14,157	292,426	273,861	469,374	349,908
Total Reserves at end of year	1,237,343	1,168,021	1,431,112	1,427,290	1,387,942	1,373,345	1,254,802	962,025	528,289
Reinvestment in infrastructure	373,444	244,673	48,958	346,203	29,827	34,230	31,195	62,537	30,112
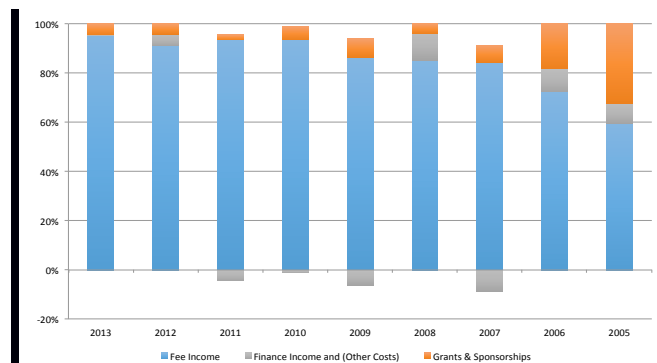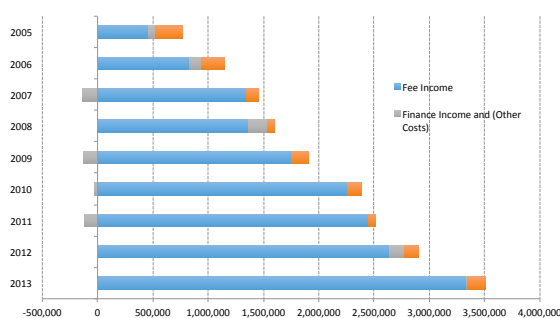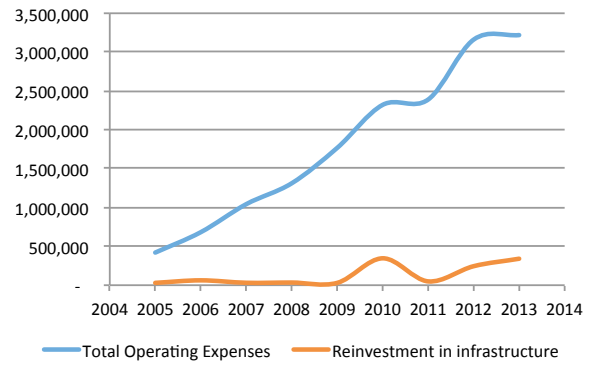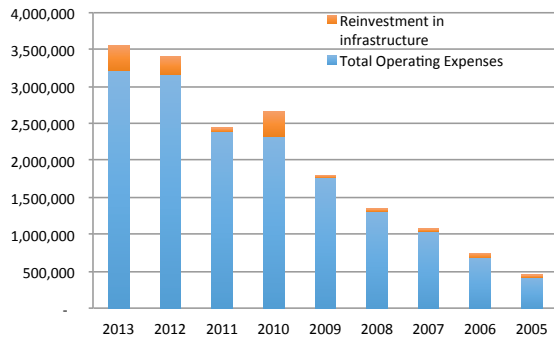
6.5 Performance Management System

- Install Performance Management System
- Optimise staff capabilities and productivity
- Yearly appraisal reports
- Improve internal communication
- Performance linked bonus system
- HR capacity Building to systematic maintain a Train the Trainers culture
- Creating and enforcement of a clear HR Charter and clear policies.

7 Strategic Plan Focus Areas

7.1 Drivers of the AFRINIC Strategy

We have identified three key elements that must drive our strategy in continuing to build AFRINIC as a sustainable and strong institution that serve the whole region.

❶ AFRINIC must be an organisation whose services continue to be **Relevant** for its members and the community

❷ AFRINIC shall continue to be *Efficient* and effective in providing its services and engaging with its community.

❸ The AFRINIC organisation structure and its service offering must be **Resilient** enough to adapt to the very dynamic change of its environment.

We are building our strategy focus area around these three points with quest for business **Excellence** as our foundation.

RELEVANCE	EFFICIENCY	RESILIENCE
As an Internet numbers registry we have to continue playing a critical role in overall number resources managment. This implies being able to evolve the functions to adapt to the future of the Internet Protocol and its usage.	To address all our current and future challenges we need to ensure a high level of productivity while ensuring the financial stability of AFRINIC in order to keep our independence and agility	Operating in a fast evolving environment, we have to build a structure that allows fast and continuous adjustment to our ecosytem. That implies a fine balance between institution structure and bureaucracy.

7.2 Focus Areas [Strategic Objectives]

We have identified five focus areas for our strategy plan:

- **Effective Registration & Value Added Service**

- **Community Development and Engagement**

- **Financial Sustainability**

- **Agile and Resilient IT Infrastructure**

- **Support to Global Infrastructure Development**

7.2.1 Effective Registration Service

AFRINIC's core business is to efficiently manage Internet number resource distribution to operators in the region. This activity is performed according to policy as defined by the Internet community. Our Registration Services offering has to be accurate and effective in all aspect and fully compliant

with existing policies. While we are moving toward the exhaustion of IPv4 and the increasing use of IPv6, the focus of our responsibility will gradually move from a restrictive management of a scarce resource (IPv4) to a more liberal allocation (IPv6) with emphasis put on accurate registration and related tools. Since 2013, AFRINIC has been working on an expansive programme of automating most of its Registration Services activities. A lot of effort must be put into this activity in order to prepare the organisation for the changes ahead.

7.2.2 Community Development and Engagement

The community is a critical element of our activities through its key role in policy development. AFRINIC has the responsibility to ensure that its community is sufficiently aware not only of its role and responsibilities but also of the global challenges facing Internet Infrastructure development and the evolution of the technology and its usage. This engagement must be in the form of capacity building but also should take place through online collaboration tools and proactive communications. AFRINIC should try to reach out to all stakeholders in its ecosystem including government, policy makers, law enforcement and legal communities.

7.2.3 Resilient and Secured IT Infrastructure

All of AFRINIC's activities and community support/development activities are supported by its IT infrastructure (public and internal), which are all handled by its internal team. The evolution of the internal information systems needs to be aligned with the growth of the organisation and changes in its structure. The AFRINIC infrastructure has to be designed for full resiliency and the necessary agility to deploy or enhance services to members and the community. There is a need to add a security audit function and compliance of the IT framework to ensure that, while the Infrastructure is growing, it is always protected and aligned with best practices. The use of Open Source solutions need to be reinforced as this can serve as example to the community.

7.2.4 Financial Sustainability

The ability for AFRINIC to continue to self-fund its activities is key for long-term sustainability. As a neutral and impartial organisation whose activity has a great impact on the Internet ecosystem in Africa, AFRINIC has to pay particular attention to its financials. Although AFRINIC operates as a not-for-

profit business, it has to derive sufficient revenue to fund its operations and related activities. AFRINIC will need to put more effort in fundraising for special activities over the coming years. It is also important to strive to recover the cost of all its service in a fair and equitable manner. The community should be encouraged to contribute to the cost of activities such as trainings and Annual Public Policy & General Member meetings.

7.2.5 Network Information Centre & Support for Regional Infrastructure Development:

Internet Infrastructure in Africa is still in its early development stage. The need for knowledge and support to build reliable, resilient and sustainable service environments is huge. AFRINIC, as an organisation that is exposed (through its functions) to best practices and skills globally, has to work on an appropriate framework to support the reinforcement of the Internet Infrastructure in the region. There is a need to refocus the global infrastructure program to ensure that critical projects are properly funded to ensure their sustainability. Funding can be sought from donors or development agencies to support such critical projects. It would be interesting for AFRINIC to pledge a percentage of its revenue to these projects in order to clearly demonstrate its own engagement and commitment.

8 Strategy Plan Matrix

Strategic Objectives	Effective Registration & Added Value Services	Financial Sustainability	Agile and Resilient IT Infrastructure	Community Development	Global Infrastructure Development
	- Improve speed and simplicity of resource allocation process. - Improve WHOIS accuracy - Improve published statistics - Encourage use of AFRINIC routing registry - Ensure understanding of relevant market dynamics	- Exercise financial prudence - Have a reserve to cover two years of operational budget. - Optimal management of HR costs - Optimal management of travel costs - Obtain funding for relevant projects. - Diversify revenue - Target an annual membership growth.	- Have Infrastructure that favours quick deployment of new services that ensure quality management processes and provide an acceptable up time for all critical services. - Adhere to best technical and operational practices. - Ensure critical service continuity in case of disaster or critical failure. - Adhere to a business continuity plan	- Encourage participation and diversity in policy development discussions and meetings. - Promote good relationships with governments and other stakeholders - Encourage continent-wide development programs. - Provide training in relevant IP related services.	- Participate in cyber-security forums. - Encourage awareness of IPv6. - Collaborate with other RIRs where appropriate. - Collaborate with other Internet-related organisations where appropriate.

Effective Registration & Added Value Services	Financial Sustainability	Agile and Resilient IT Infrastructure	Community Development	Global Infrastructure Development
• Improve online resource request tools. • Improve AFRINIC Registration Services back end. • Enhance MyAFRINIC portal capability • Secured Routing training course. • AIRRS: Africa Internet Routing and Registration Statistics. • Strategic partnerships on routing analysis. • Assess and improve AFRINIC's commitment to Business Excellence and Quality Management.	• • Improve internal control mechanisms. • Project based budgeting process. • Enhance Financial Reporting Tool. • • Project driven resource provisioning. • Develop paid training activities • • Revise fee structure to adapt to service evolution. • Improve compliance with fee payment terms. • • •	• Virtualisation of infrastructure • Design and implement a Disaster Recovery Plan • • Ensure regular quality and security compliance audit • • • Develop AFRINICs PKI infrastructure •	• • • Improve corporate governance transparency. • • Support relevant meetings within the region. • • Review and improve the AfGWG framework. • • • Support network operators' groups in the region Engage legacy resource holders	• Engage in IXP support and development through the region • Encourage root server deployment in Africa. • • Encourage the use of AFRINIC's DNS Anycast service. • Continue collaboration with RIPE NCC on measurement and data collection projects. • Develop a better partnership with AfricaCERT. • Assist with dissemination of technical information. •

Strategic Projects

	Effective Registration & Added Value Services	Financial Sustainability	Agile and Resilient IT Infrastructure	Community Development	Global Infrastructure Development
Community involvement	• - Review of IPv4 allocation/assignment policy to soften needs assessment • - Working Group on IP Analytics • support for training program	• Further educate the community on AFRINIC business rules. Ensure they pay their invoice on time		• Outreach programs to increase in-regions consumption of resources. • Train the community to be more active in PDP • AFRINIC to be represented at local events by staff or Board • More shepherding of PDP • Explore new avenues and engagement e.g. social media • Establish community entrepreneurship program • Engage legacy resource holders and make it more interesting for them to join by encouraging and enforcing resource certification for legacy members.	

	Effective Registration & Added Value Services	Financial Sustainability	Agile and Resilient IT Infrastructure	Community Development	Global Infrastructure Development
Staff Work (Operation Plan)	• Define Requirements and develop all the tools mentioned above: NMRP, New WHOIS, RR, RPKI, MyAFRINIC-2.0, IP Number Management Tool (Member and IP Analysts), Integrated Africa IP data Analytics, • Develop a training module for RPKI • Update Number Resource Management training module with new tools. • Develop Routing Registry training. • Develop training for using IP Analytics tools. • Develop an open and fully provisioned test platform for AFRINIC services by the end of 2015.	• Improve usage of Pastel functionalities (specially dynamic query and reporting tool) • Improve Pastel/MyAFRINIC integration for optimised billing process. • Validate Training Business Plan • Annual review and update AFRINIC's five year financial plan. • Implement investment plan with quarterly report. • Reduce HR costs • Obtain grants from Google, Mo Ibrahim etc • Prioritise travels and reduce costs at all levels	• Complete Virtualisation of Infrastructure • Distribution of Infrastructure • Implement quality control and security compliance process • Recruit a security and compliance dedicated member of staff • Document processes • Develop and implement a survey on IT service quality.	• Develop a new training strategy • Reinforce training capability with a diverse audience and set of topics. • Seek partnership for training activities • Develop an online training platform • Investigate an AFRINIC Training/Academy certified Agent Programme across the region.	• Develop a platform for research and data analysis publications (lab.afrinic.net)

	Effective Registration & Added Value Services	Financial Sustainability	Agile and Resilient IT Infrastructure	Community Development	Global Infrastructure Development
Board Work	• Implement an effective conflict resolution procedure for Registration Services.	• Have an active Finance committee to guide the staff on investment decisions and fund raising for special Projects. • Give CFO the powers to overrule spends • Cut staff overlaps at all levels • Increase audit process with Internal Auditors	• Ensure a supportive Budget and define effective assessment process to measure progress.	• Provide adequate Resources for government and public affairs functions. • Strengthen the NomCom so to ensure quality in Board Member Selection • Improve community confidence by working on Corporate governance and transparency in AFRINIC proceedings. ◦ *Improve corporate governance*	Recognise AFRINIC global responsibility and ensure this is properly translated in to activity plan and supporting budget.

NOTE: Attempt a Business Process re-Engineering

9 Objectives Timeline

In order to achieve its strategy objectives, AFRINIC must set some clear objectives that will drive the operation plan and allow the Board and the Management to have a clear and measurable evaluation of the execution. Below are some objectives in period scale (table-).

	< 1 Year	> 1 Year to <2 Years	>2 Years to < 5 years
1. Achieve financial stability in term of revenue/operation costs		▓	
2. Implement Performance Management System	▓		
3. Improve community engagement	▓	▓	
4. Design clear Business Excellence and Quality Management system	▓		
5. Review operation Structure to align with strategic objectives	▓		
6. Enhance AFRINIC training and community engagement capability	▓	▓	▓
7. Establish an R&D activity that supports service innovation	▓		
8. Settle AFRINIC headquarters location issue			▓
9. Increase engagement with non-conventional stakeholder (policy makers, regulators and mobile operators)		▓	
10. Increase IPv4 consumption/usage in the region	▓	▓	
11. Further engage Legacy Resource Holders		▓	
12. Develop and implement a sustainable staff development program		▓	
13. Improve execution of cooperation agreements with other organisations		▓	
14. Define and implement a clear reserve strategy	▓	▓	
15. Measurement and data analysis, IP service consulting, cyber security support, professional training service			▓
16. Achieve a stable reserve growth			▓
17. Fully implement Disaster Recovery Plan for effective operational resiliency			▓
18. Implement an effective succession plan for competence and skill stability.		▓	▓

10 AFRINIC Market Segment

AFRINIC's greatest potential for growth will come from the following stakeholder segments:

- **The Internet and Application Services Providers (ISPs and ASPs)**
- **Infrastructure/Network operators (Mobile Operators and Cable Operators)**
- **Large Corporate Institutions with own Autonomous Systems (ASNs)**
- **Research & Education Institutions/Networks**
- **Governments Networks**

Stakeholder Segments	Strategic Objective	Key Success Factors	Challenges	Key Result Area/ Performance indicator
▪ **Internet Services Providers (ISPs)** ▪ **Application Services Providers (ASPs)**	1. Increase Membership enrollment 2. Position AFRINIC as a strong and reliable brand to be associated with 3. Increase Customer Support capability for LIRs (Local Internet Registries)	1. Increase training and capacity building programmes 2. Targeted technical publications on routing best practices and optimum IP address usage. 3. Engage with executive level decision makers. 4. Develop and promote tools for easy management of number resources and interaction with AFRINIC.	1. Although technical oriented, communication should be marketing driven and reduce jargon.	1. Achieve 80% I/ASPs coverage for public IP address usage by 2020 2. Reach 1 /8 consumption per year of IPv4 by 2016. 3. Reach 60% IPv6 penetration by the end 2016. 4. Double membership in LIR category by end 2016.

	Strategic Objective	Key Success Factors	Challenges	Key Result Area/ Performance indicator
▪ **Telcos PPT/GSM Operators** ▪ **Cable Operators**	**1.** Same as above **2.** Increase Internet protocol usage's support for mobile operators.	**1.** Same as above **2.** Dedicated capacity building program for mobile operators. **3.** Engage with GSMA on join activities.	**1.** Same as above **2.** Understand business model to adapt messaging.	**1.** Same as above **2.** Make IPv6 usage on mobile devise a default choice by operators
▪ **Private Corporate Networks** ▪ **Governments and Universities**	**1.** Increase usage of public IP addresses by governments and private corporate networks. **2.** Increase academic and research network community involvement and usage of IP addresses.	**1.** Dedicated capacity building program for government network Infrastructure managers. **2.** Dedicated capacity building for academic network operators. **3.** Develop partnerships with organisation already engaged with these stakeholders (NSRC, ITU, CTO, AfREN etc…) **4.** Facilitate membership process for government networks. **5.** Increase collaboration and cooperation relationship with policy makers & regulators	**1.** Find the right balance between government led policy and AFRINIC commitment to bottom up and open policy development process.	**3.** Ensure each government network in the region has its own public IP block. **4.** Ensure 60% of African universities have their own IP addresses prefix and ASNs that match the size of their network.

11 Critical success Factors

People   (Right people, competent, mindset, engaged, clear objectives, committed, etc.)

Service and Excellence   Full documentation of processes, ISO certification and EFQM Validation

Funding
- Financial sustainability
- Infrastructure and office space
- Budget discipline

Community Trust & Further Engagement   Smooth AGMM and policy Implementation

Effective Organisation Structure   Fast turn around on execution and decision making process

12 Obstacle, Enablers

During the strategic plan session few Obstacle and Enablers

OBSTACLES	ENABLERS
Communications: - *Work to improve and facilitate communication and information dissemination within and outside the organisation.* - *Improve engagement with community (through proactive communications about AFRINIC's activities and achievements)* - *Break interdepartmental communications barrier* - *Overcome challenge of work culture diversity.* - *Better communicate and align projects to mission and goal at department level*	**Diversity** - Organisation structure carries cultural diversity by design (Regional Board appointment and International staff recruitment strategy)
Human Resource - *Develop a motivating reward system for staff* - *Reinforce mentorship program for new staff.* - *Work on a clear succession planning program* - *Increase staff exposure to the business environment to improve core business knowledge.* - *Develop and provide a regular report on staff engagement index* - *Talent management program* - *Distribution of some operations functions in the region in order to minimise staff relocation to Mauritius.* -	**Staff/People** - Young staff - Motivated staff **Market & Market Share** - AFRINIC is the only organisation performing the number registration service in the region. - Still have an exclusive advantage on certain areas of its training activity - Africa's Internet market is growing fast.
Organisation Structure - *Ensure proper organisation structure alignment with the mission and strategic objectives.* - *Organisation empowerment for more decentralised/agile decision-making process.* - *Improve overall organisation transparency, accountability and compliance*	**Expertise Products and Services** - Internet Protocol core knowledge - Global exposure to core standards, best practices and policy forums. - AFRINIC brand is recognised. - Ability to provide specific service and innovate in area not commonly explored by others.

13 THREATS AND OPPORTUNITIES

OPPORTUNITIES	THREATS
Services beyond numbers registration such as training, consulting & technical support, research & development / IP data warehouse	Availability of IPv4
Fast growing region	Relocating AFRINIC operations
Availability of IPv4 pool	Sudden economic crisis
Growing use of online services	Staff turnover
Regional integration	E-waste
Attractive brand for employment	Brain drain
Early IPv6 expertise	Bad number policies
Growing submarine cable capacity	ITU & increased Government Regulation of the Internet
New data provisioning technology (Wireless: 4G, TV white space)	New RIR that may crop up in the AFRINIC service Region, reducing AFRINIC's coverage
Cooperation with other organisation in the Internet technical ecosystem (NRO)	Cash reserve and investment plan
Capacity for innovation in number resource management	Revenue model post IPv4 exhaustion
Growth of localised content	
Internet of things (IP over everything)	
Number Resource Certification	
Financial control and unbalanced operation costs	
Cybersecurity	
R&D: contribute to global knowledge of Internet architecture and its impact on development.	

14 HR Plan

An HR plan has been produced and published in a **separate document on** the Board intranet.

15 Tactical / Operation Plan

To be prepared every year based on the <u>objective timeline</u>.

Take note of:

Services & Revenue **TODAY**	Services & Revenue **TOMORROW**
Statistics	Security
Anycast	Incubation
Registration	Routing Registry
Events organization for country	Consulting
Training	Research & Development
Members Support	Hosting Services
RDNS	Paid Training
IPv6 Tunneling	Bundled Services
WhoIs	Cloud Storage
Support to Infrastructures	Technical Events Management
Resource Certification	IPv4 Stock Market
Community Social	IP Address Brokerage
Responsibility	Paid Meetings / Conferences

16 Conclusion

A strategy is nothing if it is not followed by an effective execution plan. This document should be reviewed/assessed and adjust regularly to be continuously in line with the direction given by the Community and the trend observed in AFRINIC operating environment.

AFRINIC critically needs to continue to self support its development to ensure its independence, but at the same time raise itself to the same standard as its peers. The global nature of its service necessitates a permanent eye on the evolution of the global scene and a soft benchmark with other RIRs.

Relevance, Effectiveness and Resilience will be the core pillars of the execution.