

AHADI

Agile and Harmonized Assistance for Devolved Institutions



**DEVELOPING A COUNTY M&E
SYSTEM AND PERFORMANCE
MANAGEMENT SYSTEM AT
SERVICE DELIVERY LEVEL: Draft
Report**

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Abbreviations

AHADI, Agile and Harmonized Assistance for Devolved Institutions
CD, Capacity development
CEC, County Executive Committee Members
CIDP, County Integrated Development Plan
CIMES, County Integrated M&E system
ECD, Early Childhood Development
IT, Information Technology
M&E, Monitoring and Evaluation

MED, Monitoring and Evaluation Department
MIS, Management Information Systems
MOV, means of verification
MS, Microsoft
N/A, not available
PC, Performance Contract
SMART, Specific, Measurable, Attainable, Relevant, Timely (or time-bound)
VTC, Vocational Training Center

Executive Summary and Recommendations for AHADI

This brief document describes key elements of a County M&E and performance management system, emphasizing service delivery at facility and ward level. The term “system” is used to describe the procedures, instruments and tools a county develops and uses in order to practice M&E. The M&E system forms the foundation for performance management and should focus on measuring service delivery and should answer the following questions: (i) what services are to be/are actually provided and what is the level and quality of service delivery; (ii) where are services provided; (iii) is service provision benefitting citizens; (iv) is service delivery efficient and does it provide value for money; (v) which service provider is performing the best and worst; and (vi) how might services be improved? The M&E system should support policy and resource allocation decisions and support the management of performance, down to the level of an individual service delivery point.

This document intends to serve as a resource for AHADI facilitators.

M&E

The document describes steps AHADI facilitators can take to identify relevant indicators at the level of each directorate’s service delivery point, for example vocational training centers, water points, or ward agricultural extension teams. The identification of service delivery indicators is essential and should be undertaken by defining: (i) the output (what services are provided); (ii) who the client is; (iii) where services are provided; and (iv) what the outcomes of the client’s use of the service is expected to be. Based on a theory of change, on historical monitoring practice (a review of indicators and data previously collected) and the CIDP, this exercise should result in a list of indicators, for each directorate and each type of service delivery point (ECD school, water point, etc.). This document develops brief theories of change, a list of potential and recommended indicators to collect, and a prioritized list of indicators that can be used for performance management. These lists are suggestive only, and provide a resource for facilitators to clarify their thinking. The following sub-sectors are described: Early childhood development, vocational training, water, roads, irrigation, agriculture and veterinary. Health already has a functioning M&E system; the challenge for health is to select a few of these indicators that best reflect the performance of each facility and to develop facility-based performance management systems.

Though this reports on collecting routine administrative data (self-reported from service providers though supported through means of verification) it is essential to develop analytical studies to better capture outputs and their link to outcomes. The following are suggested: (i) for vocational training an inspection checklist of standards of service delivery; (ii) for agriculture and veterinary services, studies of contact farmers, comparing their production methods, yields, etc., with a control group of non-contact farmers; (iii) for water and irrigation, developing methods for recording and calculating volumes of water provided [the main output], and; (iv) for roads, a system to assess the physical condition of roads. This is in addition to a service delivery survey

focusing on citizen satisfaction with services from these sectors, at the level of a service delivery point.

Being able to collect and manage information at service delivery level is a pre-requisite for cascading performance management and incentives down to “facility” level. A stepwise approach is necessary. AHADI should first work with MED and Kingsway to test E-NIMES in 4-6 Counties. AHADI should undertake the following:

ACTIVITY	TIME FRAME
1. Have M&E facilitators, work with a select number of directorates to identify service delivery points (create an inventory), define a small set of key indicators, and create targets at each service delivery point. This process is described above	September-November
2. Amongst these indicators, identify those that can be used to compare performance across service delivery points (see Section 4.2)	As above
3. Working with Kingsway, ensure administrators and user rights are defined and that data can be entered into the E-NIMES.	As above
4. Collect actual data for the second quarter	January 2019
5. Assess whether data is being collected and how E-NIMES can be upgraded	January-February 2019
6. Revise E-NIMES based on lessons learned during data collection (to be done by Kingsway)	Ongoing
7. Review and revise indicators	2019/20

The goal, over the next 6 months or so is therefore:

To facilitate, operationalize and pilot E-NIMES as a functional M&E system, to collect and manage service delivery level indicators in 4-6 Counties

PERFORMANCE MANAGEMENT

Ultimately, a performance management system should:

1. Be able to identify the best and worst performance at facility / service delivery point level
2. Incentivize performance at facility / service delivery point level.

It is essential to cascade performance management to the level of a service delivery point, in order to more effectively allocate resources and to provide a mechanism to better ensure county and department and directorate level targets are met. This will involve, for each type of service, identifying a small set of indicators which: (i) ensure proper accountability (i.e. are largely under the control of the service provider); (ii) are relevant and meaningful; (iii) are clear and reliable and are (iv) accepted by the provider, as being a valid performance measure. This report provides examples of these types of indicators and drafts a very short “performance contract” (payment for results agreement) to be signed between directorates and groups of staff working at facilities and wards.

To combine multiple indicators, often having different formats, a number of indexing methods are reviewed. If computerized, indexes should be calculated automatically.

In the beginning, a performance management system should focus on establishing relevant indicators that can be used to assess service delivery across multiple service delivery providers. In the first year, indicators will be collected, performance indexes calculated, and service providers ranked in terms of their performance. The process of linking this to rewards should be

established slowly over time, after 1-2 years of implementation. In the beginning, non-financial rewards and recognition can be implemented. Therefore, AHADI should:

ACTIVITY	TIME FRAME
1. As part of the M&E facilitation process, identify a small set of indicators that can be used to compare performance across service delivery points; recommendations for these were made in the previous chapter	September-November
2. Based on these indicators, agree on a system of indexing	As above
3. Sign facility level performance contracts, that do not have financial rewards based on the template above.	December
4. Identify a system of non-financial rewards or performance recognition based on proposed indexes (i.e. rewarding top 10% or 20% of performers)	As above
5. Once data is collected, calculate indexes and rank service delivery performance across facilities, Wards, etc., identifying best and worst performers. Hold meetings to discuss results and their validity	January-February 2019
6. Complete calculations for the financial year	June-July 2019
7. Review indicators used in contracts and evaluate the feasibility of creating financial rewards	As above

The goal, over the next year is therefore:

To pilot a system of facility-based performance contracts that can be used to allocate non-financial and financial rewards in the future

1 Introduction

1.1 BACKGROUND

This brief document describes key elements of a County M&E and performance management system, emphasizing service delivery at facility and ward level. The document focusses on M&E as a foundation for performance management. Following this introduction, Chapter 2 outlines the main elements of a County M&E strategy, system or guidelines; Chapter 3 identifies potential indicators, and Chapter 4 briefly reviews a way forward on service delivery-related performance management.

This document intends to serve as a resource for AHADI facilitators.

The term “system” is used to describe **the procedures, instruments and tools a county develops and uses in order to practice M&E**. A system is an organized way of doing something (i.e. is “systematic”).

Figure 1: Definition, the word “system”

“a set of principles or procedures according to which something is done; an organized scheme or method.”

An M&E system contains both design and strategic elements (a way of envisioning M&E) as well as operational aspects (a way of implementing M&E). An M&E system includes:

Strategy

Key **design** elements, describing what will be monitored and evaluated and why (how M&E will be used, or the purpose of M&E in the county), and broadly, what the key components of the system are

Operations

The procedures, tools and instruments, to actually practice M&E. It describes how M&E will be undertaken, who is responsible, what the timeframe is (when) and what tools, such as forms, a computerized system, etc., will be used to support the implementation of M&E. It includes the actual design of surveys (survey instruments), inspection procedures, learning workshops, etc.

1.2 WHAT DOES A COUNTY M&E SYSTEM MEASURE, AND WHAT IS ITS PURPOSE?

A County M&E system forms the foundation for performance management and should focus on **measuring service delivery** and should answer the following questions:

KEY QUESTIONS

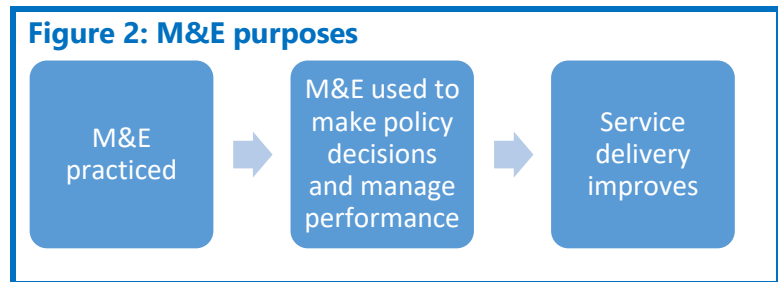
1. **What services are to be/are actually provided and what is the level and quality of service delivery?**
2. **Where are services provided?**
3. **Is service provision benefitting citizens?**
4. **Is service delivery efficient and does it provide value for money?**
5. **Which service provider is performing the best and worst?**
6. **How might services be improved?**

The M&E the system should measure a County’s service delivery outcomes and outputs, where outputs have a dimension of quantity, quality and timeliness (QQT).

1.2.1 Purpose

M&E systems identify, collect, manage, process and analyze information in order to:

- Support policy and resource allocation **decisions**
- Support the **management of performance**, down to the level of an individual service delivery point



As such, development of an M&E system is defined by a County's results framework as well as the key policy and resource allocation decisions to be made by each directorate. The function of a results framework (definition of expected results and how they will be assessed and measured) is mainly undertaken by a CIDP. However, a CIDP is not sufficient to define a comprehensive M&E system—an M&E system must also answer policy questions and it must be useful to directorates who manage decentralized service delivery points such as ECD schools, dispensaries, roads, irrigation schemes, etc.

Most directorates already have rudimentary M&E systems; they collect data ("indicators") from staff located at field level. This document aims to help Counties upgrade their existing M&E practice.

1.3 KEY PRINCIPLES

In summary, a County M&E system:

- Measures service delivery (outputs, outcomes, efficiency, effectiveness, etc.), answering the key questions outlined above, **at the level of an individual service delivery point**
- Assists directorates to make policy decisions and to manage staff and service delivery performance
- Is "systematic," in the sense that it has clear operational procedures, supported by tools such as forms, institutional arrangements, schedules, and computerized data management

2 A County M&E system

2.1 SERVICE DELIVERY POINTS: THE CONCEPT

A County M&E system is implemented at the level of a directorate.

Most data will be collected from individual service delivery points and aggregated upwards to get ward, sub-county and county level indicators.

Each directorate provides services in a different way, using different service provision mechanisms,¹ where services are provided at facilities (like ECD schools, health centers, dispensaries, irrigation schemes, roads, water points, vocational training centers, slaughterhouses, etc.) or through ward or sub-county teams / staff, such as agricultural or veterinary extension teams.

Figure 3: Review of the key evaluative questions M&E indicators and instruments will answer

- What services are to be/are provided and what is the level and quality of service delivery?
- Where are services provided?
- Is service provision benefitting citizens?
- Is service delivery efficient and does it provide value for money?
- Which service provider is performing the best and worst?
- How might services be improved?

M&E indicators do not only come from the CIDP—they come from a decision making and service delivery management perspective. Health provides a perfect case in point, where a wide set of indicators are used for policy decisions and routine monitoring. Many of these indicators are not in the results framework (CIDP).

2.2 DOCUMENTATION AND KEY ELEMENTS OF A COUNTY M&E SYSTEM

AHADI is expected to assist counties to develop M&E systems—i.e. to operationalize M&E, ensuring it is practiced, that it moves from paper to reality. This will involve going well beyond the CIDP. As such, the system consists (at a minimum) of the following:

- A definition (listing, inventory) of the type of service delivery points in each directorate (i.e. ECD schools, irrigation point)
- A definition of which indicators are collected at each service delivery point (based on a results chain or theory of change)
- Rationale for the indicators, including what types of policy and performance management decisions are anticipated
- Identification of the source (method of collection) for each indicator (i.e. routine administrative data, survey, etc.)
- The frequency of collection of each indicator (either semi-annual, quarterly or annual)²
- A list of targets for each indicator at each service delivery point

¹ Depending on the service and structure of the directorate.

² The advantage of semi-annual or quarterly collection is that performance can be assessed midway

- A description (formula) of how various indicators are calculated from others; in general, “raw data” is collected and then used to generate calculated indicators. For example, the number of ECD students starting the year (ECD01) and the number of ECD students completing the year (ECD02) are raw data used to calculate the retention rate (defined as $100 \times \text{ECD02} / \text{ECD01}$).
- Who is responsible for providing each data point (i.e. facility managers, headquarters, etc.) together with a schedule
- An outline of all survey instruments, inspections, and other “outcome monitoring” and policy analysis which is expected to take place (by whom and when)
- Data collection forms (if a paper based system is used)
- A description of the computerized system or systems to be used. Since it is assumed E-NIMES will be used, data collection forms do not have to be developed and excel spreadsheets or other databases do not need to be employed
- An outline of the reports to be prepared, their timeline, and reporting processes

Typically, such an M&E system would be described by in an M&E strategy, an M&E plan, or an M&E manual (or a mix of these, depending on the circumstances).

2.2.1 Institutional Arrangements

There are 3 main players in a County M&E system, each with different functions:

ACTORS

- 1 **Departments / Directorates:** these are the main implementers of M&E. M&E is a basic management function which is decentralized to all directorates
- 2 **Planning and M&E offices:** they play a coordinating and capacity development role. They assist, backstop, support, facilitate, and motivate directorates to undertake M&E. They compile reports based on information provided by Directorates
- 3 **Performance monitoring, efficiency monitoring or service delivery units under the Governor,** play a regulatory and quality assurance function. They are independent. They: (i) ensure indicators and targets are challenging, relevant and ambitious; (ii) periodically audit and assess the accuracy and completeness of data provided, and (iii) where relevant, either solely or jointly with directorates, the M&E office, or external actors, undertake surveys, studies and evaluations, which are reported to the governor.

Documentation of the M&E system should be clear about who does what.

2.2.2 Sources of information

For the purpose of this document, the following sources of information are emphasized:

Routine administrative data

This is the main source of information. It is generated by headquarters or service delivery points as services are provided. For example, when students are registered, the indicator “number of students enrolled” is calculated. The registry (by class), is the *means of verification* (i.e. underlying information supporting the calculation).

Inspection Results

These are assessments against service delivery or minimum standards. Inspections of service delivery points (facilities) are made by headquarters, typically using a checklist of requirements. Inspections often result in an inspection score (compliance against standards) which are used as indicators in the results framework

Household (HH) Surveys

These should be undertaken by KNBS and should include most of the poverty related, income and production indicators used at the “top end” of the results framework. Typical indicators would include: average income, % of the population below the poverty line, mortality rate, average yield (crops, livestock), areas planted / # of livestock held. In some countries, poverty data is calculated based on a proxy (type of roofing, etc.). Household survey design should be influenced by the CIDP (i.e. to collect key CIDP indicators). HH surveys may also collect information on use and non-use of services

Service delivery satisfaction surveys

As opposed to household surveys, service delivery satisfaction surveys should be undertaken at the point of service provision, immediately after the service is received. Ideally a service delivery survey should be implemented by an independent entity, like a research firm, KNBS or NGO.

Monitoring Client Service Charters

A registry should be kept on each transaction with a guaranteed time frame or quality commitment in a client service charter. So if a license is to be issued within 48 hours, the registry would list the name of the citizen, the time the application was submitted and the time the license was provided. Based on this, a calculation “% of times the commitment was realized” can be calculated. Such indicators should be calculated for all commitments.³ As with a service delivery survey, “auditing” of performance against charter commitments should be independent

Others

Depending on the results/framework, other outcome monitoring or impact evaluation studies⁴ may be undertaken

2.2.3 An overview of key steps in developing the M&E system

AHADIs should undertake the following steps to develop an M&E system. Each step should be implemented by each Directorate.

DESIGN

- A. Based on the CIDP and the monitoring needs of each directorate, identify indicators to be collected from each service delivery point (as well as headquarters)
- B. Where appropriate, map indicators into various instruments as discussed in section 2.2.2 above
- C. For administrative data, develop (cascade) targets to each individual service delivery point
- D. For each type of service delivery point (ECD school, health facility) identify a small set of indicators which can be used to compare and rank performance between service providers
- E. Develop (paper) forms to collect data if E-NIMES is not being used
- F. Design inspection procedures, household surveys, etc., based on M&E needs

IMPLEMENTATION

- G. Collect data on each service delivery point (create an inventory of service delivery points); enter them into E-NIMES
- H. Enter targets into E-NIMES / collect targets from each service delivery point

³ The PC does not include this type of monitoring; it only monitors whether a commitment is publicized to a citizen, not whether the commitment is being met.

⁴ Outcome monitoring measures whether an outcome was realized; impact evaluation is causal in nature and assesses whether an intervention led to an outcome being realized; this is typically done through control and treatment groups using a difference-of-differences approach.

- I. Collect data on actual implementation (actual values of indicators)
- J. Implement surveys and inspections
- K. Prepare reports

2.3 STEPS

This section describes in more detail the key steps to be facilitated by AHADI.

2.3.1 Step A: Identify indicators for each directorate and each service delivery point

As recommended in the next chapter, AHADI should facilitate each Directorate to better identify its key indicators. It would be useful to start with a theory of change and to develop a simple results chain inductively, starting with the output and identifying expected changes in clients. This exercise should identify:

- The output (what services are provided)
- Who the client is
- Where services are provided
- What the outcomes of the client's use of the service is expected to be

Based on a theory of change, on historical monitoring practice (a review of indicators and data previously collected) and the CIDP, this exercise should result in a list of indicators, for each directorate and each type of service delivery point (ECD school, water point, etc.). The definition of these indicators might follow a form such as that found on page 7 (Table 1). The AHADI facilitator needs to review past practice and the CIDP with a critical eye, ensuring, they cover a mix of outputs and immediate outcomes.

2.3.1.1 *Attributes of Service Delivery Points*

For each type of service delivery point (ECD center, road, water point etc.) there may be a series of descriptors, such as "type of water point" (pond, piped scheme, shallow well); **these are attributes of the service delivery point which do not change over time** (unlike indicators which change over time). In identifying indicators and service delivery points, these attributes need to be defined.

2.3.2 Step B: develop indicators collected using studies, surveys, and inspections

Directorates may need to collect information through: (i) inspections; (ii) household surveys; (iii) service delivery surveys, (iv) monitoring of client service charters and (v) other instruments.

It is expected that Counties slowly develop processes to independently assess whether standards or minimum conditions for service delivery are being met (standards may have to be developed). Inspections, led by County headquarters, may be done on a sample basis. These will tend to be procedural and process or management oriented (i.e. are dispensaries managing their cold storage, do teachers have lesson plans, are teachers attending class, etc.) typically in the form of a checklist. These types of instruments were outlined in section 2.2.2.

Table 2 (page 8) outlines the required information in terms of studies and surveys as part of a fully developed M&E system.

Table 1: Definition of indicators collected as routine administrative data at service delivery points

Directions: this form is filled out by managers of each directorate. It establishes which indicators need to be collected

Name of the Directorate: _____

Type of service delivery point: _____ (like ECD school, Ward, Irrigation Scheme); Data provider: _____

Frequency of collection _____ (Quarterly, Bi-annual, annual)

Description of the theory of change or results chain (1 paragraph)

A. CODE	B. Name of the Indicator	C. Directions / Description	D. Formula for calculation	E. CIDP Yes/No	F. Can compare performance (Y/N)	G. Rationale

- Column A: use a code for cross reference. For example, for ECD the indicators would be ECD01, ECD02, etc.
- Column B: such as "ECD enrollment rate", or "number of households using the irrigation scheme"
- Column C: Directions for the data provider explaining the indicator, how it is calculated and how it is aggregated to County level (sum, average, etc.)
- Column D: there are two kinds of indicators, raw data (which is entered directly by the data provider) and calculated indicators (such as retention rate) which might be calculated as 100*ECD01/ECD02. Type a formula, as you would with excel in column D
- Column E: is the indicator in the CIPD? (Yes or No)
- Column F: can the indicator be used to compare performance across service delivery points? (Yes/No). These are the indicators the directorate would want to use to reward good performance
- Column G: describe why the indicator is being collected and what it might be used for in terms of decision making

Table 2: Definition of M&E instruments for non-administrative data

Directions: this form is filled out by managers of each directorate. It establishes the instruments used to collect non-administrative data.

Name of the Directorate: _____

A. Name of the survey or instrument	B. Description in more detail of the instrument, how it will be implemented, etc.	C. Frequency	D. List of indicators that will be collected using the survey

- Column A: For example: (i) compliance inspection; (ii) household survey; (iii) service delivery survey; (iv) monitoring of client service charters, etc.
- Column B: A fuller description of the type of survey, how it will be done, who will implement it, etc. This would also describe the coverage of the instrument (for example every facility, every ward, or a sample across the county).
- Column C: frequency. This is expected to be annual, or very two years, etc.
- Column D: List the indicators the instrument will collect, for example “average yield per dairy cow” or “compliance score,” etc.

2.3.3 Step C: develop annual targets for each service delivery point

This information needs to be collected at each facility, ward, or service delivery point. By developing targets, the county will also create an inventory (list) of all service delivery points.

If E-NIMES is being used, this might be broken down into two steps—(i) defining the service delivery point and inventory, and (ii) developing annual targets (for 2018/9). There are two ways targets might be developed:

1. By duplicating a headquarter (HQ) level target. For example, if at HQ a target is to increase enrollment by 10%, then each facility may have an individual target 10% higher than its previous year
2. Allow service delivery points to each individually and realistically establish their targets for the upcoming year. If the indicator is the same as an HQ indicator, this may lead to inconsistencies (in which case the CIDP indicator should be revised)

If a paper system is being used, a typical form would be like that found in Table 3 (page 10).

2.3.4 Step D: establish which indicators are used to compare service delivery

As part of the process of developing a performance management system, linked to field-level service delivery (see Table 1), during the process of developing targets, staff need to reaffirm which indicators best reflect the performance of their facility, team, or unit. This is best done during the identification of targets.

2.3.5 Step E: develop forms to collect data

As is the case with the form to collect targets, forms are developed based on the list of indicators selected and a list of (inventory of) service delivery points. Forms collect only “raw data;” they do not collect calculated indicators. It is expected E-NIMES will electronically develop data entry schemes, though a typical paper form for data collection is provided in Table 4.

It should be noted that when paper forms are used:

1. All forms contain directions and descriptions of indicators ensuring the data provider understands the purpose of the data collection process
2. There should be an accountability statement where the data provider attests to the accuracy of the information he/she provides; this is done through signing an official data collection form
3. There should also be a person at headquarters who “validates” the submission of a data collection form, by visually checking that the data is complete and that it seems possible (i.e. there are not glaring errors). This is done prior to entering data into a computer

2.3.6 Step F: Design inspection procedures, household surveys, etc., based on M&E needs

During the design process, AHADI should assist Counties to begin the process of developing key analytical instruments, like inspection procedures (against minimum standards), surveys, etc. (as outlined in section 2.2.2).

Table 3: Indicator targets / identification of service delivery points Form

Directions: this form is used to develop and submit annual targets at each service delivery point. It is assumed that targets are quarterly but they may be entered semi-annually (Q2 and Q4) or annually (only Q4).

Name of the Directorate: _____

Type of service delivery point: _____ (like ECD school, Ward)

Name of the service delivery point _____

Attribute # 1 (like type of water point) _____ (note: these differ for each type of service delivery point)

Attribute #2 (etc.) _____

Year: _____ (like 2018/19)

A. Indicator Code	B. Name of the Indicator	C. Description of the indicator	D. Target Value			
			Q1	Q2	Q3	Q4

- Column A: the code (cross reference) for the indicator, established in Table 1. For example, for ECD the indicators would be ECD01, ECD02, etc.
- Column B: the name of the indicator, such as "ECD enrollment rate", or "number of households using the irrigation scheme," established in Table 1
- Column C: Directions for the data provider explaining the indicator, how it is calculated, etc., established in Table 1
- Column D: The target (desired) values of the indicator

Name of the staff member providing the target: _____

Position of the staff member: _____

Date the target was provided: _____

Table 4: Data submission form

Directions: this form is used to submit quarterly data

Name of the Directorate: _____

Type of service delivery point: _____ (like ECD school, Ward) Name of the service delivery point _____

Year: _____ (like 2018/19) Quarter: _____ (like Q1, Q2, Q3, Q4)

A. Indicator Code	B. Name of the Indicator	C. Description of the indicator	D. Value of the indicator

- Column A: the code (cross reference) for the indicator, established in Table 1. For example, for ECD the indicators would be ECD01, ECD02, etc.
- Column B: the name of the indicator, such as "ECD enrollment rate", or "number of households using the irrigation scheme," established in Table 1
- Column C: Directions for the data provider explaining the indicator, how it is calculated, etc., established in Table 1
- Column D: The actual value of the indicator

Accountability Statement

Data Provider: The data I have provided on this form is accurate and complete **Data validation:** I have received and checked the data provided on this form and it appears complete and reasonable.

Name of the staff member providing data: _____ Name of the staff member validating data: _____

Position of the staff member: _____ Position of the staff member: _____

Date the data was provided: _____ Date the form was approved: _____

3 Typical Indicators

This chapter outlines typical indicators for various County directorates. Indicators cover both performance indicators as well as resource allocation / policy indicators. It: (i) develops very quick results chains / theories of change; (ii) based on a theory of change identifies typical indicators; and (iii) based on the experience of Meru and other counties, selects from amongst these indicators. Table 12 to Table 17 provide a summary of possible indicators and some of the reasoning behind their selection.

This chapter is intended to be indicative only, to highlight the type of thinking required in identifying outcome and output indicators. It covers early childhood development, vocational training, irrigation, roads, water, agriculture, and livestock. Health is not included as the DHIS2 already identifies and assists with the management and reporting of key health indicators.

The indicators below are suggestive only.

3.1 ECD INDICATORS

The purpose of ECD education is to prepare students, socially and intellectually, for future learning (to establish the foundations for learning). Students should have both knowledge as well as traits of curiosity, sharing, cooperation, etc. The ability of a school to do this will depend on: (i) the resources available and the management of the school; (ii) the quality of teaching provided; and (iii) the support, and promotion of education within the family and community.⁵ Reasoning behind the selection of ECD indicators can be found in Table 12. In brief, indicators measure sufficient resource allocation (efficiency), enrollment, quality of education and learning outcomes.⁶ It is recommended, the following key indicators and data be collected at each school:

Figure 4: ECD services

- The service delivery point is the ECD school
- The service recipient (client) are ECD students
- The output delivered are ECD lessons, typically measured by the number of students receiving the output
- The outcome is that students learn and are prepared for further education (academically and socially)

Table 5: Recommended ECD Indicators

INDICATOR/DATA	CALCULATION
ECD01 Current number of Teachers	
ECD02 Current number of Books	
ECD03 Current number of Students enrolled in class 1	
ECD04 Current number of Students enrolled in class 2	
ECD05 Student: Teacher Ratio	$(ECD03 + ECD04) / ECD01$
ECD06 Book: Student Ratio	$ECD02 / (ECD03 + ECD04)$
ECD07 Cumulative number of drop outs to date	
ECD08 Retention Rate	$100 * (ECD03 + ECD04 - ECD06) / (ECD03 + ECD04)$, where ECD03 and ECD04 are from the first quarter

⁵ Because of parental differences in a given community, it is common to measure “education value added” which is the additional level of learning over and above expected outcomes (conditional on various community demographics). This would be too difficult to calculate currently.

⁶ The output, is the provision of ECD education (to students); outcomes concern the response to this education on behalf of parents (sending children to school) and students (learning).

INDICATOR/DATA	CALCULATION
ECD09 Number of students passing the exam	
ECD10 Transition Rate (% successfully completing examination)	$100 * \text{ECD09} / \text{ECD04}$, where ECD04 is from the first quarter

Note: Only raw indicators/data is collected (i.e. indicators/data without a calculation. Calculated indicators are generated automatically. The transition rate (ECD10) accounts for students dropping out, students not taking the exam, as well as success on the exam.

Data should be collected semi-annually, but enrollment data at the beginning of the year (Q1) also needs to be recorded. To compare performance across schools an index should be created by averaging the following indicators for each school and then ranking this average (from highest to lowest):

- % increase in enrollment over the previous year (ECD03+ECD04)
- Retention rate (ECD08)
- Transition rate (ECD10)

3.2 VOCATIONAL TRAINING INDICATORS

Vocational training aims to provide students a relevant set of skills that leads to employment. The reasoning behind these indicators can be found in Table 13. It is assumed:

1. Counties develop an inspection checklist for visiting VTCs, to ensure they are well managed; it is assumed this checklist can be converted to a simple score out of 100 (for example if the checklist is Yes/No counts the number of Yes's)
2. Counties will develop a simple tracking system for graduates to see whether they have been employed and what has influenced their employment; this will help Counties better "understand the market."

Figure 5: vocational training services

- The service delivery point is the vocational training center (VTC)
- The service recipient (client) are VTC students
- The output delivered are ECD classes, typically measured by the number of students receiving the output
- The outcome is that students learn valuable skills and can be employed based on those skills

In Meru County there was evidence, previously, that some form of "inspection" was used in the past. It is recommended, the following key indicators and data be collected at each school:

Table 6: Recommended ECD Indicators

INDICATOR/DATA	CALCULATION
VTC01 Current number of Teachers	
VTC02 Inspection Score	
VTC03 Current number of Students enrolled in class 1	
VTC04 Current number of Students enrolled in class 2	
VTC05 Student: Teacher Ratio	$(\text{VTC03} + \text{VTC04}) / \text{VTC01}$
VTC06 Cumulative number of drop outs to date	
VTC07 Retention Rate	$100 * (\text{VTC03} + \text{VTC04} - \text{VTC06}) / (\text{VTC03} + \text{VTC04})$, where VTC03 and VTC04 are from the first quarter
VTC08 Number of students passing the exam	
VTC09 Transition Rate (% successfully completing examination)	$100 * \text{VTC08} / \text{VTC04}$, where VTC04 is from the first quarter
VTC10 % of sampled students getting a job within 6 months	

Note: Only raw indicators/data is collected (i.e. indicators/data without a calculation. Calculated indicators are generated automatically)

Data should be collected semi-annually, but enrollment data at the beginning of the year (Q1) also needs to be recorded. To compare performance across VTCs an index should be created by averaging the following indicators for each VTC and then ranking the average (from highest to lowest):

- Inspection score (converted to a %, such as number of criteria met/total number of criteria)
- % increase in enrollment over the previous year (VTC03+VTC04)
- Retention rate (VTC07)
- Transition rate (VTC09)
- % of students finding a job within 6 months (VTC10)

3.3 IRRIGATION

Internationally, irrigation schemes are compared in terms of irrigation outputs (crop production, such as output per crop area [Total Production / Area Irrigated] or output per water used [Total Production / per unit of water consumed, water and irrigation supply (relative to demand), water delivery capacity [water supplied / water needed in peak demand times], and financial [Irrigation revenues / O&M costs] and profitability indicators [rates of financial return].⁷ Although these are too complicated for county use, their reasoning is clear: an irrigation scheme should be functional (canals, etc. in working condition, i.e. water availability), should meet the needs of agriculture, and should lead to increased production (an increase in the number of seasons of production) and yield. A brief results chain is reproduced on page 24 (Table 15).

Figure 6: vocational training services

- The service delivery point is an irrigation scheme
- The service recipient (client) are farmers at the scheme
- The output delivered is irrigation (water), typically measured by the volume of water supplied

In Meru county the irrigation directorate had data for each scheme with an estimate of the number of households served⁸; there was no data on water volumes generated, production, average yields, etc. This suggests data must be very simple. Though there is a wide range of irrigation indicators currently in use (Table 15), the following indicators are recommended (for each scheme).

Table 7: Recommended Irrigation Indicators (administrative data only)

INDICATOR/DATA	CALCULATION
IRR01 The system has a user’s management committee that meets regularly (1=Yes, 0=No)	
IRR02 Estimated volume of water under irrigation	
IRR03 Number of hectares under production due to irrigation	
IRR04 Number of households using irrigation schemes	
IRR05 Volume of Water/Hectares under production	[IRR02]/[IRR03]

Note: Only raw indicators/data is collected (i.e. indicators/data without a calculation. Calculated indicators are generated automatically)

Data should be collected semi-annually for each irrigation scheme. Performance management should compare each scheme, though irrigation extensionists usually cover more than one

⁷ The International Water Management Institute (IWMI) has developed a list of standard irrigation indicators, based on: [https://books.google.com.kh/books?hl=en&lr=&id=y2PRiClyg0C&oi=fnd&pg=PR5&dq=Molden+DJ,+Sakthivadivel+R,+Per ry+CJ,+de+Fraiture+C,+Kloezen+WH+\(1998\)+Indicators+for+comparing+performance+of+irrigated+agricultural+systems.+ Research+Report+20.+International+Water+Management+Institute,+Colombo&ots=uuqXaZ0du1&sig=fUjmg6wfeBc96-D0R2WO_SzagMg&redir_esc=y#v=onepage&q&f=false](https://books.google.com.kh/books?hl=en&lr=&id=y2PRiClyg0C&oi=fnd&pg=PR5&dq=Molden+DJ,+Sakthivadivel+R,+Per ry+CJ,+de+Fraiture+C,+Kloezen+WH+(1998)+Indicators+for+comparing+performance+of+irrigated+agricultural+systems.+ Research+Report+20.+International+Water+Management+Institute,+Colombo&ots=uuqXaZ0du1&sig=fUjmg6wfeBc96-D0R2WO_SzagMg&redir_esc=y#v=onepage&q&f=false)

⁸ Vihiga and Kisii counties had no irrigation schemes in their CIDPs

scheme. For management purposes schemes should be grouped under ward or sub-county irrigation teams. To compare performance across schemes an index should be created by averaging the following indicators for each scheme/irrigation team, assumed to be at Ward level (from highest to lowest):

- The system has a user’s management committee that meets regularly (100=Yes, 0=No)
- % increase in the volume of water under irrigation
- % increase in the number of hectares under production
- % of farmers satisfied with irrigation schemes (from a service delivery survey)

3.4 ROADS

Roads are a fixed asset. Roads are characterized by both their state (the current condition of the road), as well as a set of interventions which develop, upgrade, expand, or maintain it. The intervention leads to a change in the condition of the road. From an M&E perspective:

- The **physical condition of the road**, describes the quality of service provided to road users, which can be measured physically and mechanically, for example in terms of the number of potholes, the length of road which is impassable, its smoothness, structural distress such as cracking, structural adequacy such as the capacity to carry a specified number of loads, surface friction as related to safety, and various other (usually qualitative) condition measures related to culverts, signs, fences, curb and gutter, etc. such as good, fair or poor. Counties do not seem to have a mechanism or the equipment necessary for assessing the physical condition of roads. Roads assessments are essential for allocating resources and tracking improvements in the network
- A **road intervention**, like upgrading or maintenance can be monitoring either through a series of indicators (like “km of road resurfaced”) or through a project, which describes the intervention.

Figure 7: road services

- The service delivery point is the road
- The service recipient (client) are road users (citizens)
- The output delivered is the road, having a particular quality or condition
- The outcome is increased travel, decreased travel costs, improvement in road safety, etc.

Each road has a series of attributes (which are generally fixed), including its starting point, end point, length, and grade. The state (condition) of the road network, changes, and over time leads to a series of outcomes (benefits) realized by road users and communities including, reduced travel time, reduced road accidents and fatalities, reduced costs of vehicle maintenance costs, and increased road use (which should result in improved producer prices and decreases in the price of goods). These are summarized in Table 8 (see page 15). The following indicators are recommended for each road.

Table 8: Recommended road Indicators (administrative data only)

INDICATOR/DATA
ROA01 Kilometers of road resurfaced (tarmac)
ROA02 Kilometers of road graveled
ROA03 Number of bridges and culverts repaired
ROA04 Kilometers of road routinely maintained
ROA05 Number of days the road was impassable

INDICATOR/DATA

- ROA06 Average time from the Ward to the County capital using a minivan (in minutes)
- ROA97 Number of road accidents (occurring on the road)

Note: Indicators ROA01 to ROA04 may also be tracked in a projects database

Data should be collected bi-annually. For performance management purposed data from each road should be aggregated to Ward level (since road maintenance teams mostly work at this level). To compare performance across Wards an index should be created by averaging the following indicators (from highest to lowest):

- Kilometers of road resurfaced and graveled against target
- Number of days the road was impassable
- Citizen satisfaction with the quality of roads

3.5 WATER

In creating an inventory, each water point (piped water, wells, etc.) should be classified. Typically, indicators would measure: (i) the supply of water (i.e. quantity or volume as well as number of users); (ii) access (average distance to a water point); (iii) reliability (frequency of breakdown); (iv) quality of water provided (assessed through chemical and other physical tests); and (v) the management and sustainability of a system (typically looking at governance arrangements and financing of O&M costs). For each water point, the following data should be collected.

Figure 8: Water services

- The service delivery point is an individual water point or water system
- The service recipient (client) are citizen/water users
- The output is the provision of water
- Outcomes are related to health and sanitation of water users

Table 9: Recommended water Indicators (administrative data only)

INDICATOR/DATA

- WAT01 Number of households accessing piped water
- WAT02 Number of households accessing potable water
- WAT03 Estimated daily volume of water supplied
- WAT04 Estimated average kilometers to reach the water point

Indicators focus on supply, due to unavailability of quality and reliability indicators. At the county level, these figures can be converted to average distances to access water (weighted by number of households) as well as the percentage of households with access to piped and portable water. To compare performance between water schemes (and water providers), the following performance measures are recommended:

- % increase in the estimated daily volume of water supplied
- % of citizens satisfied with the provision of water (service delivery survey)

3.6 AGRICULTURAL EXTENSION

Agricultural extension provides a wide range of advice to farmers, aiming to improve their agricultural practice, yields, productivity and income. The immediate outcome is that farmers adopt (practice) the research and advice provided; this is called "uptake". While most Counties employ crop yield as a performance indicator, they do so reluctantly; the average yield in a County is only remotely related to the provision of actual extension services by the County, as a relatively low fraction of farmers are contacted and change their agricultural practices as a result

of this contact. For County yields to reflect the services delivered by the County (i.e. to be a valid performance indicator) it would need to be assumed that techniques adopted by contact farmers are then widely copied by their neighbors.

Most agriculture (and veterinary) services are private sector oriented. Counties play an important role in promoting private sector provision of inputs and extension services, but as is the case with extension, it is unclear whether these policies significantly influence, impact and therefore should be measured by County-wide indicators like yields, etc. County regulations and their ability to attract external projects affect the sector, but it is also unclear how significant this impact is. The theory of change for agriculture is extremely complex containing a myriad of assumptions linking actual service delivery (extension) to county-wide results. A more complete summary of possible agricultural extension indicators can be found in Table 16.

Figure 9: Agricultural extension services

- The service delivery point is a ward, where extensionists work
- The service recipient (client) are farmers participating in extension services
- The output is the advice provided by extensionists
- Outcomes included improved productivity, adoption of new techniques and products, increased farmer income, etc., of farmers receiving advice and services and adopting new techniques

For most Counties, extension indicators will be collected at Ward level. To truly assess and understand the effectiveness of extension in-depth studies of farmers, their adoption and non-adoption of extension advice, and how this advice translates into improved agricultural practice is necessary. Such studies are important from a policy perspective.

Table 10: Recommended Agricultural Extension Indicators (routine data only, at ward level)

INDICATOR/DATA	CALCULATION
AGR01 Current number of Extensionists	
AGR02 Number of farmers receiving extension advice	
AGR03 Total Number of farmers	
AGR04 % of farmers receiving extension advice	$100 * AGR02 / AGR03$
AGR05 Contact farmers per extensionist	$AGR02 / AGR01$
AGR06 Estimated Metric Tons produced (various crops), for contact farmers and non-contact farmers	
AGR07 Estimated yield (various crops) for contact and non-contact farmers	

Note: Only raw indicators/data is collected (i.e. indicators/data without a calculation. Calculated indicators are generated automatically. AGR06 and AGR07 may be inaccurate and are not really performance indicators unless results are compared between contact and non-contact farmers

It is assumed that provision of inputs (seed, fertilizer) is monitored centrally, by the directorate procuring it. The above data should be collected semi-annually. To compare performance across Wards an index should be created by averaging the following indicators for each Ward and then ranking the average (from highest to lowest):

- Contact farmers per extensionist
- % of farmers satisfied with extension services (service delivery survey)

3.7 LIVESTOCK SERVICES

Amongst others, services include animal husbandry advice, provision of veterinary (health) services, provision of inputs, artificial insemination, and meat inspection. Livestock services are even more complicated than agricultural extension, due to the extensive involvement of the

private sector in dairy processing and extension as well as animal health. In Meru County extensionists and veterinarians were distributed across the county down to Sub-County level only; some wards did not have dedicated officers. The indicators below focus on two main services: (i) livestock extension and (ii) veterinary services (animal health).

Table 11: Recommended Livestock Indicators (routine data only, at sub-county level)

INDICATOR/DATA	CALCULATION
LIV01 Current number of livestock extensionists	
LIV02 Current number of veterinarians	
LIV03 Number of livestock keepers receiving extension advice	
LIV04 Total number of livestock keepers in the Area (sub-County)	
LIV05 Total number of livestock in the Area (various types, cows, goats, etc.)	
LIV06 Number of deaths (various types of livestock)	
LIV07 Number of livestock vaccinated/treated for disease	
LIV08 Contacted livestock keepers per extensionist	LIV03/LIV01
LIV09 % of livestock keepers contacted	100* LIV03/LIV04
LIV10 Number of livestock vaccinated/treated per veterinarian	LIV06/LIV02
LIV11 Livestock mortality rate (in % for various types, cows, goats, etc)	100*LIV06/LIV05
LIV12 Total milk production	
LIV13 Estimated yield (liters/day) of dairy animals for keepers (contact keepers only)	

Note: Only raw indicators/data is collected (i.e. indicators/data without a calculation. Calculated indicators are generated automatically.

It is assumed that provision of inputs is monitored centrally, by the directorate procuring it. The above data should be collected semi-annually. To compare performance across sub-counties⁹ an index should be created by averaging the following indicators and then ranking the average (from highest to lowest):

- Contacted livestock keepers per extensionist (% increase)
- Number of livestock vaccinated/treated per veterinarian (% increase)
- % of farmers satisfied with livestock extension services (service delivery survey)
- % of farmers satisfied with veterinary services (service delivery survey)

3.7.1 Other livestock indicators

Other indicators could be collected at each service delivery point, including: (i) AI centers (number of cattle inseminated, number successfully inseminated); and (ii) slaughterhouses (number of cattle inspected, revenue, etc.).

3.8 SERVICE DELIVERY SURVEYS AND OTHER STUDIES; INVESTMENTS IN M&E

M&E is much more than the collection of routine, administrative data. In most cases, administrative data will identify major trends or point in the direction of issues that require further exploration. However, from a policy standpoint, the reason for trends, and the effectiveness of service delivery will often require detailed surveys and analytical work, as documented below.

Sector	Study / instrument
Roads	Develop a mechanism to assess road quality, including physical tests

⁹ Or wards, if each ward has extensionists and veterinarians.

Sector	Study / instrument
Agriculture and veterinary extension	Studies of contact and non-contact farmers to understand the adoption of extension advice and the impact of this advice on production and other indicators
Vocational training	Develop minimum standards and inspection processes
Irrigation schemes and water points	Develop a mechanism to measure the supply of water for most schemes and water supply systems

In addition to this, periodic service delivery surveys should be undertaken. These should track citizen satisfaction with health, agricultural extension, livestock extension and veterinary services, irrigation, water and roads. To be useful, each service should be assessed at each service delivery point. This will involve: (i) designing a **very brief** questionnaire (1-2 questions per service) and (ii) identifying a random sample of actual service users (in the case of health, irrigation, agriculture and livestock).

In terms of sample size, a middle ground will be necessary. It will be too expensive to interview enough people to draw statistically significant conclusions about whether service delivery is improving at each service delivery point. A sample of perhaps 10-20 users per service delivery point is probably sufficient.¹⁰ Ideally, surveys should be completed every one or two years.

3.9 A TIMETABLE FOR IMPLEMENTATION (M&E) AND AHADI ACTIVITIES

Being able to collect and manage information at service delivery level is a pre-requisite for cascading performance management and incentives down to “facility” level. A stepwise approach is necessary. AHADI should first work with MED and Kingsway to test E-NIMES in 4-6 Counties. This should include the following:

ACTIVITY	TIME FRAME
8. Have M&E facilitators, work with a select number of directorates to identify service delivery points (create an inventory), define a small set of key indicators, and create targets at each service delivery point. This process is described above	September-November
9. Amongst these indicators, identify those that can be used to compare performance across service delivery points (see Section 4.2)	As above
10. Working with Kingsway, ensure administrators and user rights are defined and that data can be entered into the E-NIMES.	As above
11. Collect actual data for the second quarter	January 2019
12. Assess whether data is being collected and how E-NIMES can be upgraded	January-February 2019
13. Revise E-NIMES based on lessons learned during data collection (to be done by Kingsway)	Ongoing
14. Review and revise indicators	2019/20

The goal, over the next 6 months or so is therefore:

To facilitate, operationalize and pilot E-NIMES as a functional M&E system, to collect and manage service delivery level indicators in 4-6 Counties

¹⁰ Alternatively, focus brief focus group discussions (or citizen scorecards) could be held for each service delivery point, with individual participants making assessments.

As part of this report, a prototype Microsoft (MS) Access database has been developed. The database demonstrates key functionality that can be adopted by E-NIMES including the dynamic definition of service delivery points, aggregation of indicators, and the development of indexes.

Table 12: Reasoning behind ECD indicators

Result	Narrative	Name of the indicator/data	Comment / Use
The School is adequately financed ↓	The school has sufficient resources (teachers, books, classrooms) and these resources are well managed	Textbook/Student Ratio	Used to allocate resources
		Teacher/Student Ratio	Used to allocate resources
		Budget per Student	Unlikely to be collected
Students attend school ↓	Parents are willing to send students to school	Number of students enrolled	Measures school performance
		Enrollment rate (# Students / Population of age group)	Unlikely to be collected
		Retention rate	Measures school performance
Quality education is provided ↓	Parents keep students at school (they perceive it to be worthwhile)	Retention rate	Measures school performance
		Examination Pass rate	Measures school performance
Students learn and are prepared for future education	Students master the requirements for their age	Examination Pass rate	Measures school performance

NOTE: all indicators from enrollment downward should be disaggregated by gender; the output, in the first column is in black

Table 13: Reasoning behind Vocational training indicators

Result	Narrative	Name of the indicator/data	Comment / Use
The School is adequately resourced and managed ↓	Vocational training centers have the proper equipment to teach, are following curriculums, and have well planned lessons	Inspection / assessment score by the directorate	Measures quality of the school's management
		Teacher/Student Ratio Cost per student	Used to allocate resources Unlikely to be measurable
Students attend school ↓	Parents are willing to send students to school	Number of students enrolled	Measures school performance
Quality education is provided ↓	Students remain at school (they perceive it to be worthwhile)	Retention rate)	Measures school performance
Students learn and are sufficiently skilled ↓	Students master the requirements for their age	Examination Pass rate	Measures school performance
Students are hired	Students receive a job following graduation (showing their education was of good quality and relevant)	% of sampled students getting a job within 6 months	Measures school performance

NOTE: all indicators from enrollment downward should be disaggregated by gender; the output, in the first column is in black

Table 14: Reasoning behind road indicators (for each road

Result	Narrative	Name of the indicator/data	Comment / Use
Roads are periodically maintained and upgraded	Roads, bridges, culverts, etc., are maintained to standard	Kilometers of road resurfaced (tarmac) Kilometers of road graveled Number of bridges and culverts repaired Kilometers of road routinely maintained	These indicators are indicative, depending on the type of interventions typically undertaken. These can also be monitored through CIDP projects
Roads are adequate and in good condition	Citizens have access to a road network which is in good condition	Number of days the road was impassable Road quality assessment (surface, potholes, cracking, structural adequacy to carry a specified load, surface friction as related to safety, etc.	Countries do not seem to currently have such a system to assess the condition of a road. This would consist of multiple indicators
Roads are used	Transporters and citizens use the road	Citizen satisfaction with the quality of roads Transporters satisfaction with the quality of roads	Service delivery survey
Roads lead to reduced travel time, improved safety	Roads lead to reduced travel time, improved safety	Average time from the Ward to the County capital using a minivan (in minutes) Number of road accidents	

NOTE: the output, in the first column is in black

Table 15: Reasoning behind Irrigation indicators

Result	Narrative	Name of the indicator/data	Comment / Use
Irrigation system is well managed	Financial involvement for Maintenance, Operation and Management (MOM) in an irrigation scheme is generally taken to reflect the strength of Irrigation System sustainability. The system has a functional governance structure	The system has a user's management committee that meets regularly	Identifies schemes where additional management support is required
		Ratio of User fees / operations and maintenance costs	Probably not available
		Ratio of User contributions / government contributions	Probably not available
Irrigation water is delivered	The irrigation scheme provides sufficient water, meeting the demands of farmers	Annual Volume of water provided	Probably not available, but probably the most important output level indicator
		Annual Volume of water per hectare farmed	Probably not available
		Volume of water provided/volume of water demanded	Probably not available
Water is used	Water is used for agricultural activities	Hectares under production Number of households supported	
Productivity increases	Farmers have additional production and improved yields; farmers are satisfied with irrigation schemes / services	Metric tons of various crops produced	Probably not available
		Average yield	Probably not available
		Average satisfaction score irrigation service delivery	Currently service delivery surveys are not done
Farmer profits and incomes rise	Farmer profits and incomes rise	Average income of farmers in the scheme	Probably not available; would ideally be compared to a control group of non-irrigation farmers

NOTE: the output, in the first column is in black

Table 16: Reasoning behind agriculture extension (advice) indicators

Result	Narrative	Name of the indicator/data	Comment / Use
Extension and new technologies are available and well managed	Research is converted into meaningful lessons to disseminate to farmers. Outreach is provided by sufficient extensionists with working equipment	Tons of fertilizer (or other input) provided Number of contact farmers per Extension Worker	These are extension capability indicators used (largely) to allocate resources and track research
Agricultural advice provided to farmers	Farmers are shown modern agricultural techniques, technologies, and products through T&V (training and visit), pilot farms, and other mechanisms	Number of active contact farmers (male, female) Total number of farmers in the Area (Ward) % of farmers in the population contacted Number of farmer-contacts ¹¹	Possibly not accurate Possibly N/A but a good indicator of coverage Probably N/A, but the best output indicators
Farmers adopt the new techniques and technology	Farmers adopt the techniques provided via extensionists	% of contact farmers adopting new techniques % of contact farmers adopting new crops Average satisfaction score with extension service delivery	Probably N/A, but an important outcome indicator Probably not available Probably not available
Farmers adopting new techniques increase productivity	Farmers adopting new techniques show an increase in yield, improvement in quality, adoption of new crops, etc.	Average increase in yield of farmers adopting extension advice Average increase in hectares farmed of farmers adopting extension advice	Probably not available; would ideally be compared to a control group of non-contact farmers As above
Farmer profits and incomes rise	Farmer profits and incomes rise	Average income of farmers adopting new technologies	Probably not available; would ideally be compared to a control group of non-contact farmers

NOTE: the output, in the first column is in black; N/A = Not available

¹¹ This can be disaggregated into a wide range of products, such as: field visits, group training, research-extension linkage workshops, visits to pilot fields, etc.; N/A = Not available

Table 17: Reasoning behind livestock extension (advice) and veterinary indicators

Result	Narrative	Name of the indicator/data	Comment / Use
Extension and veterinary services are available and well managed	Research is converted into meaningful lessons to disseminate to farmers. Outreach is provided by sufficient extensionists and veterinarians with working equipment	Tons of feed (or other input) provided Number of contact livestock keepers per Extension Worker	These are extension capability indicators used (largely) to allocate resources and track research
Livestock advice and veterinary services provided to livestock keepers	Livestock keepers are shown modern techniques, technologies, and products through T&V (training and visit), pilot farms, and other mechanisms. Animal health services are provided	Number of livestock keepers contacted by extensionists (male, female)	Possibly not accurate
		Total number of livestock keepers in the Area (sub-county)	
		% of livestock keepers in the population contacted	Possibly N/A but a good indicator of coverage
		Number of animals treated (vaccinated)	Probably N/A, but the best output indicators
		Number of animals treated per Vet	
	Average satisfaction score with veterinary service delivery		Probably not available
	Average satisfaction score with veterinary service delivery		Probably not available
Livestock productivity improves; animal health improves	Keepers adopting new techniques show an increase in productivity; disease is effectively treated resulting in improved animal health	Average increase in yield of dairy farmers	Would ideally be compared to a control group of non-contact farmers
		Mortality rate of livestock	As above
Profits and incomes rise	Farmer profits and incomes rise	Average income of farmers adopting new technologies	Would ideally be compared to a control group of non-contact farmers

NOTE: the output, in the first column is in black; N/A = Not available

4 Performance management systems at service delivery points

4.1 INTRODUCTION

As described in Chapter 1, a County M&E system aims to support policy and resource allocation decisions and **to provide the information required to manage performance at the level of a service delivery point.**

Ultimately, a performance management system should:

3. Be able to identify the best and worst performance at facility / service delivery point level
4. Incentivize performance at facility / service delivery point level.

It is essential to cascade performance management to the level of a service delivery point, in order to more effectively allocate resources and to provide a mechanism to better ensure county and department and directorate level targets are met.

4.2 WHICH INDICATORS SHOULD BE SELECTED?

Service delivery indicators (at “facility” level) need to have the following characteristics:

CRITERIA

Proper Accountability

Indicators need to be under the **control** of the service provider. This implies they should largely be output indicators reflecting quantity, quality, timeliness, and user satisfaction. As such, they should therefore not be subject to differences in resource allocation by headquarters or largely dependent on characteristics of the underlying population

Relevant and Meaningful

The indicators should incentivize a relevant aspect of service delivery which is valued by the service recipient

Clear and Reliable

Since rewards may be allocated based on performance, the data should have clear means of verification and evidence; data should not be easily manipulated or expressed as an opinion of the service provider. This would introduce bias. The indicator should be very clearly defined in terms of its calculation and how it is measured.

Accepted by the provider

The process of selecting service delivery level indicators should be owned and accepted by the provider as a valid measure of their effort and performance. Participation of service providers in developing indexes and reward systems is essential for the system to work. As described below, the “acceptance” may be gained over time, through trial and error; as such, a pilot or test-run should be implemented first to demonstrate how the system would work,

4.3 HOW WOULD FACILITY-LEVEL PERFORMANCE CONTRACT WORK?

In this section the term “performance contract” is used to refer to the official agreement between staff at the level of a service delivery point and directors of departments or directorate. The contract spells out the rights and responsibilities of all parties and is co-signed by all service providers at a ward, facility, etc. (i.e. it is a team-based or unit-based agreement). The contract should be very short. This section draws heavily from the experience of *Payment for Results Contracts*. Some key elements are outlined below

Figure 10: A typical service delivery performance contract

Payment for results contract/agreement

THE CONTRACT

1. This Contract is made and entered into by and between the [Department or Directorate name] of [County Name] (henceforth the “contractor”) and the service provider and staff listed in Annex 1 (henceforth the “sub-contractor”)

PURPOSE

2. The purpose of this contract is to introduce performance-based contracting and payment for results. This contract aims to improve the quality of services provided by clarifying expected performance and by creating incentives to improve performance.

PERIOD OF PERFORMANCE

3. The period of performance of this contract is from [START DATE] to [FINISH DATE]

PERFORMANCE ASSESSMENT

4. The performance of the sub-contractor(s) listed in Annex 1 will be assessed against a series of indicators which will be converted into a single score or index. The following performance indicators will be used:

Name of the indicator	Definition and description of the indicator

5. An overall score will be created by..[DESCRIBE]. An example of calculating such a score is provided in ANNEX 2.

REPORTING OBLIGATIONS AND OBLIGATIONS TO PROVIDE ACCURATE AND TIMELY INFORMATION

6. The subcontractor is required to provide all the indicators listed above under item 4 on a semi-annual basis, providing data by [DATE 1] following the first 6 months of implementation and [DATE 2] following the close of the financial year.
7. A form for data provision is found in ANNEX 3
8. Failure to provide complete data by the dates specified in item 6 above invalidates this contract

- 9. Provision of data which is inaccurate or falsified will result in the staff members listed in ANNEX 1 being ineligible to participate in payment for results or performance based reward schemes for a period of 3 years.

SYSTEM OF PERFORMANCE REWARDS

10. The following system of rewards will be in place...[DESCRIBE AMOUNTS PAID, CRITERIA, ETC.]

ANNEX 1: SUB-CONTRACTORS

This annex lists the sub-contractors to this performance contract.

Name of service delivery point: [NAME]

Location of service delivery point: [LIST WARD OR SUB-COUNTY OR VILLAGE]

Agreement: We the undersigned agree to adhere to this contract. In signing this contract, we have read and understood its contents. We will endeavor to continuously improve our performance. All information we provide will be correct, accurate and complete.

Name of staff	Position	Signature	Date

ANNEX 2: CALCULATING INDEXES

Show an example

ANNEX 3: DATA REPORTING

Create a data collection form, signed by all members of the service delivery point / unit

4.4 INDEXING

In comparing performance across service delivery points, indicators may have different formats and units. To create an overall index or ranking, values must be converted to a common scale. An example of vocational training indicators can be found in Table 18. There are XX ways to convert indicators with different units to a common measure:

1. Convert them to a ratio of their **actual value to their target value**. This is an effective means as well as targets are accurate and well-developed.

Table 18: Example of raw data for vocational training

SD Point	Enrollment	% passing	Compliance score
A	342	0.24	47
B	101	0.80	30
C	235	0.11	35
D	200	0.56	18
E	124	0.32	14
F	245	0.70	95
MINIMUM	101	0.11	14
MAXIMUM	342	0.8	95

2. Convert them to **percentage increases from the previous year**. This measures improvement only.
3. Convert individual data into an **index score, on a scale of 0-100**. This normalizes all data, using a formula: $Index = 100 * (Actual\ value - Minimum\ Value) / (Maximum\ value - Minimum\ value)$, where minimums and maximums are across all service delivery points. To track improvement over time, the minimum and maximum are from the first year data was collected. The conversion of data in Table 18 can be found in...This the method used for international indexes, like the *Corruption Perception Index* or *Ease of Doing Business Index*.¹²
4. Convert individual data into a **Z-Score** (bell curve) using the formula: $Z-Score = 100 * (Actual\ value - mean) / standard\ deviation$. This measures how many standard deviations an individual data point (indicator) is from the mean. Statistics are calculated across all service delivery points and trends are generated using the first year’s mean and standard deviation in calculations across all subsequent years.

Table 19: Normalized (0-100) converted data for vocational training

SD Point	Enrollment	% passing	Compliance score	Average
A	100	19	41	53
B	0	100	20	40
C	56	0	26	27
D	41	65	5	37
E	10	30	0	13
F	60	86	100	82

The latter two are relative measures, comparing performance across service delivery points. This is the way “performance comparison” works in competitive sports, like football, with rewards and punishment (like relegation) allocated to the best and worst teams, as opposed to teams that meet their internal points targets or improve the most.

4.5 A TIMETABLE FOR IMPLEMENTATION (PERFORMANCE MANAGEMENT) AND AHADI ACTIVITIES

In the beginning, a performance management system should focus on establishing relevant indicators that can be used to assess service delivery across multiple service delivery providers. In the first year, indicators will be collected, performance indexes calculated, and service providers ranked in terms of their performance. The process of linking this to rewards should be established slowly over time, after 1-2 years of implementation. In the beginning, non-financial rewards and recognition can be implemented. Therefore, AHADI should:

ACTIVITY	TIME FRAME
8. As part of the M&E facilitation process, identify a small set of indicators that can be used to compare performance across service delivery points; recommendations for these were made in the previous chapter	September-November
9. Based on these indicators, agree on a system of indexing	As above
10. Sign facility level performance contracts, that do not have financial rewards based on the template above.	December
11. Identify a system of non-financial rewards or performance recognition based on proposed indexes (i.e. rewarding top 10% or 20% of performers)	As above

¹² See www.transparency.org/cpi2017 or www.doingbusiness.org/rankings

12. Once data is collected, calculate indexes and rank service delivery performance across facilities, Wards, etc., identifying best and worst performers. Hold meetings to discuss results and their validity	January-February 2019
13. Complete calculations for the financial year	June-July 2019
14. Review indicators used in contracts and evaluate the feasibility of creating financial rewards	As above

The goal, over the next year is therefore:

To pilot a system of facility-based performance contracts that can be used to allocate non-financial and financial rewards in the future