



Strategic Plan 2011–2015

June 2011

ACRONYMS

AfriNIC	African Network Information Center
BPO	Business process outsourcing
CCK	Communications Commission of Kenya
CSR	Corporate social responsibility
DNS	
EDUROAM	
ERP	Enterprise resource planning
ICT	Information and communication technology
ICRAF	International Centre for research in Agroforestry
ILRI	International Livestock Research Institute
IR	
IRUs	
ISP	Internet service providers
IT	Information technology
KDN	Kenya Data Network
KENET	Kenya Education Network Trust
KES	Kenya Shillings
KICTB	Kenya ICT Board
KPI	Key performance indicator
LAN	Local Area Network
MB	Management board
Mbps	Megabit per second
MI	Member institution
MMU	
MU	
NOC	Network operation centre
NOFBI	National optical fiber backbone infrastructure
NREN	National Research and Education Network
PoPs	Points of presence
PCs	
SLA	Service level agreement
UoN	University of Nairobi
USAID	United States Agency for International Development
SU	
WACS	
WAN	Wide area network

PREFACE

The Kenya Education Network Trust (KENET) is a not-for-profit membership organization that is open to all higher education and research institutions in Kenya. Since its inception in 1999, KENET's growth has been phenomenal with its membership growing from five founder members to the current 59, which include 13 private universities and seven public universities.

KENET is constituted as a Trust to promote Internet connectivity and sharing of information among its member institutions. To achieve its mandate, KENET has focused on creating a capable information and communication technology (ICT) workforce through capacity building of its membership by holding regular training workshops and seminars for key ICT staff and faculty.

The Trust has made significant strides in the prevailing competitive and complex ICT landscape. A notable achievement has been increasing bandwidth use by its members by tenfold after considerably lowering its costs. We believe this has influenced overall reduction of Internet tariffs charged by commercial operators in the country.

Despite its outstanding performance, KENET continues to face challenges. These include dramatic changes in the broadband market in Kenya, inadequate e-readiness of member institutions, high cost of ICT resources, insignificant faculty research productivity, and little locally relevant content.

KENET's new Strategic Plan (2011–2015) responds to these challenges and sets the course for renewed focus on developing quality and cost-competitive broadband infrastructure; sharing expensive common services; improving e-readiness; facilitating research collaboration; developing and sharing locally relevant content; and strengthening its governance and management structures and systems. Through these robust efforts, KENET expects to position itself as a leader in the ICT-in-education sector in Kenya and Africa.

KENET has been instrumental in transforming our higher education institutions using ICTs and I call upon its member institutions, the government and other partners to continue supporting its efforts geared towards making ICT an integral part of higher education and research in Kenya.



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1. INTRODUCTION

1.1. BACKGROUND

The Kenya Education Network Trust (KENET) was formed in 1999 as a membership organization to serve higher education and research institutions in Kenya. KENET is designated as the national research and education network (NREN) by the Government of Kenya. Registered as a Trust under the Perpetual Succession Act KENET's beneficiaries include students, faculty, and staff of member institutions. It has a board of trustees (<http://www.kenet.or.ke/governance>) who are assisted by a management board representing founder universities and research institutions in Kenya. Its day-to-day operations are run by an executive director, 11 talented and skilled young engineers and techies, three interns, two young accountants, a management consultant and a research projects administrator.

KENET's objectives aim to:

1. provide a sustainable and high-speed Internet connectivity to educational institutions;
2. facilitate electronic communication among beneficiaries in educational institutions;
3. support sharing of teaching and learning resources among educational institutions;
4. support teaching and learning over the Internet for beneficiaries in educational institutions both in Kenya and outside;
5. collaborate in developing relevant content for syllabi in educational institutions; and
6. collaborate in research in educational institutions.

KENET currently provides Internet bandwidth to 59 member institutions and 73 campuses, including all large research universities in Kenya. It peers directly in London with the European Regional Research and Education Network (GEANT), and through the African regional research and education network, UbuntuNet Alliance. Its network carries both commodity and research, and education traffic.

Apart from connectivity and bandwidth, KENET provides the following services to its member institutions: network training and application including web hosting; e-mail; disaster recovery; top-level domain registration; and consultancy, including preparation of bidding documents, designing and specifying technology solutions. KENET also acts as a research grantee for foundations and other donor agencies. It has received funding as follows:

- US\$ 1.1 million from USAID for infrastructure development (1999–2002);
- Over US\$ 1 million from the Partnership for Higher Education in Africa from Rockefeller Foundation for e-readiness research, infrastructure, and capacity

- building; and Ford Foundation for e-readiness research, capacity building and content development (2005–2011) ; and
- US\$ 21.5 million from the Government of Kenya for infrastructure and bandwidth development (2008–2011).

1.2. ACHIEVEMENTS OF THE 2007–2010 STRATEGIC PLAN PERIOD

In 2006, KENET developed its first strategic plan (2007–2010) that focused on 10 strategic issues. A major achievement was the reduction in bandwidth costs for its member institutions and tenfold increase in consumption. The table below highlights key achievements in each strategic area.

Strategic issue	Achievements
1. Human resources	<ul style="list-style-type: none"> • Recruited most staff • Trained technical staff in Kenya and abroad • Trained member institutions on network management and content development • Created conducive working environment in KENET
2. Governance and management structures	<ul style="list-style-type: none"> • Governance structures established • Operations manuals developed
3. Interconnection infrastructure	<ul style="list-style-type: none"> • Designed a national broadband network • Provided network design services to new members and connected them • Established partnerships with operators • Network management system implementation started
4. Internet bandwidth	<ul style="list-style-type: none"> • Lowered cost of bandwidth by huge margins • Directly purchased undersea fiber bandwidth (IRUs) • Signed service level agreements (SLAs) with operators • Government provided grant for bandwidth subsidy
5. Educational content	<ul style="list-style-type: none"> • Some online journals available on the KENET portal
6. Funding	<ul style="list-style-type: none"> • US\$ 21.5 million government funding • Reviewed levies to members • Raised funds from connection of new members • Business plan developed and implemented • Provided guidelines on level of ICT funding to members from the e-readiness research
7. Image and leverage	<ul style="list-style-type: none"> • Organized stakeholder forums • News and information regularly send to member and key stakeholders • Established informative and dynamic portal
8. Partnerships and collaborations	<ul style="list-style-type: none"> • Joint research projects initiated e.g. Accession and Marsabit projects • Partnerships established, e.g. DFN and UbuntuNet Alliance • Bulk purchase of bandwidth and associated services achieved

Strategic issue	Achievements
9. Institutional policy framework	<ul style="list-style-type: none"> • E-readiness research conducted and disseminated
10. Sustainability	<ul style="list-style-type: none"> • Business plan and structure for sustainability developed • Internet Protocol policy developed

1.3. NEW STRATEGIC PLAN 2011–2015

The Strategic Plan 2011-2015 was developed against a backdrop of a dynamic and complex ICT landscape. Moreover, Kenya's new development blueprint 'Vision 2030' identifies science, technology and innovation as one of six foundations for socio-economic transformation. The vision for the education sector is: *"to have globally competitive quality education, training and research for sustainable development"*.

The National University Strategy also acknowledges ICT infrastructure as one of four pillars of the emerging knowledge economy and ICT infrastructure as essential for achieving higher quality of university education. One of the strategic goals of the strategy is: *"To integrate ICT into university education and increase ICT innovation and research output of Kenyan universities"*.

To further strengthen KENET's position as a leading national research and education network, this new strategic plan sets to respond to emerging opportunities and challenges, including the dramatic changes in the internal and external environments such as the broadband market in Kenya, insufficient quality of higher education, inadequate e-readiness of member institutions, high cost of ICT resources, limited faculty research productivity, and little locally relevant content.

This plan, which is informed by lessons learned from implementing the previous one, was developed through an inclusive and participatory process involving KENET's management board and staff; and representatives of ICT directors and faculty of member institutions. (See Annex 1: List of participants in the strategic planning workshop).

2. VISION, MISSION AND CORE VALUES

2.1. VISION

To be a leading research and education network driving quality higher education and research through ICT

2.2. MISSION

To be a key catalyst and driver of the integration of ICT in teaching, learning and research through quality, cost-competitive and efficient ICT services and to be a key partner in the development of the Kenyan ICT society

2.3. CORE VALUES

To achieve our vision and mission, we will be guided by the following core values:

- a) **Partnerships and collaborations.** We shall nurture partnerships and collaboration of value to our members.
- b) **Open access.** We shall be guided by the principles of open access in the products and services we provide or promote.
- c) **Diversity.** We shall promote gender, ethnic and university diversity in the recruitment of employees, capacity development and governance.
- d) **Sustainability and competitiveness.** We shall endeavor to be sustainable and competitive in the products and services we offer.
- e) **Integrity and ethics.** We shall embrace professionalism in our work and relationships and foster transparent and participatory decision-making, accountability for decisions and ethical behavior.
- f) **Customer delight.** We shall at all times strive to delight our customers.
- g) **Innovation.** We shall promote member collaboration and provide value-adding services driven by continuous innovation on technology and partnership.

3. ENVIRONMENTAL ANALYSIS

In developing this strategic plan, an institutional analysis was conducted on the internal (strengths, weakness, opportunities and threats–SWOT analysis) and external (political, economic, social, technological, environmental and legal–PESTEL analysis) factors that could impact KENET’s ability to deliver on its mandate.

3.1. EXTERNAL ENVIRONMENT

Political factors

The policy environment for ICT development in Kenya is supportive. In 2008, KENET received US\$ 21.5 million for network infrastructure and international Internet bandwidth expansion from the government. KENET could also benefit from the implementation and operation of e-government, and content investments by the Kenya ICT Board (KICTB); as well as be the preferred service provider for the proposed open university. Other opportunities include provision of network operation centre (NOC) services such as hosting, publishing, backup, etc. to its members and government bodies such as KICTB; and business process outsourcing (BPO). However, key threats include brain drain; inability to cope with requirements for content hosting; and potential political instability associated with General Elections.

Economic factors

Although Kenya’s economy is expected to continue recovering (*Economic Survey 2010; World Bank’s Kenya Economic Update, Edition No. 3, December 2010*), the country is likely to face challenges, at least in the short term, including high energy costs, poor rains and the huge budget required to implement the new Constitution. Other threats include the global financial crisis; high inflation and unstable exchange rate; corruption; labour mobility nationally and regionally; and limited or slow uptake of ICT in universities.

According to World Bank’s *Kenya Economic Update, Edition No. 3, December 2010*, ICT has been the main driver of economic growth in the past decade and has outperformed all other segments of the economy since 2000. Growing by 20 percent annually on average, the combined transport and communications sector has become the economy’s second largest after tourism. This creates an opportunity for KENET to increase penetration and impact of ICT in its member institutions and with support from AfricaConnect (<http://www.africaconnect.eu>), KENET could become an Africa IT hub. Other opportunities include increased national income; increased investments in ICT; and more new universities, including the proposed open university. The increased number of new universities, however, will create a greater demand for KENET’s services.

Socio-cultural factors

The fast growing student population in universities continues to create increased demand for Internet services and e-learning resources in Kenya's higher education institutions. The e-readiness survey of 17 Kenyan universities found an enrolment of 162,319 students compared to about 141,830 students in a 2006 survey of the same universities, representing an increase of nearly 14 percent increase (Kashorda and Waema, 2009). The pervasive use of mobile phones presents various opportunities in developing innovative products and services in mobile learning. However, conservative leadership, that is not supportive of ICT in management, teaching and research in some public universities, poses a challenge.

Technological factors

The available multiple undersea fiber cables will allow KENET to access high-capacity and cheaper Internet bandwidth as well as to purchase bandwidth from different sources, such as Asia and Europe, and therefore connect directly to other research and education networks in Africa, Asia, Europe, South and North America. Through the AfricaConnect project, KENET will be able to provide network operation centre services and have direct interconnection with other African national research and education networks. However, a key challenge in the near future is limited diversity of routes to Europe through SMW4 undersea fiber, while connections through other routes will require investment in circuits to South Africa for connection to other undersea cables such as WACS or MAIN-1.

The national optical fiber backbone infrastructure (NOFBI) has also created an opportunity for KENET to extend fiber infrastructure to its members outside the main cities and towns. However, the coverage is not always close to many current and potential member institutions. Other opportunities include KENET providing shared resources such as enterprise resource planning (ERP) applications, especially for universities; leveraging on providing gateways for mobile applications; consultancy; NOC; disaster recovery and video conferencing services nationally and regionally.

Key threats for KENET include the high cost of providing last mile connectivity either using open access fiber or via radio links, which increases recurrent costs; and lack of reliable power supply at KENET points of presence (PoPs) or in member institutions. Although electricity is available in most member institutions, many lack reliable backup power supply such as diesel generators or other green technologies. However, this presents an opportunity for KENET to provide shared and cloud services and also to experiment with new energy sources such as solar power or wind power for campus networks and PoPs.

Environmental factors

The Communications Commission of Kenya's (CCK) policy guidelines on infrastructure sharing (such as masts and ducts) in an effort to ease the investment burden of new entrants into the market and avoid duplication of resources (Waema

et. al, 2009) offer an opportunity. KENET could also promote a common and e-waste disposal policy for the higher education community and provide it at a fee. Key challenges include the increased costs of fiber infrastructure development by various agencies such as the National Environment Management Authority (NEMA) requirements; municipal and county governments; and the Kenya Civil Aviation Authority. CCK also provides last mile radio frequencies at commercial rates that significantly increase the cost of Internet access.

Legal and regulatory factors

The CCK's licensing requirements and Kenya Communications (Amendment) Act (2009) present an opportunity for KENET with respect to enabling e-commerce transactions. The main challenge, however, is the poor **IR** rights legislation and protection and lack of security a certificate issuing authority in Kenya, which may hinder content production.

Competition

KENET faces stiff competition from infrastructure operators, who consider it a competitor rather than a partner. These operators use unfair and predatory pricing to lure its member institutions, who perceive KENET as an ISP rather than a NREN. To address these threats, KENET could build its own network and offer innovative value-add NREN solutions.

KENET may also be in competition with some of its member institutions in providing services, such as consultancy and research, which could be problematic in getting the necessary cooperation from member institutions or accessing certain human resources.

Partners

KENET has in the past received support from a number of partners, including USAID, The Rockefeller Foundation, The Ford Foundation, Telkom Kenya Ltd, Kenya Data Network (KDN), Communications Commission of Kenya, the Ministry of Education and the Ministry of Information and Communication. There is an opportunity to further leverage on the goodwill created with these valued partners as well as with future partners.

KENET also depends on local telecommunications operators in rolling out its physical network (layers 1 and 2), both in the local and international segments. These partners include KDN (national optical fiber distribution network and international connectivity); Jamii Telecommunication in international connectivity and backup links to points of presence and member institutions; and Safaricom in international connectivity and last mile solutions for institutions outside Nairobi. These partners have made it possible for KENET to roll out and manage a large network connecting over 70 campuses in a short period of about two years. The partners will continue to support KENET with the rapid network expansion even as it builds some broadband optical networks to the major research universities and institutions in the future.

The twinning arrangement with German NREN (DFN) provides KENET with capacity building opportunities in complex areas of network planning and NOC operations. KENET is also a founder and active member of the regional UbuntuNet Alliance. Through the Alliance, KENET has been able to work with other NREN members, including TENET of South Africa and to peer directly with GEANT in Europe and also be part of the AfricaConnect project.

KENET has actively been involved in the development of the national ICT policy and can position itself to influence the implementation of the national ICT policy, especially in the education sector.

3.2. INTERNAL ENVIRONMENT

ICT policy and strategy

KENET's key strengths include member institutions having e-readiness reports, ICT strategies and documenting successful case studies. Key weaknesses include some ICT directors not having the expected impact; insufficient budgets for ICT; ICT plans not in alignment with corporate strategies; lack of institutional ICT policy and framework; and lack of internal service level agreements in member institutions.

ICT integration in learning and research

KENET's strengths include member institutions having the required infrastructure for sharing educational and research resources, and using e-learning platforms and ICTs in the libraries (open source tools available). Weaknesses include limited capacity for developing e-content, research and innovation.

Human resources

KENET's key strengths include opportunities for overseas training; committed young professionals; access to a rich mix of human resources in members institutions that can provide consultancy and outsourced services; low staff turnover; good team spirit and compensation based on market rates in the industry; and high-profile ICT directors. The main weaknesses include constant threat of poaching of key staff by other industry players; and the human resource policy and reward structure not being formalized. At the institutional level, key weaknesses include skills gaps in design and deployment of campus networks; insufficient ICT personnel and inadequate technical capacity; faculty who are "techno-phobic"; low retention of ICT staff; and senior managers not prioritizing ICT as a strategic resource.

ICT infrastructure

KENET has an established, cost-effective and innovative nation-wide ICT physical network, with monitoring tools and financial system. At the member institution level, strengths include most members adopting ERP/academic systems; availability of open source solutions; increased bandwidth demand and most member institutions operating their own websites. Key weaknesses include limited capacity to cope with

increased demand for connectivity; over reliance on other providers for backbone and last mile fiber connections; and frequent down times occasioned by upstream failures. At the institutional level, weaknesses include slow ICT adoption; non-existent or poorly designed intra-campus networks; inadequate security for campus networks; frequent downtimes of various systems, and some member institutions lagging behind in adopting ERP/academic systems.

Business processes

KENET has a proactive approach to resolving members' problems and has SLAs with clearly defined escalation procedures. Other strengths include having a financial processes and procedures manual and a strong system for staff recruitment. A key weakness is lack of processes for commercial law matters given its large operations.

Physical facilities

KENET has good office space providing a conducive work environment, training facilities and goodwill from member institutions who have donated space for point of presence facilities. The key weakness is the impression that KENET belongs to members who have donated the space.

Organizational structure

KENET's strengths include high profile Trustees with a strong sense of ownership, competent and committed management board, and a lean organizational structure. Key weaknesses include difficulty in convening meetings because Trustees are too busy, new members feeling left out of KENET's governance structures and several vacant positions, which has increased workload for existing staff and management board members.

Management style

KENET has a flexible and open management style that promotes teamwork and is not centered on individuals. A key weakness is lack of succession planning.

Finance and audit

Key strengths include having a strong asset base and solid capital structure; sufficient cash flow; documented financial management procedures; and timely annual audits. The weaknesses include very fast growth in the ICT industry means that decisions have to be made faster and sometimes attention to detail may be compromised, auditors' roles not extended to quality assurance of network performance and the members taking too long to pay their bills.

4. STRATEGY

This strategy is informed by the environmental analysis in Chapter 3. It covers strategic issues, objectives, strategies and expected outcomes. Key strategic issues or critical challenges that will be addressed during this strategic plan period include:

1. Broadband infrastructure
2. Shared services
3. Institutional ICT readiness
4. Collaborative research
5. Locally relevant content
6. Image and leverage
7. Governance and management

4.1. BROADBAND INFRASTRUCTURE

KENET lacks a competitive advantage because it does not own a national broadband infrastructure and therefore runs on other operators' networks. Poor last mile connectivity to some member institutions has led to dissatisfaction with the quality of service provided. Some operators have taken advantage of this gap to lure member institutions to their networks by promising them lower prices and better quality of service.

KENET's broadband infrastructure however is likely to grow during this strategic plan period due to the following factors:

1. Rapid growth of public and private universities which will increase demand for broadband connectivity.
2. Public and private universities opening new campuses in different parts of the country.
3. New members, especially universities and research institutes, that were not included in the first and second phases of the bandwidth expansion project funded through KICTB.
4. The Ministry for Higher Education, Science and Technology wanting all 48 technical and vocational education and training colleges to be connected by the next fiscal year.
5. Government training institutions wishing to be part of the KENET network because they collaborate with universities, such as Kenya Institute of Administration, Kenya School of Law, Judicial Training Institute, etc.
6. The Ministry of Education wanting all 22 teacher training colleges connected to the KENET network.
7. The need to meet broadband connectivity needs of schools and health centers neighboring universities. This will not only be part of an outreach but is also the desire of the government to get schools connected at non-commercial rates.

In order to address these challenges and have an infrastructure that effectively enables research, teaching, learning and outreach, the strategic objective that KENET shall pursue is:

Strategic Objective 1: To grow the broadband infrastructure and improve its quality and cost-competitiveness

The key expected outcomes are:

- Low congestion broadband infrastructure
- Increased retention of member institutions
- Expanded broadband infrastructure

The *strategies* to help realize the above objective and outcomes are:

- a) Develop KENET-owned cost-competitive broadband infrastructure
- b) Joint procurement of leased lines for institutions in areas where it is not commercially viable to develop KENET-owned links
- c) Improve network redundancy through provision of backbone and last mile back-up links
- d) Sign service level agreement for all KENET network operations
- e) Increase the number of high-capacity connected member institutions
- f) Increase the number of KENET network nodes or points of presence
- g) Secure broadband infrastructure funding through infrastructure grants, equipment supplier financing, bank loans or member institution financial commitments
- h) Organize regular seminars for member institutions to exchange best practices on ICT development and progress
- i) Catalyze the uptake and utilization of bandwidth at individual member institutions through various incentives.
- j) Develop specialized and innovative products for students and faculty.

4.2. SHARED SERVICES

Shared services save members from having to individually purchase expensive resources. Some members, particularly new universities cannot afford to establish reliable data center services in their respective campuses, thus compromising the value of ICT in their institutions. Most of the member institutions also do not have the technical capacity to host and administer their own ICT applications and services and to individually provide security and disaster recovery services. Apart from sharing the infrastructure (infrastructure as a service), there is the benefit of bulk joint procurements of teaching and administrative applications and software licenses as way of reducing the total cost of ICT services for members.

In order to deal with these challenges of this strategic issue, KENET will pursue the following strategic objective:

Strategic Objective 2: To implement an appropriate suit of cost-competitive shared services

The key expected outcomes are:

- Increased uptake of shared services
- Increased savings by members
- Improved revenue from shared services

The set of *strategies* to help realize the above objective and outcomes are:

- a) Jointly procure common and expensive ICT resources
- b) Build capacity in management of the existing KENET data center
- c) Increase the uptake of KENET data center services (shared services)
- d) Bundle data centre services to improve uptake
- e) Provide capacity development courses to member institutions on shared services and cloud computing services
- f) Partner with leading data services and applications providers to offer advanced shared services to member institutions
- g) Develop and implement a shared services business model.

4.3. INSTITUTIONAL ICT READINESS

According to the e-readiness survey of 2008, there is limited alignment of the institutional ICT strategies to the corporate strategies. Moreover, the leadership of most member institutions does not consider ICT strategic as critical to their core mission of teaching and research. Other challenges include:

1. Lack of clear ICT strategies
2. Low or insufficient funding for the ICT function
3. Limited ICT leadership skills
4. Inadequate high-end technical talent within member institutions
5. Limited human capacity to develop, implement and operate large or complex ICT projects
6. Lack of campus broadband backbone networks in most campuses and for multi-campus universities, lack of broadband intra-campus networks
7. Low penetration of networked computers in campus networks and/or limited access for student-owned computers to the campus networks
8. Lack of security policies for campus networks
9. Lack of reliable power supply resulting in frequent downtimes due to power outages and other infrastructure issues
10. Lack of trained or motivated faculty in the use of ICT in teaching and learning.

Thus, readiness of most of the member institutions for most of the ICT in education indicators developed by KENET is very low. The strategic objective to address these challenges is:

Strategic Objective 3: To promote and facilitate higher e-readiness in member institutions

The key expected outcomes are:

- Enhanced e-readiness of member institutions
- Enhanced ICT capacity of member institutions
- Increased revenue from training/consultancy services to member institutions

The set of *strategies* to help realize the above objective and outcome are:

- a) Develop and provide best practice templates for institutional ICT policies
- b) Conduct e-readiness surveys every two years to monitor progress in achieving critical ICT readiness indicators
- c) Advocate for, and train member institutions to improve their e-readiness status
- d) Enhance the technical capacity of member institutions
- e) Offer consultancy and outsourced services to member institutions
- f) Develop template design of campus networks, including security directory services and federated solutions for wireless access (e.g. EDUROAM)
- g) Promote the increase in networked computers through joint procurement and establishment of campus wireless hotspots to support both on-campus and off-campus students and faculty
- h) Organize regular seminar with member institution ICT to exchange best practice on ICT development and progress

4.4. COLLABORATIVE RESEARCH

Research is the primary mandate for KENET. The key challenges for this issue include: low research output from member institutions; lack of critical mass of researchers, especially in areas of ICT, engineering, and medicine; and the inability of Kenyan researchers to join the global community of researchers, especially in the science, engineering and medical area. This has led to limited collaboration with researchers at top-tier universities in Europe, North America, China, India and other African countries.

In order to deal with the challenges of this strategic issue, KENET will pursue the following strategic objective:

Strategic Objective 4: To increase the quality and quantity of research output of member institutions

The key expected outcomes are:

- A vibrant research community
- Increased research particularly in the areas of engineering and ICT

The set of *strategies* to help realize the objective and outcomes are:

- a) Create a database of active researchers from various institutions
- b) Provide grant writing support to develop proposals
- c) Facilitate forums for active researchers in curricula review and use of ICT in teaching, learning and research
- d) Create a consortium of ICT PhD supervisors
- e) Facilitate research collaboration with external universities
- f) Organize annual thematic conferences on key issues facing member institutions
- g) Publish key research reports such as the e-readiness report

4.5. LOCALLY RELEVANT CONTENT

KENET has identified locally relevant content as a key strategic issue to be addressed during this strategic plan period. However, KENET can only be a facilitator since most content must be generated by member institutions as part of online course materials. Research databases and digitized thesis would also be considered locally relevant content.

Local content is expected to reduce demand for international bandwidth and eventually reduce the cost of operating the KENET private network. The key challenges for this issue include limited availability and sharing of locally relevant content. In addition, member institutions have ICT curricula content that is not standardized and most of is not aligned to current technologies, while there are industry complaints of low quality graduates.

Strategic Objective 5: To facilitate development and sharing of locally relevant e-content

The key expected outcomes are:

- Increased amount of locally relevant e-content
- Standardized and uniform ICT degree curricula

The set of *strategies* to help realize the objective and outcomes are:

- a) Facilitate the creation of a repository of local content in thematic areas
- b) Facilitate the creation of partnerships among member institutions, faculty and researchers for content development
- c) Advocate for e-learning materials for all courses offered in universities

- d) Facilitate capacity development workshops for faculty and directors of teaching and learning engaged in e-learning materials development and instructional design
- e) Promote the generation of content by university students
- f) Host locally relevant content
- g) Advocate for modernization and standardization of selected ICT curricula of different universities
- h) Promote adoption of selected ICT model curricula

4.6. IMAGE AND LEVERAGE

One of the strengths of KENET is its good image as perceived by stakeholders inside and outside the country. In particular, KENET has been actively influencing national ICT policy as well as ICT policies of its member institutions. However, some members have misconceptions about the role of KENET and consider it as just another ISP that provides commodity Internet services and not as a research and education network.

The low levels of SLA support by the commercial operators, who provide leased line services to KENET, has contributed to the perception the KENET's does not provide good Internet services. This has reduced the credibility of KENET as an operator and service provider. A challenge for KENET is that its other research and education activities are not well understood by the member institutions, especially faculty, researchers and students in member institutions. Consequently, there is limited community of researchers and educators that are collaborating through KENET as a research and education network.

The strategic objective that will address this issue is:

Strategic Objective 6: To enhance the image of KENET

The key expected outcomes are:

- Enhanced image and presence of KENET
- Increased participation of member institutions in KENET projects and activities

The set of *strategies* to help realize the objective and outcomes are:

- a) Hire the services of a branding expert
- b) Develop a marketing and branding policy
- c) Brand KENET items, events and projects
- d) Actively participate in ICT in education forums
- e) Regularly engage member institutions' key stakeholders
- f) Improve the visibility of KENET among end users (students, faculties) and build KENET's image as an educational and research network

4.7. GOVERNANCE AND MANAGEMENT

Governance and management is a strategic issue in enhancing KENET's institutional sustainability. There is also need to strengthen KENET's human technical and managerial capacity, improve the quality of technical staff, and ensure the government recognizes KENET status as a Trust and its role as a research and education network. KENET does not have tax exemption status on surplus funds generated or waiver of taxes for network infrastructure investments (except when they are funded by external donors like the World Bank). The strategic objective to address this issue is:

Strategic Objective 7: To strengthen the governance and management of KENET and enhance its sustainability

The key expected outcomes are:

- Increased participation of members in KENET governance structures
- Enhanced staff motivation
- Increased skilled technical capacity at KENET and member institutions
- Enhanced sustainability

The set of *strategies* to help realize the objective and outcomes are:

- a) Increase the number of management board members and fill the additional slots on a rotational basis for board membership for positions other than the representative of Trustees
- b) Increase the Trustees from Universities by five to be filled on a rotational basis every three years
- c) Develop human resources policy and manual
- d) Introduce a business development unit/function and source for expertise in commercial law and investments
- e) Ensure adequate staff complement in KENET to cope with the demands of the member institutions
- f) Ensure that the KENET Trust Deed is incorporated
- g) Mentor technical staff of member institutions through an internship program
- h) Enhance debt collection for services offered
- i) Lobby for tax exemption from the Kenya Revenue Authority
- j) Establish a research endowment fund
- k) Monitor and evaluate the implementation of the strategic plan

5. IMPLEMENTATION

5.1. IMPLEMENTATION PLAN

An implementation plan based on the strategy with the outcomes, performance indicators for each outcome, targets to be achieved over the plan period and the offices responsible for achieving these targets is elaborated in Annex 2.

5.2. MONITORING AND EVALUATION

Monitoring and evaluation (M&E) helps those involved in executing the KENET strategic plan to assess if progress is being made in line with expectations in the plan. Monitoring involves establishing indicators; setting up systems to collect information relating to these indicators; collecting and recording the information; analyzing the information; and using the information to inform day-to-day management. The key reasons for monitoring can be summarized as follows:

- to establish if performance targets have been met and the explanations as necessary;
- to act as an early warning system and detect potential difficulties and help to address them during implementation; and
- to provide feedback to the next phase of implementation, reduce the cost and/or increase the efficiency of post evaluation studies.

Evaluation is a comprehensive appraisal that looks at the long-term impacts of a project and exposes what worked, what did not, and what should be done differently in future projects. Specifically, evaluation will involve:

- Looking at what KENET intended to achieve – what difference did it want to make? What outcomes did KENET expect?
- Assessing progress towards what KENET expected to achieve.
- Looking at the strategy. Was KENET effective in following its strategy? Did the strategy work? If not, why not?
- Looking at how it worked. Was there an efficient use of resources? What were the opportunity costs of the way it chose to work? How sustainable is the way in which KENET works? What are the implications for the various stakeholders in the way KENET works?

The monitoring and evaluation framework consists of activities and responsibilities outlined in the table below:

M&E Activity	Responsibility
Monitoring implementation of the strategic plan	<ul style="list-style-type: none"> Persons responsible for the KPIs and targets as in implementation plan
Collection and maintenance of performance data	<ul style="list-style-type: none"> Executive Director or a designated staff member to identify and collect performance data on each indicator on a continuous basis and maintain it in a database
Creating quarterly monitoring reports, with explanations for variance as necessary	<ul style="list-style-type: none"> Executive Director to submit reports on a quarterly to the management board for appropriate decision-making Executive Director to take corrective action based on decisions by the management board
Mid-term and end-term evaluation	<ul style="list-style-type: none"> KENET to appoint an independent consultant to carry out mid-term and end-term evaluation of the implementation of the strategic plan

At the beginning of each year, KENET staff will develop their annual work plans and set performance targets based on the implementation plan. These targets will form the basis of the performance contract that the Executive Director enters with each staff. At the end of the year, each staff member will be evaluated against the targets in their performance contract. Any bonus or salary increment will be based on the results of this evaluation.

ANNEX 1: LIST OF PARTICIPANTS IN THE STRATEGIC PLANNING WORKSHOP HELD ON 23RD -25TH MARCH 2011, MAANZONI LODGE, ATHI RIVER, MACHAKOS COUNTY

No	Name	Title/Institution	E-mail
1	Prof. Timothy Waema	Chairman, KENET MB	waema@uonbi.ac.ke
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3	Mr. Paul Muinde	Daystar, Member KENET MB	pmuinde@daystar.ac.ke
4	Dr. Gerald Chege	USIU, Member KENET MB	gchege@usiu.ac.ke
5	Prof. Abraham Idowu	UEAB, Member KENET MB	aoidowu@ueab.ac.ke
6	Dr. Edwin Ataro	Chairman, Electrical Engineering Dept, MU and Member KENET MB	ataro@arcor.de/ataro@mu.ac.ke
7	Prof. Mghendi Mwamburi	Director of ICT, Chepkoilel University College	mghendi@yahoo.com
8	Mr. Ian Moore	ICT Director, ILRI/ICRAF	i.moore@cgiar.org
9	Mr. Macharia Gichogu	ICT Director, KU	Director-ict@ku.ac.ke
10	Mr. John Walubengo	ICT Director/AFRINIC, MMU	jwalubengo@mmu.ac.ke
11	Fernandes Korir	Management Accountant, KENET	fkorir@kenet.or.ke
12	John Ngunyi	Management Consultant, KENET	ngunyi_horizon@yahoo.com
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14	Kevin Chege	Network Manager, KENET	kchege@kenet.or.ke
15	Michelle Opiyo	Network Administrator, KENET	mopiyo@kenet.or.ke
16	Joel Bulyar	KENET Journalism Intern	interns@kenet.or.ke
17	Teresia Wanjiku	KENET Business Intern	interns@kenet.or.ke
18	Dr. Wanjiku Ngang'a	Lecturer, School of Computing and Informatics	wanjiku.nganga@uonbi.ac.ke
19	Cornellius Achiki	Student, Department of Electrical Engineering, University of Nairobi	
20	Mrs. Agatha Njeri	Systems Librarian, UoN	akabugu@uonbi.ac.ke
21	Dr. Mathiu Mbaabu	Lecturer, Public Health, University of Nairobi and	mmbaabu@uonbi.ac.ke

		Tuck Medical School	
22	Dr. Wilfred Njoroge Mwema	Lecturer, Department of Electrical & Electronic Eng., University of Nairobi	Wilfred.mwema@uonbi.ac.ke
23	Mr. Eric Katheriya	Web author / Librarian, SU	ekatheriya@strathmore.edu

ANNEX 2: IMPLEMENTATION PLAN

1. BROADBAND INFRASTRUCTURE

Strategic Objective	Outcomes	Strategies
To grow the broadband infrastructure and improve its quality and cost-competitiveness	<ul style="list-style-type: none"> Low congestion broadband infrastructure Increased retention of member institutions Expanded broadband infrastructure 	a) Develop KENET-owned cost-competitive broadband infrastructure b) Joint procurement of leased lines for institutions in areas where it is not commercially viable to develop KENET-owned links c) Improve network redundancy through provision of backbone and last mile back-up links d) Sign service level agreements (SLAs) for all KENET network operations e) Increasing the number of high-capacity connected member institutions f) Increase the number of KENET network nodes or PoPs g) Secure broadband infrastructure funding through infrastructure grants, equipment supplier financing, bank loans or member institution financial commitments

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
Low congestion broadband infrastructure	% of average monthly network availability	93.70%	94.50%	2011/12	Network Manager
			95.50%	2012/13	
			96.50%	2013/14	
			97.50%	2014/15	
			98.50%	2015/16	
	% of KENET operations with signed SLAs	25	60	2011/12	Network Manager
			70	2012/13	
			80	2013/14	
			100	2014/15	
			100	2015/16	
	% of inter-POPs links that are backed up	35	50	2011/12	Network Manager
			70	2012/13	
			100	2013/14	
			100	2014/15	
			100	2015/16	
Increased retention	% of member	95%	96%	2011/12	Executive

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
of member institutions	institutions connected		97%	2012/13	Director
			98%	2013/14	
			100%	2014/15	
			100%	2015/16	
	Cost of 1 Mbps of Internet bandwidth (US\$)	300	200	2011/12	Executive Director
			150	2012/13	
			100	2013/14	
			100	2014/15	
			100	2015/16	
Expanded broadband infrastructure	No. of connected campuses	73	90	2011/12	Head of Infrastructure
			120	2012/13	
			150	2013/14	
			180	2014/15	
			200	2015/16	
	Amount of Internet bandwidth distributed (Mbps)	750	1350	2011/12	Head of Infrastructure
			1950	2012/13	
			2550	2013/14	
			3150	2014/15	
			3750	2015/16	
	Amount of grant received (US\$)	21.5m	0	2011/12	Executive Director
			5m	2012/13	
				2013/14	
				2014/15	
				2015/16	

2. SHARED SERVICES

Strategic Objective	Outcomes	Strategies
To implement an appropriate suit of cost-competitive shared services	<ul style="list-style-type: none"> Increased uptake of shared services Increased savings by members Improved revenue from shared services 	<ul style="list-style-type: none"> a) Jointly procure common and expensive ICT resources b) Build capacity in management of the existing KENET data center c) Increase the uptake of KENET data center services (shared services) d) Bundle data centre services to improve uptake e) Provide capacity development courses to member institutions on shared services and cloud computing services f) Partner with leading data services and applications providers to offer advanced shared services to member institutions

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
Increased uptake shared services	No. of new shared services	4 (web hosting, DNS, mail filtering & co-location)	8	2011/12	Network Manager
			16	2012/13	
			22	2013/14	
			28	2014/15	
			30	2015/16	
	% utilization of hosted services	10%	50%	2011/12	Shared Services Manager
			60%	2012/13	
			70%	2013/14	
			80%	2014/15	
			90%	2015/16	
Increased savings by members	No. of joint procurements through KENET	2	4	2011/12	Shared Services Manager
			5	2012/13	
			6	2013/14	
			7	2014/15	
			8	2015/16	
Improved revenue from shared services	Annual shared services revenue, excluding bundled services in KES (and as a % of total annual KENET revenue)	453,472 (0%)	38,088,000 (12%)	2011/12	Shared Services Manager
			54,216,000 (15%)	2012/13	
			71,712,000 (18%)	2013/14	
			101,088,000 (24%)	2014/15	
			111,196,800 (24%)	2015/16	

3. INSTITUTIONAL ICT READINESS

Strategic Objective	Outcomes	Strategies
To promote and facilitate higher e-Readiness in member institutions	<ul style="list-style-type: none"> Enhanced e-readiness of member institutions Enhanced ICT capacity of member institutions Increased revenue from 	<ul style="list-style-type: none"> a) Develop and provide best practice templates for institutional ICT policies b) Conduct e-readiness surveys every two years to monitor progress achieving critical ICT readiness indicators c) Advocate for, and train member institutions to improve their e-readiness status d) Enhance the technical capacity of member

	training/consultancy services to MIs	institutions e) Offer consultancy services to member institutions f) Develop template design of campus networks, including security directory services and federated solutions for wireless access (e.g., EDUROAM) g) Promote the increase in networked computers through joint procurement and establishment of campus wireless hotspots to support both on-campus and off-campus students and faculty
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Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
Enhanced e-readiness of member institutions	No. of e-readiness surveys completed	2 (2006/07, 2008/09)	1	2011/12	Executive Director
			0	2012/13	
			1	2013/14	
			0	2014/15	
			1	2015/16	
	ICT budget as a % of the total MI budget (average)	0.50%	1%	2011/12	Heads of MIs, ICT Directors
			1.5%	2012/13	
			2%	2013/14	
			2.5%	2014/15	
			3%	2015/16	
	% of alignment of ICT strategy with corporate strategy (average)	50%	60%	2011/12	Heads of MIs, ICT Directors
			70%	2012/13	
			80%	2013/14	
			90%	2014/15	
			95%	2015/16	
	ICT policy documents exist and approved	Not available in most MIs	KENET templates available	2011/12	Executive Director
			Draft available	2012/13	ICT Directors
			Approved & Communicated	2013/14	Heads of MIs
	Internet bandwidth per 1,000 students (average)	3 Mbps (2010)	4 Mbps	2011/12	Heads of MIs, ICT Directors
			5 Mbps	2012/13	
			6 Mbps	2013/14	
			7 Mbps	2014/15	
			8 Mbps	2015/16	
	PCs per 100	6 (2010)	8	2011/12	Heads of

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
	students (average)		10	2012/13	MIs, ICT Directors
			12	2013/14	
			15	2014/15	
			20	2015/16	
	% of online courses (average)	No estimates available but anecdotal evidence is < 5%	5%	2011/12	Heads of MIs, e-Learning Directors, Executive Director
			10%	2012/13	
			15%	2013/14	
			20%	2014/15	
			25%	2015/16	
	% of MIs operating Students Management System	53%	60%	2011/12	Heads of MIs, ICT Directors, Executive Director
			70%	2012/13	
			75%	2013/14	
			80%	2014/15	
			85%	2015/16	
	% of MIs operating Financial Management System	69%	70%	2011/12	Heads of MIs, ICT Directors, Executive Director
			75%	2012/13	
			80%	2013/14	
			85%	2014/15	
			90%	2015/16	
	% of MIs operating Library Management System	50%	55%	2011/12	Heads of MIs, ICT Directors, Executive Director
			60%	2012/13	
			65%	2013/14	
			70%	2014/15	
			75%	2015/16	
Enhanced capacity of member institutions	No. of technical training courses for techies conducted per year	1	4	2011/12	Network Manager
			6	2012/13	
			6	2013/14	
			6	2014/15	
			6	2015/16	
	No. of training courses for ICT Directors conducted per year	0	2	2011/12	Executive Director
			2	2012/13	
			2	2013/14	
			2	2014/15	
			2	2015/16	
	No. of joint Heads of MIs & ICT Directors awareness workshops/forums	1	1	2011/12	Executive Director
			1	2012/13	
			1	2013/14	
			1	2014/15	
			1	2015/16	
	No. of training	1 (2009)	1	2011/12	Executive

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
	sessions for faculty per year		1	2012/13	Director
			1	2013/14	
			1	2014/15	
			1	2015/16	
Increased revenue from training & consultancy services to MIs	Training & consultancy annual revenue in KES (and as a % of the total annual KENET revenue)	1,574,282 (1%)	6,960,000 (2%)	2011/12	Head of Infrastructure, Network Manager, Executive Director
			10,080,000 (3%)	2012/13	
			12,816,000 (3%)	2013/14	
			14,659,200 (4%)	2014/15	
			16,271,040 (4%)	2015/16	

4. COLLABORATIVE RESEARCH

Strategic Objective	Outcomes	Strategies
To increase the quality and quantity of research output of member institutions	<ul style="list-style-type: none"> A more active research community Increased research throughput particularly in the areas of engineering and ICT 	a) Create a database of active researchers from various institutions b) Provide grant writing support to develop proposals c) Facilitate discussion forums for active researchers d) Create a consortium of ICT PhD supervisors e) Facilitate research collaboration with external universities f) Organize annual thematic conferences g) Publish key research reports e.g. E-readiness report

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
A more active research community	No. of submitted proposals	0	0	2011/12	Research Director, Researchers
			2	2012/13	
			4	2013/14	
			6	2014/15	
			8	2015/16	
	No. of funded proposals	0	0	2011/12	Research Director, Researchers
			2	2012/13	
			2	2013/14	

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
			2	2014/15	
			3	2015/16	
	Amount of joint research funding (US\$)	850,000	0	2011/12	Research Director, Researchers
			1,000,000	2012/13	
			1,250,000	2013/14	
			1,500,000	2014/15	
			2,000,000	2015/16	
	No. of new research projects administered by KENET	2	0	2011/12	Research Director, Researchers
			1	2012/13	
			2	2013/14	
			2	2014/15	
			2	2015/16	
	No. of active researchers in the KENET research network	66	66	2011/12	Research Director, Researchers
			120	2012/13	
			180	2013/14	
			270	2014/15	
			405	2015/16	
	No. of thematic research forums established	1 (E-readiness)	1	2011/12	Research Director, Researchers
			2	2012/13	
			3	2013/14	
			4	2014/15	
			5	2015/16	
	No. of consortiums established for joint ICT PhD programs	0	1	2011/12	Research Director, Researchers
			2	2012/13	
			4	2013/14	
			6	2014/15	
			8	2015/16	
	No. of research partnerships/MOUs created	0	1	2011/12	Research Director, Researchers
			2	2012/13	
			2	2013/14	
			2	2014/15	
			2	2015/16	
	No. of supervisors in ICT PhD consortiums	0	5	2011/12	Research Director, Researchers
			8	2012/13	
			10	2013/14	
			12	2014/15	
			14	2015/16	
Increased research throughput	No. of joint papers accepted in international conferences	0	0	2011/12	Research Director, Researchers
			1	2012/13	
			1	2013/14	
			1	2014/15	
			1	2015/16	
	No. of joint papers	0	1	2011/12	Research

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
	accepted in refereed journals		2	2012/13	Director, Researchers
			4	2013/14	
			6	2014/15	
			8	2015/16	
	No. of ongoing PhDs candidates	0	0	2011/12	Research Director, Deans/Directors of ICT programs
			10	2012/13	
			20	2013/14	
			24	2014/15	
			28	2015/16	
	•No. of completed ICT PhDs	0	0	2011/12	Research Director, Deans/Directors of ICT programs
			0	2012/13	
			0	2013/14	
			0	2014/15	
			2	2015/16	

5. LOCALLY RELEVANT CONTENT

Strategic Objective	Outcomes	Strategies
To facilitate development and sharing of locally relevant e-content	<ul style="list-style-type: none"> Increased amount of digitized locally relevant content More standard and uniform ICT degree curricula 	<ol style="list-style-type: none"> Create a repository of local content in thematic areas Create partnerships among MIs, faculty and researchers for content development Advocate for e-learning materials for all courses offered in universities Facilitate capacity development workshops for faculty and directors of teaching and learning engaged in e-learning materials development and instructional design Promote the generation of content by University student community Host locally relevant content Advocate for modernization and standardization of selected ICT curricula of different universities Promote adoption of selected ICT model curricula

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
Increased amount of locally relevant e-content	Number of digitized project reports and thesis	0	10	2011/12	e-Learning Director, Appropriate Deans/Directors
			50	2012/13	
			100	2013/14	
			200	2014/15	
			400	2015/16	

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
	No. of research databases and repositories	0	2	2011/12	e-Learning Director, Appropriate Deans/Directors
			4	2012/13	
			8	2013/14	
			16	2014/15	
			20	2015/16	
	No. of faculty trained on e-learning course development per year	60 (Marsabit project, KU)	60	2011/12	e-Learning Director, Appropriate Deans/Directors
			60	2012/13	
			60	2013/14	
			60	2014/15	
			60	2015/16	
	No. of e-learning websites in member institutions	?	?	2011/12	e-Learning Director, Appropriate Deans/Directors
			?	2012/13	
			?	2013/14	
			?	2014/15	
			?	2015/16	
	Local content as % of total KENET content	15%?	20%	2011/12	e-Learning Director, Appropriate Deans/Directors
			25%	2012/13	
			30%	2013/14	
			40%	2014/15	
			50%	2015/16	
	% of members accessing local content hosted in KENET	?	3%	2011/12	e-Learning Director, Appropriate Deans/Directors
			5%	2012/13	
			10%	2013/14	
			15%	2014/15	
			25%	2015/16	
	No. of new partnerships on content development facilitated by KENET	?	1	2011/12	e-Learning Director, Appropriate Deans/Directors
			2	2012/13	
			3	2013/14	
			4	2014/15	
			5	2015/16	
More standard and uniform ICT degree curricula	No. of model ICT curricula developed	?	1	2011/12	e-Learning Director, Appropriate Deans/Directors
			1	2012/13	
			1	2013/14	
			1	2014/15	
			1	2015/16	
	No. of graduates from revised ICT curricula	0	0	2011/12	e-Learning Director, Appropriate Deans/Directors
			0	2012/13	
			0	2013/14	
			0	2014/15	
			200	2015/16	

6. IMAGE AND LEVERAGE

Strategic Objective	Outcomes	Strategies
To enhance the image of KENET	<ul style="list-style-type: none"> Enhanced image and presence of KENET Increased participation of member institutions in KENET projects and activities 	a) Hire the services of a branding expert b) Develop a marketing and branding policy c) Brand KENET items, events and projects d) Actively participate in ICT in education forums e) Regularly engage member institutions' key stakeholders f) Execute CSR activities

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
Enhanced image and presence of KENET	Marketing and branding policy manual	0	0	2011/12	Management Board
			1	2012/13	
	No. of institutional websites with KENET links	1	57	2011/12	Executive Director
			All MIs	2012/13	
			All MIs	2013/14	
			All MIs	2014/15	
			All MIs	2015/16	
	% of branded KENET items, events and projects	5% (folders, pens)	80%	2011/12	Executive Director
			100%	2012/13	
			100%	2013/14	
			100%	2014/15	
			100%	2015/16	
	No. of forums (exhibitions, events, policy meetings, etc.) in which KENET participates	0	4	2011/12	Executive Director
			4	2012/13	
			4	2013/14	
			4	2014/15	
			4	2015/16	
	No. of award ceremonies held in a year	0	1	2011/12	Executive Director
			1	2012/13	
			1	2013/14	
			1	2014/15	
			1	2015/16	
	No. of CSR activities executed in a year	0	1	2011/12	Executive Director
			2	2012/13	
			2	2013/14	
			2	2014/15	
			3	2015/16	
	No. of times KENET appears positively in the media in a year	0	4	2011/12	Executive Director
			8	2012/13	
			8	2013/14	

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
			8	2014/15	
			8	2015/16	
Increased participation of member institutions in KENET projects and activities	% of member institutions participating in KENET's 3 key projects and activities in a year	?	60%	2011/12	Executive Director
			70%	2012/13	
			80%	2013/14	
			85%	2014/15	
			85%	2015/16	

7. GOVERNANCE AND MANAGEMENT

Strategic Objective	Outcomes	Strategies
To strengthen the governance and management of KENET and enhance its sustainability	<ul style="list-style-type: none"> Increased participation of members in KENET governance structures Enhanced staff motivation Increased skilled technical capacity at KENET and member institutions Enhanced sustainability 	<ul style="list-style-type: none"> a) Increase the number of MB members and fill the additional slots on a rotational basis for Management Board membership for positions other than the representative of Trustees b) Increase the Trustees from Universities by five to be filled on a rotational basis every three years c) Develop human resources policy and manual d) Introduce a business development unit/function and source for expertise in commercial law and investments e) Ensure adequate staff complement in KENET to cope with the demands of the member institutions f) Ensure that the KENET Trust Deed is incorporated g) Mentor technical staff of member institutions through an internship program h) Enhance debt collection for services offered i) Lobby for KRA tax exemption j) Establish a research endowment fund k) Monitor and evaluate the implementation of the strategic plan

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
Increased participation of members in KENET governance structures	Revised Trust Deed to expand the BOT and MB and to allow for rotation of membership to these	No	No	2011/12	Management Board
			Yes	2012/13	
			Yes	2015/16	

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
	governance structures for non-founder members				
	Amended Trust Deed incorporated	No	No Yes	2011/12 2012/13	Executive Director
Enhanced staff motivation	Operational HR policy and manual	No	Yes	2011/12	Executive Director
			Yes	2012/13	
	Staff complement as a % of establishment	80%	85%	2011/12	Management Board
			85%	2012/13	
			90%	2013/14	
			95%	2014/15	
			95%	2015/16	
	Staff salaries as a % of industry average	75%?	75%	2011/12	Management Board
			75%	2012/13	
			80%	2013/14	
			85%	2014/15	
			90%	2015/16	
Increased skilled technical capacity at KENET and member institutions	No. of technical staff from member institutions mentored per year	0	5	2011/12	Head of Infrastructure, Network Manager
			5	2012/13	
			5	2013/14	
			5	2014/15	
			5	2015/16	
	No. of soft skills training courses conducted per year	0	1	2011/12	Executive Director
			1	2012/13	
			1	2013/14	
			1	2014/15	
			1	2015/16	
	% of professional KENET staff trained per year	30%?	30%	2011/12	Executive Director
			30%	2012/13	
			30%	2013/14	
			30%	2014/15	
			30%	2015/16	
Enhanced sustainability	% of institutions that pay within 30 days	<10%	30%	2011/12	Management Accountant, Executive Director
			50%	2012/13	
			75%	2013/14	
			90%	2014/15	
			95%	2015/16	
	% of invoiced amounts paid within 30 days	50%	60%	2011/12	Management Accountant, Executive
			75%	2012/13	
			80%	2013/14	

Outcomes	Key Performance Indicator (KPI)	Baseline	Target	Time Frame	Responsibility
			95%	2014/15	Director
			95%	2015/16	
	Average no. of days debtors take to pay their bills	130	90	2011/12	Management Accountant, Executive Director
			60	2012/13	
			30	2013/14	
			30	2014/15	
			30	2015/16	
	Tax exemption granted	No	No	2011/12	Executive Director
			Yes	2012/13	
	Endowment fund established	No	No	2011/12	Executive Director
			Yes	2012/13	
Improved performance of KENET	Overall score in the strategic plan implementation	Not evaluated	70%	2011/12	Management Board
			75%	2012/13	
			80%	2013/14	
			85%	2014/15	
			85%	2015/16	