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Data Desks

A FRAMEWORK FOR COUNTIES IN KENYA

FULL MANUAL

THE WORLD BANK

This Framework is Developed with the Support of the World Bank.

APPRECIATION

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Part 1: FOUNDATIONS FOR A DATA DESK

Chapter 1: The Open County Initiative

***Goals setting for the chapter**: In this Chapter, you will learn about the Open County Initiative and why it is a timely intervention for engagement with data at the local level. It will also explain interlinkages with other initiatives within the data ecosystem. This chapter will cover the following topics:*

1. *The Open County Portal;*
2. *Introduction to the County Data Desk;*
3. *The citizen engagement components that especially seek to promote participatory budgeting;*
4. *Integration of county websites with the Open County Portal; and*
5. *The Kenya Open Data Initiative.*

Section 1: The Open County Portal

a. Background

The promulgation of the Constitution of Kenya (2010) created new structures for devolved government, consisting of 47 sub-national county governments that are led by a Governor. In addition, each County has a County Assembly; this is the legislative arm of the County Government which makes laws to govern devolved operations; the assembly also has oversight responsibilities on the county's operational activities.

However, since 2013, accountability and governance has been cited as a great concern by Kenyans - especially in the area of public finance management. It has manifested as the lack of capacity for proactive and continuous accountability measures. In addition, there has been increasing demand for county governments to engage citizens by sharing information and seeking feedback so as to be more responsive in service delivery. Citizen participation is promoted in Kenya as an important pillar of democracy. In fact, in 2011, the National Government of Kenya (GoK) formally started the process of adoption of the principles of the Open Government Partnership (OGP). Kenya became the first African country to Launch an Open Data Portal (in 2012).

Further, by law, counties are required to establish county performance monitoring and management systems under various parts of the supporting legislation for the Constitution. The Inter-governmental Relations Act of 2012 stipulates that the Summit

shall provide a forum for evaluating the performance of county governments, including performance on the execution of their functions, while the Public Finance Management Act of 2012, requires counties to disclose information on the funds received and spent as well as the results achieved.

b. What is the Open County Initiative?

The core principle undergirding the Open County (OC) Initiative is promoting open government at the grassroots. Through this local focus, the OC Initiative provides a framework through which county-level engagement between county government, private sector and civil society is initiated and sustained. It also ensures citizens are given a seat at the table through public participation in governance processes such as county budgets, service delivery and the use of devolved funds which are critical to the improvement of their livelihoods .

The Open County initiative comprises components which include: 1) the Open County Portal, 2) the County Data Desk (discussed later in this paper), 3) The citizen engagement component that especially seeks to promote participatory budgeting 4) Integration of county websites with the Open County Portal, 5) Collaboration with the Kenya Open Data Initiative, among others.

c. The Open County Portal

The OC Platform (www.opencounty.org) is a set of dashboards that were developed to guide county management teams to manage development results more effectively, provide a platform for engaging citizens (through updating them on performance) and receiving their subsequent feedback. Ultimately, its primary purpose is to enable the county government, the national government and the public to track the progress made in budgeting, expenditure, development projects and contracting during public procurement. The development of the OC Platform followed a request from the Council of Governors to the World Bank (WB) to support the establishment of county-level open data dashboards.

The platform contains various datasets that showcase multiple stakeholders on the state of economic growth and development in various sectors in the counties. Presently, the data therein is being broadly used by county governments to overcome challenges they face in realising their objectives for good governance, integrity, transparency, and accountability through - public participation, building public participation for accountability and innovating; and building capacity.

This initiative complements ongoing Bank efforts to strengthen the Kenya Open Data Initiative, which the Bank has supported since 2011, through the Kenya Transparency and Communications Infrastructure Project (KTCIP) and the ongoing Kenya Statistics

Program for Results (P4R) that supports the general development of statistics in Kenya.

d. How is the OC Platform Structured?

Data on all 47 counties are currently hosted on the OC Platform. Some of the sources of key data sets include:

1. Kenya National Bureau of Statistics (KNBS)
2. Ministry of Agriculture, Livestock and Fisheries
3. Ministry of Education
4. Ministry of Energy
5. Ministry of Health
6. The Kenya Police
7. Kenya Institute of Curriculum Development (KICD)
8. Kenya Open Data Initiative (KODI)
9. Centre for Humanitarian Data
10. The World Bank

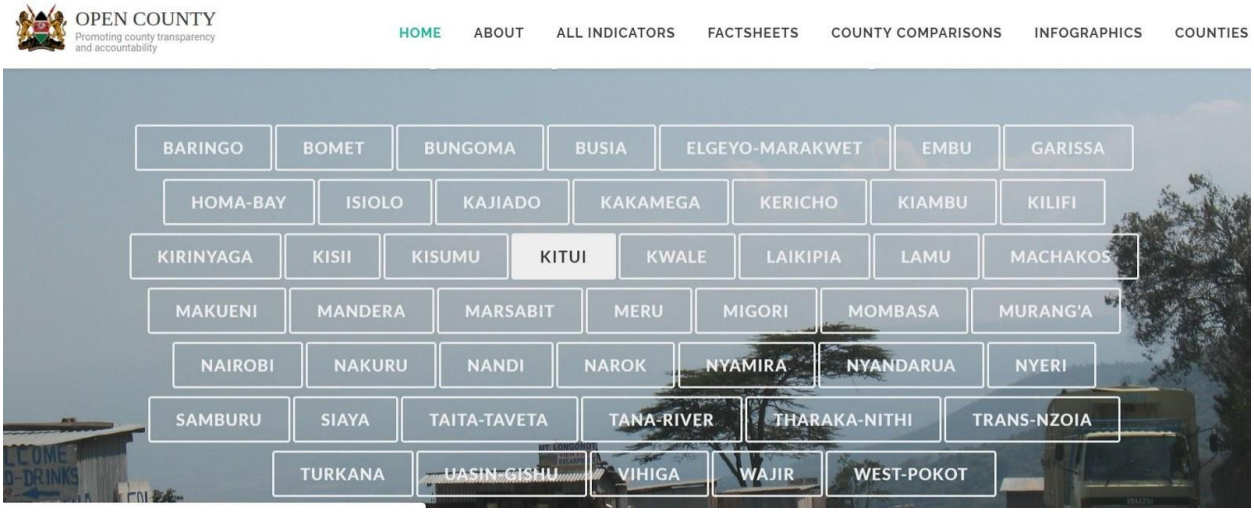


Figure 1: Home page - Open County Platform

The platform includes the following features:

1. **County comparisons:** these are key datasets that enable (at least two) comparisons between counties for the available data sets. Key indicators include health, water, among others.
2. **Infographics:** Using the data, some key summaries that are thematic and topical have been made by the Open Institute team. They are useful means by which visitors can see how to engage with the data.

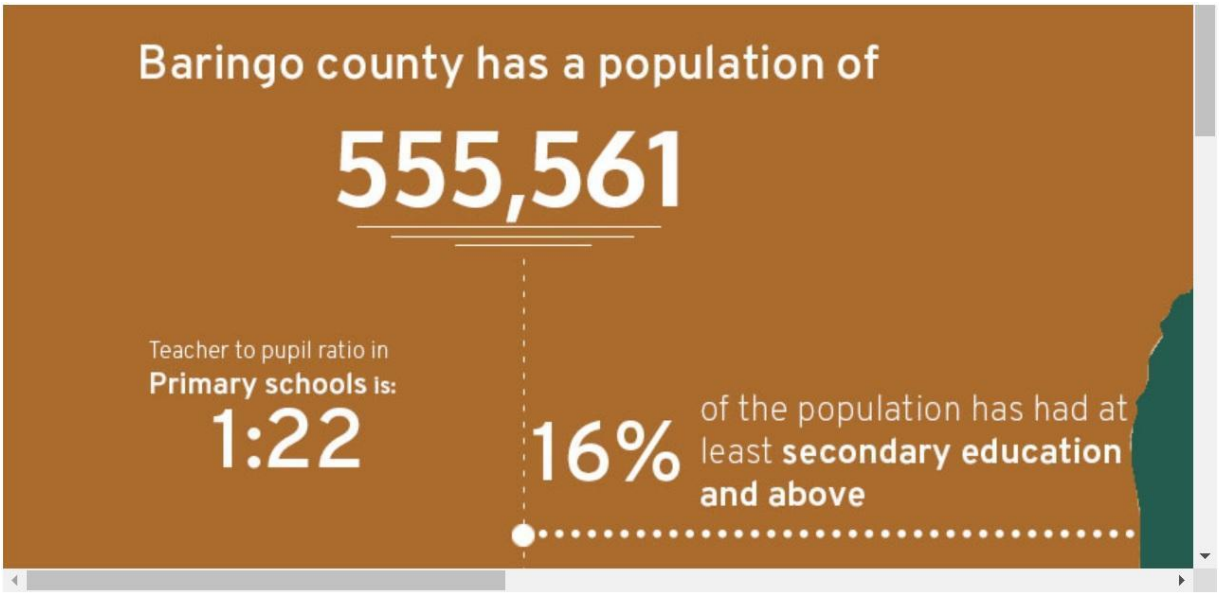


Figure 2: Infographic on Baringo county (Source - The Open Institute, 2016)

3. **County summary pages:** Each county has a summarized page with key indicators, ongoing projects, county-related resource documents, and summarized an overview of the county.
4. **Fact Sheets:** county fact sheets contain summarized at-a-glance data about the county which is downloadable as a PDF document.

Example Box 1: *County comparison analytics on the OC Platform - Nairobi and Mombasa Counties. Analytics such as these are useful to compare the performance of indicators between 2 counties. This is a useful benchmarking tool that can be useful to bolster indicator monitoring and improved performance.*

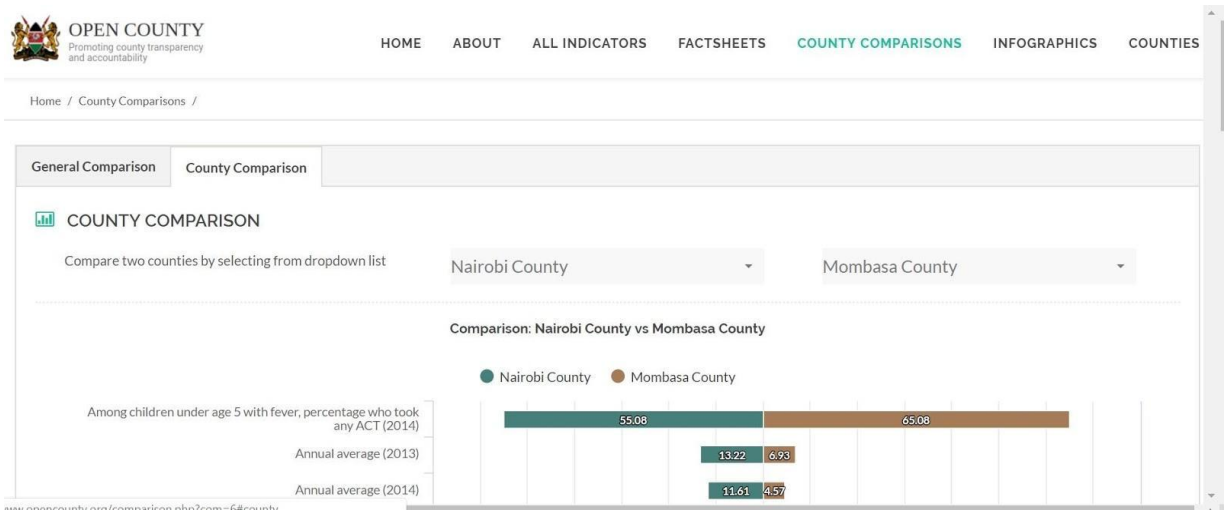


Figure 3: County comparison (Nairobi vs Mombass indicators - Open County Platform - Sources and Years specified)

Section 2: Introduction to the County Data Desk

a. Definition

A data desk is envisaged to be a (both offline and online) platform through which users can obtain relevant and actionable data about the county. Such data may include, spatial data, population, sectoral performance, policy targets, **budgets**, business services and public services. The growth of information technology services at County level can improve the granular data available to enable stakeholders to improve information sharing within the County. The County Data Desk would also enable the public, private sector and government to access information for decision making. This service would be free of charge and would open up opportunities for investments by private sector players, development financiers and enhance planning in County governments through observing trends and analyses in the data.

In addition the data should be availed in different formats to serve the needs of different users (both internal and external users).

b. Data sources

In addition, to the sources of data highlighted in Section 1.d, national and subnational data can be obtained from external websites such as The World Health Organization (WHO), The World Bank/IFC, OECD, OpenAfrica[1]. At a national and county level, the

[1] https://africaopendata.org/

Kenya National Bureau of Statistics and the **Kenya Open Data Initiative** can avail datasets to the data desk.

c. Giving a data desk purpose and mandate at the County and at the Council of Governors

Borrowing from the World Bank's Data Help Desk[2], a data desk should also facilitate answers to multiple stakeholders about data and encourage dialogue on how to improve/increase the datasets therein. Personnel at this desk would also respond to important technical queries from both internal (County Staff, the Executive, County Assembly, National Government) and external stakeholders (media, citizens, CSOs, private sector). This therefore cannot be achieved without proper policies on data release; and where lacking or weak, such policies should be developed or strengthened respectively.

Given the central nature of budget preparation, it is posited in this manual that Finance and Economic Planning Departments[3] (given the vital role in budget preparation and planning as well as monitoring and evaluation either at national or subnational level). The mandate should also extend to collection of sectoral data from various departments within the County and to publish any authorised data sets on the OC Platform.

***Example Box 2**: The data desk lays foundations for E-Participation in Kenya*
In Kenya, County Government Act, 2012 (s. 87 a, b) requires the involvement of citizens in the preparation of budgets, policies, as well as planning by the County Government. Consequently, ICT infrastructural investments should be considered to strengthen E-participation as follows: 1. *Sustainable frameworks are being developed by various county governments to help in keeping data updated; the data desk is one such initiative.* 2. *Innovative bottom-up and top-down channels that make use of ICTs (SMS, digital notice boards and other new media) have been deployed (for example Nairobi, Vihiga counties, etc.) for both disseminating information (efficiently and effectively) and collating feedback.* 3. *Because counties do not have a uniform approach to implementing citizen participation, the data desk can supply vital data during the Participatory Budgeting process that will continue to yield value-for-money due to evidence-based decision - across counties.*

[2] https://datahelpdesk.worldbank.org/
[3] These might be named different in different counties.

4. *Data desk functions are not isolated, personnel manning the desk have to work closely with staff in other sectoral departments, ICT and Communications Departments, the County Assembly or even the Council of Governors*[4].

See additional references:

1. *Open Data and Sub-national Governments: Lessons from Developing Countries : https://webfoundation.org/docs/2015/08/ODDC-Phase-2-Paper-Subnational.pdf*
2. *Open Data Inventory 2018/19: https://opendatawatch.com/publications/open-data-inventory-2018-19-annual-report/*

Due to existing gaps in data collection standards, norms and reporting cycles, the data desk also prescribes normative templates that can be used to collect budget data as well as sectoral data (this is explored in Part 2 - Chapter 2 of this manual).

The data desk is created and implemented at the subnational level in a county as well as at the Council of Governors (CoG). The role of the data desk at the county has been described above - and will interact with a similar desk supplying requisite data at the national level as well as at CoG; the latter is enabled by the Maarifa Centre[5]. This ensures activities related to data use and evidence are embraced and sustained by the county governments. It also provides a framework by which scale-up to other county governments would occur. The interaction of the data desk with Maarifa Centre at the Council of Governors is outlined in Part 1 - Chapter 2 of this manual.

Example Box: Look up these examples from other countries

1. ***Germany*** *(in German language):*
   a. *http://www.gbe-bund.de/gbe10/pkg_isgbe5.prc_isgbe?p_uid=gast&p_aid=&p_sprache=E*
   b. *https://www-skm.destatis.de/webskm/online/data;jsessionid=965A3C40E1E2FC270789FE0D86BF85F2.tomcat_SKM_1_1?Menu=Einleitung*
2. ***United States of America****:*

[4] https://cog.go.ke/: The Council of County Governors (COG) is a non-partisan organization established under Section 19 of the Intergovernmental Relations Act (IGRA 2012).
[5] The Maarifa Centre is a knowledge sharing and learning platform for capturing of lessons and experiences from the 47 Counties.

a. https://www.usaspending.gov/#/
b. https://www.newyorkfed.org/markets/data-hub

3. ***South Africa***:
   a. http://southafrica.opendataforafrica.org/
   b. http://dataknp.sanparks.org/sanparks/
4. ***World Bank Data Catalogue:***
   a. https://datacatalog.worldbank.org/granularity/subnational

Section 3: Citizen engagement and participatory budgeting.

Public value legitimizes organizations through more accountability whereby public managers both face citizens as well as their political masters, rather than static, top-down models where public managers only focus on meeting centrally driven targets and performance management. Participatory Budgeting (PB) occurs generally through 5 steps:

1. **Planning**: it concerns itself with asking the following questions:
   a. What are the Participatory Budgeting (PB) objectives for the financial year?
   b. Do the objectives resonate with majority of stakeholders?
2. **Idea collection**: this is an open and democratic process where the citizens get an opportunity to provide their views on what development projects should be undertaken in the county. The quality of these engagements can be enhanced by mobilizing citizens and ensuring that as many men/women/youth and children participate in the process.
3. **Proposal development**: after the Public Participation process, the county officials retreat to explore which ideas are viable and feasible in the financial year; consider the spatial coverage in terms of population in prioritizing the projects and also moderate based on the available resources (and overlap) between the flagship projects (the longer term projects aligned to the CIDP and Vision 2030 framework) and those which are viable under the PB process. The county officials expound on a plan and budget for implementation of the project which they then present back to the citizens.
4. **Voting**: during this step, citizens will democratically vote on the desired projects. A challenge that occurs when it comes to engaging stakeholders during PB voting stage is that during voting/consensus on projects at PB meetings, there is a risk of decisions being carried by the majority (that is, majority groups, tribes who reside within localities), despite it not necessarily

leading to value-for-money or best social outcomes. Supplying data that is useful in supporting decision making for this step is therefore very vital.

5. **Project implementation**: this has to do with the actual delivery of the projects on the ground. An important consideration during this step is the active monitoring of the projects (by multiple stakeholders) to ensure that the projects are being implemented within time and budget.

Step 1: Choose the general strategy.

Step 2: Prepare the organization model.

Step 3: Develop informational material and ways to mobilise citizens.

Step 4: Hold the first Public meetings.

Step 5: Carry out a technical analysis of proposals.

Step 6: Refine and publish the list of proposals.

Step 7: Voting on which projects progress.

Step 8: Approve the participatory budget and sign off by the accountable body.

Step 9: Creation of voluntary working groups on successful proposals.

Step 10: Review what went well and make improvements to projects and process.

Figure 4: 10 Step model of implementing PB adopted in Kenya (Source: the World Bank)

In Kenya, article 6 and 7 of the Public Finance Management (PFM) Act of 2012 entrenches accountability and transparency in the budget preparation process through public participation. Article 6(1) states "Subject to national security considerations, the public shall be provided with full access to financial information in a timely manner for purposes of seeking public input..." These regulations also make provision for the public to be informed of forum dates (publicly announced at least one week in advance), venues, an annual calendar of events from the start of the financial year, among others. Online platforms are one of the strategies promoted by the Act but often under-utilized in the context of the county.

Also, the County Government Act of 2012, section 119 lays the ground for a Citizen's Service Centre (a central office for the provision of public services in conjunction with the national government); it states that "... (1) A county executive committee shall establish a Citizens' Service Centre at (a) the county; (b) the sub-county; (c) the Ward; and (d) any other decentralized level". It goes on to further state that the governor should ensure the use of appropriate information and communication technologies at a Citizens' Service Centre to aid in the provision of timely and efficient services to the county citizens. This also includes electronic participation in public democracy processes; the basis of this is open data at the County level.

Example Box 3: *Generic guide to evaluate Participatory Budgeting and Citizen engagement*

Below is a generic guide with why certain questions are important when considering citizen engagement with the Participatory Budgeting Process borrowing from the following broad concepts:

1. *Development Assistance Committee (DAC) evaluation criteria: they were developed by the Organisation for Economic Co-operation and Development (OECD) to outline set the standard on evaluation areas that should be considered most and measured in international development. These are: relevance, effectiveness, efficiency, impact and sustainability.*
2. *Public value legitimizes organizations through more accountability whereby public managers both face their citizens as well as their political masters, rather than static, top-down models where public managers only focus on meeting centrally driven targets and performance management.*

Key considerations for the county governments.

1. ***Relevance****: The extent to which the PB is suited to the development priorities of all concerned stakeholders in the target counties. This will consider the following questions:* ***What are the objectives of PB in the respective counties? Do these objectives resonate with stakeholders? Are they aligned to the respective CIDPs? And other frameworks (Public Finance Management Act 2012, MTP III, and third basis for sharing of revenue among county governments - CRA)***

2. ***Effectiveness****: checks if PB is attaining its objectives. This will consider the following questions:* ***To what extent were the objectives achieved or are likely to be achieved? What were the major factors influencing the achievement or non-achievement of the objectives? What is working? Why do we think it works?***

3. ***Efficiency****: This measures the qualitative and quantitative outputs in relation to the inputs. It will include considering different approaches that compare if the best process has been adopted in relation to the output. This will consider the following questions:* ***How much does the process cost? Were objectives achieved on time? Was the program or project implemented in the most efficient way compared to alternatives?***

4. ***Impact****: This interrogates the positive and negative changes that might have resulted from PB adoption (or the lack thereof). As far as PB, the indicators range from impact on civic and political Life, impact on inclusion and equity and impact on government. Both intended and unintended results are of significance. When assessing impact, it is useful to consider the following questions:* ***What has happened as a result of the program or project? What real difference has PB made to county residents (including the traditionally marginalized communities)? What is the impact of PB to***

county government spending? How many residents, CSOs, politicians have been affected? *Under impact, our assessment will also consider new public service theory which concerns itself with public benefit and public value management. The additional question here is:* ***What public value does PB afford?***

5. ***Sustainability****: This component examines if there is evidence to suggest that gains made through the initiative can be sustained and/or scaled nationally. Some of the questions to be considered include:* ***Are budget allocations for PB entrenched in county legislation? Is there PB allocation for current FY and how much as a percentage of total budget? Does a workplan for PB exist? Whom among the stakeholders facilitates the workplan? Are they equipped and resourced adequately?***

6. ***Transparency and Accountability****: Transparency concerns itself with the level of openness and what communication strategies have been put in place during the PB process. A critical question is raised by the public service theory that informs accountability:* ***Might there be other bottom-up accountability mechanisms for public service managers and politicians in public budget matters?*** *(This is somewhat related to the efficiency component - just in the event there are other alternatives).*

7. ***Use of information and communication technologies (ICTs) in PB:*** *many other sectors have leveraged ICT for improved efficiency of processes. Online tools enable people to participate at their convenience thus reduce waste of time and cost of travelling and preparations of physical meetings (barazas). This assessment however makes the distinction between the efficiency of the PB process and the benefits accruing from the use of ICTs in the PB process. Consequently, there will be a specific examination of:* ***how/whether ICT has contributed by providing unique opportunities for citizen participation in democratic decision making processes****. In other words, the efficacy of ICT will be interrogated with a view to see what works.*

Section 4: The Kenya Open Data Initiative (and why the data desk solves a different need)

KODI has been successful as a pioneer initiative to enhance stakeholder access to data for decision making. At the time of writing this manual, Kenya Open Data[6] has data on 11 sectors and around 688 sources of data. Each County Data desk would leverage on both existing and new data, specific to Counties.

[6] http://www.opendata.go.ke/

***Example Box 4**: Investigating The Kenya's Open Data Initiative (KODI) in Urban Slums and Rural Settlements and impact on citizens*

This study revealed that there are four categories of citizens when it comes to the open data landscape in Kenya.

1. *The first category is people who neither know about/ look for government information nor care much about it. When asked about the reasons for not seeking government data they said:*
   "The information won't change their lives."
   "There are no sources for such information."
   "It is a waste of time, the government never helps."
   "I am not interested in government information."
   "It is a waste of time, the government never helps."
   "The government bureaucracy makes me scared of seeking government information and also the secrecy of the government departments."
   "The government does not think of its people."
   "The government gives false promises."
   "The government does not give the information we need."
   "Government officials give biased information."
   "There are no sources of such information."
2. *The Second category is those who know that government data exists but don't use it. Their attitudes range from the fear of the government bureaucracy, the biased nature of government information, the non-responsive government agencies, the lack of trust in government data, and that the government is not providing the information they need.*
3. *The third category of citizens are those who know about government data and use it but do not know if the source of data was the government portal or not. This category knows very little about the existence of the government data portal.*
4. *The last category is those who know about the government data portal and use it. Those citizens know about the datasets available on the portal and have utilised it. For instance, some respondents indicated that they have sought statistics on the national census results on the number of people in their area of residence, information on the allocation of resources to different counties and their development rates, information on health, bursaries fund, and data on high school students' transition.*

Source: Open Government Data for Effective Public Participation: Findings of a Case Study Research Investigating The Kenya's Open Data Initiative in Urban Slums and Rural Settlements (2014) Z. Chiliswa.
http://www.opendataresearch.org/sites/default/files/publications/JHC%20Publication%20April%202014%20-%20ODDC%20research.pdf

However, uptake and use of this data in participatory budgeting has been limited. This may be due to lack of awareness at a local level, specifically, lack of public awareness that county governments can avail this information online, and lack of physical designation of facilities for the stakeholders to access this data. Internet connectivity and uptake and use of ICT at a county level also influences the degree of awareness of the county, and its ability to point stakeholders to the right data sources.

These (KODI, OC,) are all important in promoting an information sharing system at the county level, that is linked to various departments at the County and the CoG. The information sharing system will play a critical role in operational effectiveness and accountability as discussed in Part 1 - Chapter 1 - Section 2 and 3 above.

Quiz questions

1. *What is open data?*
2. *On the Global Open Data Index, which country*
  a. *Tops?*
  b. *Where does Kenya Rank?*
NB: Kindly answer 2a and 2b having referred to the Open Data Inventory (by the Open Data Watch) (http://odin.opendatawatch.com/)
3. *How do the scoring methodologies for ranking differ?*
4. *Is open data really that valuable? How can it benefit the county government or my department?*

Chapter 2: The Maarifa Platform

***Goals setting for the chapter**: In this Chapter, you will learn about the Maarifa Platform, which is an important component of the Maarifa Centre - an initiative of the Council of Governors.*

Section 1: Background

The Council of Governors (CoG) has developed the Maarifa Centre which is a one-stop for county governments on all matters related to knowledge sharing and learning.

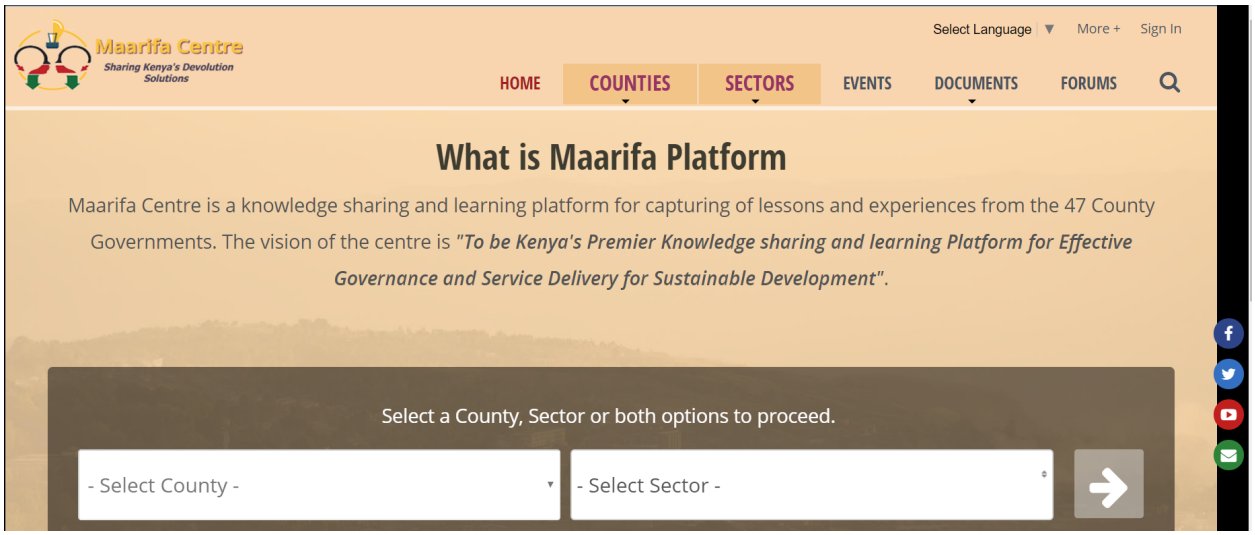


Figure 5: Maarifa Platform

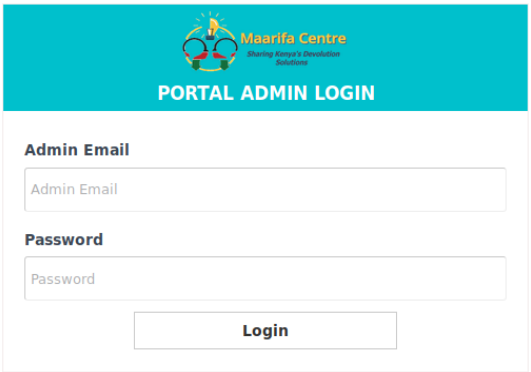


Figure 6: Maarifa Platform Admin Login

The Maarifa Platform (http://maarifa.cog.go.ke) is the online presence component. The Maarifa Platform enables the systematic recording and sharing of information across the counties (first-inter county and then with external partners.).

On the Maarifa Platform, it is possible to view and download resources (CIDPs, legal documents, reports and other information on the State of Devolution) related to sectoral work for a particular county. A section is included on 'Experiences and Innovation' which showcases specific experiences of the county. For example, Garissa county has included a video on how the county is providing Uterine Balloon Tamponade (UBT) services at the Health facilities in managing uncontrolled Postpartum Haemorrhage (PPH) in an effort to reduce maternal deaths.

Overall features of the content management system on the Maarifa Platform include:

1. Managing Portal Navigation Links
2. Managing Content (experiences, news, events)
3. Managing Resources and Galleries
4. Managing Committees and Forums (Communities of Practice - CoPs)
5. Managing Member Accounts and Member Posts.

NB: The OC Platform is one of the tool components also in use at the Maarifa Centre - currently hosted by the CoG - and instrumental to knowledge sharing.

a. Menu Management

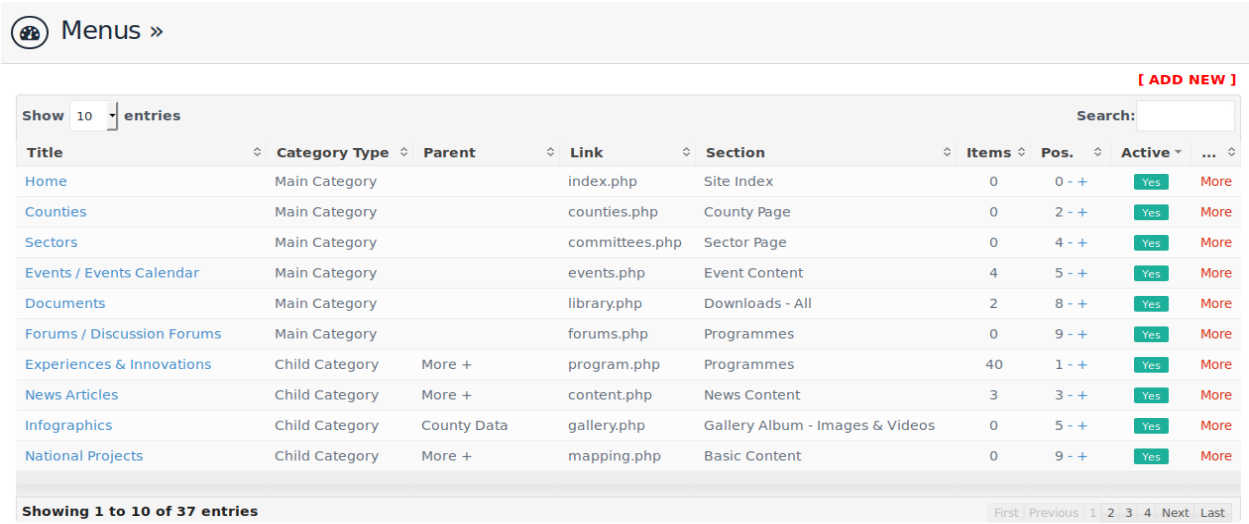


Figure 7: Menu management

1. This page shows all **Menus** on the site, whether visible on front-end or not.
2. To Add a new menu, click on the [Add New] Link.
3. To Edit an existing link, click on the Link's **Title**.

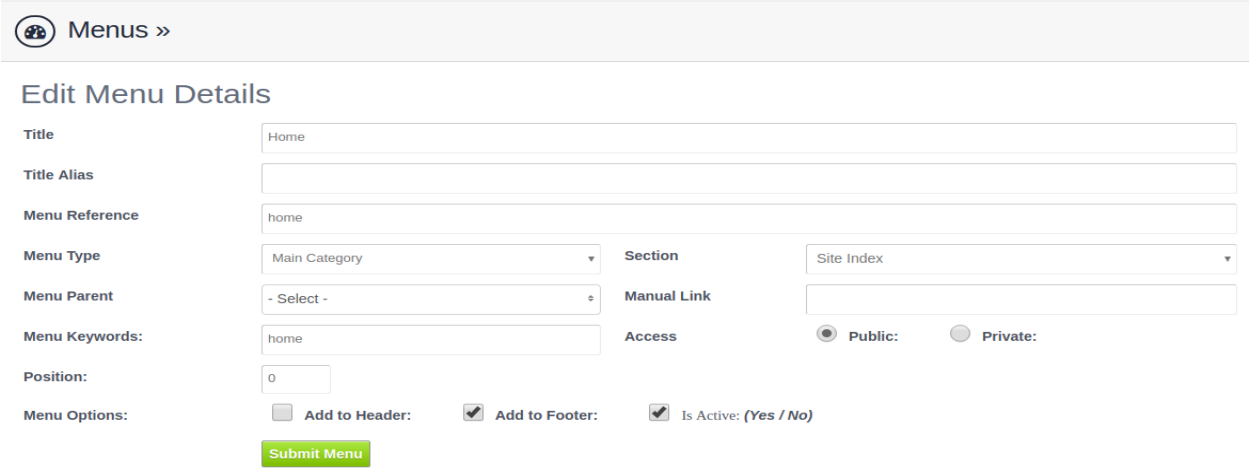


Figure 8: Adding/Editing a menu

Screen fields

1. **Title:** The Menu / Link name.
2. **Title Alias:** Heading to be displayed instead of the "Title" on the Front End.
3. **Menu Reference:** The menu's user friendly link (automatically generated).
4. **Section:** Content type that the Link will display.
5. **Menu Type:** Determines where and how the Link will be displayed.

6. **Menu Parent:** Used to select where current menu should appear as a “Child Link”. Allows multiple selections.
7. **Manual Link:** Used to manually set a url that Link will open. If left blank, automatically set by the ‘Section.’
8. **Menu Keywords:** Descriptive words that can be used to inform about the Link
9. **Is Active:** Set whether or not Link will be visible to viewers.
10. **Position:** Ordering of the Link in relation to others in the same Menu Type. By Default the website will arrange links in the order they were entered.

b. Article Management

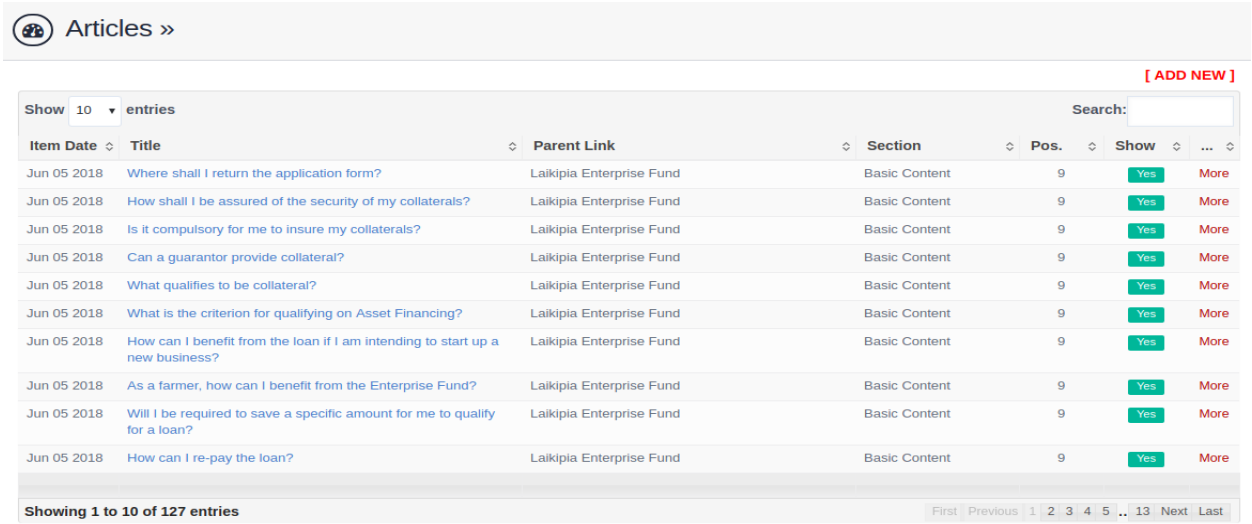


Figure 9: Article management

1. Page shows list of all **Contents** on the site including **Events** and **News Articles**.
2. To Add a new Article, click on the [Add New] Link.
3. To Edit an existing Article, click on the Article’s **Title**.

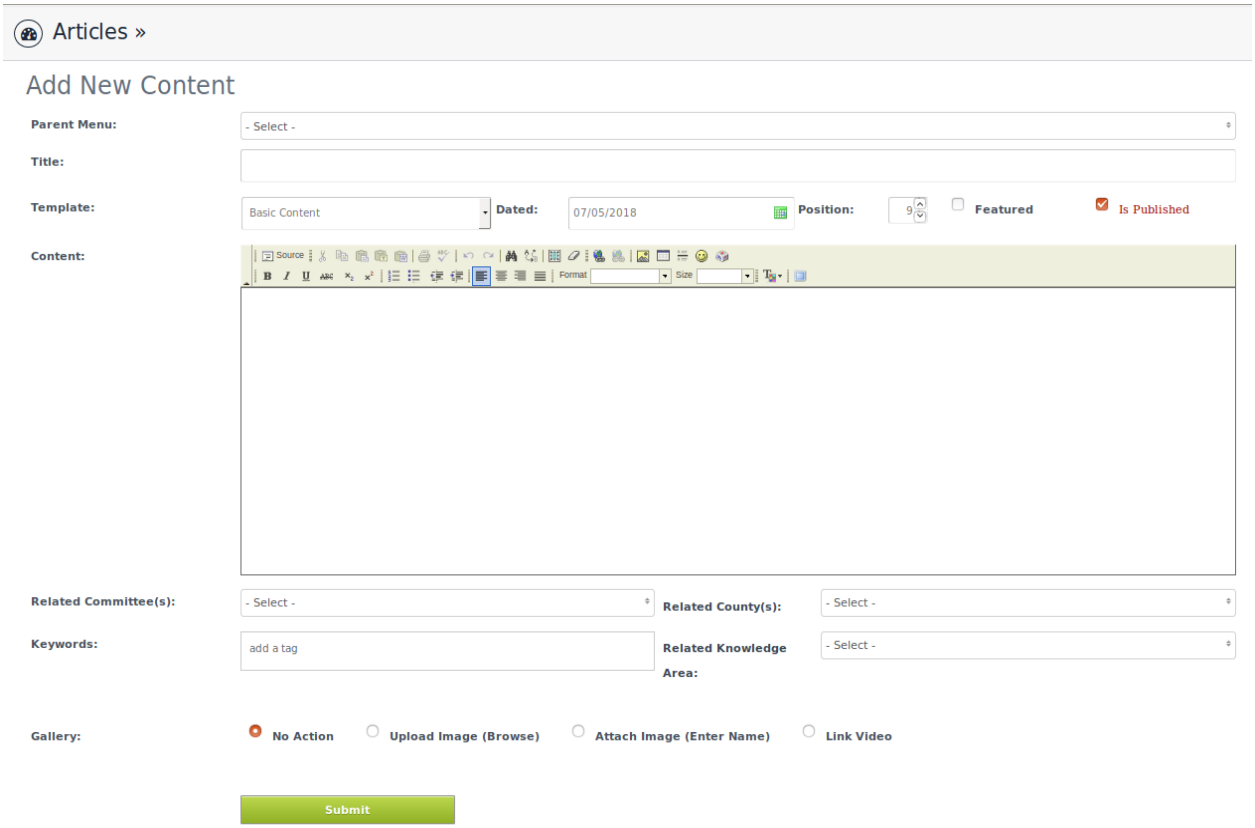


Figure 10: Adding/Editing content

Screen fields

1. **Parent Menu:** Menu under which content entry will appear.
2. **Title:** The Subject or headline of the Article/Story.
3. **Template:** Classification used to identify on what page layout the article will be displayed.
4. **Is Active:** Specifies whether the article should be visible or not to the website viewer.
5. **Featured:** Option to specify whether an article will be featured on the home page.
6. **Content:** This is where the Story text will be typed or pasted:
    a. Allows manipulation of content 'as-if' it was being done on Processors like MS Word.
    b. User can insert uploaded pictures directly into content.
    c. Allows admins to paste content directly from other sources e.g. MS Word, MS Excel, Notepad, PDF etc. Press CTRL+V to paste copied content.
7. **Related Committee, Related County, Related Knowledge Area:** Used to add tagging options for content.

8. **Keywords:** Descriptive words that can be used to index / locate the article on portal.
9. **Gallery:** Function to allow admins to upload an image or link a video to the content.

c. Managing Events

The function is similar to Content / Article Management but with date additions.

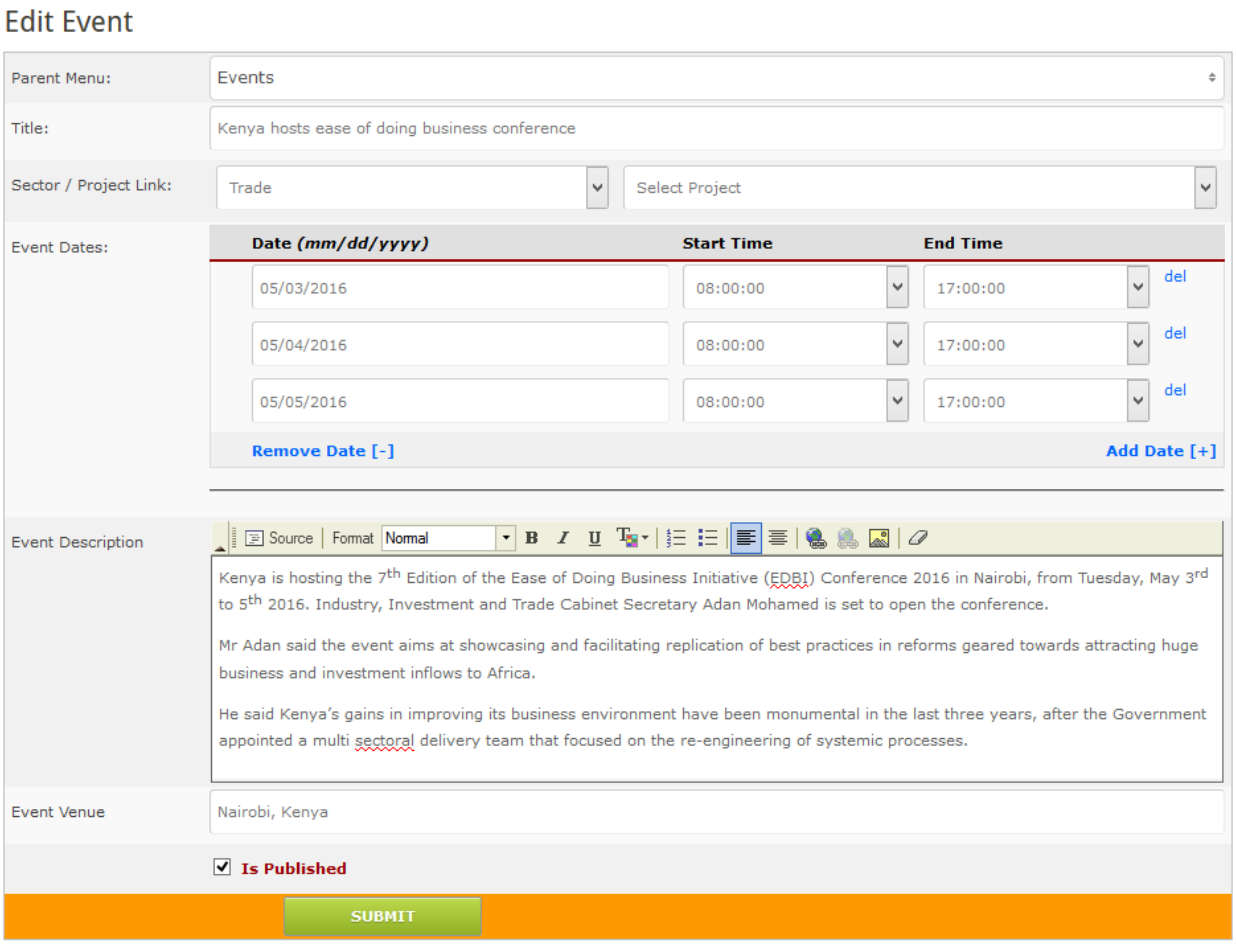


Figure 11: Managing Events

Screen fields

1. **Event Dates:** Use to add date and time of event. Admins can add multiple dates and times by clicking on the **Add Date [+]** button.
2. **Event Description:** Enter (type or paste) details of the event here.
3. **Event Venue:** Location or where the event will take place.
4. **Event Options:** Is Published (Yes / No). Function allowing admin to publish to hide event from the website viewers.

c. Resource Library / Downloads Management

This is a page that shows list of resources (documents / zip files) uploaded to the portal.

Show 10 entries Search:

#	Posted	Title	Filename	Parent Item	Featu..	Active	...
1	May 04 2016	Economic Survey 2016 highlights	mygov.go.ke/wp-content/uploads/2016/05 /economic_survey_2016.pdf	MENU:: Resources		Yes	[View]
2	May 03 2016	Kenya Economic Survey 2013.	Kenya_Economic_Survey_2013.pdf	MENU:: About		Yes	[View]
3	May 03 2016	Vision 2030 Popular Version	Popular_Version.pdf	MENU:: About		Yes	[View]
4	Apr 29 2016	PC GUIDELINES ON THE VISION 2030 PROJECT INDICATOR FY 2013-2014	FINAL_VDS_PC_GUIDELINES_2013_2014(1).pdf			No	[View]
5	Apr 28 2016	Kenya Vision 2030 Newsletter.	Kenya_Vision2030_Newsletter.pdf			Yes	[View]
6	Apr 28 2016	Kenya Vision 2030 Open Letter by Mugo Kibati.	V2030-Open_Letter_.pdf			Yes	[View]
7	Apr 28 2016	Vision 2030 Progress Report as of February 1, 2013	Vision_2030-_score_booklet.pdf			Yes	[View]
8	Apr 28 2016	Sessional paper No. 10 of 2012 On Kenya Vision 2030	VISION_2030_Sessional_Paper_final_09_11_12.pdf			Yes	[View]
9	Apr 28 2016	The Constitution of Kenya.	ConstitutionofKenya2010.pdf			Yes	[View]
10	Apr 28 2016	Re-Alignment - Education Sector.	Task_Force_Final_Report_Feb_20123.pdf			Yes	[View]

Showing 1 to 10 of 16 entries First Previous 1 2 Next Last

Figure 12: Downloads management (documents and other resources)

1. Resources can be linked to Menus, Articles and Projects
2. Resource managers have the option to either upload files or link to external files in other websites
3. To view details for an entry, click on 'Title' link or click the 'View' link
4. To add resources, click either 'Add New' link under **Resource Library**

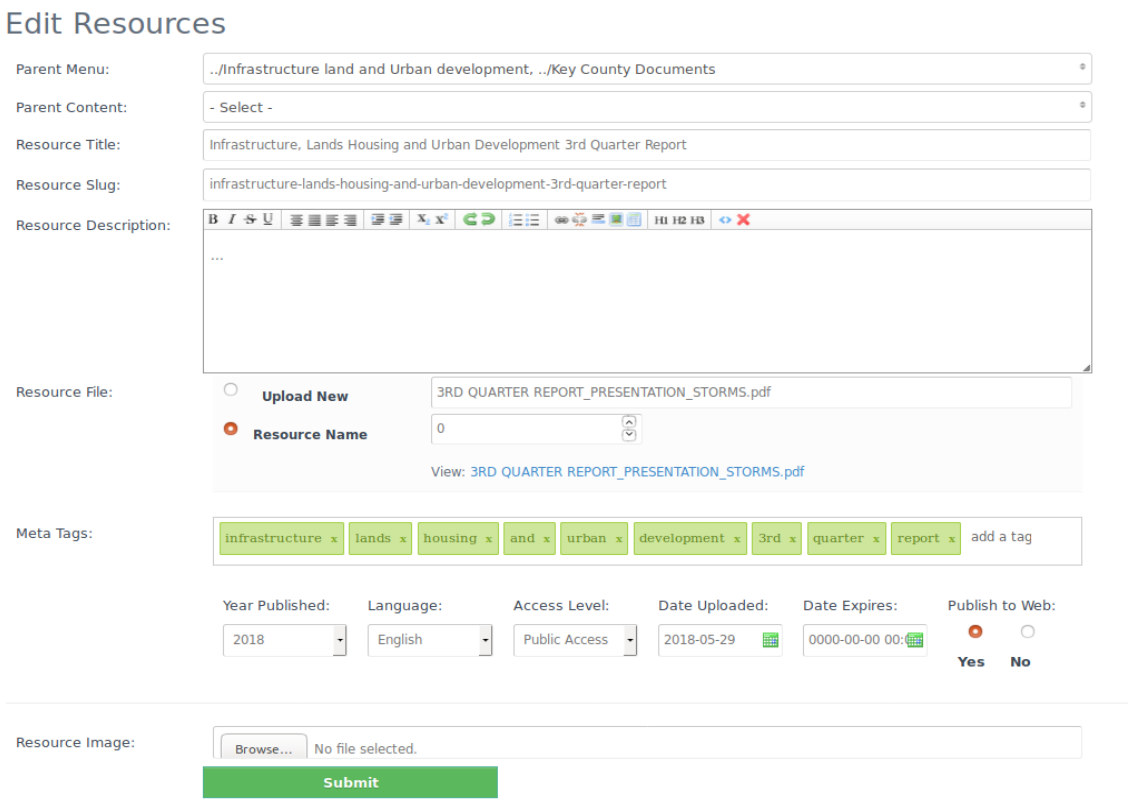


Figure 13: Module that allows linking/uploading of resources/documents one at a time

d. Galleries - Image / Video Uploads

The page shows a list of uploaded images and linked videos.

Show 10 entries Search:

#	Date	Title	Parent Item	Filename	Category	Active	...
1	Jun 28 2016	VISION 2030: Delivery firmly on course	[CONT] VISION 2030: Delivery firmly on c...	Runner-1280by1024px.jpg	Gallery (pic)	Yes	[View]
2	May 17 2016	Olkaria IV Geothermal Power Plant - Well Discharge	[CONT] Progress (2016 March): Energy Gen...	Geothermal_well_discharge_best.jpg	Gallery (pic)	Yes	[View]
3	May 17 2016	Reconnaissance and surface exploration	[CONT] Progress (2016 March): Energy Gen...	Geothermal_2.jpg	Gallery (pic)	Yes	[View]
4	May 17 2016	Olkaria IV Geothermal Power Plant	[CONT] Progress (2016 March): Energy Gen...	Geothermal_Slide1.JPG	Home Banner - Side (pic)	Yes	[View]
5	May 17 2016	NGO pastoral and agro-pastoral livelihood support activities	[CONT] Progress (2016 March): Disaster R...	1463436000_507975832_830595661.png	Gallery (pic)	Yes	[View]
6	May 17 2016	National security data center	[CONT] Progress (2016 March): Security, ...	1463436000_41145027_161679285.jpg	Gallery (pic)	Yes	[View]

Figure 14: Uploaded images and linked videos

1. List includes name of entry item, parent (menu or content its linked to), item category and also date posted

2. To Edit / view an item, click on its **Title**
3. To Add a new item, click 'Add New' link under **Galleries** Menu

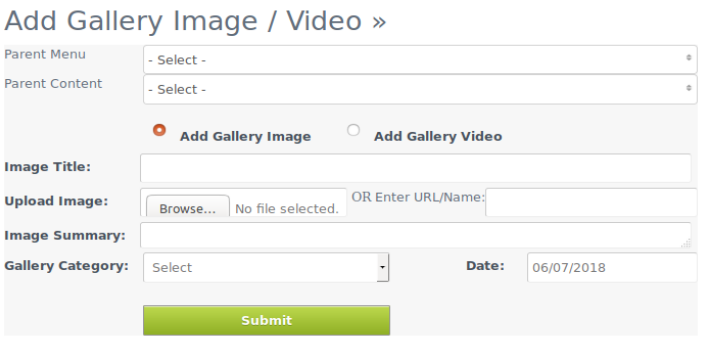


Figure 15: Uploading an image

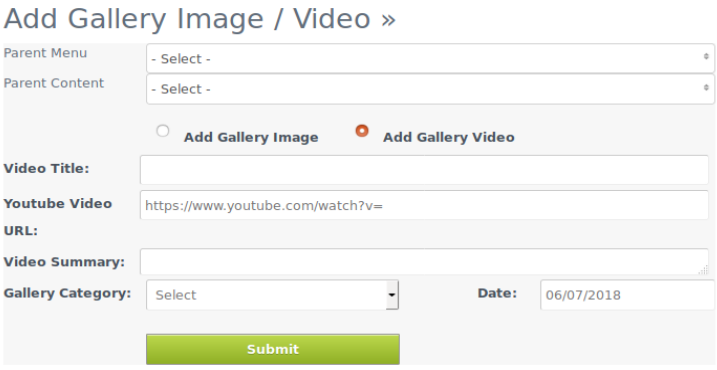
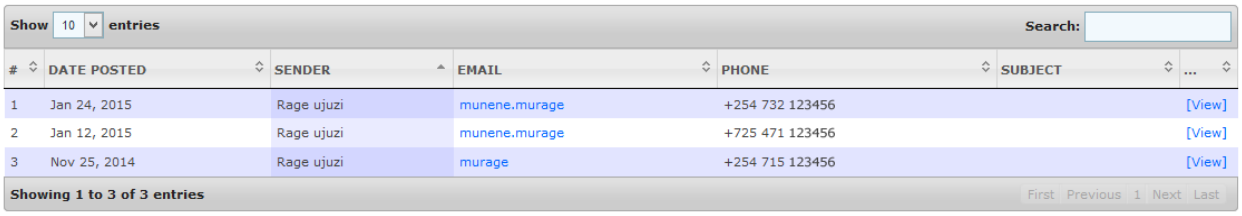


Figure 16: providing a link to a video

Figure 17: Editing an image or a video

e. Contact Lists - Feedback / Enquiries

This function displays a list of inquiries, comments, feedback or suggestions submitted by website visitors via the Online Feedback Form. A copy of each feedback post can also be sent to a specified email, for example **portal@laikipia.go.ke**



Show 10 entries Search:

#	DATE POSTED	SENDER	EMAIL	PHONE	SUBJECT	...
1	Jan 24, 2015	Rage ujuzi	munene.murage	+254 732 123456		[View]
2	Jan 12, 2015	Rage ujuzi	munene.murage	+725 471 123456		[View]
3	Nov 25, 2014	Rage ujuzi	murage	+254 715 123456		[View]

Showing 1 to 3 of 3 entries First Previous 1 Next Last

Figure 18: List of feedback posts

Feedback Details	
Date Posted	Feb 10, 2015 08:27:40 AM
Sender	Murage
Email	munene.murage@gmail.com
Phone	+254 715 123456
Subject	
Details	message

Figure 19: Feedback Details Screen

f. Member Accounts – Sign-ups List

This is a simple list of users who have signed up or created accounts on the website. Registered members are granted access to a restricted area within the website.

An administrator is in charge of identifying who within registered members is a staff member as only staff members are allowed to upload and share files through the website in the restricted "Resource Centre", visible after logging in.

g. Tools - Forums

This feature enables the creation of Discussion Forum items including:

1. Forum Categories
2. Category Topics / areas for discussion
3. Moderating Posts

Create Category | Create Topic | Categories | Topics | Posts

CATEGORY LIST

Category	Topics	Pub	
FEATURED Laikipia County Forum	2 - view	✔	Edit
Smart City (Wiyumiririe) Forum	1 - view	✔	Edit

Figure 20: Categories Management

Create Category | Create Topic | Categories | Topics | Posts

TOPIC LIST

Topic	Posts	Category	Pub	
What are your views on the new Laikipia Portal?	8 - view	Laikipia County Forum	✔	Edit
What are your views on County Governments salaries?	1 - view	Laikipia County Forum	✔	Edit
Help for Departmental Champions	0	Smart City (Wiyumiririe) Forum	✔	Edit

Figure 21: Topics Management

Section 2: Integration of Maarifa with Open County

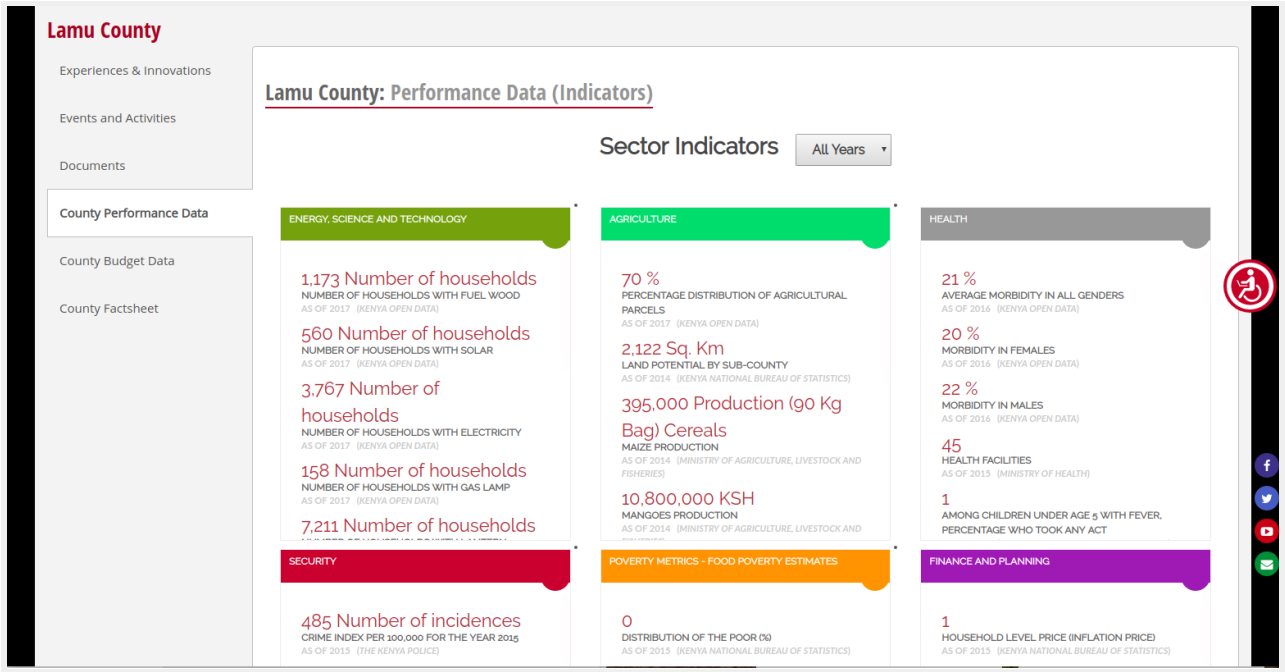


Figure 22: Maarifa - OpenCounty Integration Screenshot - Performance Data / Sector Indicators

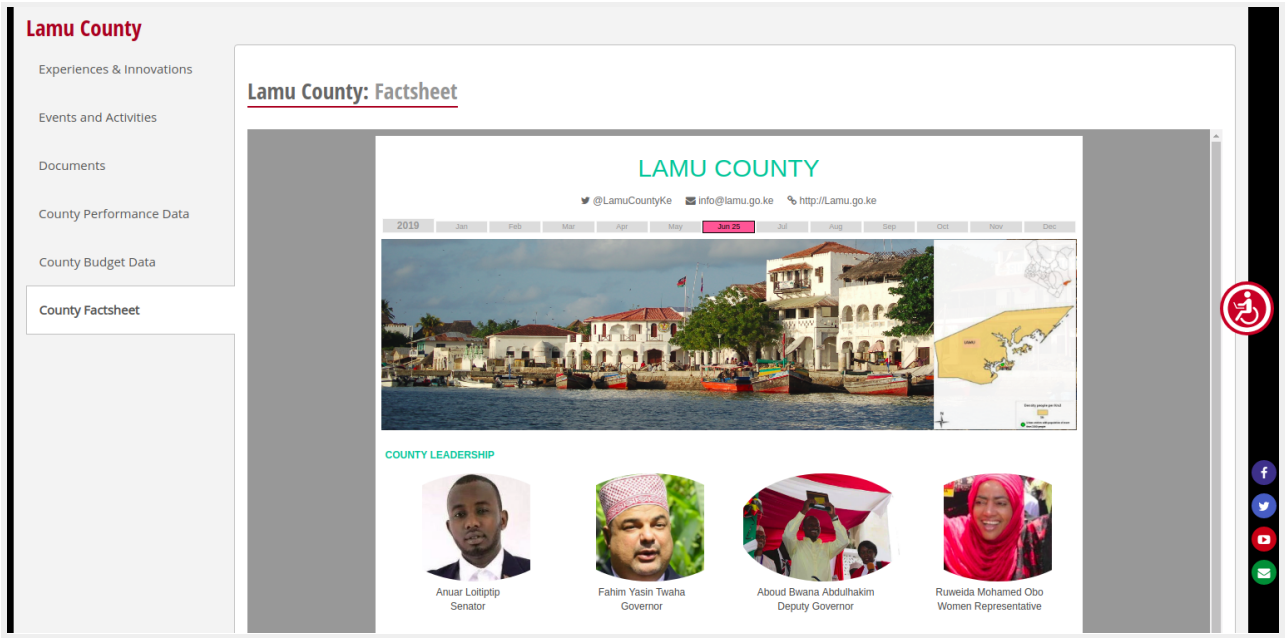


Figure 23: Maarifa - OpenCounty Integration Screenshot - County Factsheet

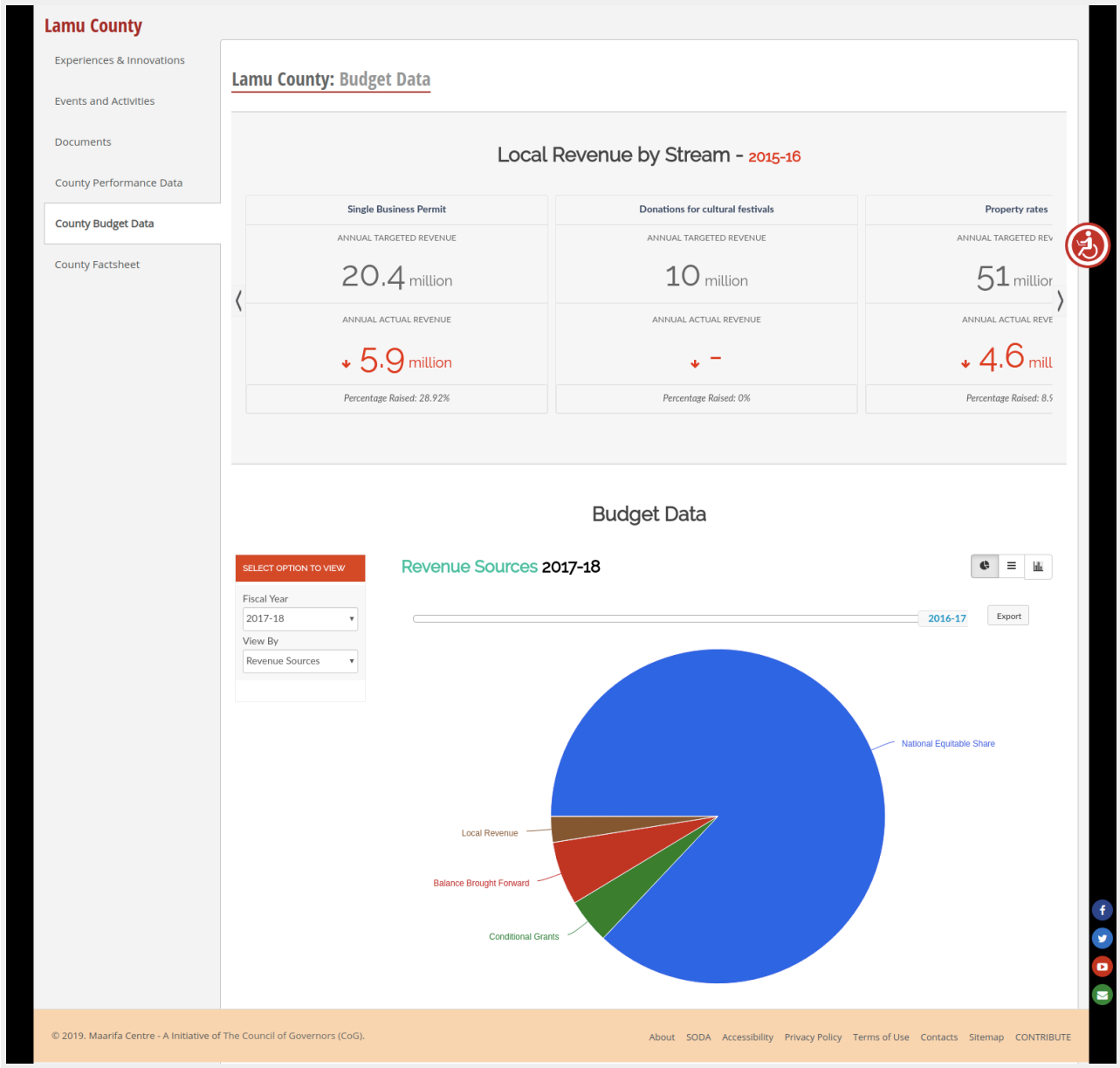


Figure 24: Maarifa - Open County Integration Screenshot - County Budget Data

Quiz questions

1. *This is an open standard application programming interface (API) for accessing a database.*
    a. *Universal Data Access*
    b. *Open Database Connectivity*
    c. *Topic Map Query Language*
    d. *Open Data-Link Interface*
    e. *command line interface*

Chapter 3 - Basics on Public Finance Management in Kenya

***Goals setting for the chapter**: In this Chapter, you will learn about the budget process, important timelines and who is responsible at each stage of the budget process. In particular, you will learn:*

1. *How budgeting is undertaken at county and national level;*
2. *Challenges that exist in the budgeting process; and*
3. *Some solutions to challenges through the use of data.*

Definition

A budget is an essential tool that covers both financial and non financial aspects of the plan and serves as a blueprint for the county to follow for an upcoming period in order to remain effective. Budgeting facilitates (scarce) resource allocation in the face of competitive demands.

Section 1: Policy context

1. County Governments:

The Constitution of the Republic of Kenya (2010) provides for a devolved system of government – Chapter 11 – Part 2 (Article 176). Each county has a county government consisting of a county assembly and a county executive. The County Governor is the chief executive of the county government. Article 1 of the Constitution delegates the sovereign power of the people to the County Governments as state organs. Kenya has 47 county governments, which translates to 47 governors. Each county is expected to provide public services to the extent it is practically able. The Governor chairs the County Executive Committee which reviews and approves budgets before submission to the County Assembly. Within each county, County Treasury (Headed by a County Executive Member for Finance) is the organ responsible for working closely with the National Treasury to ensure proper coordination of financial and fiscal relations between the county and the national government.

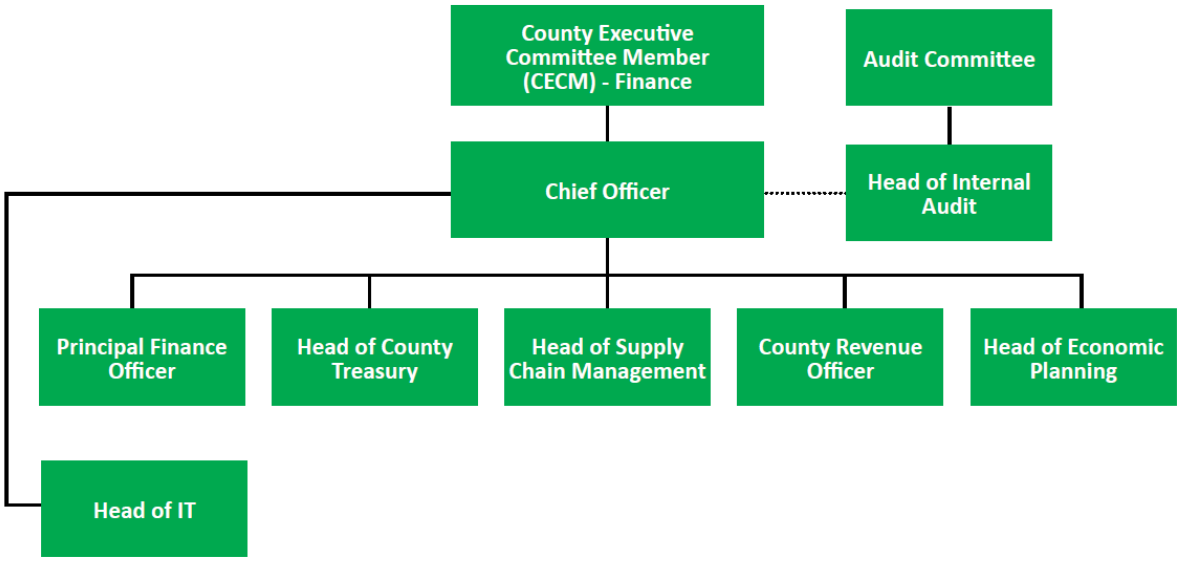


Figure 25: Organization Structure of most County Treasuries

The County Treasury functions include resource mobilization; management of the county revenue and emergency funds; budget preparation, coordination, and review; budget implementation; debt management; cash management; fixed assets and inventory; compliance with accounting standards and reporting. Other key persons include:

a. Accounting Officers, who are personnel designated by the County Executive member responsible for finance in each Department. They adhere to the PFM Act of 2012 (to make regulations user-friendly, 2 volumes of regulations have been prepared - one for the National Government and the other for County Governments) in ensuring proper accounting and provide reports for expenditure on all appropriated monies.
b. Receivers of revenue are selected by the County Executive member for finance; they have the mandate to mobilize revenue collection at the county and account for such revenues.
c. Internal audit officers ensure the necessary internal controls are put in place.

2. Ministry of Finance and National Treasury (The National Treasury):

is mandated by the Constitution of Kenya 2010, the Public Finance Management (PFM) Act 2012 and the Executive order No. 2/2013. The National Treasury formulates all financial and economic policies and coordinates government financial operations – which involve both expenditure and revenue. It is therefore the apex body that ensures effective accountability for the use of financial resources – for national, devolved government and all public entities. The National Treasury is organized into 5

Directorates (see organogram) with various other key institutions. Two that are of note with regard to this report are:

a. *Office of the Auditor General (OAG):* The OAG draws its mandate from the Constitution of Kenya, Chapter 12, Part 7, article 229. The OAG can also audit any Procurement Entity (PE) that receives public funds – which includes county governments. Such reports are either submitted to the National Assembly or the respective County Assembly for oversight. The Auditor General (AG) is nominated by the President, with approval from the National Assembly before final appointment by the President. The independence of the OAG is provided for in articles 248(3) and 249(2); the OAG cannot be directed or controlled by any person or authority.
b. *The Office of the Controller of Budget (OCOB):* It draws its mandate from Article 228 of the Constitution of Kenya; its main role is to oversee implementation of the budgets of the National and County Governments by authorizing the withdrawal from public funds. OCOB also monitors the execution of budget and reports to the National Assembly every 4 months. Separating the audit function (OAG) and oversight functions (OCOB) aims to promote stronger fiscal discipline, particularly in the new dispensation of devolved governments.

The diagram below outlines key institutions involved in PFM as specified in the Constitution of Kenya (2010), PFM Act of 2012, County Government Act of 2012, and accompanying regulations and circulars.

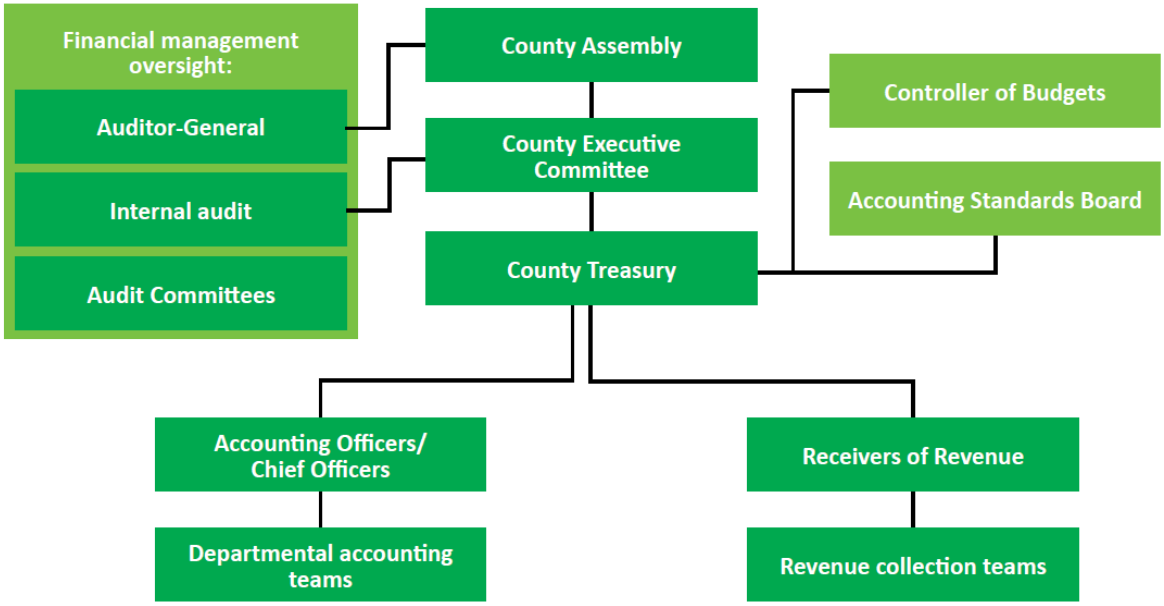


Figure 26: Key Institutions in the PFM cycle

Section 2: The Budget Cycle (National)

The preparation phase consists of initially determining the macro-economic framework for the country, after which budget circulars on the guidelines for the preparation of sectoral budgets are formulated and distributed. Ministries, Departments and Agencies (MDAs) (and in Kenya County Governments) are requested to submit their draft estimates at budget hearings, after which the conclusions are sent to the Cabinet. The Ministry of Finance (in Kenya, the National Treasury) then consolidates all sector budgets into one national budget document, which officially becomes the Government's budget proposals for the fiscal year. After Cabinet has approved the budget, it is then submitted to Parliament for approval. The budget is usually a bulky document, and Parliament is expected to deliberate and approve it over a period of one month. Following its deliberations, the budget is voted and becomes law.

Example box: *Information which citizens would like government to make available*

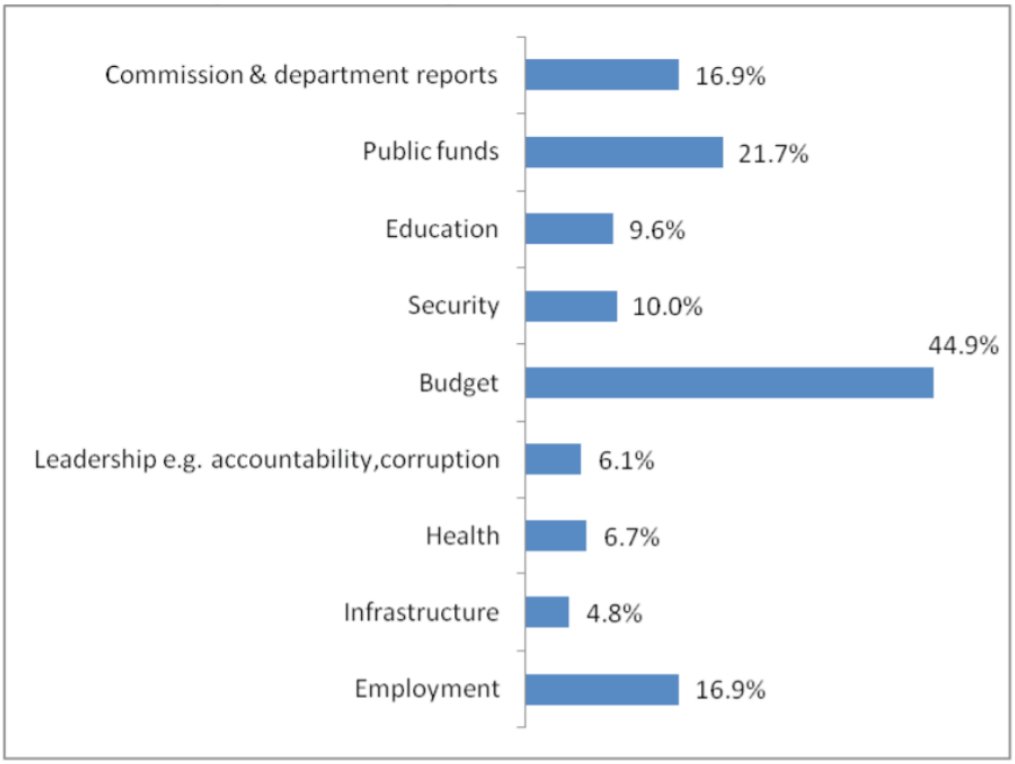


Figure 27: Information that is of interest to citizens

The majority of the respondents, 44.9%, wish for budget (spending) information to

be made available to them. 21.7% demand on information on public funds. 16.9% of the respondents want the reports of commissions and departments reports to be available to the public. Security, health and education are picked by 45.3 % cumulatively whereas infrastructure is listed by only 4.8%.

Source: Open Government Data for Effective Public Participation: Findings of a Case Study Research Investigating The Kenya's Open Data Initiative in Urban Slums and Rural Settlements (2014) Z. Chiliswa. *http://www.opendataresearch.org/sites/default/files/publications/JHC%20Publication%20April%202014%20-%20ODDC%20research.pdf*

During the implementation phase, funds are disbursed and responsible persons will most likely be the Heads of Procurement Entities or Accounting Officers in the MDAs and Counties.

During implementation, there are intended to be two key accountability mechanisms. First, there are parliamentary select committees (and County assemblies) with a sectoral focus that have an obligation to also monitor spending. Secondly, internal audit units of MDAs and county governments are required to check internal transactions; unfortunately, most government internal audit units are not well resourced or independent and often fail to hold duty bearers or spending officers to account.

Example box 5: *Promoting stronger fiscal discipline in Kenya*

In Kenya, we have a third function, which is the Office of the Controller of Budget (OCOB) which is established under article 228 of the Constitution of Kenya; its main role is to oversee implementation of the budgets of the National and County Governments by authorizing the withdrawal from public funds. It also monitors the execution of budget and reports to the National Assembly every four months. Thus for Kenya, separating the Audit function (Office of the Auditor General - OAG) and oversight functions (OCOB) aims to promote stronger fiscal discipline, particularly in the new dispensation of devolved governments.

Section 3: County Budgeting Process

In line with the PFM Act of 2012, each county must provide a budget plan for the next financial year, and shall not start this process later than 30th August of the current year, basing this on priorities identified in the county's development plans (the ADP and CIDP) (key dates are tabulated in Annex 2) . In general, county budget processes are similar. The budget process happens every year and has four broad steps:

1. First, the Executive proposes a spending plan - basing this largely on ceilings in the County Fiscal Strategy Paper (CFSP) and County Budget Review and Outlook Paper (C-BROP) which are then submitted to the county assembly by end of April.
2. These proposals are debated and approved by the county assembly who may make amendments in line with the CFSP and the County Allocation of Revenue Bill (CARB). The county assembly must pass the annual appropriations bill by the end of June.
3. Third, the budget is then implemented by the Executive. During implementation, the citizens and the county assembly should also provide overall oversight on public spending at the county level in line with principles of public finance and fiscal responsibility principles.
4. Finally, there is a process of review and audit to check to make sure the budget was properly implemented. The Controller of Budget and the Auditor General are also involved in this process

Example box 6: *Key dates in the budgeting process*

Timeline	Activity
August 30th	The County Treasury releases a circular to all departments informing them that the budget process is beginning, so that they prepare their requests for funding. This circular is also important for the public and it should contain some details of how the public can participate in the budget process prior to the tabling of the budget to the County Assembly.
September 1st	Counties prepare and table a County Development Plan to the County Assembly for approval. The plan must be made public within seven days.
September 1st to February 15th	County government departments undertake consultation with the public and other stakeholders. Views from the public should feed into the preparation of the County Budget Review and Outlook paper (CBROP).
January 1st	The Commission on Revenue Allocation (CRA) submits its recommendations for the division of revenue between national and county governments to Parliament, national and county governments.
February 15th	The Division of Revenue and County Allocation of Revenue Bills go to Parliament.
February 28th	Deadline for the County Fiscal Strategy Paper to be tabled in each County Assembly.
March 16th	Deadline for passing the Division of Revenue and County Allocation of Revenue Bills by Parliament.
30th April	The County Executive (the Governor and the people he has appointed to the County Executive Committee) prepares and submits budget estimates (proposed spending plan) to the County assembly for discussion, amendment and approval. The County Assembly can then debate and change the budget proposal anytime between April 30 and June 30.
May	This is the period when the County budget committee is likely to hold public hearings on the budget.
June	A County Finance Bill is tabled in the County Assembly.
June 30th	This is the end of the financial year, and the deadline for the County Appropriations Bill to be passed by the County Assemblies to authorize spending for the new budget year.
October 30th	County governments publish an implementation report on the first quarter of budget implementation (July-September) not more than 30 days after the end of the first quarter. The national government has until November 15th to do the same.

.

Section 4: Challenges and solutions in public finance management

In public finance management, resource allocation is the biggest challenge facing public institutions; hence need for proper planning and budget implementation manifesting as follows:

1. **Challenge 1:** Lack of planning and using evidence and data:
    a. Traditional budgeting approach has consistently shown high rates of inaccurate assumptions, a massive time commitment and tedious manual input.
    b. Targets are never realized. This is mainly because they are often based on unrealistic revenue projections. For instance, in the past, the government has included in the budget outturns uncommitted donor funds and receipts expected from the disposal of public corporations, which are never realized.
    c. Increasingly, there is a push from data communities – including the open data community – to engage policymakers and other stakeholders to help ensure decision-making is driven by data and research. There have been successes in this regard – which are stated in the introduction section (i.e chapter 1 and 2) above. However, much still remains to be done, as evidence is often not a driving factor in decision making. Many governments will grapple with other considerations such as budget, politics, development partner priorities, among others, when it comes to resource allocation.

    Solution 1: It should not be assumed that uses of data are not uniform; it is posited in this chapter that planning and decision support lies between routine uses of registry data and learning needs. There are competing priorities and a participatory budgeting process is one of the tools through which harmony may be democratically achieved.

2. **Challenge 2**: Inefficient budget process:
    a. Public institutions which undertake budgeting on a hierarchical basis face the challenge where the original requests are changed in one way or another as various budget items are processed further and aggregated.

One of the major challenges therefore that affects these budgets with regard to implementation is that subsequently when funds are approved, the people who made actual proposals will resist the budget since their proposals have been disregarded.

b. Traditional budgets are created based on requests from competing stakeholders, each justifying their projected expenditures based on their departmental needs rather than the overall goals of the institution.

Solution 2: Priority-based evaluation frameworks such as participatory budgeting helps establish concrete targets and priorities based on the strategic goals of a particular fiscal year. The targets are then communicated to all stakeholders involved in the budget process, leading to faster decisions and minimizing budget negotiation issues that may arise from competing interests and priorities.

3. **Challenge 3:** Traditional budgeting does not adequately link financial investments to results or outcomes, limiting the ability for in-depth analysis and understanding of the real Return on Investment.
   a. Links to annual development work plans, CIDPs is weak or not directly translated to funds allocation.
   b. Fiscal linkage of to MTP III and other national frameworks may also be weak.

   Solution 3: Performance-based framework allocates resources to specific objectives or activities based on appropriate metrics; ultimately, this framework provides increased visibility into how financial decisions translate into results.

4. **Challenge 4:** A lot of resources are utilized in the administration of the budget process.
   a. Static budgets and multi-year financial plans produce high level financial targets and constraints, but if material deviations occur during the year, they can paralyze institutions that do not have efficient processes for evaluating the causes of these changes and adjusting budgets and plans accordingly.
   b. In an unstable and sometimes volatile marketplace, drastic changes in resource levels, budget constraints, and strategies are inevitable. If

material deviations occur during the year, they can paralyze an organization that does not have an efficient process for evaluating the causes of these changes and adjusting budgets and plans accordingly.

Solution 4: To be successful, budgets and plans should be updated as frequently as needed to reflect economic, institutional, and other outside variables, rather than seen as 'set in stone '.

A budget that takes into account performance under alternative (what-if) scenarios will serve your organization better than one that ignores the future and risks, and invests too much time detailing the budget based on what happened in the past.

Example Box: *Why a data desk?*

1. ***Makes bureaucracy visible:*** *Bureaucracy - the regulated state administration - is essential to the functioning of a modern society; Laws and regulations protect against private and state arbitrariness. Excessive bureaucracy, however, burdens the economy, the citizens and the administration. A data desk may provide a view of bureaucratic burden by actual display of the results - whether there is a return on investment in all sectors.*
2. ***Increasing transparency and accountability for improved service delivery***
    a. *Public expenditure*
    b. *Monitoring of development projects and recurrent expenditure*
    c. *Accountability by executive and county assembly*
    d. *Improved visibility*
    e. *Collective ownership*
3. ***Improved decision making (evidence based)***
    a. *Resource allocation*
    b. *Prioritization*
    c. *Citizen engagement/civic education*
    d. *Sound political environment*

Quiz questions
A case study research conducted by Chiliswa (2014) titled "Open Government Data for Effective Public Participation: Findings of a Case Study Research Investigating The Kenya's Open Data Initiative in Urban Slums and Rural Settlements" summarizes that Kenyan citizens do seek and use government information in different domains of their lives and that more and better government information is fundamental to enhancing effective public participation in the marginalized areas covered in this study. However, the findings also suggest that: 1. *There is a mismatch between the data citizens want to have and the data the Kenya open data portal and other intermediaries have provided.* 2. *Most people go to local information intermediaries instead of going directly to the government data portals and that there are few connections between these intermediaries and the wider open data sources.* 3. *Currently the rural communities are much less likely to seek out government information.* 4. *The kinds of data needed to support service delivery in Kenya may be different from those needed in other places in the world.* *How does the data desk address the challenges identified in the study?*

Chapter 4 - Data types

Goals setting for the chapter*: In this Chapter, you will learn about different sources of data, data types and the different uses of data.*

Section 1: Background

Collecting quality data is the foundation on which one gathers evidence and makes sense of it. Deciding what data is required is lays the right foundation on the kinds of decisions, analysis and conclusions that can subsequently be made. There are two general types of data: quantitative and qualitative.

Example Box 8*: Quantitative vs qualitative data*	
Quantitative	***Qualitative***
Numbers, information that can be counted.	*Information about behavior, perception. It can seldom be counted*
Examples	
• *How many people took part?* • *How much did it cost?* • *How long was it?* • *What happens when, who it is for,*	• *Sharing likes and dislikes* • *How they think it could be improved* • *What difference it has made to*

cost, etc.	*their lives* ● *Whether they would recommend the programme to others*
Data Sources	
● *Statistics and statutory data* ● *Structured surveys involving closed questions, multiple choice or likert scale items* ● *Positivist research paradigm*	● *Stories of participants' experiences and impact* ● *Observation* ● *Open ended interviews* ● *Interpretivist research paradigm*

The above is important in generally informing what kind of data users will typically collect and therefore store and use. This manual goes a step further to classify data as either being closed or open based on the usage of data.

Classification of data

By examining how different uses of data are currently regulated, it is possible to identify a spectrum of data openness: ranging from closed data with restricted access through to data that is openly published[7] in reusable formats. Between these two ends of the spectrum can be found planning and decision-support data as shown below.

[7] open data is "...data made available by governments, businesses, and individuals for **anyone** to access, use and share." Broad, E., F. Smith, D. Duhaney, & L. Carolan (2015) *Open Data in Government: How to Bring about Change – The ODI*. London, UK: The Open Data Institute. https://theodi.org/article/open-data-in-government-how-to-bring-about-change/

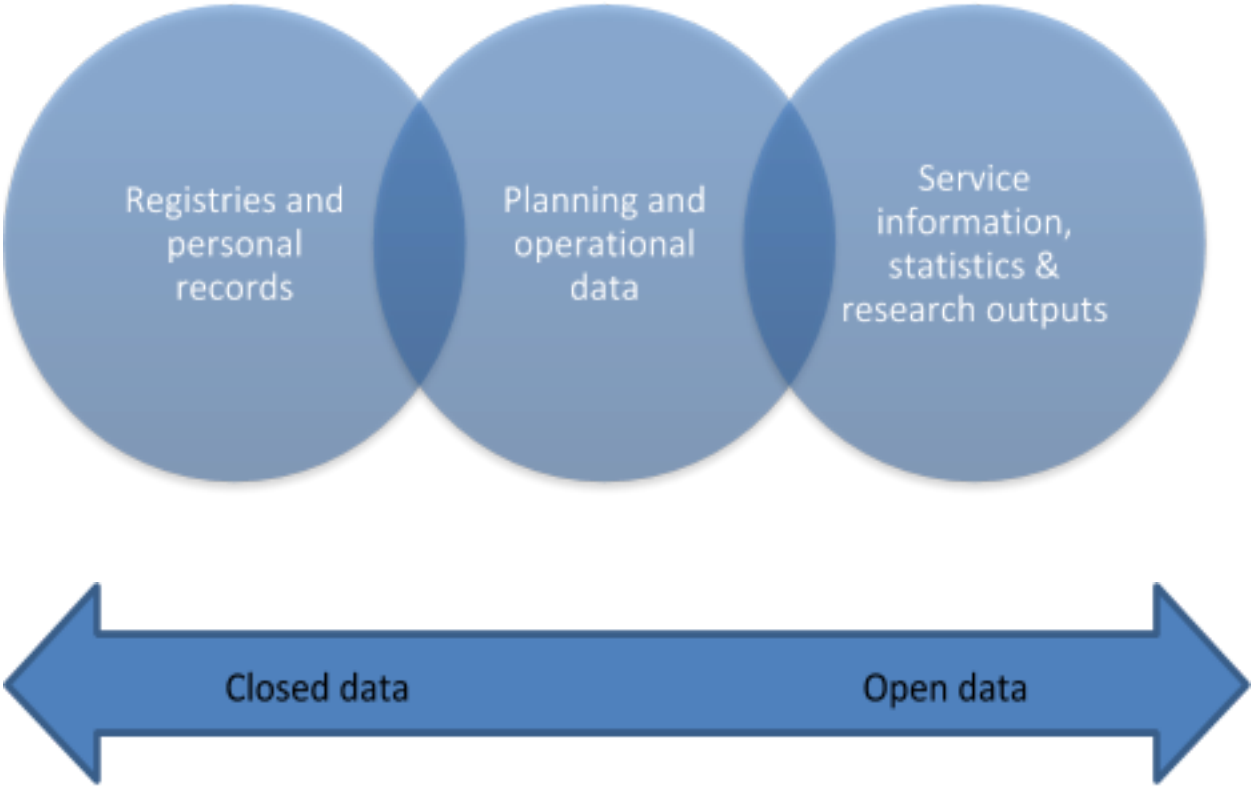


Figure 28: Openness of data based on intended use.

Section 2: Data stakeholders

Government MDAs and private firms coexist often having common or divergent public and private interests in data (which is also private or public). The following broad categories of actors can be identified: the state (MDAs), private-sector firms, citizens, professionals, researchers, and a broader diaspora of interested parties, including development partners, donors and journalists. All these actors, as illustrated below, have the potential to generate data that could be accessed and used, and all may also be users of data generated by other actors.

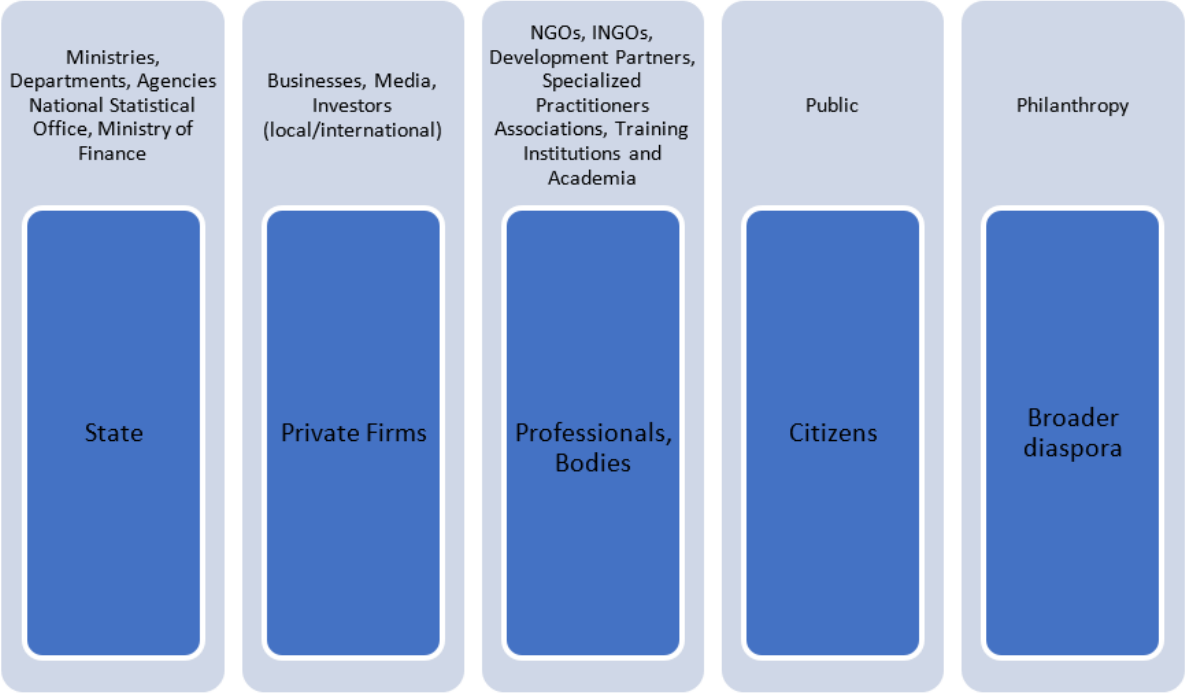


Figure 29: Spectrum of data stakeholders.

Different actors seek to use data for a variety of purposes. In particular, users seek the data from registers, for example, to access and update information about individuals. They also look for data to support operational requirements, such as planning and decision-making, to improve efficiency and effectiveness of public or private services, and they seek to analyse data for research purposes to inform policy and practice development. Data may also be used by patients to locate and access health services.

Section 3: Budget data (and the Integrated Finance Management Information system - IFMIS)

The Government of Kenya has been automating public financial management (PFM) processes over the last decade. Part of these reforms have resulted in the introduction of the IFMIS – a web-based technology platform. Despite it having robust modules, there are only a few which have been operationally rolled out. Mostly these have to do with the procurement process - these are mostly pertinent to procurement functions as well as the incurrence of expenditure. Presently, IFMIS facilitates:

1. Comprehensive, timely accurate and detailed capture and storage of revenue, expenditure, asset and liability transactions;

2. Improved control of development projects, through flexible project-based reporting linked to the control of disbursements;
3. Effective control of the use of suspense accounts (advances and deposits), through automated checking of code validity, authorization levels, and funds availability; and
4. The detection and prevention of fraud and corruption through readily available secure and up to date financial information and the compulsory authorization of transactions;
5. Full use of the features offered by modern, secure computerized systems, such as data capture and electronic funds transmission.

County Governments use the Standard Chart of Accounts (SCOA) developed by the National Treasury. SCOA which comprises eight segments and 45 digits, and aims to:

1. Ensure consistency between budget allocations and IFMIS codes;
2. Ensure uniformity in accounting practice throughout government;
3. Facilitate performance accounting by aggregation of costs on the basis of cost centres, programmes and functions of government;
4. Address the financial reporting requirements of the users of the general purpose financial statements, in accordance with International Standards;
5. Facilitate benchmarking of government's performance with similar governments, as SCOA is consistent with structures used elsewhere; and
6. Facilitate the integration of recurrent and development activities.

Books of account are used as source documents for posting transactions in IFMIS by each county government department. All transactions involving a receipt or payment are recorded in the department's cash book, which is both a primary and subsidiary book of account. The corresponding double entries are posted to the relevant ledger accounts (e.g. sales and purchase ledgers).

The vote book is used to record and monitor a department's commitments, expenditure and remaining fund allocations. It should be reconciled on a quarterly basis to warrants issued by the County Treasury.

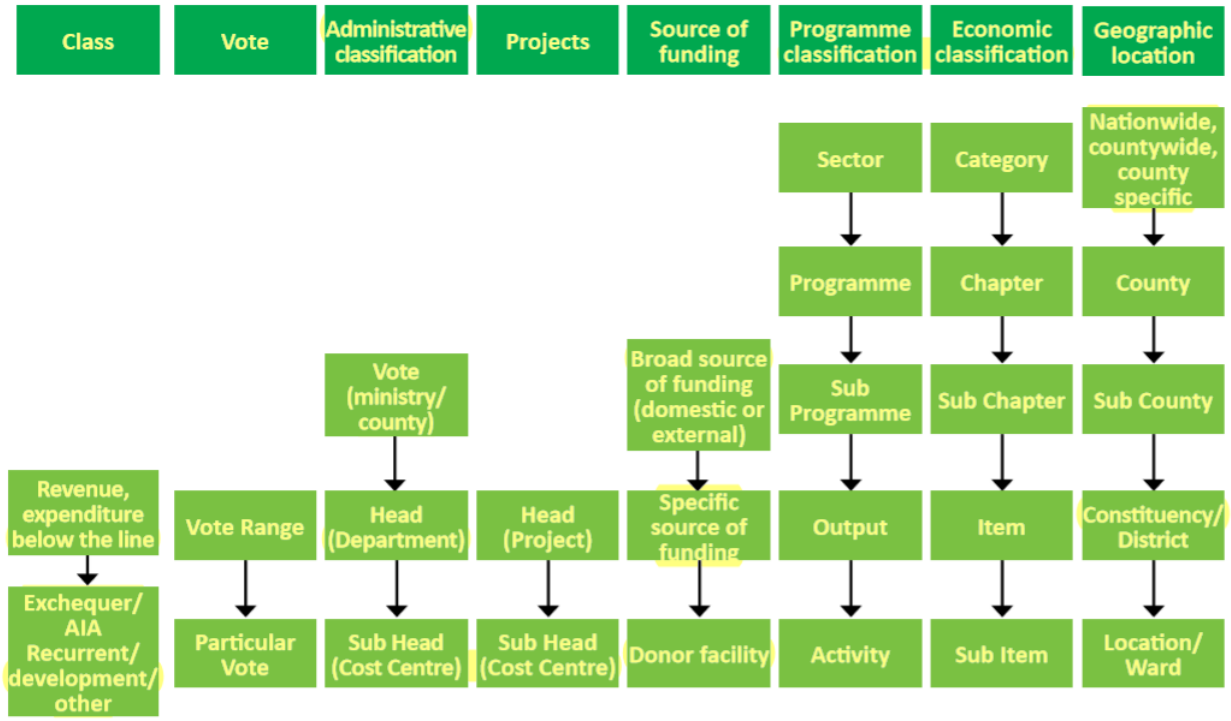


Figure 30: SCOA from the Ministry of Finance

At the moment, IFMIS operates with limited automatic interfaces.

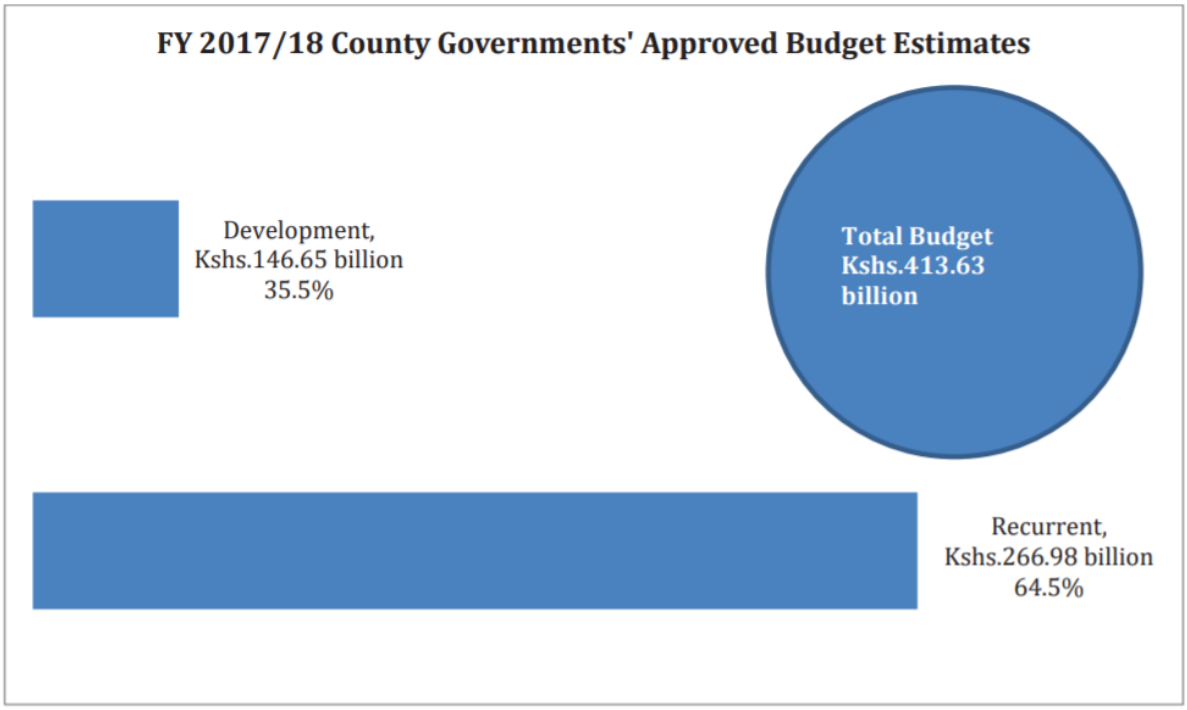
Rolling out IFMIS requires that government MDAs and County Governments at national, regional and local level adopt common tools and use of unified budget classification codes and a single charts of accounts. At the time of writing this manual, roll out of this is ongoing; consequently, the budget module is yet to be used at the county level - which means that budget preparation remains a manual process at the county level (that is, the Hyperion budget management system is not in use in budget preparation). Capacity building in the Hyperion budget system[8] has also not taken place.

The National Integrated Monitoring and Evaluation System (NIMES) is not integrated with IFMIS and so the budget cannot be reported against certain indicators due to this gap.

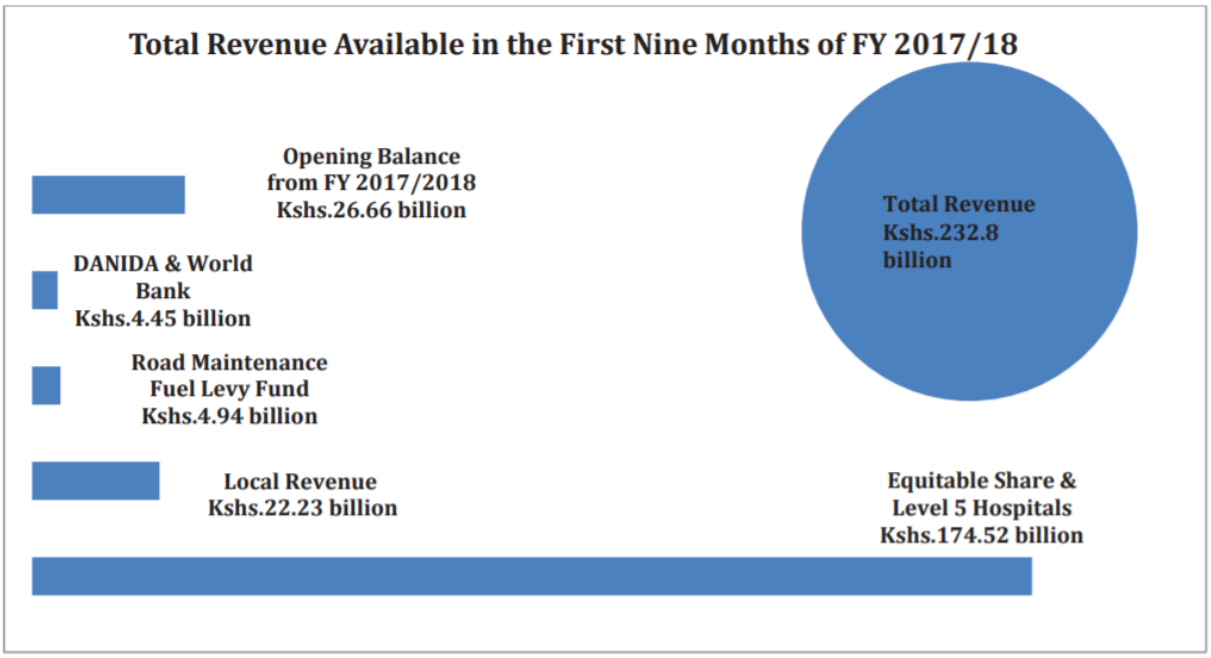
[8] Hyperion Planning is a centralized planning, budgeting, and forecasting solution from Oracle (Oracle Corporation is an American multinational computer technology corporation headquartered) that integrates financial and operational planning processes and improves business predictability

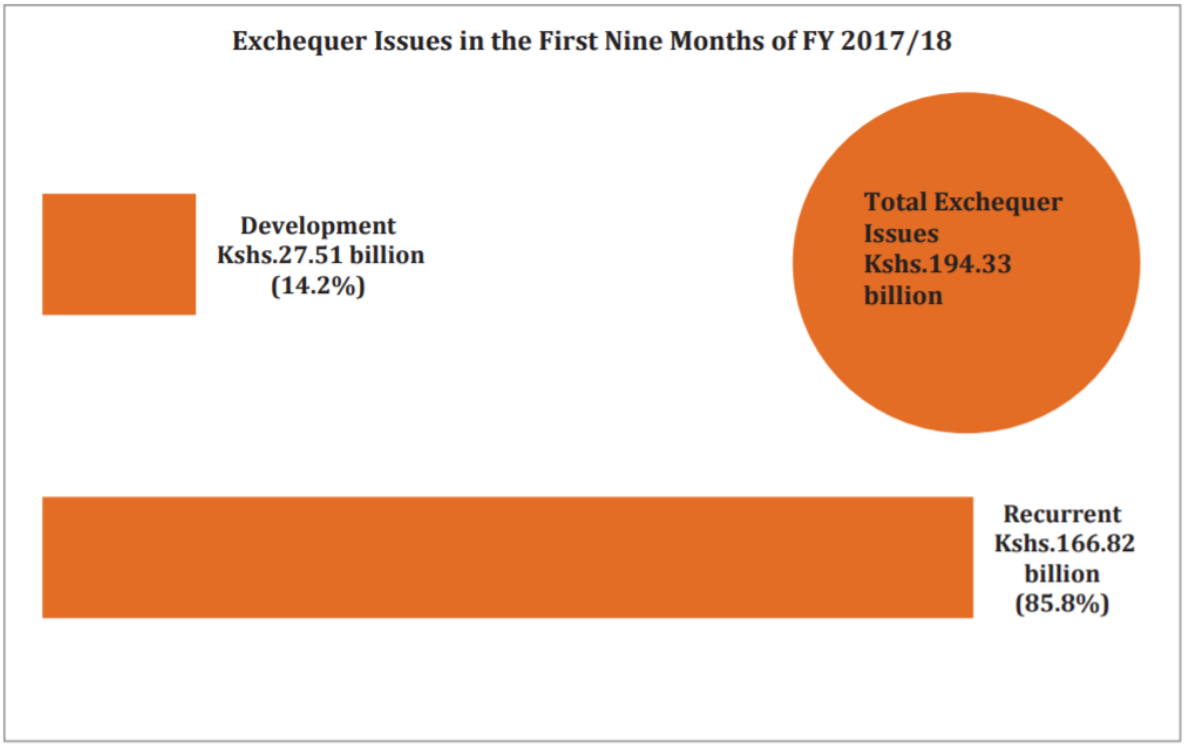
Given that the county governments report to the OCOB every quarter, they are a very important source of data[9] - besides IFMIS - and they provide an overview of budget performance per county.

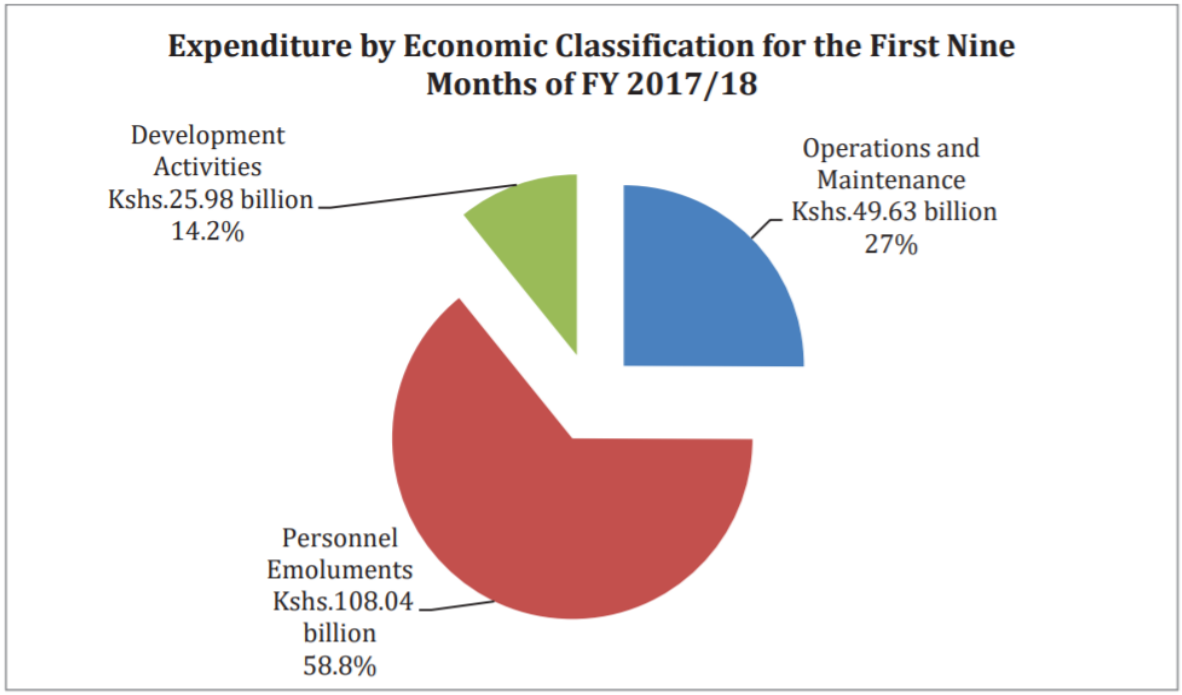
***Example box 9**: County government budget implementation review report for first 9 months of FY 2017/2018*[10]



[9] See example reports from OCOB: https://cob.go.ke/publications/county-reports/
[10] OCOB reports: https://cob.go.ke/publications/county-reports/


Total Revenue Available in the First Nine Months of FY 2017/18
Opening Balance from FY 2017/2018 Kshs.26.66 billion
DANIDA & World Bank Kshs.4.45 billion
Road Maintenance Fuel Levy Fund Kshs.4.94 billion
Local Revenue Kshs.22.23 billion
Equitable Share & Level 5 Hospitals Kshs.174.52 billion
Total Revenue Kshs.232.8 billion


Exchequer Issues in the First Nine Months of FY 2017/18
Development Kshs.27.51 billion (14.2%)
Recurrent Kshs.166.82 billion (85.8%)
Total Exchequer Issues Kshs.194.33 billion



Section 4: Sectoral data sources

The UN has developed guidelines in handling official statistics ranging from social to economic ones; such as national accounts, housing, prices and index numbers, agriculture, environment, trade, population and housing census and civil registration.[11]

***Example Box 10**: Some definitions from the KNBS Compendium*

Below are some important definitions from the KNBS Compendium that help to further clarify concepts in sampling.

1. ***Population**: This term applies to the totality of all units of interest in a study or investigation at a given time in a given area.*
2. ***Sampling**: The process of obtaining a representative sample from a given population.*
3. ***Sampling frame**: A comprehensive list of distinct and distinguishable units within a population from which a sample is selected.*
4. ***Sampling Unit**: An element or group of elements of a population, which is convenient for selecting samples. A sampling unit can be a group of persons,*

[11] The reason for this is to enable cross-country comparisons at international level in every aspect.

households or administrative areas.

5. ***Sampling Design**: The mechanism used to select a sample. The sampling designs are divided into two broad categories: the random and non random sampling design. The types of sampling designs include:*
   a. ***Simple Random Sampling (SRS)**: Under SRS, the desired elements are selected by a chance or probability process and each element in the population has an equal chance of being selected/ chosen.*
   b. ***Systematic Sampling**: The elements are consecutively numbered and the first unit (k) in the sample is selected randomly. The sample is then selected by taking the kth, (k + s) th, (k + 2s)th, .,.,.,.. etc., where k is not larger than the sampling interval (s). The sampling interval is obtained by dividing the total population by the sample size (n). For example to select a sample of n units, we take a unit at random from the first k units and every kth unit thereafter. If s is 15 and the first unit drawn is number 20, the subsequent units are numbered 35, 50, 65 etc.*
   c. ***Random Sampling with Replacement**: At any draw all the members of the population are given an equal chance of being drawn no matter how often they have already been drawn.*
   d. ***Cluster Sampling**: This is where the elements are not selected individually but rather in groups, often based on proximity. This allows overcoming the constraints of costs and time associated with a dispersed population. NB: All the elements in the selected group are included in the study.*
   e. ***Stratified Sampling**: In Stratified Sampling, the population is divided into homogeneous sets or strata with respect to the characteristics being studied and a random sample is selected from each stratum independently.*
   f. ***Strata**: In stratified sampling the population of N units is first divided into non overlapping subpopulations of N1, N2,..., NL units respectively. These subpopulations are referred to as strata.*
   g. ***Quota Samples**: A sample, usually of human beings, in which each investigator is instructed to collect information from an assigned number of individuals (the quota) but the individuals are left to his personal choice. In practice this choice is severely limited by "controls", e.g. s/he is instructed to secure certain numbers in assigned age groups, equal numbers of the two sexes, certain numbers in particular social classes and so forth.*
   h. ***Multi-stage Sampling**: A method where selection of the sample is carried out in several stages, i.e. primary units are regarded as a population from which sub-samples of secondary units are selected.*
1. ***Survey:** A relatively extensive and comparatively widespread study that uses interviews or self-administered questionnaires as the methods of collecting the data and where sampling techniques are employed to select the respondents or units of interest*
2. ***Indicator**: A pointer used specifically to shed light on a variable of interest. This variable may be demographic.*

a. Official and non-official statistics

Official Statistics can generally be described as statistics produced and published by governments or government agencies; in Kenya, this must be done by the Kenya National Bureau of Statistics. (KNBS). The statistics Act of 2016 mandates the KNBS to be the sole custodian of Official Statistics.

Non official statistics are generally produced by non-government organisations and/or departments, such as independent research bodies, academic research, commercial and market research organisations.

Kenya National Bureau of Statistics (KNBS) has good statistically knowledgeable staff with substantial experience. KNBS strives to produce statistics of almost all socio-economic sectors at national levels and is by far, the only one stop for official statistical needs in Kenya - given mandate by the Statistics Act (2006), specifically to:

1. Act as the principal agency of the government for collecting, analysing and disseminating statistical data in Kenya;
2. Act as custodian of official statistics;
3. Conduct the Population and Housing Census every ten years, and such other censuses and surveys as the Board may determine;
4. Maintain a comprehensive and reliable national socio-economic database;
5. Establish standards and promote the use of best practices and methods in the production and dissemination of statistical information across the NSS; and
6. Plan, authorise, coordinate and supervise all official statistical programmes undertaken within the national statistical system.

MDAs are also required to produce their own data and statistics. In ideal situations, however, each ministry has to have a monitoring and evaluation or statistical unit or a department. These have the role of producing data that is relevant to the ministries operational activities.

Also, the notion of official versus non-official statistics also informs the usage of data.

Table 1: Official vs Non official Statistics[12]

Official statistics	***Non official statistics***
1. *Provide quantitative and/or qualitative information on all major areas of citizens' lives, such as economic and social development, living conditions, health, education, and the environment.* 2. *This data is nationally representative, because it is obtained from complete censuses or very large-scale national sample surveys, and conform to international definitions and classifications.*	1. *The publications of these statistics do not need any clearance of the government like the official ones.* 2. *The organisations producing such statistics have the liberty to publish them at will.*
Merits	
1. *Statistics are produced with certain periodicity allowing a possibility of developing trends over time;* 2. *They allow comparison on national achievements as compared to other nations;* 3. *Offices responsible for their production and publication have legal backing in their respective countries;* 4. *Data from censuses are good benchmarks for sample surveys and studies carried out in the respective countries in subsequent periods;* 5. *They are used in assessing sectoral performance of the*	1. *They can be very detailed and if properly collected and analyzed, can be as good sources as census data in some aspects;* 2. *They respond fast to contemporary data needs to address issues of interest to the population in all socioeconomic spheres;* 3. *Address almost all socio-economic areas;and* 4. *In some fields, especially in scientific ones, they are the only source of such statistics.*

[12] Mkoswa, Z.E. (2016). *Beyond Official Statistics*. International Journal of Applied Science and Technology. 6(2), pp 100-107

socio-economic aspects of the country from time to time; and 6. *They enjoy international backing and guidance such as from the United Nation Statistics Division (UNSD)*	
Demerits	
1. *They do not portray the situation on the ground due to periodicity of collection; lagging behind the needs;* 2. *External interference may lead either to the delayed production, or publication of partial statistics [13]; and* 3. *Production and publication of these statistics are biased to economic aspects. There are enormous gaps in social statistics which have direct impact on people's lives.*	1. *At times samples sizes used are too small to warrant meaningful inference to the whole population. This means they have, at best, to be taken as case studies, never to be used to generalise to the parent population;* 2. *Improper handling of statistics related information by non-statisticians in most institutions lead to the production of unreliable statistics;* 3. *Lack of political will and low statistical literacy prevents harnessing potential in filling data gaps left by official statistics;* 4. *Most produced statistics lack important supporting background information such as the sample sizes, of the population of interest, sample units' selection methods, data collection methods, estimation methods, and data analysis procedures.*

County governments are key producers of many of the micro level statistics (especially for devolved functions). Whereas not all functions are currently devolved,[14] it is only

[13] See example: https://www.standardmedia.co.ke/article/2000017228/census-and-the-question-of-tribe
[14] Agriculture, Health and Early Childhood Education are the main devolved sectors in Kenya

when each county government is enabled to produce data and statistics at their own level and for local planning that counties will realise real development.[15] Often times, county governments also collaborate with KNBS; as such the data they produce from such collaboration becomes official statistics.

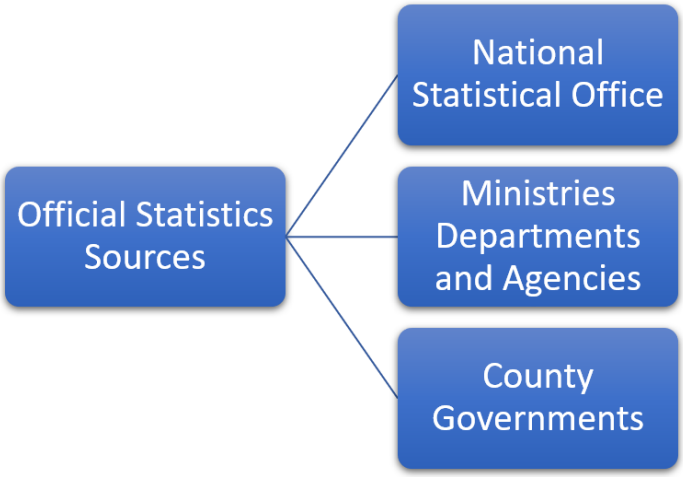


Figure 31: producers of official statistics (data sources)

b. Citizen generated data

Citizen Generated Data (CGD) is emerging as an important source of data to monitor, demand or drive changes on issues that are affecting citizens. Initiatives differ on technologies used and the way stakeholders will be engaged. Also, different initiatives have different objectives. Some seek to mobilize the public and to educate them (civic education through participatory engagement); other times, we might just have the desire to crowdsource data to plug in a gap of missing data. Here are some of the ways through which CGD is applied:

1. Production: CGD can be applied to sample surveys, household surveys, (understanding citizens experiences in public facilities, services, among others)
2. Defining: CGD can be used for problem scoping; citizens can collect new data or enhance existing information.
3. Dissemination: CGD can be mainstreamed in approaches such as community scorecards organise group deliberation by facilitating focus group meetings with different groups of people (usually split by sex, age and other relevant criteria). The goal is to collectively define assessment criteria for public services based on people's perceptions of the most critical problems

[15] This is because vices in people's lives, like poverty, cannot be tackled by national directives but local initiatives that understand the population needs, conditions and because of different local level conditions as well as geological factors.

4. Enriching of existing data by complementing gaps that are missing. For instance, citizen groups could want to ensure the reliability and accuracy of their data by comparing it against official data collections or prediction models.

c. Big data

Big Data has been described as data sets that are impossible to store and process using common software tools, regardless of the computing power or the physical storage at hand. National Statistical Offices (NSOs) are also exploring how big data can be used to complement official statistics in their respective countries.

Example box 10: *The rise of big data*
Asking whether and how Big Data should affect official statistics is not only about asking whether official statisticians should or should not use Big Data as data to produce official statistics. It is about whether and how official statisticians and systems should deal with the emergence of Big Data as an emerging complex data ecosystem[16]*.* ***Investigating the viability of using satellite imagery data to improve official statistics*** *The Australian Bureau of Statistics has a pilot project that will assess the feasibility of statistical methodology for classifying satellite surface reflectance data to crop type and for estimating crop production. This will help answer whether it is possible to statistically distinguish crop types.* *The Colombian National Department of Statistics (DANE) will assess the feasibility of applying remote sensing processing methodologies for the estimation of land consumption rate, and applying GIS spatial analysis for the calculation of the relationship between land consumption and population growth in metropolitan areas.* ***Electronic Health Records (EHRs)*** *Every patient has their own digital record which includes demographics, medical history, allergies, laboratory test results etc. Records are shared via secure information systems and are available for providers from both public and private sector. In the US, Kaiser Permanente is providing a model; they've fully implemented a system called HealthConnect that shares data across all of their facilities. Availing EHRs has improved outcomes in cardiovascular disease and achieved an estimated $1 billion in savings from reduced office visits and lab tests.*

[16] Letouzé E. and Jütting, J. (2014). *Official Statistics, Big Data and Human Development: Towards a New Conceptual and Operational Approach*. Data pop Alliance White Series. Paris 21.

Clean solar energy
M-kopa provides solar energy instruments to rural East Africa; it has targeted paraffin users in rural areas to turn to solar energy which is cleaner.

The company has equipment in over 500,000 homes in the region this also implies investment in monitoring tools that yield over one million device readings every day; from the batteries to temperature, GIS data, sunshine readings, among others. M-Kopa calculates that since they started five years ago, they have saved their users US$338 million.

Big Data is all about finding correlations; it is analyzed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions. Consequently, an advantage of Big Data that is argued is that it could provide faster, cheaper, more granular data and be more agile in meeting growing demands of decision making.

It is therefore probable that in the near future, the governments, companies, academia, media and civil-society organizations will increasingly turn to near real-time alternative measures of well-being in the social sectors in order to leverage the potential of Big Data.

d. GIS data

A geographic information system (GIS)[17] is a system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data. The key word to this technology is Geography – this means that some portion of the data is spatial, that is, data in some way references locations on the earth. When fused with traditional data, such as project name, what has been achieved and status, GIS can be a very effective problem solving tool.

GIS can be used as a tool in both problem solving and decision making processes, as well as for visualization of data in a spatial environment as follows:

1. Mapping the location of features and relationships to other features;
2. Show the density of features in a given space;
3. Highlight what is happening inside an area of interest;
4. Show what is happening nearby some feature or phenomenon; and
5. Demonstrate how a specific area has changed over time and in what way.

[17] GIS is more than software, people and methods are combined with geospatial software and tools, to enable spatial analysis, manage large datasets, and display information in a map/graphical form.

As an example, the integration of the Open County platform with a Participatory Budgeting component takes the shape of a map integration with MapKibera's platform as shown below. A user will be able to select a point and view more details about a project as mapped.

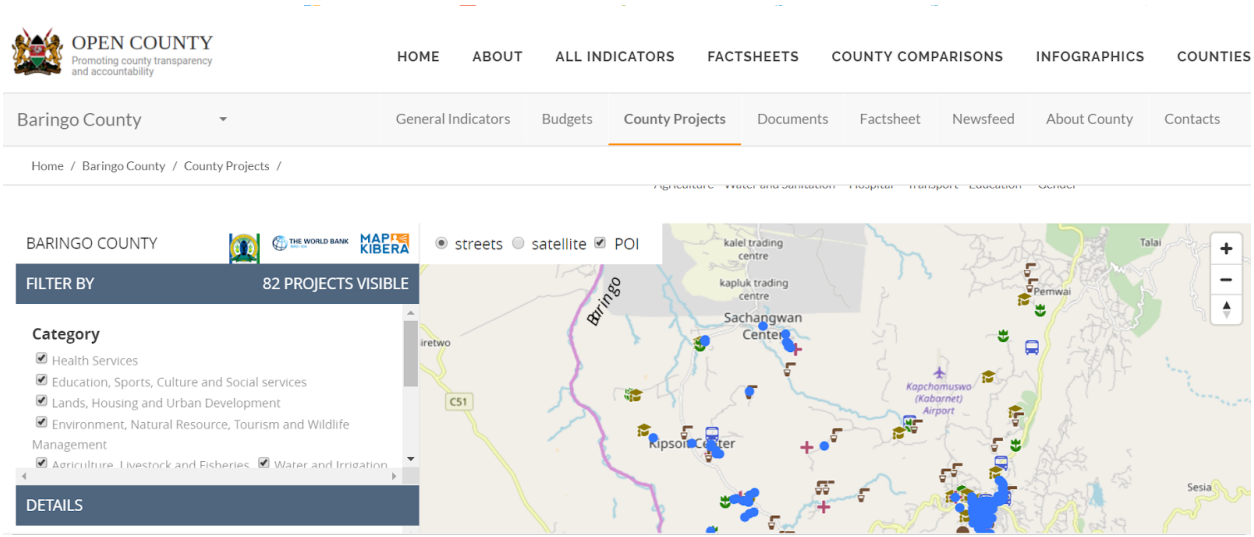


Figure 32: Integration of Open County with Participatory Budgeting (an example of Baringo County).

Example box 11: *Free GIS Data Sources: Best Global Raster and Vector Datasets (2019)*[18]

1. *Natural Earth Data: http://www.naturalearthdata.com/downloads*
2. *Esri Open Data: http://opendata.arcgis.com/*
3. *USGS Earth Explorer: http://opendata.arcgis.com/*
4. *Open Street Map: https://gisgeography.com/openstreetmap-download-osm-data/*
5. *NASA's Socioeconomic Data and Applications Center (SEDAC): http://sedac.ciesin.columbia.edu/*
6. *Open Topography: http://www.opentopography.org/*
7. *UNEP Environmental Data Explorer: http://geodata.grid.unep.ch/*
8. *NASA Earth Observations (NEO): http://neo.sci.gsfc.nasa.gov/*
9. *Sentinel Satellite Data: https://scihub.copernicus.eu/dhus*
10. *Terra Populus: https://www.terrapop.org/*
11. *FAO GeoNetwork: http://www.fao.org/geonetwork*
12. *ISCGM Global Map: The International Steering Committee for Global Mapping (ISCGM) resolved to transfer Global Map data to the Geospatial Information Section in the UN.Their archives have been uploaded to*

[18] https://gisgeography.com/best-free-gis-data-sources-raster-vector/

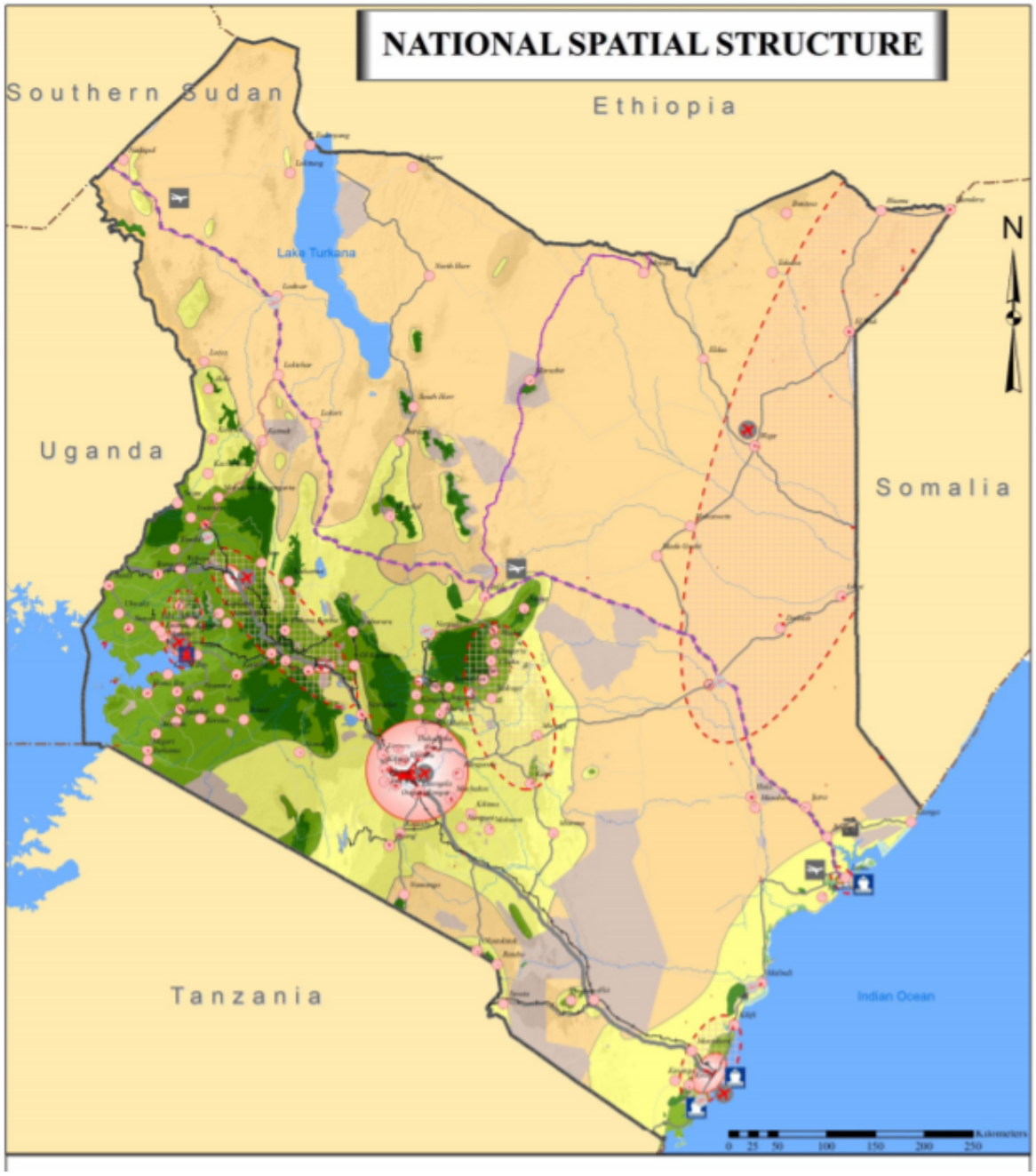
https://globalmaps.github.io/

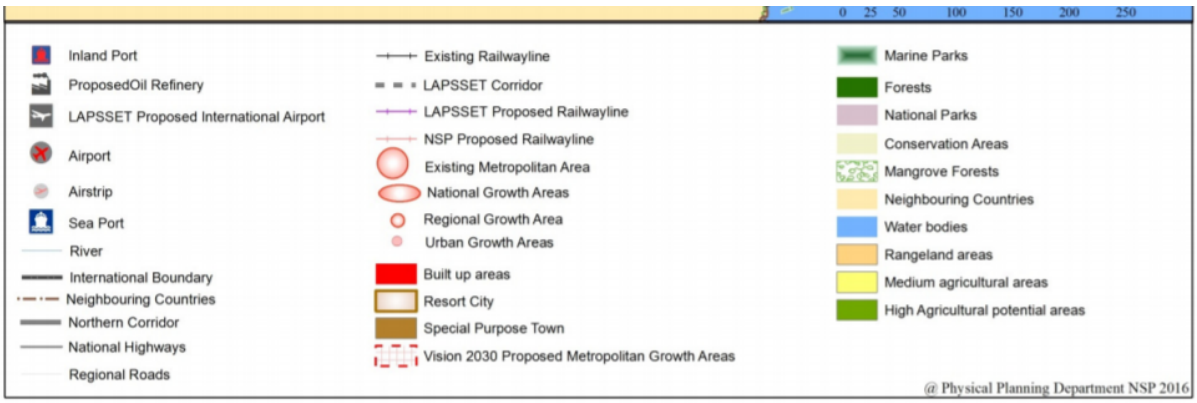
Lastly, Kenya has a National Spatial Plan (NSP 2015-2045)[19] that is supporting the implementation of strategic national projects - specifically the flagship projects spelt out under Kenya Vision 2030 by indicating their spatial locations. It provides a coordinating framework for sectoral planning which has been lacking in the country and it aims to address the disconnect that has existed for a long time between physical and economic planning.

This is expected to result in more prudent use of the country's scarce resources as the plan provides a platform for prioritization of programmes and projects within the implementation mechanism.

Example box 12: *The National Spatial Structure proposed by the NSP creates three broad areas in which the spatial planning for the country shall be undertaken. These are informed by agro-climatic zonation and agricultural potential. These broad areas are the* ***high agricultural potential****,* ***medium agricultural*** *areas and rangelands****.***

[19] http://lands.go.ke/wp-content/uploads/2018/03/National-Spatial-Plan.pdf


NATIONAL SPATIAL STRUCTURE
Southern Sudan
Ethiopia
Lake Turkana
Uganda
Somalia
Tanzania
Indian Ocean
N



Quiz questions

1. *Official statistics face certain limitations. For your county government (and department), what are some of these limitations?*
2. *How can the data desk address some of the identified limitations?*

Part 2: USING THE DATA DESK PLATFORMS

Chapter 1 - About the data desk

Goals setting for the chapter*: This chapter is a follow up to Part 1 - Chapter 1 that delves deeper into the functions of the data desk. In this chapter, we shall learn:*

1. *What resources are required per county and at CoG*
2. *Data fellows skills/abilities desired*
3. *Mandate of the data desk*
4. *Interfaces of the data desk*
5. *The technical architecture of the data desk*

Section 1: Resources required at the county and CoG levels

To recap, in Part 1 - Chapter 1, a data desk was defined as a (both offline and online) platform through which users can obtain relevant and actionable data about the county. Such data may include, spatial data, population, sectoral performance, policy targets, budgets, business services and public services. The data desk should also facilitate answers to multiple stakeholders about data and encourage dialogue on how to improve and increase the datasets therein.

The overall framework for establishment of a data desk is depicted below. The process begins with establishing the needs and resources (personnel, technical capacities to be built and hardware/software requirements) which guide the implementation activities - which include training and the technical integration of the respective county's website with the Open County Portal. After the implementation phase, operationalization of the data desk must occur through the adoption of guidelines and policies which then formally mandates the functions of the data desk to publish data. A public launch can take place thereafter; this is highly advisable so that all relevant stakeholders (including the citizens/communities) are sensitized about the functions of the data desk.

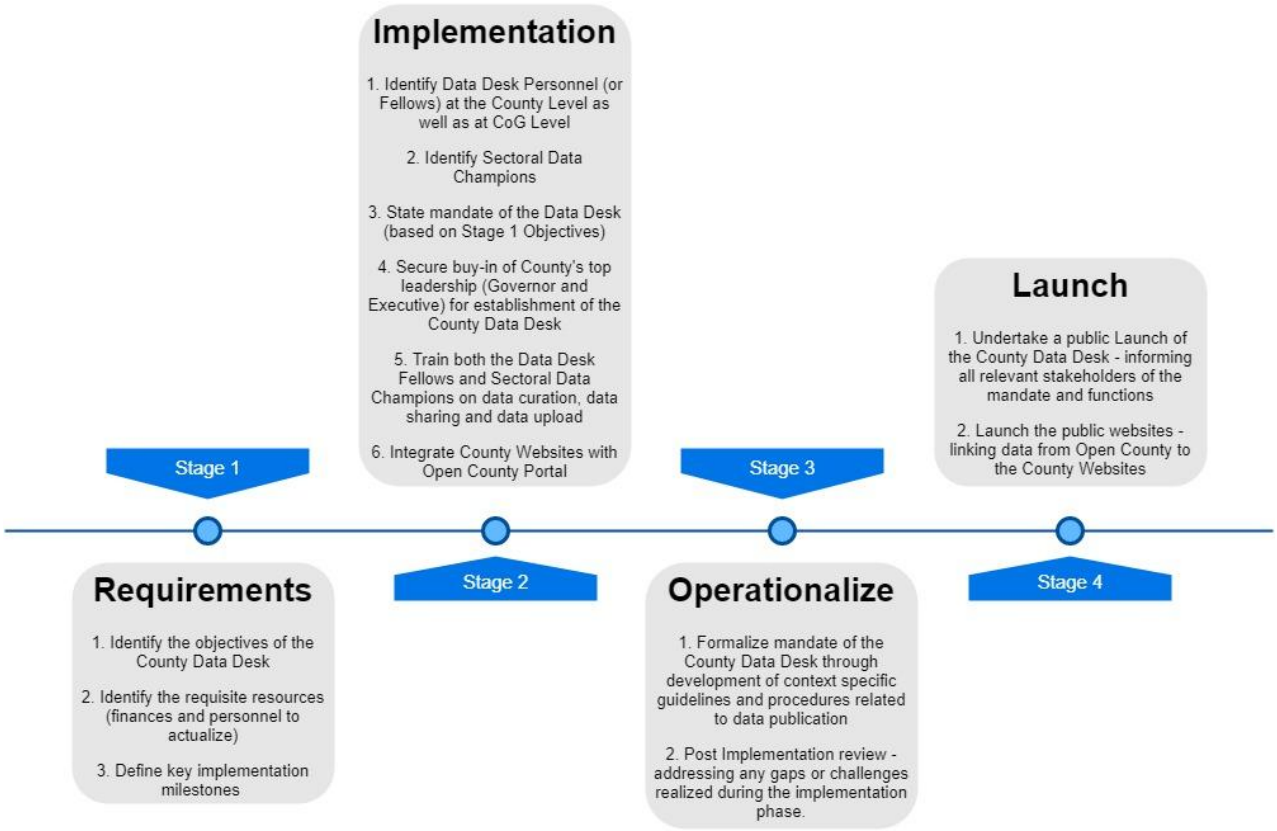


Figure 33: Main process for establishment of a data desk

The data desk is currently implemented at the subnational level in the county (Elgeyo Marakwet, with Baringo, Makueni and Kilifi counties soon to onboard) as well as at the Council of Governors (CoG). This ensures activities related to data use and evidence are embraced and sustained by the county governments (bottom-up) but also by the Governors (top-down). Inherent in this approach is a deep consideration of sustainability and scale up (to other counties) - which requires political support as well as technical capacities[20] to ensure constant flow of updated data.

Ideally, a data fellow from the county could be drawn from 1) The Finance and Economic Planning Department, 2) ICT Department or 3) Communications Department. Reasons are that the Finance and Economic Planning Department already has mandate (given the vital role in budget preparation and planning as well as M&E at the county). The ICT department is already responsible for the technical

[20] Any potential data desk fellow must have an excellent knowledge of word processing tools and spreadsheets (MS Office Word, Excel etc.). They should also have working knowledge of office equipment and computer hardware and peripheral devices.

components - ensuring the implemented architecture works well and that any technical problems are resolved. The Communications department - is normally responsible for uploading content, news that has been authorized to the website. They will not only support upload of information on the website but can also support the work of data upload on the OC Platform.

Below is a summary of additional requirements for the data desk.

Table 2: Additional requirements for establishment of a data desk.

Requirements	***Justification***
Revised data collection templates	*Due to existing gaps in data collection, the data desk will also develop and implement templates that can be used to collect budget data as well as sectoral data.*
Youth volunteers	*A sustainable approach to keeping data updated at the data desk must involve training on GIS skills (to county staff and youth volunteers) for continuous project updates.*
OC integration with county website.	*For this instance, we will only need a space that can host, most likely a subfolder.* *- Mysql Server (5.6 and above)* *- PHP (v5.2 and/or above with mail and file execution modules)* *- Apache for web server*

Section 2: Mandate of the data desk.

a. What is the ideal structure and Terms of Reference for the data desk?

As outlined in Part 1 - Chapter 1 - Section 2, the data desk is created and implemented at the subnational level in a county as well as at the Council of Governors (CoG). Data is updated via the CoG or county data desks and through the OC Platform before it propagates to county websites.

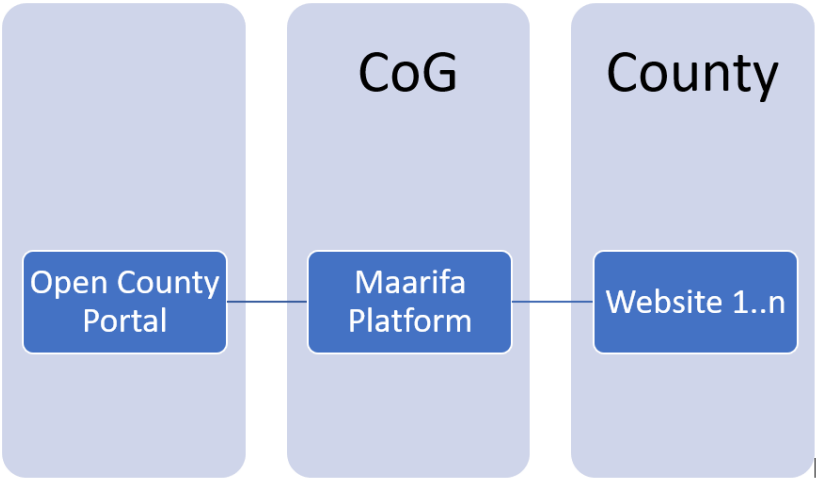


Figure 34: Interaction of the CoG and county data desks with the Open County Platform.

The data desk has mandate for the following main tasks:

1. Transfer any data from paper formats, PDF reports onto machine readable and reusable formats before upload in the OC platform.
2. Translation of (1) above into predefined templates which are made use of on the OC Platform (see Part 2 - Chapter 2).
3. Verify data quality by comparing it to source documents and any additional triangulation.
4. Perform regular updates of data in the OC Platform.
5. Working closely with the Open Institute, the data desk ought to also provide training and support services to county staff, on usage of the OC Platform as well as how to share data and resources to CoG.
6. Coordination with Open Institute on any technical enhancements or upgrades to the OC Platform.

b. Mandate of the data fellows.

Table 3: *Services needed by the county for a data fellow*

Description of services needed:
To coordinate the different facets of the Open County Initiative, we seek to create a

fellowship program at the county. The fellow will work under the overall management of the ***Director of Budget and Planning*** *at* ***<County Name>*** *County Government, at the County Headquarters. His/her role will be supported by the Open Institute, the advisors to the project. The fellows' specific responsibilities include, but are not limited to:*

1. *Work to establish a Data Desk at the county - The Data Desk will be the central point for collecting, cleaning, coordinating and uploading data on the OC platform, received from various stakeholders and counties.*
2. *Be a communication focal point at the county - regularly coordinating with the Data Fellow at the Council of Governors (working on the Maarifa Platform which is also integrated with Open County), to continuously gather and share data as needed.*
3. *Collect, clean, upload and continuously update the OC platform and all its components. These include, but are not limited to sectoral data, budget data, devolution resources, and events.*
4. *Working together with the Manager, review, and moderate responses to comments on blogs and forums by citizens and other stakeholders.*
5. *Working with support from the Open Institute, provide training and support services to county staff, on the use of the platform and on sending data and resources to CoG to keep the platform updated.*
6. *Provide feedback on platform performance, stability and potential upgrades.*
7. *Undertake analytics on the use of the platform and provide feedback on user habits.*
8. *Participate in any local seminars, workshops, and events to showcase the platform.*
9. *General in-county Project Management.*

Required competencies and knowledge

1. *Candidate must be located at the County Headquarters*
2. *Candidate must be a Kenyan Citizen*
3. *Proven experience working with or for Government bodies is an advantage*
4. *Strong communication, written, oral and presentation skills*
5. *2 years experience working with Data and Databases*
6. *Basic data analytical skills is an added advantage*

7. *Degree in Computer Science is an added advantage*

8. *Fluency in English and Kiswahili*

Table 4: Services needed at the CoG for a data fellow

To coordinate data activities pertinent to the Maarifa platform, the CoG seeks to create a fellowship program. The fellow will work under the overall management of the Manager of the Maarifa Platform at the CoG Headquarters in Nairobi, and his/her role will be assisted by the Open Institute, the advisors to the project. The fellows' specific responsibilities include, but are not limited to:

1. *Work to establish a Data Desk at the CoG - The Data Desk will be the central point for collecting, cleaning, coordinating and uploading data on the Maarifa platform, received from various stakeholders and counties.*
2. *Be the communication liaison working with the respective County points of contact, to continuously gather data and resources to upload to the Maarifa platform.*
3. *Collect, clean, upload and continuously update the Maarifa platform and all its components. These include, but are not limited to, forums, budget data, events and devolution resources.*
4. *Working together with the Manager, review, and moderate responses to comments on blogs and forums.*
5. *Working with support from the Open Institute, provide training and support services to county staff, on the use of the platform and on sending data and resources to CoG to keep the platform updated.*
6. *Provide feedback on platform performance, stability and potential upgrades.*
7. *Analyze analytics on the use of the platform and provide feedback on user habits.*
8. *Participate in seminars, workshops, and events to showcase the platform.*
9. *Coordinate and prepare a monthly Maarifa newsletter.*

10. *General Project Management.*

c. Ideal project owner

At the **county level** the Department of Finance and Economic Planning (headed by a director) at the county level derives its mandate from the Constitution of Kenya (2010) and other related subordinate laws including the Public Management Finance Act 2012, County Government Act of 2012 and is responsible for finance and economic planning of the County. The department plays a pivotal role in the coordination of development planning, mobilization of public resources and ensuring effective accountability for use of the resources. Consequently, this department works with a range of multi-sector data in order to realize efficient and effective usage of resources at the county. As such, a lot of data is already relayed to this department. This important role makes it ideal for hosting the data desk at the county.

***Example box 13**: Mandate of the Department of Finance and Economic Planning*

The mandate of the department is to:

1. *To Implement Financial and Economic policies in the county.*
2. *Annual budget preparation.*
3. *Resource mobilization.*
4. *Managing County Government's public debt and other obligations & developing debt control framework.*
5. *Consolidating Annual appropriation accounts and other financial statements of the County Government.*
6. *Custodian of the inventory of County Government Assets.*
7. *Assisting County Government Entities develop capacity.*
8. *Provide National Treasury with information.*
9. *Ensure compliance with accounting standards prescribed by Accounting Standards Board.*
10. *Ensure proper management and control of, and accounting for the finances of the County Government and its entities in order to promote efficient and effective use of county budgetary resources.*
11. *Monitor County Government entities.*
12. *Issue circulars.*
13. *Advise County Government Executives, County Executive Committee, and*

County Assembly on financial matters.

14. *Strengthening financial and fiscal relations between the National Government and County Government in performing its function.*
15. *Reporting regularly to the County Assembly on the implementation of the annual county budget.*

The CoG is established under Section 19 of the Intergovernmental Relations Act (2012). The COG provides a mechanism for consultation amongst county governments, sharing information on performance of the counties in executing of their functions and facilitating capacity building for Governors. Recall that the Maarifa Centre platform is currently hosted by the CoG and includes the Open County portal; thus it is also the ideal unit to drive the data desk.

A Project Owner is responsible of the bigger picture; they define the scope of "What should we be doing?" and "Why should we be doing it?". Given the legal mandate and functions of both units (CoG and Department of Finance and Economic Planning) as stated above, they are ideally suited to 'own' the data desk. Their functions or roles are well aligned (these units are already undertaking some functions resembling the role of data desk - but now need formal, structured and better technical skills); to ensure that there is collective action by stakeholders and that all data needs (by internal and external users) are met using regularly updated data.

d. Ideal project sponsor

Data has become an increasingly complex force, influencing more and more aspects of socioeconomic life of ordinary citizens. It is also important to recognize issues pertinent to power struggles are immanent when we talk about data. In the era of data politics, which includes political aspects of data such as data activism, open data and open government, multiple stakeholders are keen about questions such as: 1) Who owns our data? 2) Who controls it? 3) How is it being used? 3) What constitutes good, reliable data, and how can this be assessed? 4) What are the restrictions to data dissemination? These are largely philosophical questions that can be addressed through adopting informed data practices from 2 stances:

1. Reactive: where large scale data collection threatens the freedoms and privacy of the society.
2. Proactive: where open government can be harnessed to realize greater positive societal changes.

Strong leadership therefore is required from the offices of the governors for adopting data practices that are proactive at the local level. Whereas we have legal frameworks at the national level[21], county laws also need to catch up. When the practices of data collection evolve in a way that they are transparent, com comprehensible and responsible, the data becomes and asset that actually increases the efficiency in the area of service delivery and governance. Further, frameworks such as the Open Government Partnership (OGP)[22] are important considerations because they help structure the work of the data desk towards the set of five "grand challenges" which are immanent in most OGP commitments:

1. Improving Public Services;
2. Increasing Public Integrity;
3. More Effectively Managing Public Resources;
4. Creating Safer Communities; and
5. Increasing Corporate Accountability.

As a project sponsor, the office of the Governor is charged with overall accountability. It would primarily be concerned with ensuring that the data desk delivers the agreed benefits to the stakeholders. Without a sponsor (budget allocation and prioritization of the data desks annual activities) it is probable that the data desk activities would not be sustained. Importantly, without good practices that are proactive, there would be more side-effects than desired.

Section 4: Interfaces of the data desk

This section will outline probable use data cases that showcase the value of the data desk to multiple stakeholders at the county who include internal (County Staff, the Executive, County Assembly, National Government) and external stakeholders (media, citizens, CSOs, the private sector, CoG)

Table 5: interfaces of the data desk

Sample user	Sample use case
Public (media, citizens, CSOs, the private sector)	Monitoring Service Delivery by Media, Citizens and CSOs: Several of these institutions including citizens can be able to monitor service delivery and project implementation in the county to ensure that intended results have been achieved on the ground. This would greatly reduce the oversight burden of the county government - with these users being the 'eyes of the county on the ground'.

[21] Access to Information Act (2016) Section 96.
[22] Elgeyo Marakwet is a signatory to the Open Government Partnership, having joined in 2016.

	For the private sector, published county priorities (in procurement plans for example) can help forecast potential opportunities.
Other departments within the county executive Office of the Governor (Service Delivery Unit)	Early warning on target achievement: Given that there are annual targets in the ADPs and CIDPs, sectoral data collection would quickly inform the department if they are on the way to attain (or miss) its commitments and targets.
The County Assembly	Budget absorption: It is possible to get real-time information on budget absorption. A deeper analysis can ensure that spending is attached to procurement plans.
National government (National Treasury, OCOB)	Improving value for money: by increasing the quality and quantity of data, it is possible to increase efficiency in monitoring progress of public infrastructure projects. This will help to improve competitiveness of bidders and to reduce mismanagement.
Council of Governors	Reports using data forms an important part of the annual State of Devolution Address; the CoG will request departments in different counties to consolidate data and send it in order to compile this

Section 5: The technical architecture of the data desk

The integration of the Open County platform with a Participatory Budgeting component takes the shape of a map integration with MapKibera's[23] platform as shown below. A user will be able to select a point and view more details about a project as mapped.

As engagements continue to secure data from the Hyperion Budget module in IFMIS, focus for the county will be to upload their signed-off budget data in the OC Platform. This will continue to address the integration of the OC Platform with the KADP PFM

[23] Map Kibera Trust's mission is to increase influence and representation of marginalized communities through the creative use of digital tools for action. Map Kibera Trust has worked with the community to transform a marginalized settlement which was previously a blank spot on the map into an increasingly visible and vibrant community

County reform process; strengthening data analysis with the requisite disaggregation at the county level as broader engagement proceeds.

Internal capacity to support web applications should exist so that implementation is undertaken as follows:

1. OC will be implemented on the existing county's website wireframe; it will be easy to create a subdomain under the existing county website and an embedded script used to publish OC information. Where a county is willing to change their wireframe completely, the technical framework is still flexible so that all the important features that lead to OC information actually being availed on the county's revamped website are allowed.
2. Architecturally, data will be updated via the CoG or county data desks and through OC before it propagates to county websites. Necessary security for data and access would be put in place.

Expected challenges to be overcome mostly includes the inability to append additional project-specific information, such as, time, comments - which are a key deliverable; public visitors should be able to post feedback about a project. Additionally, a lot of information is missing; some project specific information with historical tracking is not possible because we don't have details such as dates of implementation, regular status updates, project budgets.

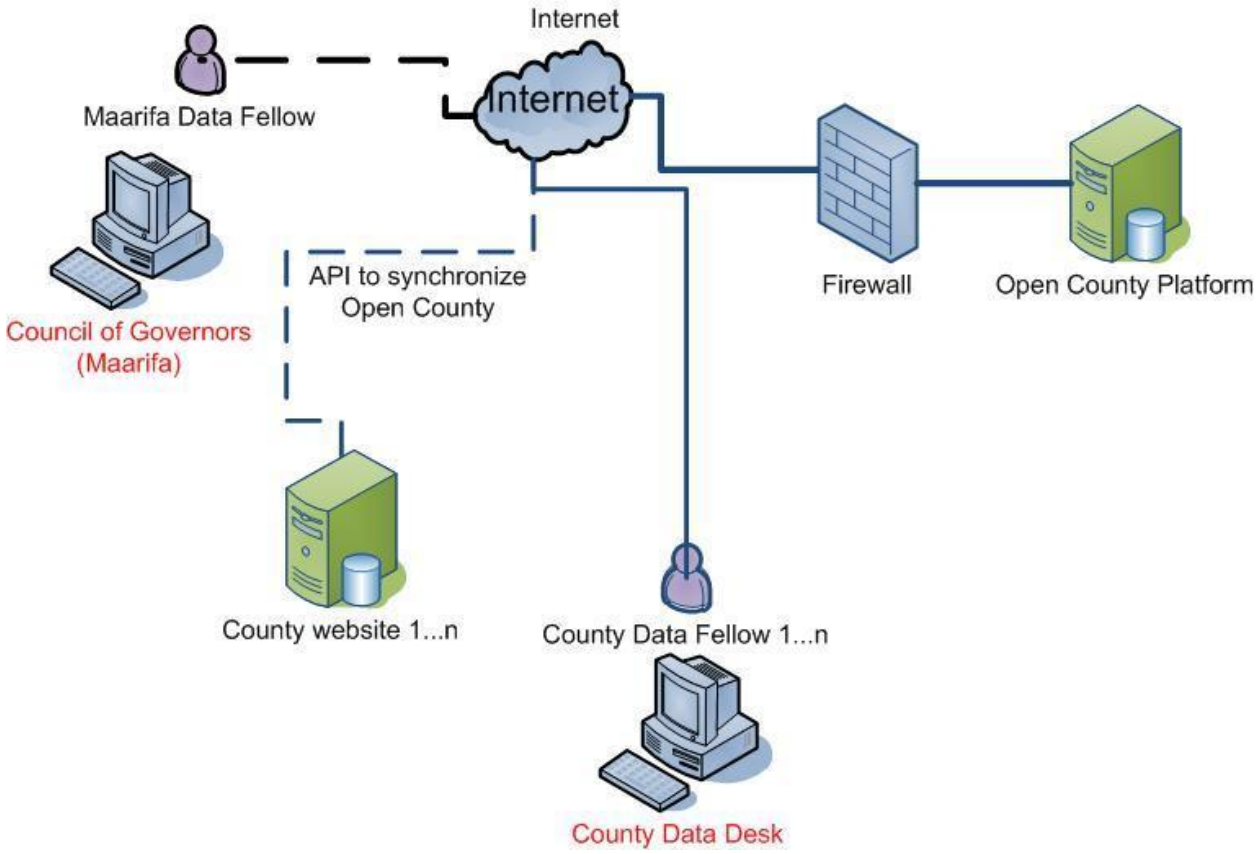


Figure 35: Proposed architecture of the Integration

Quiz questions
1. *List the interfaces of the data desk* 2. *What is the difference between a project sponsor and project owner?* 3. *Where will the fresh data updates to the data desk be uploaded?* a. *County Website* b. *Kenya Open Data Portal* c. *Open County Platform* d. *Maarifa Platform* 4. *This is a standard interactive and programming language for getting information from and updating a database.* a. *dynamic data exchange* b. *Structured Query Language*

c. *ASCII*
d. *Erlang programming language*
e. *WebLogic*

Chapter 2: Using the OC Platform

***Goals setting for the chapter**: This chapter outlines how to use the Open County Platform. In this chapter, we shall learn:*

1. *Where to go to use the platform - as a citizen, as county staff or as an infomediary; and*
2. *Find out how to use the feedback features on the platform.*

Section 1: Navigating the Open County Platform

a. Citizens (and other infomediaries)

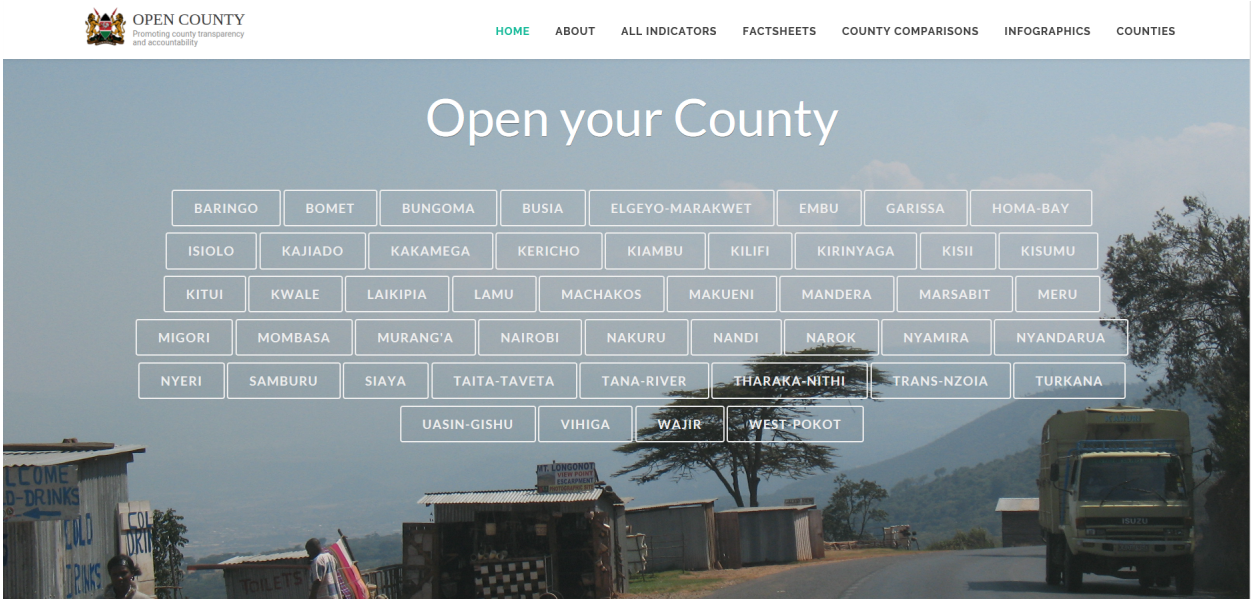


Figure 36. The landing page of The Open County Portal

b. Selecting county data

Click on your county name to open the county's landing page

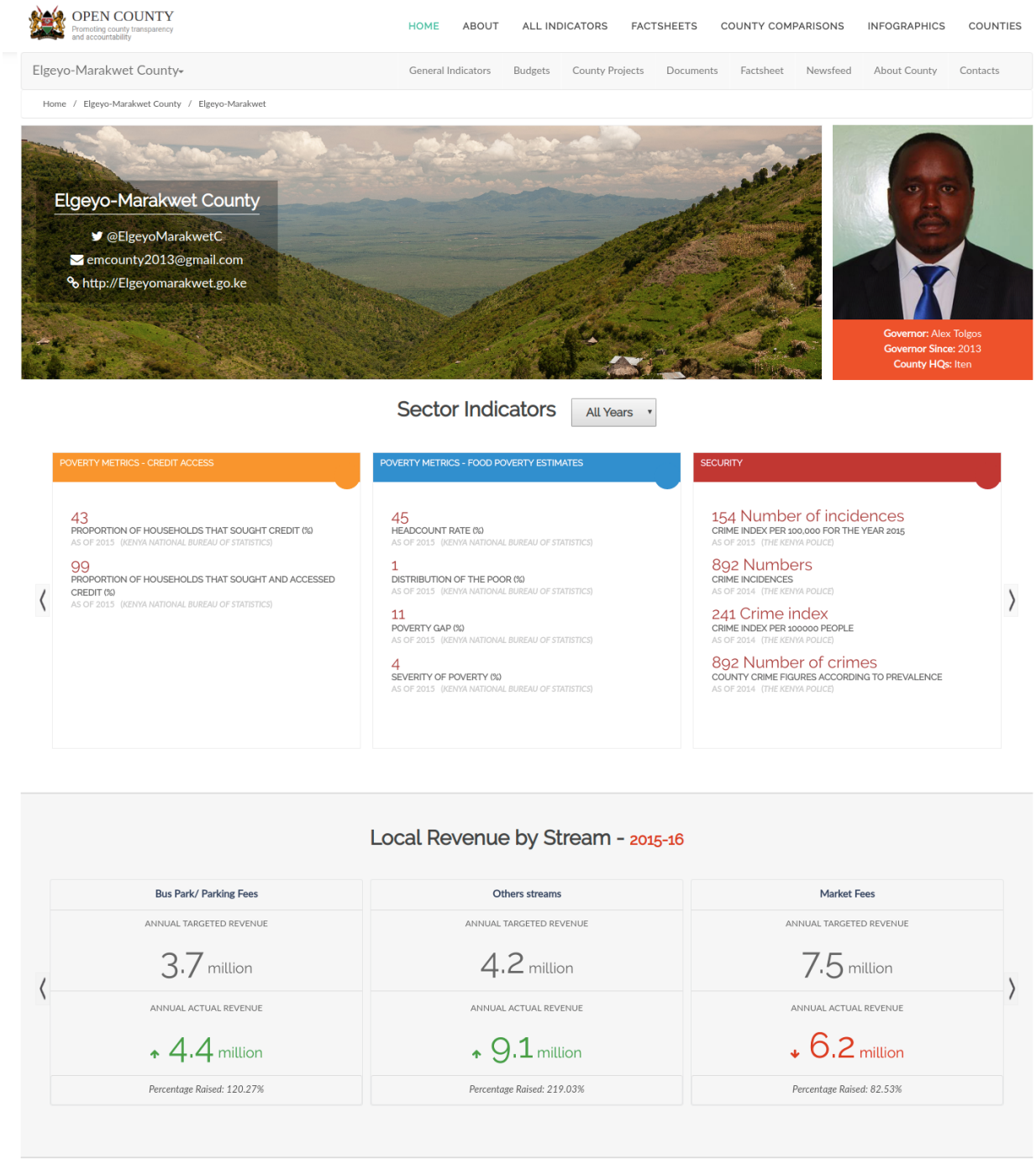


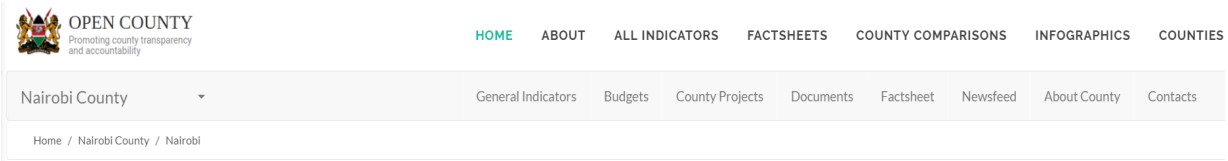
Figure 37. Elgeyo Marakwet landing page, showing an overview of Sector Indicators and Local Revenue streams. Sector Indicators can be filtered by year.

d. Viewing county fact sheets

Pulling all fact sheets

Figure 38: All county fact sheets

d. County menu



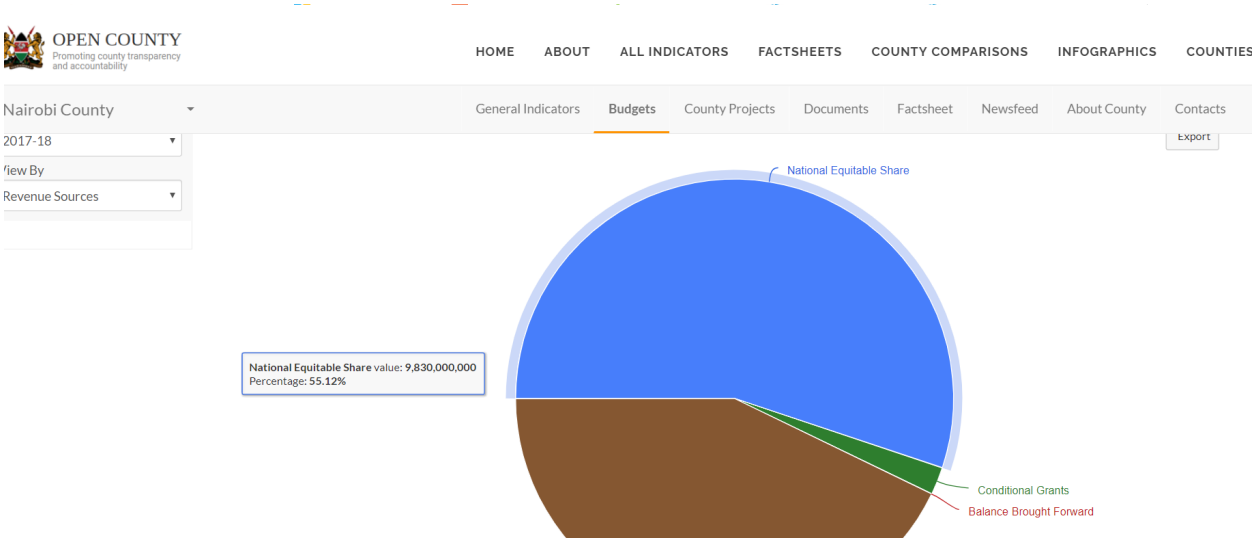


Figure 39: County Budgets

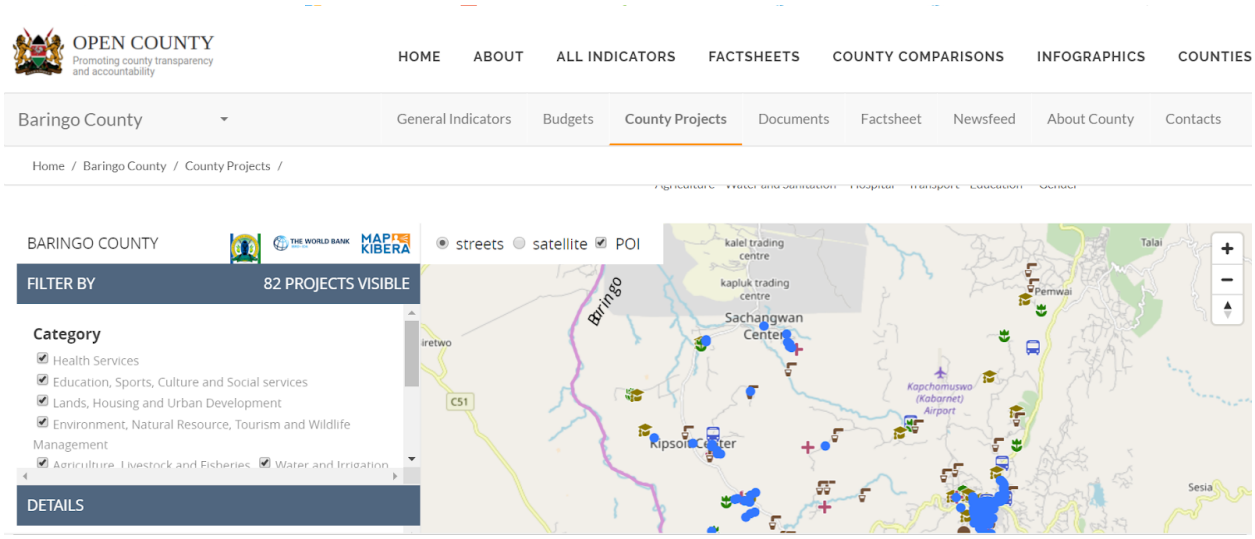


Figure 40: County Projects

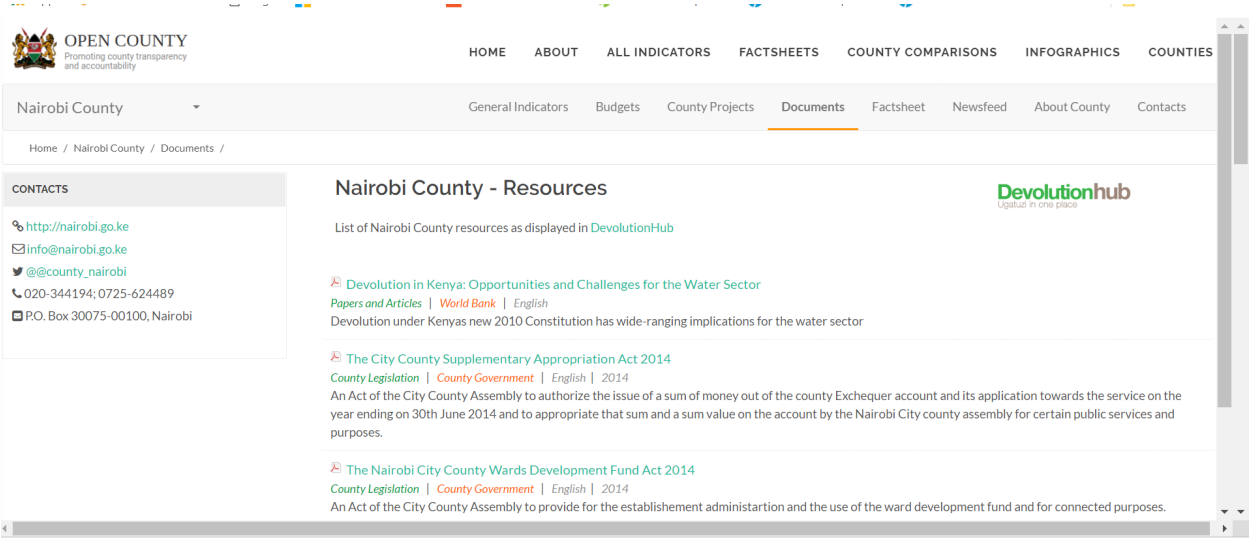


Figure 41: Documents

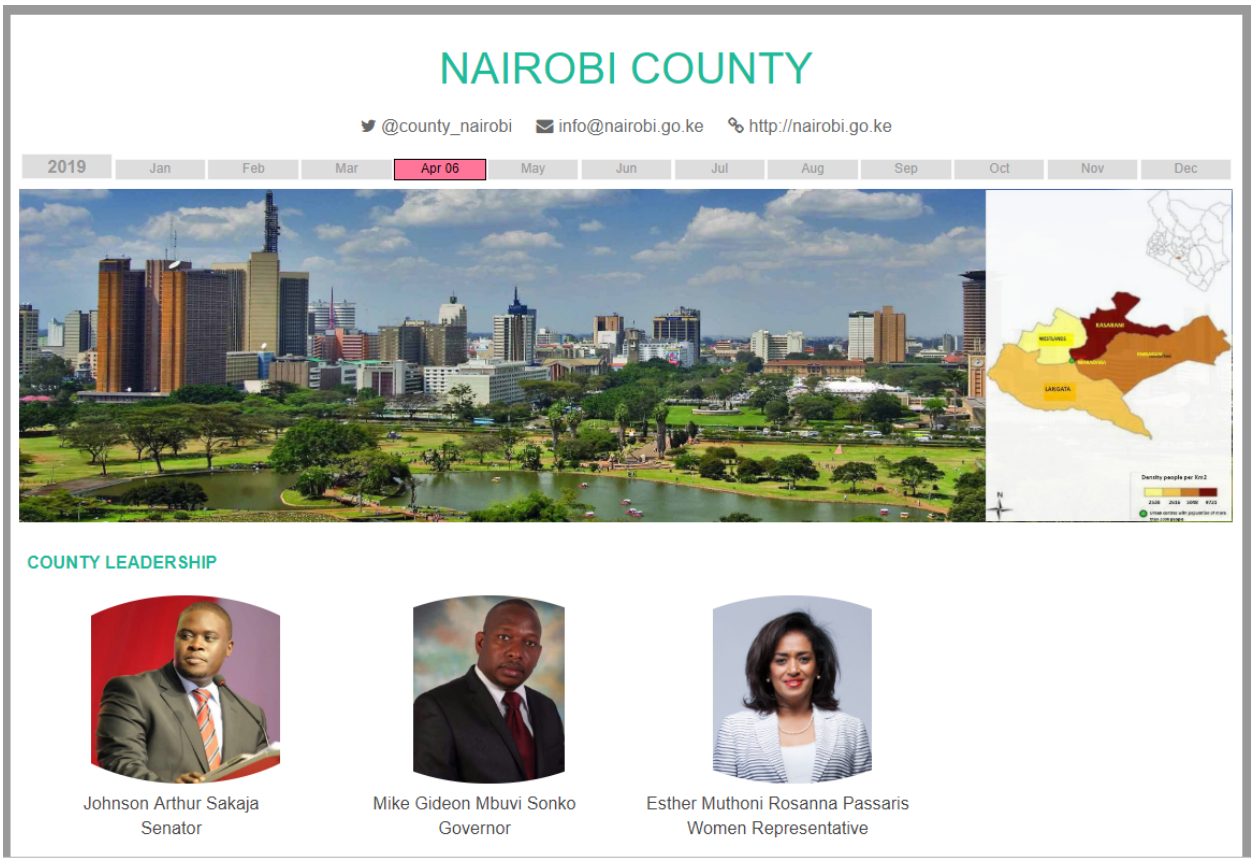


Figure 42: County Fact sheet

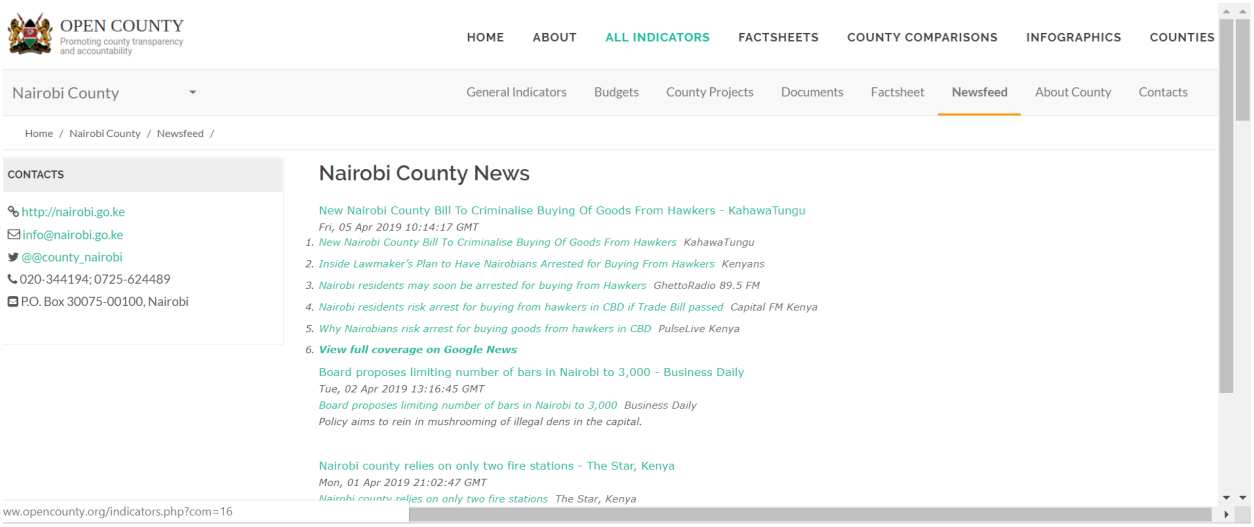


Figure 43: News feed

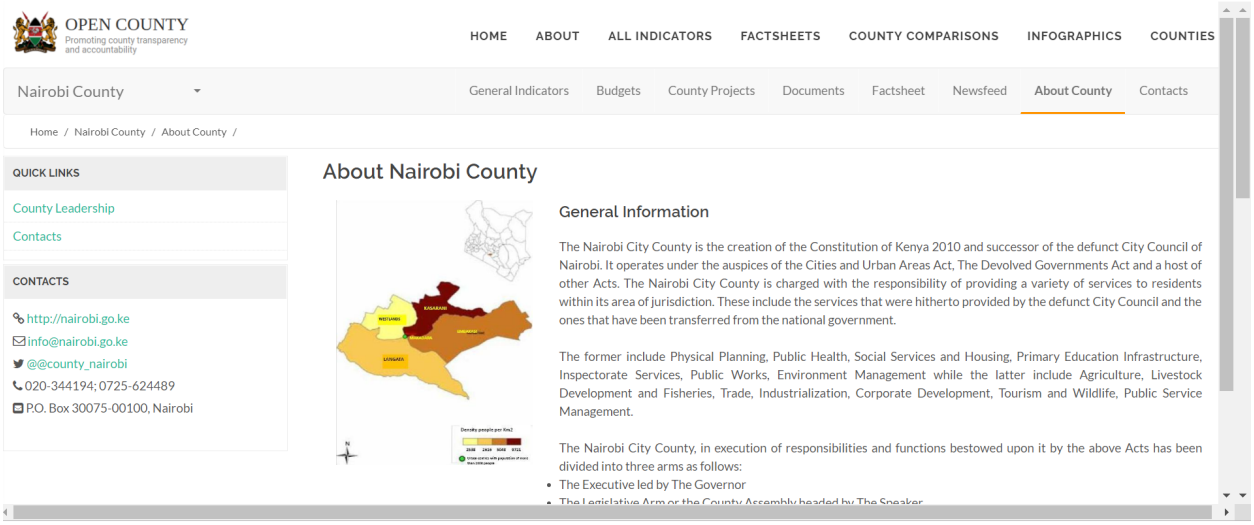


Figure 44: About County

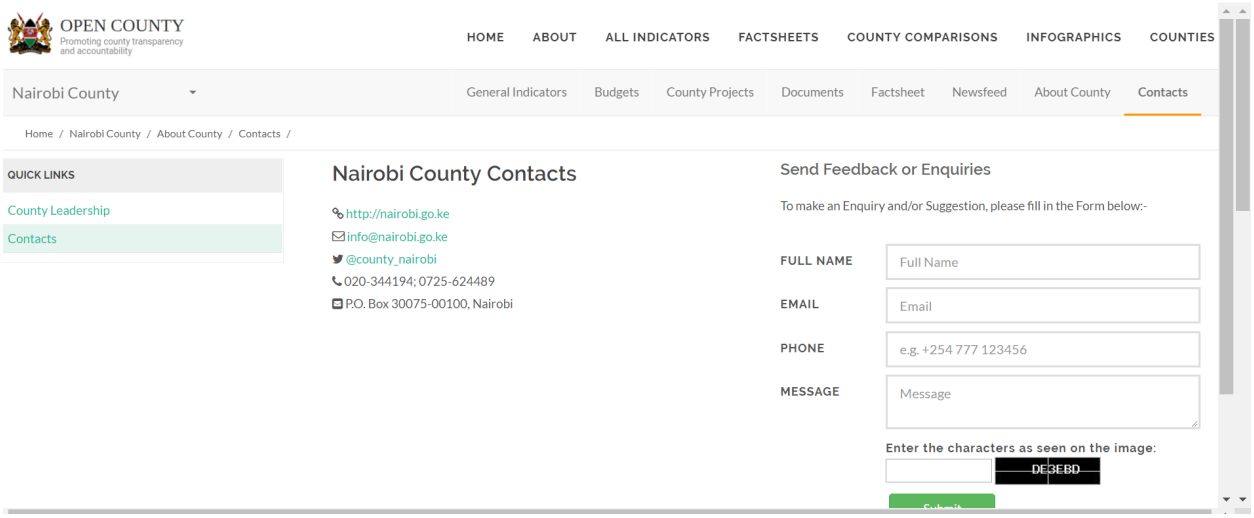


Figure 45: Contacts

Integration with other systems

How to access Data on Open County via API (Application Programming Interface)

1. Goto https://opencounty.org/api.php

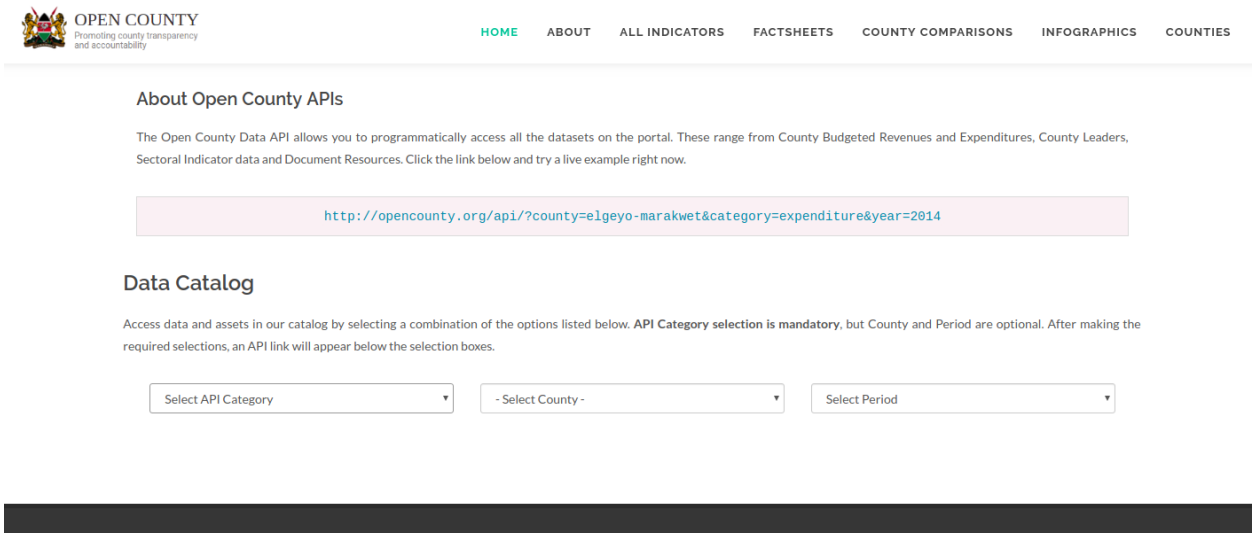


Figure 46: Accessing API Data on Open County

2. Under **Data Catalog**, select API category e.g. Expenditure Data or Agriculture Data
3. Select County to filter by, AND/OR
4. Select Year to filter by

5. Click on/Copy the link that is provided to access the generated data

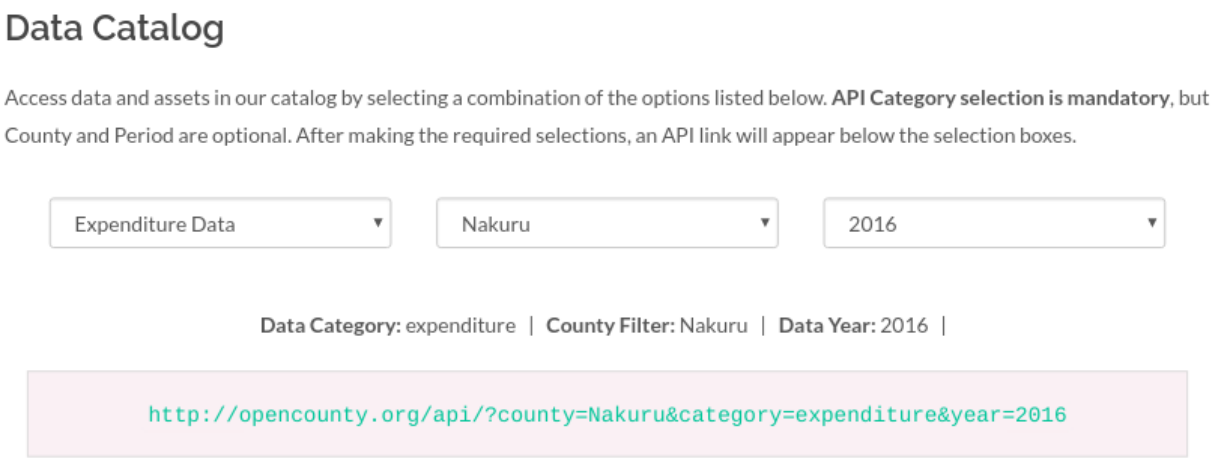


Figure 47: Accessing the data catalogue on Open County

a. Staff

Platform Admin Panel

i. Login Screen

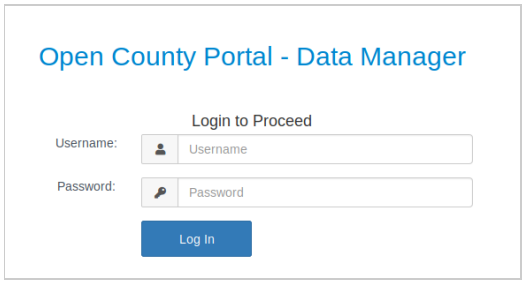


Figure 48: Open County Data Manager login

ii. Data Upload Options

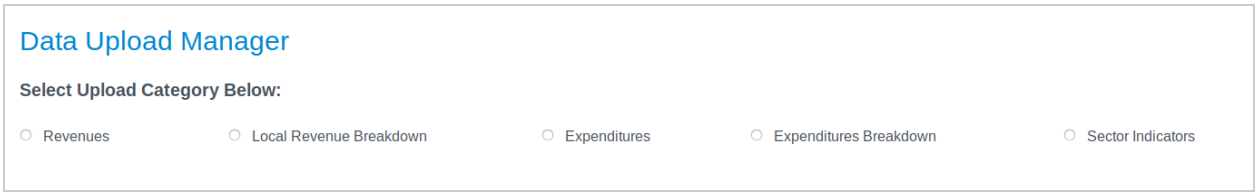


Figure 49: Data upload in Open County backend

Data Uploads Manager is specifically designed to pick data from MS Excel (.xls) documents or CSV files. Where the source is a Microsoft Excel document, only data in the first worksheet is collected.

iii. Data Upload: How to upload Revenue Data

1. Click on the "Revenues" tab
2. Use the template example / table provided as a guide to columns expected. In your document, columns that are not featured in the template will be ignored
3. Click on "Browse" to select the document with data to be uploaded
4. Click on "Submit File" to send the document to the server
5. Click on "Upload Data" to approve upload of the data previewed from the submitted document.

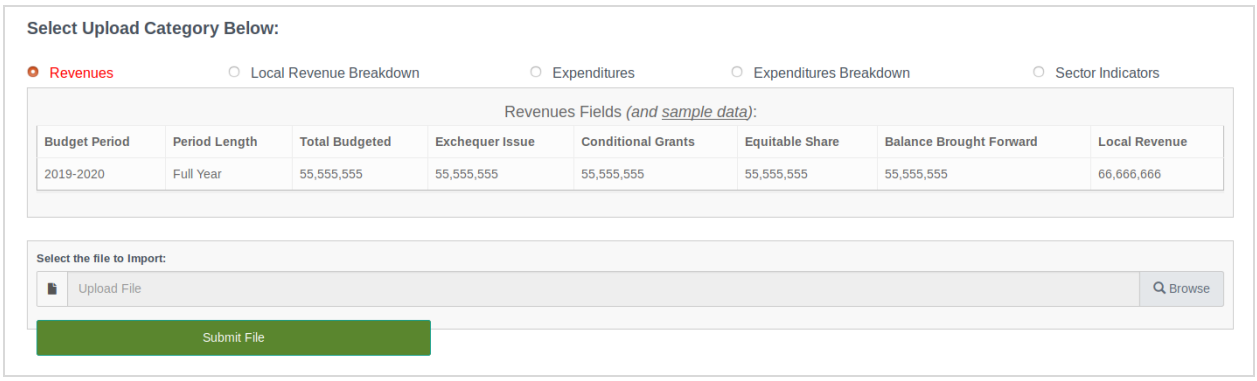


Figure 50: Data upload functionality - Revenues

iv. Data Upload: How to upload breakdown of County Local Revenue Data

1. Click on the "Local Revenue Breakdown" tab
2. Use the template example / table provided as a guide to columns expected. In your document, columns that are not featured in the template will be ignored
3. Click on "Browse" to select the document with data to be uploaded
4. Click on "Submit File" to send the document to the server
5. Click on "Upload Data" to approve upload of the data previewed from the submitted document.

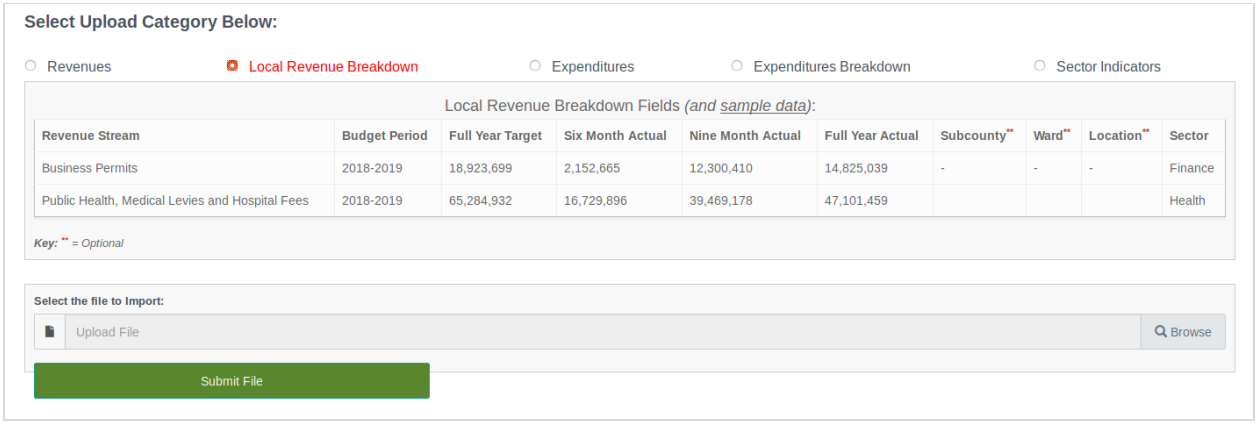


Figure 51: Data upload functionality - Revenues - Local Revenues

v. Data Upload: How to upload Expenditure Data

1. Click on the "Expenditures" tab
2. Use the template example / table provided as a guide to columns expected. In your document, columns that are not featured in the template will be ignored
3. Click on "Browse" to select the document with data to be uploaded
4. Click on "Submit File" to send the document to the server
5. Click on "Upload Data" to approve upload of the data previewed from the submitted document.

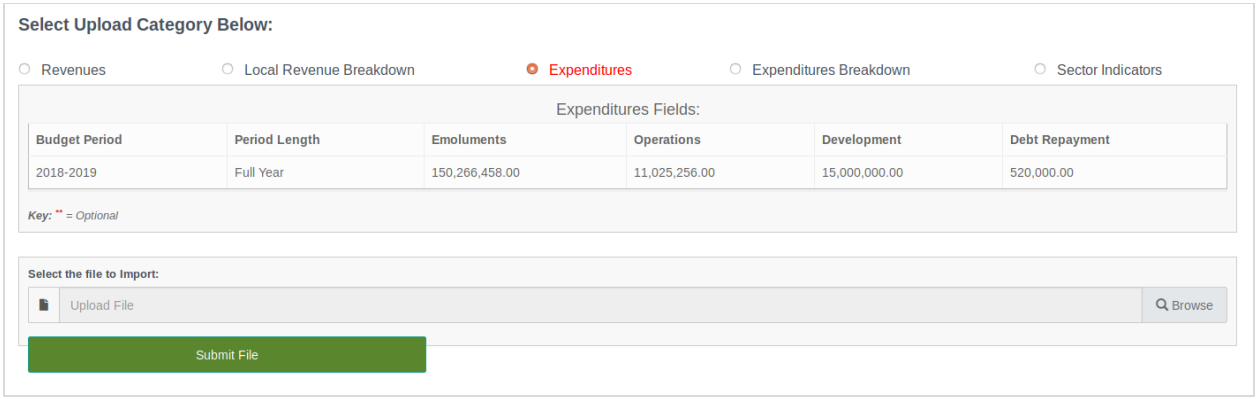
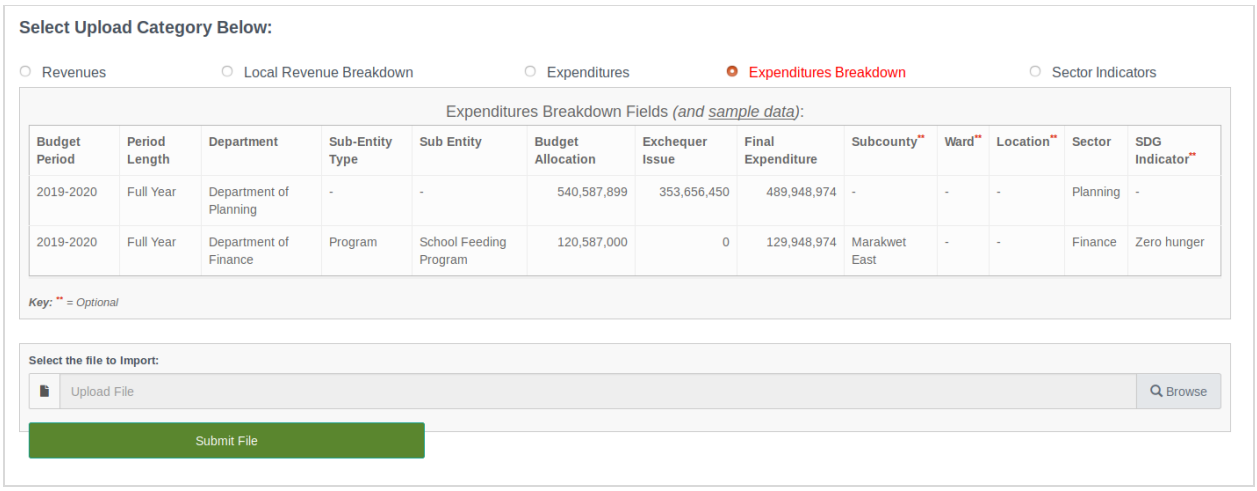


Figure 52: Data upload functionality - Revenues - Expenditures

vi. Data Upload: How to upload breakdown of County Expenditure Data

1. Click on the “Expenditures Breakdown” tab
2. Use the template example / table provided as a guide to columns expected. In your document, columns that are not featured in the template will be ignored
3. Click on “Browse” to select the document with data to be uploaded
4. Click on “Submit File” to send the document to the server
5. Click on “Upload Data” to approve upload of the data previewed from the submitted document.

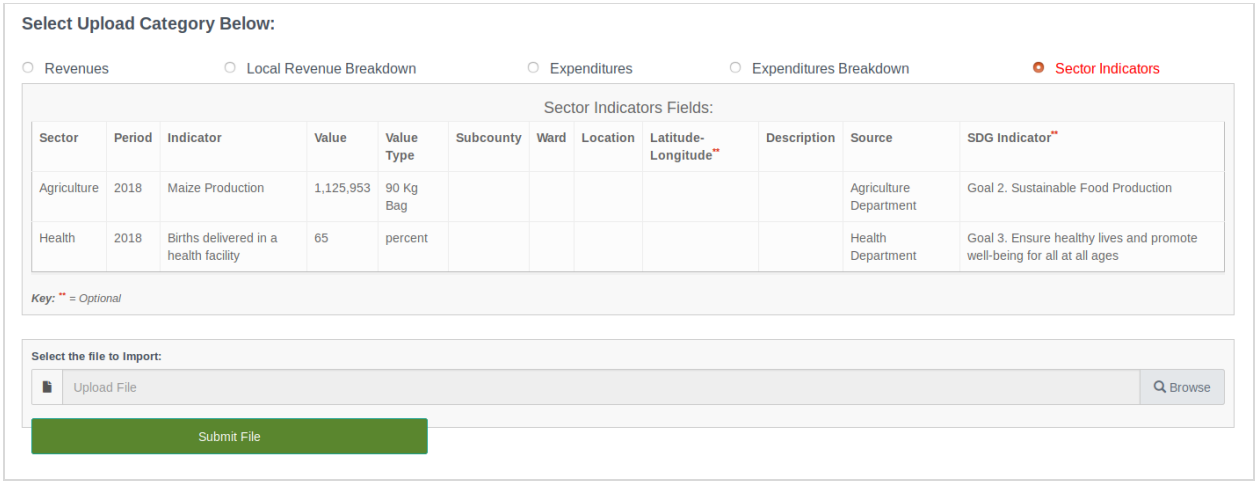


Budget Period	Period Length	Department	Sub-Entity Type	Sub Entity	Budget Allocation	Exchequer Issue	Final Expenditure	Subcounty**	Ward**	Location**	Sector	SDG Indicator**
2019-2020	Full Year	Department of Planning	-	-	540,587,899	353,656,450	489,948,974	-	-	-	Planning	-
2019-2020	Full Year	Department of Finance	Program	School Feeding Program	120,587,000	0	129,948,974	Marakwet East	-	-	Finance	Zero hunger

Figure 53: Data upload functionality - Expenditures Breakdown

vii. Data Upload: How to upload Sector Indicator Data

1. Click on the “Sector Indicators” tab
2. Use the template example / table provided as a guide to columns expected. In your document, columns that are not featured in the template will be ignored
3. Click on “Browse” to select the document with data to be uploaded
4. Click on “Submit File” to send the document to the server
5. Click on “Upload Data” to approve upload of the data previewed from the submitted document.



Select Upload Category Below:

Revenues | Local Revenue Breakdown | Expenditures | Expenditures Breakdown | Sector Indicators

Sector Indicators Fields:

Sector	Period	Indicator	Value	Value Type	Subcounty	Ward	Location	Latitude-Longitude**	Description	Source	SDG Indicator**
Agriculture	2018	Maize Production	1,125,953	90 Kg Bag						Agriculture Department	Goal 2. Sustainable Food Production
Health	2018	Births delivered in a health facility	65	percent						Health Department	Goal 3. Ensure healthy lives and promote well-being for all at all ages

*Key: ** = Optional*

Select the file to Import:

Upload File | Browse

Submit File

Figure 54: Data upload functionality - Sector indicators

Quiz Question
1. *How much money has Turkana County received since its inception[24]? Is it KSh50 billion, KSh40 billion or KSh33 billion?* 2. *What are the implications?*

[24] See the impact of data on this issue by the President, Deputy President and the Governor of Turkana County: https://pesacheck.org/how-much-money-has-turkana-county-received-since-its-inception-de8a55fbb9ee

Chapter 3: The Open County Initiative - Encouraging data uptake and data use

***Goals setting for the chapter**: In this Chapter, you will learn why it is important to keep data updated. This chapter will cover the following topics:*

1. *Good practices*
2. *How to update data*

Section 1: Good practices

There are many things that go into identifying a data set and keeping it regularly updated and formatted:

1. For Open Data to be relevant, there is a need to continuously engage with users. This cannot happen if the data is redundant or obsolete. Engaging often with actual and potential users and re-users of the data help ensure that the next iteration of your service is as relevant as it can be.
2. Data should be packaged in formats that can be digested by all users: developers, CSOs, department staff, researchers and citizens. This could mean putting the data into APIs[25], spreadsheet docs, text and zip files, FTP servers and torrent networking systems. Thus, it should be machine-readable.
3. Data should be discoverable: links should be well organized so that users can easily find what they are looking for. For example, once the dataset is saved with the correct real-time resource settings, a URL path containing a push API key will appear. This path, appended to your domain base URL is where the platform will expect data to be sent after publication.
4. Open data should also be reusable. Important to this is having clear references and ensuring that the rights to publish are properly cleared and understood, starting from data collection through to publishing.

Alignment of data to the PB process, and any other existing formats when uploading it in the OC platform. This is important as it would make OC the one stop shop for all reporting needs.

One of the sustainable ways in which to keep GIS data refreshed is to engage community volunteers who can regularly update the data.

[25] See a similar API for OC: http://opencounty.org/api.php

With a central repository of data, it will be easier for departments to share information.

Section 2: How to update/amend data in the OC Platform

Each import is saved using a unique session key tied to the user logged in, import category and time. For each of the categories, the user who uploaded or an administrator can view and amend the imported records.
To modify an entire import set, click on category menu on the left, then click on the "Imports" link.

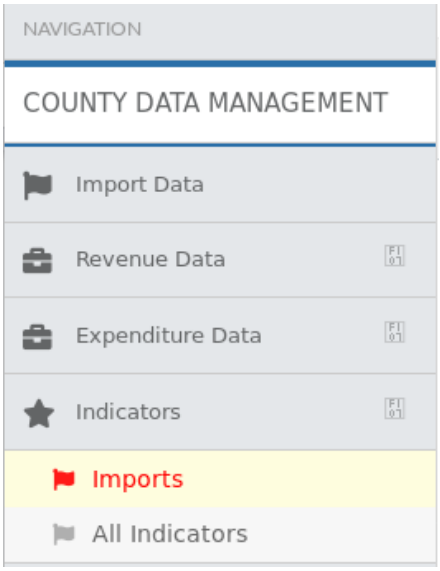


Figure 55: Import Access Menu

Imported Indicators »

Show 10 entries Search:

#	Id	Sector	Sector Sub	Title	Num Records	Posted By	Date Posted	Show	...
1	1557319755	Administration	Intergovernmental Relations	ID Registration	16	Linus	May 25 2019	No	More
2	1557319755	Administration	Intergovernmental Relations	Voters	16	Linus	May 25 2019	No	More
3	1557315611	Productive and Economic	Cooperatives	COFFEE MARKETING CO-OPERATIVES	1	Imelda	May 25 2019	No	More
4	1557315611	Productive and Economic	Cooperatives	DAIRY MARKETING CO-OPERATIVES	1	Imelda	May 25 2019	No	More
5	1557315611	Productive and Economic	Cooperatives	HORTICULTURE CO-OPERATIVES	1	Imelda	May 25 2019	No	More
6	1557315611	Productive and Economic	Cooperatives	HOUSING CO-OPERATIVES	1	Imelda	May 25 2019	No	More
7	1557315611	Productive and Economic	Cooperatives	MATATU SACCOS	1	Imelda	May 25 2019	No	More
8	1557315611	Productive and Economic	Cooperatives	RURAL SACCOS	1	Imelda	May 25 2019	No	More
9	1557315611	Productive and Economic	Cooperatives	TEA MARKETING CO-OPERATIVE	1	Imelda	May 25 2019	No	More
10	1557315611	Productive and Economic	Cooperatives	URBAN SACCOS	1	Imelda	May 25 2019	No	More

Figure 56: Sample Grouped Imports List - Imported Indicators

How is data amended?

To amend an import group e.g. to keep as draft or to publish / make visible to the public:

I. Click on the title of the import

II. Make the required changes in the form that is displayed

III. Click on Submit.

To amend individual imports, click on the “All Indicators” link to get a list of all indicators in the portal.

All Indicators »

Show 10 entries Search:

#	Sector	Sector Sub	Title	Value	Value Type	Date Updated	Sub County	Serial Ward	Posted By	Show	...
231	Productive and Economic	Livestock	Eggs (Turkey)	820	Number	May 25 2019	Marakwet West		Imelda	No	More
265	Productive and Economic	Livestock	Eggs (Turkey)	270	Number	May 25 2019	Marakwet East		Imelda	No	More
178	Productive and Economic	Livestock	Eggs ind.	1600632	Number	May 25 2019	Keiyo North		Imelda	No	More
208	Productive and Economic	Livestock	Eggs ind.	2743470	Number	May 25 2019	Keiyo South		Imelda	No	More
229	Productive and Economic	Livestock	Eggs ind.	2891106	Number	May 25 2019	Marakwet West		Imelda	No	More
264	Productive and Economic	Livestock	Eggs ind.	1767600	Number	May 25 2019	Marakwet East		Imelda	No	More
283	Social	Education	Employed VTC graduands		Number	May 25 2019	Marakwet West	Arror	Felix	No	More
286	Social	Education	Employed VTC graduands	0	Number	May 25 2019	Marakwet West	Cherangany/Chebororwa	Felix	No	More

Figure 57: All Indicators list

To edit an entry, click on the record's title, to display its full details. Make the desired changes and click on Submit. Only an authorized Admin or the user who uploaded the record can modify it.

Section 3: What are the levels of access?

There are five main levels of access in the portal as described below:

a. Administrator - The administrator has full read and write access to all sections of the portal. This includes adding or editing navigation Links / Pages, Budget, Indicators and leadership data, User Accounts and System Settings
b. Content Administrators - These are granted privileges to only add and edit data, including imports
c. Basic User - A Basic user can access and upload / edit content under all sections but that content will not appear online automatically
d. Sectional Users - These are granted access to only specific sections of the portal. For example, if allowed access to Indicators, a user will only be able to import

and add indicator data. Editing is restricted to only data the user has added to the portal.

e. Content Approvers - These are Admin type users with the capacity to only edit and/or approve uploaded data, so that it may be visible online.

Quiz questions
1. This term is used to describe the process of forecasting, or simply discovering patterns in data that can lead to predictions about the future. *a. customer relationship management* *b. PERT chart* *c. data mining* *d. enterprise risk management* *e. Histogram* *2. A solid information governance program will rely on input from a few departments rather than many, as it follows the old saw that too many cooks spoil the broth.* *a. True* *b. False*

Part 3: MANDATING THE DATA DESK

Chapter 1: Standards and Norms

***Goals setting for the chapter**: In this Chapter, you will learn about Information Governance frameworks: legislative and existing policies allowing for harnessing and sharing data including:*

1. *Guidelines to data collection and management;*
2. *KNBS guidelines; and*
3. *Interoperability guidelines.*

Section 1: Guidelines to data collection and management

Data governance

It is the exercise of authority, control and shared decision making (planning, monitoring and enforcement) over the management of data assets. Data governance is a core component of 9 disciplines which tie data management together as shown in the figure below:

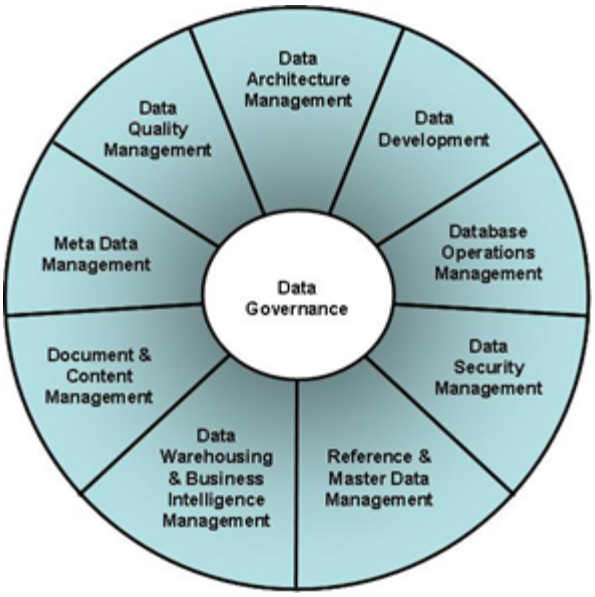


Figure 58: Data management functions (Source: DAMA DMBOK)

Often, data across one or multiple organizations is CRUD in nature (Create, Read, Update, and Delete); but there is also often an unwillingness to have this shared by multiple organizations or unities within an organization. Data governance is much needed in order to engage each of the above 9 disciplines in order to overcome these data 'silos'. For example, more licensing (data security management) or more hardware (data warehousing and business intelligence management) may be required. Specifically for the county government, data governance is the approach that will shape the philosophy of data acquisition, management and archiving; thus a governance program tries to bridge the Information Technology needs and those of various departments at the county county government together in order to define data elements and the rules that govern the data across applications.

Why data governance is important

It is tempting to prescribe general mainstream data governance frameworks like COBIT 5[26], ISO 9001:2015[27], DAMA DMBOK[28] for master data management, ITIL[29] for change and Information Technology services management and operations, Prince2[30] for project management, SCRUM[31] for agile software development, or even more vendor-specific systems like Oracle Fast track[32] for data warehousing development.

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[26] Control Objectives for Information and Related Technology (COBIT) is a framework created by Information Systems Audit and Control Association (ISACA) for information technology (IT) management and IT governance as a broad set of resources, tools and guidance for managers to managers to bridge the gap between control requirements, technical issues and business risks for the entire enterprise. (see: http://www.isaca.org/cobit/pages/default.aspx)

[27] This is one of the standards in the ISO 9000 family include that sets out the requirements of a quality management system; All the requirements of ISO 9001:2015 are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides. (see: http://www.iso.org/iso/catalogue_detail?csnumber=62085)

[28] DAMA (Data Management) International is an organization concerned with advancing information and data management practices. Consequently, the DAMA International provides the Data Management Body of Knowledge, or DAMA DMBOK which defines a standard industry view of data management functions, terminology and best practices, without detailing specific methods and techniques (see: https://www.dama.org/content/body-knowledge)

[29] IT Infrastructure Library (or ITIL) was commissioned by the Central Computing and Telecommunications Agency (CCTA) in Great Britain due to the lack of quality of the IT services procured by the British Government. The objective is to improve the quality of IT services but decrease the associated costs by using efficient and effective best practices that permeate the entire IT organization.

[30] PRINCE2 (PRojects IN Controlled Environments) is a non-proprietary process-based method for effective project management which includes best practices such as: business justification for decisions; clear project governance structures; product based planning and managing projects through controlled phases.

[31] Scrum is an agile framework to manage processes in a project, usually software development.

[32] http://www.oracle.com/us/solutions/045784.pdf

Nevertheless, based on the different needs of the departments at the county government (and nature of their reporting needs across multiple frameworks) prescribing such nuanced approaches to data governance may not work long term since there are multiple stakeholders with complex relationships to data generation and ownership. As an example, the **Inception Report** on readiness for OC Platform adoption at the county level reveals that data collection sometimes occurs in an ad-hoc manner depending on various factors including data skills and availability of funds.

Important good practice that should guide data uptake and use at the county government

Consequently, this manual prescribes four basic practices which OI has found useful for delivering tangible results and which are not based on any specific approach. Used effectively (singly or in combination) they address quality and availability of data and its impact on how decisions are subsequently made in an organization. These are summarized below:

1. **Top-down:** a decision model based upon authority patterns. Once made, decisions are generally not open to debate, and compliance is not optional – people will do as they are told. Consequently, if a policy exists at the county (or from national government), the top leadership must be seen to adhere to the policies set, else the middle management and lower ranks will also disregard laid policies.
2. **Bottom-up**: this is where county staff on a daily basis will be engaged and will make certain decisions which filter upward. This is a good way in which certain good practices could become normative because they are iteratively tested and tried over time.
3. **Centre-out**: this is where some hired experts or centralized resources who will act in the best interest of the county based on their skills and experience as well as independence. The top management may later issue a mandate (make a top-down decision), but before that happens, it is the centralized resources (such as budget) that drives the options and considers their impact on stakeholders.
4. **Silo-in:** it brings together representatives from multiple groups who can craft a common path for action. Thus, multiple perspectives will be explored and the impact to various stakeholders is often assessed. Thus, the decisions from such a process, though slower to gain credibility, will often stick since the argument that some stakeholders have been left out is totally eliminated.

Table 6: Advantages and disadvantages of each of the data governance models[33].

Governance Model	***Advantages***	***Disadvantages***
Top-down	*Applying a top-down approach to any of the nuanced frameworks mentioned earlier (ie. ISO 9001:2015, ITIL, COBIT, etc.) on a specific Information Technology environment can reduce the amount of documentation which makes it much clearer to different parts of the business.*	*Often organizations are fragmented with numerous coordination points needed. In the public sector especially, centralized decision making may not be supported by multiple departments and ministries.*
Bottom-up	*There's a big difference between the theory and praxis of implementing data governance. Actually implementing a new system (in the confines of data governance) affords the opportunity to evaluate the maturity of processes and whether they might work in other areas of the organization. A bottom up approach is the best way to provide such evidence and garner top management support*	*It is possible that the strategy may be driven necessity rather than need. This may not be a bad thing altogether; nevertheless there are higher chances of failure especially if the bottom up approach is driven more by the availability of existing infrastructure and resources as opposed to the business needs. Because of a lack of focus on business needs, the interventions will not scale to other areas of the organization; and the misfit might require major (and expensive) changes to the organization structure or how data is acquired, managed and archived.*

[33] Thomas, G.Choosing Governance Models. http://www.datagovernance.com/choosinggovernancemodels/ [viewed 19/05/2018]

Centre-out	*Center-out decisions are made by one or more centralized resources who will consider options and then decide what is best for the enterprise. Because they carry skills and experience in the domain and their relative independence, they have to persuade multiple stakeholders and not only share but also get their views. This results in better educated stakeholders and better quality outcomes at the enterprise level.*	*Admittedly this will be a very slow process to eventually attaining data governance. In fact, until a small core team of stakeholders first meet and deliberately design a framework that suits the culture, organization culture, existing processes, there should be no cross functional larger meetings. This is because the lack of clarity, lack of expectations, frustration and mistrust will have fewer and fewer people attending meetings until eventually the data initiative 'fizzles' away.*
Silo in	*Silo-in decision flow models are effective at making decisions that will be upheld because they eliminate the arguments that certain stakeholders have been left out and so they will not abide to a process or decision.*	*Silos pose certain business risks – one important one is not being nimble enough to act quickly in a changing business environment. Therefore, inherent in a silo-in approach is an acknowledgement that they exist; and that even silos can be healthy.* *Whilst may not be entirely untrue, breaking down unhealthy organizational silos that have been entrenched (especially in public service) over many years can be very challenging – especially because most people are averse to change.*

At OI, we uphold that a hybrid of these models would work best based on the culture, county government structures and existing decision making processes; since decisions occur at multiple hierarchical levels (of power and politics) especially across the different public sectors involved in the running of the county government. For example, if the data governance rules are important across multiple departments, then it makes sense from them to be mandated from the top-down; but when the rules apply primarily to one department, then a bottom-up model may suffice. For a second example, one of the preferable models is the use of 'silo-in' method and merging it with a 'top-down' model since a lot of the work by the technocrats in the county government (especially the department of Finance and Economic Planning) ultimately reports to the County Assembly - who have a political mandate. Possibly, even a 'center-out' model may also be incorporated since it will rope in experts who can benchmark and provide empirical methods that reduce the risks by demonstrating how they have tackled similar data management and quality issues elsewhere.

Data ownership and two important roles.

One of the key tenets in data governance is that no one individual should claim ownership over data; therefore it is owned by the county government and not even by the departments within the county government. Nevertheless, ownership must be appropriated to departments within the county government in order to have accountability. Thus, a level of authority must be appropriated to 'Data Owners' and who will often be picked from each department. The Data Owners have a clearly outlined role that determine who can access what data, in accordance with security protocols, privacy requirements, compliance management, and other risks.

Also, within the county government, there are scenarios where complex data arrangements occur due to complexity in the organization structure (due to a multi-agency approaches or interactions with national actors) for integration of data systems - a good example is the usage of IFMIS alongside other revenue management systems localized at the county government. In these arrangements, it is important to identify champions (called Data Stewards) who will be responsible to coordinate the accountability; but the final ownership is still ought to be attributed to the data source (that is the person/departments collecting the data).

Clear responsibilities must be assigned (people need to be clear on what it is that you want them to do) on mechanisms for resolving data-related issues, what escalation paths exist and who is responsible for disseminating information to the data stakeholders.

Approaches to tools and Information Technology

The main ICT requirements (we can also call them ICT indicators) that are important to create a more robust and effective data management and data governance ecosystem (which impacts the Open County Initiative) by the county government are:

1. The state of Internet connectivity
2. Access to, and stability of, electricity
3. Necessary hardware and physical infrastructure and associated costs to access the internet (by both individuals and institutions)

Maintenance (both physical and service) costs to maintain infrastructure

The needs of the county governments are complex – not just from one sub-county to the next but also across multiple departments collecting data in this environment. It is probable that the actual information systems upon which the actual data is stored and processed will take the form of web applications (a relational database, middleware and client access via a web browser) – typically hosted in the cloud (to improve the availability, performance and speed as well as scalability of the applications). Choosing the right tools and approaches to data gathering is crucial. The first important question is whether to adopt a customized approach/tool (custom software) or pick existing frameworks and tools in order to benchmark with other similar implementations elsewhere (off-the-shelf software).

The table below summarizes the considerations that have to be made:

Table 7: Pros and Cons of a software/tools approach

Pros	***Cons***
Customized tools/software	
• *One can start with the minimum necessary requirements and add more features as needed* • *Can be fitted to exact business needs and processes* • *Changes requests can be made quickly*	• *Very high initial cost* • *All changes and feature requests will be billable (since they may be applicable to only one type of business)*
Off the shelf software	

• *There are lower up-front cost* • *It contains many features, often more than you need* • *Support is often included or can be added with a maintenance contract* • *Upgrades may be provided for free or at a reduced cost* • *If it is a software-as-a-service (SaaS) there is no hardware or software to install*	• *They may be slower to adapt to the business needs even after its acquisition* • *Feature and change requests may get ignored if they do not benefit the larger customer base* • *May require you to change your process to fit the software* • *One may incur higher customization fees for very specific business needs*

Besides the above approach, often, technologies are deployed based on the problem at hand and the sector of interest; this manual prescribe 4 main generic considerations:

1. **Degree of automation:** whether fully manual, semi-manual, semi-automated, and fully automated, describing the extent to which processes are operated by humans or by machinery. This therefore applies to the different county governments depending on if an MIS and the requisite procedures may exist by which to collect results sector data or other.
2. **Technological modernity:** refers to whether the process techniques and Information Communication Technologies in place is the one commonly in place today, or is significantly older or newer.
3. **Turnover of production/consumption:** as low, medium, and high in volume per unit time, describing the scale of operations and how this scale relates to a county.
4. **Spatial intensiveness/extensiveness:** these are described as low, medium, and high resource/energy input/output per unit time, describing the spatial effectiveness and resource use efficacy of the site.
5. There are emerging technologies for data collection, processing and dissemination using mobile devices, and which is a growing area of interest; citizen engagement is an important opportunity for crowd sourced data.

Example Box 14: *Important themes that lead to improving data quality*
1. ***Theme 1- Availability:*** *Availability is the more fundamental overall theme that has to be underscored before any data governance initiatives can be undertaken. Does any centralized data exist even if not in electronic form? Whereas electricity, internet and software/hardware resources may facilitate*

the acquisition, management and archiving of data, it is important that processes do exist in the first place to collect centralized data.

2. ***Theme 2 - Statutory Reporting and effect it has on data collection/mgmt./utilization:*** *This directly speaks to the data governance models that have been discussed previously, namely: top-down, bottom-up, silo-in and center-out. The advantages and disadvantages of each of these models have been discussed in view of culture, organization structure (and people) as well as processes and how they impact on acquisition, management and archiving of data.*
3. ***Theme 3 - Coverage and Sampling in data collection:*** *In Kenya for example, A standard demographic and health survey is published (Standard DHS is every 5 years using a systematic sample building from clusters developed in the previous DHS of 2009; last one in 2014[34]) with other interim surveys focusing on a smaller set of indicators for monitoring purposes. The same data is used by the county governments for planning.*

   In addition, the process of developing the 2nd generation CIDPs has led to posing of certain questions, what is the state of the data of the particular sector? Is it?

   a. Sufficiently complete to provide for model input
   b. Incomplete datasets for which there is mitigation
   c. Missing datasets for which there's no recourse.

   In answering these questions and examining size and significance of the sector (viz a viz the resources involved) the scale of the data collection and sample design may be impacted.

   4. Theme 4 - Mode of collection and processing: *This focuses on the tools that are used to collect data. Note that in the FCA cities, translation must be done to the major local languages. Often, data gathering occurs through the use of questionnaires. And even with the proliferation of mobile technology and connectivity technologies like Wi-Fi, 4G, 3G, GSM (SMS, USSD among others), data collection at large scale will remain a challenge to the level of resources and skills needed to coordinate such activities. The automation of the process is impacted at multiple levels by availability (or lack) of necessary hardware/software and infrastructure such as electricity to facilitate any of the levels of acquisition, management and archiving of data.*

   Ultimately, even where data is collected in a physical format, it will be processed electronically; thus software will be used for management of data.

[34] https://www.knbs.or.ke/2014-kenya-demographic-and-health-survey-kdhs/

The important consideration then becomes what skills exist within and in other sister departments/organizations to handle the technology? This may significant where data will be shared across multiple organizations.

5. Theme 5 - Frequency of collection: *Service delivery workers also often bear the brunt of the data collection burden; this often happens at the expense of provision of actual services such as patient health care and which adversely impacts the quality of data.*

A sound approach to data collection would seek a top-down approach where the lower levels provide detailed inputs on what data might be most needed as well as a bottom-up approach that considers the other human and financial costs of collecting data before prescribing a frequency cycle. This would also differ from sector to sector depending on the criticality of the data.

6. Theme 6 - Best practices on data labelling and tagging, granularity, metadata practices: *Metadata exists in data governance to facilitate the management of data sources, provide role-based access to valued data assets (by extracting meaning and relating data to the users needs), and make data integration sustainable. This is often achieved through a bottom up approach to unpacking multiple data source in cataloguing solutions by:*

a. *Grouping data according to quality standards*
b. *Using metadata to determine who can access data,*
c. *Visualizing the Metadata and the data sources that they point back to so user can absorb it with a single look*
d. *Listing important elements of both Metadata and the sources it points to is valuable for the purposes of integration and the maintenance of disparate databases*

7. Theme 7 - 3rd party verification and data audit mechanisms: *This will mostly manifest as the security and privacy protocols which the data owners have prescribed for processing and curation of data. In this case, a county data desk will undertake this important function - ensuring that the right questions are posed before data is uploaded.*

8. Theme 8 - Dissemination, access and publication: *We must ask ourselves what is the best format for data publication and access. Below is a useful summary.*

a. *What format is the data available in?*
    i. *Editable soft files, online*

ii. Non editable (e.g. pdf) soft files, online
iii. Editable soft files, pen drives
iv. Non editable soft files, CD/DVD
v. Paper

b. Who is this data available to?
i. Anyone can access (without request)
ii. Anyone can access (but upon request)
iii. Only Ministries, Departments, Agencies and other County Governments (without request)
iv. Only Ministries, Departments, Agencies and other County Governments (but upon request)
v. Not shared (used only within the county government)

9. Theme 9 - User Satisfaction: *has to do with putting a mechanism in place to rate user satisfaction and comments on the quality of service delivery(as well as the data quality)*

10. Theme 10 - Utilization of data: *After all these investments have been made in data, are we actually using it to inform decision making and planning? Do all stakeholders have access to it? Are the issues relating to ownership also resolved? What budgetary allocations have resulted from the use of data?*

Effective data governance summarized

An effective data governance strategy requires careful planning, the right people and appropriate tools and technologies. This section offers a set of best practices around data governance to accompany the approach to tools and technologies, which transform data into information that is comprehensive, consistent, correct and current.

1. **Buy-in but not commitment: T**he business needs to do more to create the data definitions, business rules and key performance indicators (KPIs) for a data governance program; the reality is that often data governance tasks are not prioritized and business managers are not adequately equipped – and so decision support remains a daily firefight.
2. **Think globally and act locally:** It is important to phase the data problems in incremental deliverables.
3. Strike the correct balance between being too high level such that the substantive data issues are never really dealt with and getting bogged down by too much detail by attempting to define every data field in every table across the sector.
4. A failure to implement will make organizations return to their old habits and data governance loses momentum.

5. **Technology is just an enabler**: Vendor hype and high price tags raises the expectations that software will do the hard work; but it is the interaction between people, processes, technology and culture which drive the success or failure of data governance.
6. Build continuous and sustainable systems which survive the long haul by infusing funds and training to the data initiatives and adopting processes which support continuous improvement.
7. **Balancing mandate, incentives and good will**: Whilst enforcement works at the initial stages to standardize data governance rules, mandate alone will not work, there is also need to understand the role of good-will and incentives and striking the delicate balance since neither of these can work alone.
8. It is important to use common/well understood tools and technologies as much as is possible to ensure the data quality, data catalogue remain consistent across departments (in the same county) or where possible across ministries and agencies working with the county government. This is one of the main reasons why a lot of governments adopt open standards in implementation of information systems – it aids not only in reducing the total cost of ownership but also encourage use and reuse of data elements and investments.
9. **Managing change management**: Data governance will initiate changes which causes people to be fearful and anxious about their jobs. People, processes and organizational culture issues, and the internal politics resulting from them, are challenges that need to be tackled.

Section 2: KNBS guidelines

KNBS is mandated by the Statistics Act of 2006; part of this mandated is the establishment of standards and promote the use of good practices and methods in the production and dissemination of statistical information.

Example Box 15: *Two informative guidelines provided by KNBS in the recent past.*
1. *Summarized Census Guidelines[35] including - why everyone should participate in the Census and how this information helps determine locations for schools, roads, hospitals, and more. Businesses can also use census data to locate supermarkets, shopping centers, new housing and other facilities; among others.*

[35] https://www.knbs.or.ke/census-frequently-asked-questions-faqs/

2. *KNBS has provided inputs into the Kenya SDG Monitoring framework*[36] *adopted in June 2017.*
3. *Data quality assessment framework for Balance of Payment Statistics*[37].

KNBS is also mandated through the Statistics Act of 2006 to establish standards and promote the use of good practices and methods in the production and dissemination of statistical information. This manual notes that explicit guidelines, norms and standards are still lacking to guide the process and quality of data collected by non-state actors and county governments. For instance, the fourth schedule of the Kenya Constitution of 2010 and the County Government Act 2012 (section 104, specifically 105 (e), 106 and 107) dictate that data gathering is a shared role between the national and county government, though presently, counties are not permitted to undertake certain statistics functions like population census.

Whilst explicit guidelines are still lacking on collection and quality of data at the county government (the County Statistics Bill is still under deliberation in the Senate), we have found a comprehensive Data Quality Assessment Framework (DQAF) for Balance of Payments Statistics[38] which also provides very useful guidelines that can extend to other sectoral data; and which can be adopted by the county government.

Table 8: Transferrable principles of data quality borrowed from the Data Quality Assessment Framework for Balance of Payments Statistics

Prerequisites	
Legal and institutional environment	1. ***Collecting, processing and disseminating:*** *The statistics act identifies KNBS as the principal agency of the government for collecting, analysing and disseminating statistical data in Kenya and permits KNBS to plan, authorize, coordinate and supervise all official statistical programmes undertaken within the National Statistical System (NSS).* 2. ***Data sharing:*** *The NSS includes producers and users of*

[36] http://planning.go.ke/wp-content/uploads/2018/04/SDG-Implementation-plan-2030.pdf
[37] https://www.knbs.or.ke/download/data-quality-assessment-framework-dqaf-balance-payments-statistics/
[38] Balance of payments statistics record economic transactions between residents and non-residents. ... Data are collected for all the major balances, inflows and outflows in the current, capital and financial accounts.

	statistics under the supervision and coordination of the KNBS and mainly comprises MDAs and county governments. *3.* ***Confidentiality of individual data:*** *KNBS cannot publish, or otherwise make available to any individual or organization, information that would enable the identification of any individual person or entity (Statistics Act - Section 22)*
Quality management	*1. KNBS is committed to providing quality statistics and associated services effectively and efficiently. KNBS is committed to a quality management principles - aligned to ISO 9001:2015 international standard - which are implemented by a dedicated quality team.* *2. Internal audits are to be carried out on a regular basis through an internal auditor.*
Integrity	
Professionalism	*1.* ***Impartiality of statistics****: it is important to build a reputation around impartiality, professionalism, scientific approach in the compilation of statistics.*
Transparency	*1. Disclosure of terms and conditions for statistical collection, processing, and dissemination: during the conduct of surveys and censuses, respondents are informed on the objectives of these surveys, their rights and obligations for information being provided* *2. When there's changes in methodology, the media are notified - through presentations and other notes.* *3. Official statistics are published at the same time (to both internal - within government - and external stakeholders). No one is given information before its official release.*
Ethical Standards	*1. All KNBS staff must abide by a code of conduct - exercising public trust in a worthy manner and in the best interest of the people of Kenya.*
Methodological soundness	
Concepts and	*This has to do with putting in place the correct research*

definitions	*design and analytical framework.*
Accuracy and reliability	
Sources of data	*Reliable and accurate data sources must be selected. There is also need not to use outdated data.*
Serviceability	
Periodicity and timeliness	*To decide whether data will be published quarterly or annually. Once this is decided, the publication should remain consistent.*
Data Accessibility	
Accessibility	*1. Presentation: Data is presented in clear charts, maps and tables* *2. Dissemination: Reports are published in hard and electronic copy on the KNBS website*
Metadata	*Metadata is provided alongside the published statistics and is available on the KNBS website*
Assistance to users	*1. Mentioning focal persons on the report as well as on the KNBS website* *2. Generally availing documents and service catalogues.*

All of the above good practices can also be adopted by the county governments.

Section 3: Interoperability guidelines

Lack of data standards (and compliance to them) for effective interoperability and embedding of good meta data to support important trends. Since county governments have multiple departments which create and use data, as well as multiple applications within each department, interoperability is a key area of concern.

This is a key requirement across the life cycle, including migration from legacy systems into the cloud, to operating in the cloud. Below are some key interoperability requirements:

1. **Data Portability**: It relates to the capability of moving data in and out of the data centre or cloud service environment. Typically, it is the cloud service data which is the concern for data portability and these are managed by cloud

service providers (such as Amazon or Azure, etc.). Hence, the county will need to contract service providers who understand on how the data can be imported or exported to other service providers in the cloud (and so data portability might not be a concern unless the county government is hosting their own data in local sites).

2. **System/Application Portability**: It relates to the capability of moving specific application codes to or from the cloud service. To port code from one cloud service to another, the target application environment must be usable by the application being ported.
3. **Quality of Service (QoS):** Everything in cloud computing is delivered as a service, so it is essential to ensure the quality of cloud service for user satisfaction. The terms and conditions of contract between the Service Provider and its Client (in this case the county government) are defined in Service Level Agreements (SLA). The SLA is a legally binding contract negotiated and agreed between a customer and a service provider. It contains the QoS as agreed including response time, throughput, error rate, availability etc. It may include other non-functional requirements such as timeliness, scalability and other terms and conditions as well. Service provider is required to execute service requests from a customer within negotiated quality of service requirements for a given price. The following are key aspects which County Governments need to look at incorporating in their SLAs.
    a. **Availability:** Availability can be defined as a design by which the downtime of systems, network, storage and infrastructure are standardized thereby ensuring uninterrupted services to its stakeholders. In other delivery models it is viewed from a software point of view like unavailability of services is related to downtime of applications deployed on the cloud, and unavailability of data is related to the downtime of associated storage infrastructure.
    b. **Performance:** Any of the unavailability cases can result in services being available with insufficient processing power to meet acceptable performance levels. Hence, a QoS definition of a cloud should define availability along with associated performance. The user perception of performance of cloud also depends on the performance of network links connecting the user to Cloud.
    c. **Response time**: In a cloud computing environment typically real-time scalable resources such as files, data, programs, hardware, and third party services are accessible to users from a Web browser via the Internet. The SLA agreement ought to also speak to this).
4. **Security:** Migrating an on-premise application to the cloud may present the county government with a number of security risks and threats like the protection of intellectual property, personally identifiable information that could

fall into the wrong hands. Making sensitive information available on the internet requires a considerable investment in security controls and monitoring access to the content.

In the cloud environment, the county may have little or no ability to store or backup processes and, as the data from multiple customers may be stored in a single repository, forensic inspection of the storage media and a proper understanding of file access and deletion becomes a significant challenge. Organized criminals and hackers see this as a new frontier to steal private information, disrupt services and cause harm to the enterprise cloud computing network. This is typically a key barrier for Public Sector adoption of the cloud. However, there are a number of mitigating processes which can be put in place to address this.

The following aspects need to be considered when drawing up SLAs and agreements with Cloud operators

1. **Data Integrity**: Data integrity in such a system is maintained via database constraints and transactions. Transactions should follow ACID (atomicity, consistency, isolation and durability) properties to ensure data integrity. Most databases support ACID transactions and can preserve data integrity.
2. **Data Availability**: A multi-tier architecture needs to be adopted, supported by a load balanced farm of application instances, running on a variable number of servers. Resiliency to hardware/software failures, as well as to denial of service attacks, needs to be built from the ground up within the application. At the same time, an appropriate action plan for service continuity and disaster recovery needs to be considered for any unplanned emergencies.
3. **Data Location**: In general, cloud users are not aware of the exact location of the data center and do not have any control over the physical access mechanisms to that data. Most well-known cloud service providers have data centers around the globe. In many cases, this can be an issue. Due to compliance and data privacy laws in various countries, locality of data is of utmost importance in many enterprise architectures. Resolution of this issue is typically also the role of the national governments, in laying out policies governing this aspect.
4. **Data Privacy**: Data privacy is also one of the key concerns for Cloud computing. A privacy steering committee should also be created to help make decisions related to data privacy. This is also an area where the National Governments can provide guidance and set standards for county governments to follow

Example box 16: *Fundamental Principles of Official Statistics (revised, 213)*

- ***Principle 1****. Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information.*
- ***Principle 2.*** *To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional*
- ***Principle 3.*** *To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.*
- ***Principle 4.*** *The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.*
- ***Principle 5.*** *Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.*
- ***Principle 6.*** *Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.*
- ***Principle 7.*** *The laws, regulations and measures under which the statistical systems operate are to be made public.*
- ***Principle 8.*** *Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.*
- ***Principle 9.*** *The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.*
- ***Principle 10.*** *Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.*

Source: http://unstats.un.org/unsd/dnss/gp/FP-New-E.pdf

Quiz questions

1. *What qualifies as a record?*
2. *When and how do I dispose of records I no longer need?*
3. *What are the main sources of data for the county? Where does the data come from?*
4. *What is file record maintenance?*
    a. *refers to the periodic updating of files*
    b. *refers to recording office conversations regarding maintenance*
    c. *refers to the physical cleaning of records*
    d. *the ability of a record to be duplicated*
5. *1. _____ is a contingency plan that has been put in place to retrieve records in case they are lost, destroyed, or compromised.*
    a. *records management*
    b. *inactive record maintenance*
    c. *FERPA*
    d. *disaster recovery*
6. *If you last visited your dentist's office ten years ago, what type of record would that be considered as?*
    a. *confidential*
    b. *inactive*
    c. *open*
    d. *active*
7. *What is interoperability?*
    a. *The seamless, secure, and controlled exchange of data between applications*
    b. *Software that adapts its content and pacing to the current knowledge level of the user*
    c. *The reuse and repurposing of digital materials in teaching, researching, and learning*
    d. *None of the above*

Chapter 2: Principles of (electronic) records management

***Goals setting for the chapter**: In this Chapter, you will learn about electronic records management.*

1. *Principles, procedures and structures required to create, and maintain authoritative, reliable records.*
2. *Legal and policy guidelines (at national/subnational) level.*
3. *Information technology, tools and infrastructure*
4. *Administrative data collection*

Section 1: Procedures and structures

Records must be recognized as a key resource for good management. Sound records management is a vital aspect of ensuring transparency and accountability. Good record keeping practices contribute to the following:

1. Creation and maintenance of accurate and reliable information;
2. Easy accessibility to information;
3. Transparency and accountability;
4. Departments within the county are performing their functions efficiently;
5. Availability of authentic, reliable and tangible records to fight inefficiencies and even corruption; and
6. Ensures resources are being matched to objectives.

Records form the foundation of good and accountable administration. Disorganized and poorly managed records lead to inability to access information needed to support policy formulation, implementation and delivery of programs and services. Failure to manage records leads to build up of closed records, overcrowding and disorganization. This makes it difficult to retrieve and use records efficiently.

1. Decisions are taken on ad hoc basis without the benefit of records;
2. Fraud cannot be proven and meaningful reporting and audits cannot be carried out;
3. Government actions are not transparent;
4. Citizens cannot protect or claim their rights;
5. Citizens cannot make an informed contribution to the governance process;

The international standard for information and documentation-records management, ISO 15489, applies to the creation, capture and management of records regardless of

structure or form, in all types of organizations and technological environments, over time. An organization seeking to conform to ISO 15489 (or towards best practice) needs to have the following in place:

1. **A records management policy** whose objective is the creation, maintenance and management of authentic and reliable and accurate records that is capable of supporting business functions and activities. The policy should be endorsed and adopted at the highest decision making level, and should be implemented throughout the organization;
2. **Lead records management responsibility and accountability** should be defined and assigned to a person with appropriate authority. However, all employees of the organization are responsible and accountable for keeping accurate and complete records of their activities. Those who create records should ensure that the records they create are captured in the official filing system;
3. Organizations need to **create and maintain authentic and reliable records,** and to protect the integrity of those records for as long as required. This will include:
    a. Ensuring that reliable records are created – a reliable record is one whose contents can be trusted as full and accurate representation of transactions and activities captured on the record;
    b. Assessing the risks that would result from failure to maintain authoritative records;
    c. Preserving records and making them accessible over time in order to meet business requirements;
    d. Complying with legal and regulatory requirements and organizational policy;
    e. Ensuring that records are maintained in a safe and secure environment;
    f. Safeguarding the integrity of records - this refers to their being complete and unaltered;
    g. Compliance-records should be managed in accordance with the legal and regulatory
    h. environment;
    i. Providing an appropriate storage environment and media that afford records adequate protection; and
    j. Records systems should provide timely and efficient access to, and retrieval of records needed for business and accountability requirements.

With the rise of digital content, and our increasing reliance on it, changes to the way we manage our records are inevitable - this is now addressed in the ISO 15489-1 standard. It was once the case that records were equated with only documents and

files. However, today, we keep and make records in various forms - including electronic databases, video and audio. But whether they are data, documents or some other form of information, the job remains to properly contextualize and manage them over time. Further, there are increased expectations of transparency in decision making from business and government, the general public, customers, users of services, records' subjects, and others with an interest in how records are created, captured and managed. Lastly, security threats to records has become very significant to multiple stakeholders - both within and outside of organizations.

ISO 15489-1 establishes principles for the design, implementation and management of policy, information systems and processes that allow:

1. Create and capture of records that meet requirements for evidence of any organization activity.
2. That enable appropriate action to be taken to protect the authenticity, reliability, integrity and useability of records.

Section 2: Principles in creation, and maintenance of authoritative, reliable records.

a. Concept of records life cycle

Records should be managed throughout their life. A record goes through a life cycle consisting of three phases:

1. Active or current: These are the open files that are in use for conducting the current business of the organization. Current records and documents are constantly in use and should therefore be maintained close to the users
2. Semi-current: These consist of the recently closed files. They are only infrequently used.
3. Inactive or non-current phase: These are documents that are hardly ever referred to

b. Opening a record

A record is opened when an existing one matures for closing and the next volume is opened, when a new subject or activity arises which cannot be accommodated in the existing files, or when an existing file subdivides into new subjects. An official file should have the following qualities:

1. A file title that is clear and specific;
2. A file reference number that links the file to the approved file scheme and other official files;
3. Name of the organization on the cover;

4. A specific subject or activity; and
5. Security classification - open or confidential.

These are important metadata that will often accompany a record.

c. Storage of records

Records in the file should be filed in date order with the earliest ones at the bottom and the latest documents at the top. The records in the file will be folio numbered, that is serially numbered. This helps to maintain the order of the papers and facilitates early detection if the papers are removed or tampered with.

Whenever records are stored, a file classification scheme should be used to generate categories based on the functions and activities of the organization so as to guide the following objectives:

1. It ensures letters and documents are put in their right files;
2. Facilitates access and retrieval to records;
3. Facilitates procedural opening of files;
4. Ensures consistent and logical naming and referencing of files; and
5. Facilitates logical arrangement and organization of files.

d. Records movement

The records office controls and monitors the movement and use of a file or a document within the department. The purpose of controlling and monitoring of file movement is:

1. To monitor access to records by users;
2. To ensure a particular matter is dealt with by the responsible officer;
3. To ensure that the location of a file is known at all times;
4. Files are returned promptly to the registry once they have been seen by the indicated officers;
5. Files do not go missing; and
6. Officers do not overstay with files issued to them.

e. Electronic Records Management Strategy

A sound, integrated strategy reflects the relationship between records management and operations, and ensures records are managed in a way that supports the organization's daily work, long-term operational needs, and meets legal requirements.

Forms management is a part of records management. Often, forms (whether electronic or not) are designed for management, extraction or capture of new information. Forms management strategies will aim:

1. To provide each form a unique control number for identification purposes

2. To determine what forms are needed;
3. To design forms that are user friendly and that enhance information processing;
4. To ensure only authorized forms exist and are used; there is no proliferation of forms
5. To review existing forms periodically to establish whether they are still relevant and to
6. consider those that can be eliminated or consolidated

Some common problems with forms include:

1. Use of obsolete forms, e.g. forms requesting a user to indicate their ethnic tribe
2. Forms with vague captions and words and are poorly designed.
3. Forms that are unnecessarily complicated to fill
4. Forms that duplicate other existing forms
5. Forms that lack an identifying number or code

f. The Role of internal auditors

Auditors can contribute to better records management by noting and drawing the attention of the organizations to cases of weak and inadequate record keeping practices. Auditors should indicate where there is non-compliance with the requirements for good records management. They should report on and recommend sanctions and penalties against offenders.

Section 3: Legal/policy regulations on records management (at national/subnational) level.

Table 9: Various legislations and policy documents on management of public records issued by the Government of Kenya

The Public Archives and Documentation Service Act, Cap 19	1. *This is the principal law that governs management, preservation and disposal of public records in Kenya.* 2. *Section 5A of Cap 19 states that every Permanent Secretary or head of government department or chief executive of a state corporation or local authority shall supply to the Director two copies of any published or generally circulated documents or reports produced by that office whether in hard copy or microfilm; and the creating office may prescribe the period for which the document shall remain restricted from circulation to other public offices or members of the public.*

<table>
<tr><td></td><td>3. Section 8 of the Public Archives and Documentation Service Act, Cap 19, makes it an offence to destroy public records without the Director's authority.</td></tr>
<tr><td>The Chief Secretary's circular on the destruction of non-current government records Ref. OP.1/48A/66 of 28th November 1985</td><td>1. The circular states that it is the responsibility of the public offices to effectively manage their records.
2. The circular further states that "no valueless public records should be kept longer than necessary as this will result into wastage of public funds through uneconomical usage of office space and equipment.</td></tr>
<tr><td>Government Financial Regulations and Procedures, Chapter 23, section 4:2-5</td><td>These were issued to provide guidance on the management and disposal of accounting documents.
<table>
<tr><th>Records description</th><th>Retention period</th></tr>
<tr><td>Principal ledger</td><td>10 years</td></tr>
<tr><td>Cash books</td><td>10 years</td></tr>
<tr><td>Journals</td><td>3years</td></tr>
<tr><td>Payment vouchers</td><td>5 years</td></tr>
<tr><td>Paid cheques</td><td>3 years</td></tr>
<tr><td>Completed indent warrants</td><td rowspan="4">12 months after the end of the financial year to which they relate</td></tr>
<tr><td>Completed order books</td></tr>
<tr><td>Duplicate receipts</td></tr>
<tr><td>Duplicate payment vouchers</td></tr>
<tr><td colspan="2">Receipt books</td></tr>
<tr><td>Fully used</td><td rowspan="2">6 months after date of completion, but must be inspected by the Auditor-General</td></tr>
<tr><td>Obsolete, partly used</td></tr>
<tr><td>Obsolete, wholly used</td><td>None</td></tr>
<tr><td>Redundant</td><td>None</td></tr>
</table></td></tr>
<tr><td>Circular OP.1/48A/11/10 of 7th July 1989 on depositing of reports and other generally circulated documents in the Kenya National Archives</td><td>This circular from the Chief Secretary directs all PSs, Heads of Departments and state corporations to deposit with the Kenya National Archives all categories of published and unpublished reports and documents, including annual reports, project proposals, case studies, feasibility studies, surveys, periodicals and magazines.</td></tr>
<tr><td>Directorate of</td><td>The circular provides guidelines on time limits for the retention</td></tr>
</table>

<table>
<tr><td>Personnel Management (DPM) circular on personnel records- ref.No. DPM.12/6AVol. I (71) of 12th March 2008</td><td>of various categories of personnel records in the public service.
<table>
<tr><th>Category of Records</th><th>Retention Period</th></tr>
<tr><td>Records relating to recruitment Selection by authorized officers.</td><td>One year after the file is closed</td></tr>
<tr><td>Records relating to candidates selected for training.</td><td>3 years after file is closed</td></tr>
<tr><td>Records relating to promotions and appointments by Authorized Officers.</td><td>1 year after file is closed</td></tr>
<tr><td>Personal files of officers who have retired or left service.</td><td>15 years after file is closed except for senior officers in Job group ‘N’ and above which may be kept permanently. In exceptional cases, files of officers in job groups “M” and below may be considered for permanent preservation if the file is of some historical significance.</td></tr>
</table></td></tr>
<tr><td>Circular OP.39/2A of 14th April 1999 on cases of Missing and lost files and documents in the Public Service</td><td>The circular was issued by the Head of Public service concerning cases of missing and lost files in the public service and attributed the weakness to laxity and poor records management practices and in some cases result of corruption among civil servants</td></tr>
<tr><td>Circular OP.39/2A of 14 November 1999 on cases of missing and lost files and documents in the Public Service</td><td>This circular was a follow up to the 14th April 1999 circular and was issued by the Head of the Public service</td></tr>
</table>

Section 4: Information technology, tools and infrastructure

a. Background

Many developing countries have looked at Information Technology as a possible new tool to solve age-old problems of poverty, bad governance, and poor economic growth.

This trend is the same when looking at e-governance[39]. e-Governance is has three major components:

1. **G2C (Government-to-Citizen):** entails interaction of individual citizens with the government. Examples include electronic payments for land rates by citizens through electronic payments (mobile money, bank transfers) (https://epayments.nairobi.go.ke/selfservice/login). The e-Citizen Portal (https://www.ecitizen.go.ke/) is another example providing various services such as passport applications, foreigner visa applications, driving licence renewals among others.

2. **G2B (Government-to-Business):** involves interaction of business entities with the government. Examples include corporate tax filing or government procurement process through the Internet. Another example is the Kenya suppliers portal (https://supplier.treasury.go.ke:) for businesses intending to do business with the government. The portal is an extension of the government's Integrated Financial Management Information System (IFMIS) and potential suppliers can bid for any open tender[40].

3. **G2G (Government-to-Government)** involves large transactions among government Ministries, Departments, Agencies (MDAs) and county governments. An example is the government human resource system (https://www.ghris.go.ke/) which different MDAs use to validate payroll information for government employees. Another example includes services offered by county governments on the e-citizen platform; the county government of Mombasa offers a host of services on the e-citizen platform.

[39] Electronic governance or e-governance is the application of information and communication technology (ICT) for delivering government services, exchange of information communication transactions, integration of various stand-alone systems and services between government-to-citizen (G2C), government-to-business (G2B), government-to-government (G2G), government-to-employees (G2E) as well as back-office processes and interactions within the entire government framework

[40] As of1st January 2019, the new rules on awarding tenders indicate it will be compulsory for all suppliers to undertake all their procurement through the e-procurement system, IFMIS. Thus, suppliers must be registered in the Supplier Portal as a first step.

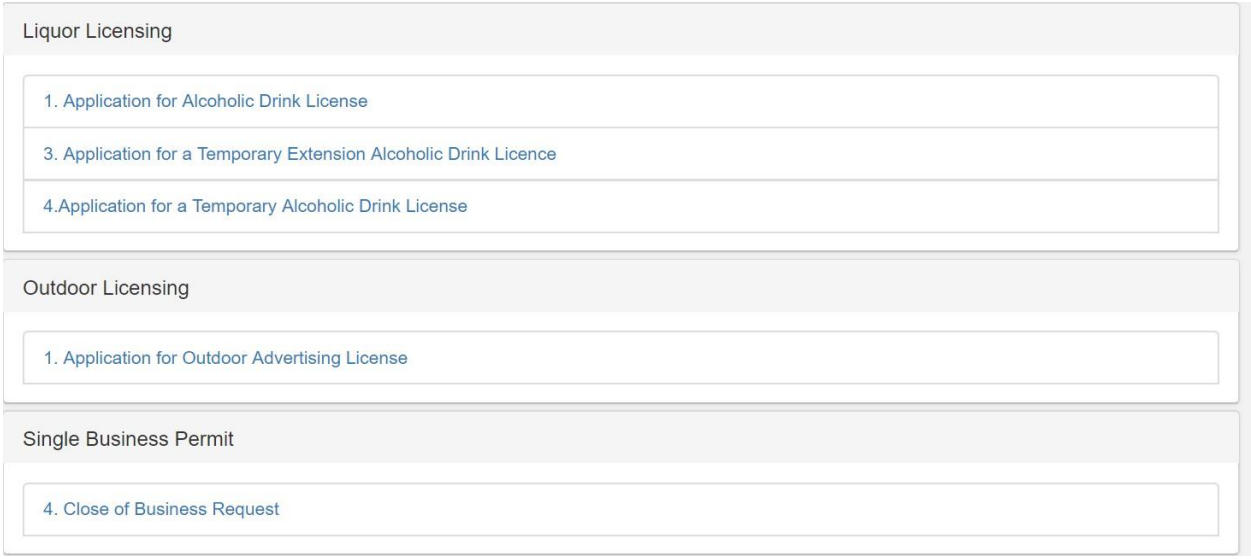

Figure 59: Mombasa county government services on the e-citizen portal.

E-government is the use of ICT to transform government by making it more accessible, efficient, effective and accountable. E-government is concerned with:

1. Increasing access to government information
2. Promoting civic engagement by enabling the public to interact with government officials
3. Making government more accountable by making its operations more efficient and transparent (reducing the opportunities for corruption)
4. Providing development opportunities for rural, minorities and unserved communities.

Note that there is a difference between e-governance and e-government. **E-government** refers to the use of ICTs in public administration and the overall improvement of public services and democratic processes. **E-governance** incorporates ICT governance which requires a substantial increase in regulation and policy-making and specific expertise that ensures both the governing and the governed needs are met. The best form of e-governance cuts down on bureaucracy; emphasizes robust infrastructural setup with the support of local processes which can be sustained by MDAs and county governments. For example, the formulation of a financial budget for planning, development, and growth can make use of e-governance system. It can be seen that this is a much more involved process than automating government services.

b. The 3 phases of implementing E-Governance.

Automating manual processes and giving computers to MDAs is not e-government. ICTs alone will not change the culture of bureaucrats who view the citizen as neither a customer of government nor a participant in decision-making. The underlying notions to e-government emphasize the utilization of technology to accomplish reform by fostering transparency, eliminating barriers, and empowering people to participate in the political processes that impact their lives. The countries that have been successful in e-government begun the process with smaller projects which were successful and which then formed the basis of subsequent iteration leveraging the infrastructure and expertise that had been acquired.

For success, 3 implementation phases are recommended. The phases are not dependent on each other; they do not one phase to be complete before the other begins; but they are conceptual important to help set concrete objectives for e-government implementation.

i) Phase 1 : Publish-Expand Access to Government Information

Governments generate huge volumes of information, much of it potentially useful to individuals and businesses. The Internet and other advanced communications technologies can bring this information quickly and more directly to citizens. Good examples includes the Kenya Open Data Initiative (www.opendata.go.ke). Projects such as the National Optic Fibre Backbone (NOFBI) which aims at ensuring connectivity in all the 47 counties of Kenya would also be vital in easing communication across counties as well as improve access to information as well as government service delivery (for example, application of national identity cards, passports and registration of birth and death certificates, among others).

***Example box 17**: Why Infrastructure development for ICTs is important*
Countries implementing e-government struggled to develop infrastructure that will take advantage of new information technologies and communications tools. *Below are some good practices to keep in mind:* 1. *Develop projects that are compatible with the nation's telecom infrastructure.* 2. *Use public access kiosks and mobile centers if teledensity is low.* 3. *Lift regulations on wireless and other digital technologies to accelerate their deployment.* 4. *Mainstream government's use of technology.*

5. *Develop a master plan at the beginning of the process to allow for a rational and coordinated investment effort that works for internally (within the MDA or county government) or externally (other non-state actors can easily plug into to resource, reuse, etc.).*

Focus areas for phase 1:

1. Getting relevant information online; prioritize content that drives economic development, anti-corruption, attracting foreign direct investment.
2. Putting in place policies, guidelines and laws that avoid ambiguity on the mandate of publishing information.
3. ICT investments (infrastructure, websites, etc.) that are easy to maintain and sustain.

ii) Phase – 2: Broadening Civic Participation In Government

In this step, there is a deliberate move by government to involve citizens in the governance by engaging them in interaction with policy makers throughout the policy cycle and at various levels. Strengthening civic engagement contributes to building public trust in government. This start out as 2-way communication - can citizens provide feedback on services? Is there a public participation process by which citizens provide input to policy proposals or resource allocation?

Focus areas for phase 2:

1. Genuinely showing citizens that their engagement and involvement matters beyond elections by incorporating their feedback (especially those obtained online or via mobile)
2. Government breaking down complex policy issues or processes such as the program based budgeting into easy-to understand components for citizen consumption.
3. There is a focus on online transactions, data, engagement even where traditional media (word of mouth, radio, etc.) have been used to mobilize or spotlight the online components.

iii) Phase-3: Transact Government Services Online

Here, governments go further by creating online platforms (https://ecitizen.go.ke) that allow users to conduct transactions online. Similar to e-commerce platforms, MDAs and county governments should do the same with their services. Where in the past,

government services such as land registration or the renewal of drivers' licenses required long waits, and annoying bureaucracy (and bribes); innovations mean that these services can be offered through centres such as Huduma[41] (https://www.hudumakenya.go.ke/) bringing services closer to the people.

Focus areas for phase 3:

1. Target services that are valuable and have immediate use by the public
2. Automate services that can be offered online. Examples are registry searches such as company registers, land registers, motor vehicle registers, etc. There will always be services which cannot be offered electronically. These include services that expose the privacy of individual's information. Also, in Kenya, citizens still have to walk into Huduma Centres countrywide (at least 1 in each county) and obtain services in person - such as national ID renewal.
3. Address change management by ensuring the concerns of government workers whose roles will change as a result of the innovation are addressed.
4. The initial investments in transactional systems, though expensive, will pay off over time in terms of cost savings and increased revenue.

c. Benefits of e-governance

The countries that have been able to fruitfully implement e-Governance cite all the benefits below.

1. Increases government efficiency: electronic exchange of data and other information, communication is faster and more efficient than before.
2. Reduces bureaucracy: citizens do not visit multiple offices at great cost to obtain services. In Kenya, they can just walk to the Huduma centre at the county level. Also, a more informed government will make informed and prioritized decisions that reduce wastage of public funds.
3. Empowered citizenry: it empowers citizens by making once opaque processes that depended on the officer offering the service now transparent. Standardization is realized through automation and so citizens become more aware of their rights. e-Governance allows the government to become better
4. Improved relations with private sector: relationship between the private sector and government has influence on the business environment of a nation. e-Governance encourages that relationship to be more friendly and more interactive. One-stop services for businesses also reduces the cost of doing business which leads to more confidence and more investment.

[41] The aim of the Huduma Kenya program is to enhance the access and delivery of Government Services to all Kenyans.

5. Encouraging other non-state actors to adopt ICT:
    a. Through automation of services (eg. e-procurement) the private sector can be influenced to modernize as well.
    b. There is a real risk that the world will be divided into the "information rich" and the "information poor" which would exacerbate the problems of social and economic injustice. Similarly, for a society to prepare itself for the 21st century, its citizens must be attuned to use of ICTs in various aspects - from education, to healthcare and finance. Citizens must become aware that ICT is an everyday tool. Bridging the digital divide means more than just addressing race and class issues. Successful programs create new opportunities for those who are traditionally isolated from government programs; in particular, ICT programs often leave women, children, persons with disability, immigrants and the elderly behind.

Section 5: Administrative data collection

Continual investments in administrative data collection and use at county government level will be important in the future. Such alternative data will help the county adequately plan. It is also important to note that if done well, the veracity and of such data can enable it fit well into the national reporting frameworks.

a. Village Administrative Units

Village Administrative Units (VAUs) consist of a group of village leaders, including women and youth leaders who would each represent a cluster of 25-30 households. They would together form a group that would work regularly with the county government to collect data from each household as well as to surface citizen inputs and complaints efficiently.

b. Why Village Administrative Units are important?

Village Administrative Units are important because they create a structure that enables government engagement at hyperlocal levels - at village levels. This increases government accountability and strengthens its ability to surface citizen complaints and needs efficiently and quickly. VAU create structures that enable government to collect data at household levels to strengthen accuracy of service delivery.

c. Village Administrative Units and data

In practice, citizens needs and priorities can be driven by citizen generated data[42]. Working with citizens to map out all county projects is important for the creation of a baseline and have a baseline from which citizens can track progress. To achieve this, baseline data must be collected from every household in the county using tools that are consistent with global statistical standards and KNBS standards. Thereafter, there would be attempts to mainstream this data through integration with government statistics.

Quiz questions

1. *Which interaction model refers to the use of electronic means between the public and the government?*
2. *What model does electronic payment of corporate income taxes reference?*
3. *Which technological advancements have ushered in e-governance?*
  a. *ICT*
  b. *SMS*
  c. *EDI*
  d. *Email*
4. *Which phase of e-government results in functional architecture and requirements specification?*
  a. *1.0*
  b. *2.0*
  c. *3.0*
  d. *4.0*
5. *At what phase is your county in implementation of e-government?*
6. *E-government has the potential of either equalizing access to government and its services. Please state some important things that should be done to avoid it increasing the digital divide and creating more socio-economic injustice.*

[42] Citizen-generated data is data that people or their organisations produce to directly monitor, demand or drive change on issues that affect them.

Chapter 3: Data protection and privacy

***Goals setting for the chapter**: In this Chapter, you will learn about data privacy.*

1. *Background*
2. *Understanding GDPR, General Data Protection Regulation (GDPR)*
3. *Access to information laws and constitutional mandates to publish data*

Section 1: Background

a. Privacy

Governments collect vast quantities of data on their citizens. Protecting the privacy of citizens' personal information stored on these databases is an important issue. In order to utilize Internet-based e-government systems, it is important to incorporate privacy in the planning and design of e-government systems since it is much harder to incorporate privacy protections after a system is built.

1. Educate and train government officials on the importance of privacy.
2. Design applications that integrate privacy protections.
3. Follow "fair information practices." Minimize the collection and retention of personal information.
4. Limit access to personally identifiable information - do not automatically allow employees to tap into databases of personally identifiable information.

Privacy should not be construed to mean that government systems and processes should not be transparent. Transparency should be interpreted as the need for citizens to understand how government decisions are made. It does not extend to private records or expose security risks to data, rather, it is concerned with ensuring that the public are actively participating in government. The lack of transparency can conceal official graft and other forms of fraud. Examples of transparent practices include:

1. Posting online rules, regulations and requirements for government services to minimize subjective actions by officials.
2. When offering e-government services, allow citizens the ability to track the status of their applications.
3. Train civil servants and provide incentives to reform.
4. Reform processes and simplify regulations and procedures.

b. Security

Security must be addressed in the design phase, as security breaches can shatter public trust in government. It is therefore important to continually assess systems to make sure that security precautions are being implemented. Other activities that ought to be taken place include:

1. Backing up information regularly and store backups in a separate location.
2. Keeping personal data information collection to a minimum and do not disclose personal information that has been collected.
3. ICT security awareness programs for employees on computer security.

c. Law and Public Policy

The application of ICT to government may lead to legal or policy barriers that prevent implementation and roll out. Archaic laws, old regulatory regimes, overlapping and conflicting laws need to be updated to recognize the new dispensation of electronic documents and transactions so that they support and not impede e-government. The effort must incorporate a holistic view, not just focusing on technology.

Legal reforms and new policy directives may have to be adopted before the online world can function smoothly. Consult with stakeholders to assess how existing laws may impede the desired results.

1. Give legal status to online publication of government information.
2. Clarify laws and regulations to allow electronic filings with government agencies.
3. Reform processes by simplifying regulations and procedures.

Section 2: Understanding GDPR, General Data Protection Regulation (GDPR)

General Data Protection Regulation (GDPR) is a regulation in EU law on data protection and privacy for all individuals within the European Union (EU) and the European Economic Area (EEA) that came into effect in 2016. GDPR applies to any organisation operating within the EU, as well as any organisations outside of the EU which offer goods or services to customers or businesses in the EU.

The GDPR is a set of rules designed to give EU citizens more control over their personal data. It aims to simplify the regulatory environment for business so both citizens and businesses in the European Union can fully benefit. GDPR establishes one law across the continent and a single set of rules which apply to companies doing business within EU member states. This means the reach of the legislation extends further than the borders of Europe itself.

a. Privacy notice

This privacy notice describes how we collect and use personal information in accordance with the General Data Protection Regulation (GDPR). Such a notice indicates that an organization will comply with data protection law. This says that the personal information held must be:

1. Used lawfully, fairly and in a transparent way.
2. Collected only for valid purposes that the organization has clearly explained to the person and not used in any way that is incompatible with those purposes.
3. Relevant to the purposes the organization has told the person about and limited only to those purposes.
4. Accurate and kept up to date.
5. Kept only as long as necessary for the purposes the organization has told the person about.
6. Kept securely.

b. Examples of personal information that might be kept

Personal data may be collected in multiple ways. Government will normally be privy to important personal information by default. However, in today's world, almost every aspect of our lives revolves around data - from social media companies, to banks and retailers. Most services online involves the collection and analysis of personal data such as name, address, credit card number and more.

Personal data, or personal information means any information about an individual from which that person can be identified. It doesn't include data where the identity has been removed (anonymous data). It would normally include:

1. Personal contact details such as name, title, addresses, telephone numbers, and personal email addresses
2. Date of birth
3. Gender
4. Marital status and dependants

5. Next of kin and emergency contact information
6. National Hospital Insurance number, National Social Security Number
7. Bank account details, payroll records and tax status information
8. Salary, annual leave, pension and benefits information
9. Copy of driver's licence, passport or birth certificate
10. Recruitment information (including copies of right to work documentation, references and other information included in a CV or cover letter)
11. Employment records (including job titles, work history, working hours, training records and professional memberships)
12. Compensation history
13. Performance information
14. Disciplinary and grievance information
15. CCTV footage and other information obtained through electronic means such as swipe card records or biometric readers
16. Information about your use of our information and communications systems
17. Photographs
18. Information about your race or ethnicity, religious beliefs, sexual orientation and political opinions
19. Information about your health, including any medical condition, health and sickness records
20. Genetic information and biometric data

c. Why GDPR

Once GDPR comes into force, it'll introduce a duty for all organisations to report certain types of data breaches that involve unauthorised access to or loss of personal data to the relevant supervisory authority. In some cases, organisations must also inform individuals affected by the breach.

Organisations will be obliged to report any breaches which are likely to result in a risk to the rights and freedoms of individuals and lead to discrimination, damage to reputation, financial loss, loss of confidentiality, or any other economic or social disadvantage.

Failure to comply with GDPR can result in a fine ranging from 10 million euros to four per cent of the company's annual global turnover, a figure which for some could mean billions. Fines will depend on the severity of the breach and on whether the company is deemed to have taken compliance and regulations around security in a serious enough manner.

***Example box 18**: Five-Step GDPR Preparation Checklist*
1. *Appoint a GDPR lead and review data handling procedures.* 2. *Actions to take when handling/collecting personal data* 3. *Actively manage existing personal records* 4. *Update privacy policy regularly - including how data is stored and how to contact the organization* 5. *Design a data breach plan: GDPR requires organizations to report data breaches no later than 72 hours after the organization becomes aware of the breach.*

Section 3: Access to information and Constitutional Mandates to Publish Data

The right of citizens to access government information is established in the Constitution of Kenya. Public participation is a constitutional requirement specifically, Article 1 that states that sovereign power belongs to the people and Article 10 (2) (a) and the Fourth Schedule Part 2 (14) of the Constitution of Kenya and is stipulated as a function of the County Government. Sections 87 to 92 and 115 of the County Governments Act, 2012 outline the principles of public participation and the imperative for facilitating public participation in the work of the County government. Also, Section 115 of the County Government Act 2012 stipulates that Public participation in the county planning processes shall be mandatory. In line with this, the public participation framework strives towards involvement of the public in development of policies and involvement of the community.

Citizen participation is promoted in Kenya as an important pillar of democracy. In 2011, the Government of Kenya (GoK) formally started the process of adoption of the principles of the Open Government Partnership (OGP); it was the first African country to Launch an Open Data Portal (2012)[43]. So far, in the 2nd National Action Plan, Kenya has made 8 commitments to OGP, 4 of which are related to transparency, accountability and sharing of information with the public as follows[44]:

1. Commitment 4: Publish Oil and Gas Contracts, including revenue information to ensure transparency and accountability of the extractive sector;
2. Commitment 5: Ensure greater transparency around bids and contracts by individuals and companies in Kenya;

[43] https://www.opengovpartnership.org/countries/kenya
[44] In total, 8 Commitments are expounded in the third National Action Plan II (July 2018 to June 2022)

3. Commitment 6: Create transparent public procurement process, public oversight of expenditure and ensure value-for-money towards citizen priorities;
4. Commitment 7: Improving access to government budget information and creating wider and more inclusive structures for public participation.

Allowing people to seek and receive public documents serves as a critical tool for fighting corruption, enabling citizens to more fully participate in public life, making governments more efficient, encouraging investment, and helping citizens exercise their fundamental human rights. This is also further outlined in the Access to Information Act of 2016. However, Despite the huge strides that have been made in providing access to information to citizens, getting updated information is still quite opaque; information is either not shared in a timely manner (when it's needed) or not shared at all. Kenya does not have an open data policy that governs open data initiatives even though it has an open data program called the Kenya Open Data Initiative.

***Example Box 19**: How to create an open licence to protect data*
The European Data Portal has a detailed online resource is available on how to build a machine readable open licence that can be applied to any online content. It covers the following content: 1. ***Purpose of a licence -** The participants learn the purpose of a licence; the role of copyright in created works and also the place of database rights in collections in Europe and other countries such as Mexico.* 2. ***Exploration of common licences -** The participants engage in a discussion of common licence types including the Creative Commons licence family, Open Government Licence in the UK and any other examples from the local context. Key points to highlight include the simplicity of a licence, the visibility of the licence on the dataset and how the conditions preserve access, use and sharing.* 3. ***Identifying open licences -** The participants should find and examine a pre-prepared set of licences so as to decide whether it is open and if so why?* *Source: https://www.europeandataportal.eu/en/resources/training-companion/open-data-licensing*

For data to meet the basic requirement of "openness", there must be a push to consider adoption of an open license or a disclaimer stating that its published data is

in the public domain. Adoption of an open license is the first step in advancing towards the 5-Star Open Data Plan, created by Tim Berners-Lee[45]. Open licenses guarantee citizens' rights to use the data in question, including to republish and mix the data at the user's discretion. A license may also set forth usage terms, including whether or not attribution is required.

Table 10: Two Open Data license examples

Open Data Publishers	***Site Referencing License***	***License Used***
Government of Singapore	*https://data.gov.sg/dataset/dengue-clusters*	*Singapore Open Data Licence*
City of Montreal	*http://donnees.ville.montreal.qc.ca/portail/licence/*	*https://creativecommons.org/licenses/by/4.0/legalcode*
Data World	*Common licence types for datasets*	*https://help.data.world/hc/en-us/articles/115006114287-Common-license-types-for-datasets*

Quiz questions
1. *Why is citizen access to information important?* 2. *The GDPR's protection of EU citizens' data only applies to companies located in Europe.* a. *True* b. *False* 3. *4. The GDPR does not include any changes to the provisions for consent from the previous 1995 Data Protection Directive, currently in effect.* a. *True* b. *False* 4. *Design a suitable data breach plan.* 5. *Research and advise a suitable Open Data License for your County - indicating why such a license would be suitable*

[45] http://5stardata.info/en/