

The graphic features a large yellow circle on the left containing the text 'Knowledge Hub'. To its right are two overlapping circles, one teal and one red, both containing a network diagram of white nodes connected by thin lines. The background is a light blue gradient.

# Knowledge Hub

DATA.FI BUDGET REPORT

# South Africa Knowledge Hub eLearning System One-Year Comprehensive Budget

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# Background and Budget Introduction

The Knowledge Hub (KH) is a central, online, zero-rated platform in South Africa connecting the public and private health workforce to relevant, high-quality, in-service training opportunities. The KH platform provides access to curated and effective professional development opportunities and resources, including online and blended-learning courses, face-to-face workshops, self-study resources, policy documents, guidelines, and reference materials. To deliver high-quality healthcare to clients, healthcare professionals need to maintain and improve their skills and performance, and implement strategies to develop effective managers and healthcare practitioners. The opportunities provided by the KH system are targeted to solving problems in the daily life of a professional and are based on effective needs analysis.

The KH is led by the National Department of Health (NDOH) and is supported by provincial and district departments working to develop the capacity of all healthcare workers. Initially developed in 2016, Neil Butcher and Associates (NBA), an integral service provider partner supporting the NDOH, has maintained the KH with funding through the US Centers for Disease Control (CDC). On October 1, 2020, above-site support for the KH transitioned from the CDC to the United States Agency for International Development (USAID) through the Data for Implementation (Data.FI) project mechanism. Upon this transition, USAID established the goal of transitioning responsibility for hosting the KH system from NBA, to institutionalize the hosting within the NDOH, and to continue to provide technical assistance and support for ongoing improvements to the KH in support of the long-term sustainability of the system.

To prepare for long-term sustainability, a thorough understanding of the budget requirements for all operating costs, including personnel and direct costs, is needed. As part of the technical assistance being provided, Data.FI worked with NBA to draft a one-year comprehensive operating budget that identifies the financial resources needed to support the KH system, taking into consideration the hosting costs; human resource support by a complete and ideal team of staff; and technical maintenance costs. The development of the budget used estimates based on historic staffing and budgets from NBA's previous years working on the KH system, and on reference market rates researched from December 2021 to February 2022. The budget can serve as a benchmark to summarize the financial resources required to fully staff a team covering all aspects of the KH's routine operations and programmatic activities. It is intended to serve as a resource to the Human Resources Directorate (HRD) when applying for, seeking, or planning for funding requests for the sustained financing of the KH system and its programmatic activities. This narrative accompanies the one-year comprehensive budget and provides a description of the budget structure and budget inputs.

This one-year comprehensive operating budget organizes the cost categories in two ways: (1) by main KH activity type, and (2) by budget line item.

## 1. BY KH ACTIVITY TYPE

- There are four primary activities to support KH system maintenance:
  - System hosting, maintenance, and oversight of content generation
  - New course development, adaptation, and setup
  - Knowledge management and ongoing capacity building
  - Communications and marketing

## 2. BY BUDGET LINE ITEM CATEGORIES

- The two categories of budget line items are the personnel required to support all KH program components and the direct costs associated with implementing KH programmatic activities.

The purpose of displaying the budget in the two ways is to allow users to fulfill different tasks using the budget. The first format—summarizing the budget by the four main activities to support KH system maintenance and programmatic implementation—allows a user to assess the necessary funding to support these specific activities, which may be important if there is only partial funding available. With the activity categorization, a user can prioritize how to use partial funding to cover specific activities that support different components of the KH system and its implementation.

The second format, by budget line item, is organized by the cost types. This is a common way that budgets are formatted when requesting funding. This format demonstrates the main cost categories that support the maintenance of the KH system and its programmatic implementation.

In the one-year comprehensive budget tool, the first tab contains the summary budget in these two formats. The tool uses inputs from the other tabs in the budget that contain the full detailed list of every individual personnel and direct cost items. Instructions on how to use the input tabs to generate budget summaries are included in the budget tool on the instructions tab and in Annex 1 of this budget narrative.

NBA's staffing plan informed the development of the personnel list. Prepared in collaboration with NBA and the HRD unit at the NDOH, the final list of personnel in the budget reflects the structure recommended by NBA and the staffing that the HRD unit would arrange to support the KH platform in an ideal situation, without considering existing staffing gaps or funding limitations. The staffing list is meant to demonstrate the full team recommended to optimally run the KH; however, the budget tool is designed to allow users to change the staffing, salaries, and level of effort (LOE) to adjust the budget totals should staffing changes need to be considered.

### BUDGET BY ACTIVITY CATEGORY

The first way the budget summary is organized is by activity category. As stated above, there are four main activities that support the running, maintenance, and implementation of the KH and its programmatic components:

- System hosting, maintenance, and oversight of content generation
- New course development, adaptation, and setup
- Knowledge management and ongoing capacity building
- Communications and marketing

Each activity is explained in detail in the sections that follow.

Within the budget tool, the division of the budget across each activity is done by first listing the total personnel and then, based on the recommendations and experience of NBA's staffing plan since 2016, dividing the time of each of the personnel across the four activities. Personnel salary rates are based on daily rates for consultants in the respective fields, but can be edited, as necessary.

#### Activity 1. Hosting, Maintenance, and Oversight of Content Generation

The objective of this activity is to support and maintain the hardware and software needed to host the KH platform. This activity includes efforts to properly monitor and maintain the hosting environment.

The KH platform uses Drupal and Moodle Learning Management System, both of which are open-source software. Per best practices in software development, hosting of the KH platform is across three servers: the live, development, and testing servers. The development and testing instances are used to test the KH software and functionality updates before they are moved to the live server and released to users. The updates are released by Drupal and Moodle on an ongoing basis. It is critical that these updates are done timeously to ensure that the system is protected from potential risks and vulnerabilities.

Server storage, free memory, and CPU usage are monitored to ensure that the server runs optimally. Older server backups are removed. Backups are monitored and tested on a regular basis to make sure that the data are maintained and can be restored, if necessary. The Ubuntu server and the software installed on the server, such as Apache, PHP, and MySQL, receive regular security and bug fixes. They are monitored and applied on a regular basis to ensure that the server software remains up to date and is running optimally so that the website remains responsive for users.

Activities in this area include:

- Maintenance of the KH development and testing servers, which includes the following activities:
  - Monitor packages/software on the server and update, as necessary.
  - Monitor server CPU, memory, hard disk drive, and network performance on the server to ensure that the server does not become overloaded.
  - Based on the status of the server, plan to resolve any issues that arise.
  - Monitor that server backups are running and test accordingly.
  - Ensure that all necessary software is running correctly and is optimally tuned.
  - Restart any software or the entire server, as necessary.
  - Monitor and address physical server failures.
- Test software updates before live release.
- Implement periodic software updates to ensure that standard software updates from the open-source software community are applied as released, which is important to keep the software current and secure.
- Provide technical user support and error resolution.
- Generate monthly statistics reports.
- Manage and support the current cadre of eLearning courses hosted on the KH platform (as of February 2022), including:
  - Basic HIV for Health Care Professionals
  - Community health worker programs, including:
    - Master trainers
    - Outreach team leaders
    - Community health workers
  - Adult Primary Care Master Trainer and Health Care Worker Course
  - Adult Primary Care for Health Care Professionals Full Course
  - Adult Primary Care for Health Care Professionals 2020 Update
  - Introduction to TLD and Switching Stable 1st and 2nd Line ART Clients to DTG Containing Regimen

- Electronic Vaccine Data Systems
- COVID-19 Clinical Case Management and Infection Prevention Control Courses
- Adult Primary Care COVID-19 Guidance for Health Care Worker
- Antimicrobial Resistance Awareness Module
- Voluntary Medical Male Circumcision Course
- Advanced Clinical Care for Health Care Professionals
- Advanced Clinical Care for Certified Master Trainers
- Sexual and Reproductive Health and Rights
- COVID-19 Vaccination Training for Healthcare Workers
- COVID-19 Vaccination Training for Health Workers Cohort 2
- COVID-19 Vaccination Training for Health Workers Face to Face and Provincial Data Capture System
- Upload resources, training opportunities linked to job roles, and eLearning courses received from the NDOH in the KH portal, eLibrary, and learning management system. This includes preparing metadata for new resources and training opportunities, and managing existing metadata and files to ensure that resources and training opportunities are accurate and relevant.
- Manage user registration, roles, permissions, and access.
- Support and host webinar events.
- Conduct project management and administration, which may include:
  - Recurring weekly or monthly meetings of KH staff and the NDOH HRD and NDOH programs (as necessary)
  - Ad hoc meetings and planning sessions requested by the NDOH
  - Ongoing project administration and communication

## Activity 2. New Course Development, Adaptation, and Setup

The objective of this activity is to support the development or adaptation of course content or resources that are to be uploaded to and hosted on the KH platform. This activity includes the preparation of new course materials or resources, the adaptation of existing materials or resources to appropriately format them for an electronic platform, and the correct setup of the course modules in the learning management system component of the KH platform.

The staffing scenario provided in the budget tool assumes that the HRD unit relies on NDOH program staff or partners to develop course materials or to provide existing materials that it would like to have adapted for hosting on the KH platform. Included in the personnel list in the budget tool are instructional designers and subject matter experts who would support the review of courses and their adaptation/content formatting, and who would inform the visual design, structuring, implementation, and evaluation of the eLearning content based on learner needs and desired learning objectives to ensure that the courses provide an effective learning experience.

However, should instructional design staff not be available, an alternative model for course development or adaptation is to have NDOH programs use their own resources or budget to prepare the eLearning materials before submitting them to the HRD unit for uploading to the KH platform. In this case, the personnel associated with course development could be excluded from the overall



budget because the HRD unit would not be responsible for fulfilling that role or function from its own available staff.

Activities in this area include:

- Create, adapt, and develop courses based on the Learning Design and Content Development Frameworks using content generated by NDOH programs, including:
  - Design the course look and feel and related course elements (banners, labels, and buttons).
  - Upload course materials with accompanying transcripts, resources, guidelines, and other supporting documents.
  - Set up course activities and the course schedule.
  - Set up and manage discussion forums.
  - Edit, package, and upload interactive session webinar recordings and supporting materials.
  - Set up the course evaluation.
- Schedule and host all planned webinars, including orientation sessions and module interactive sessions.
- Set up and manage course roles, permissions, and access.
- Facilitate orientation and training sessions for all course facilitators and panelists (course and Zoom sessions).
- Provide user support for course-related activities, including registration, enrollment, course activities, Zoom webinars, accessing the course, etc.
- Design course certificate and setup systems to implement grading, track course activity completion, generate certificates, and produce reports.
- Prepare all Health Professions Council of South Africa continuing professional development (CPD) points reporting requirements, where necessary.

### Activity 3. Knowledge Management and Ongoing Capacity Building

The objective of this activity is to support ongoing processes for maintaining the KH system and program implementation documentation and resources, and to support ongoing capacity building of current staff and new staff in their roles and responsibilities.

Activities in this area may include:

- Onboarding and training new administrative staff or technical/information technology staff on the use and management of the KH platform, which could include:
  - Programmatic processes
  - Use of the platform
  - KH Drupal and Moodle maintenance tasks:
    - Installing and testing periodic software and plugin/module as released to keep the software current and secure
    - Drupal site administration
    - Moodle site administration, course creation, and user registration
    - Technical user support and error resolution
    - Generation of monthly statistics reports from KH Drupal and Moodle platform

- Providing ongoing support to KH staff and team.
- Preparing or updating any documentation for the KH platform, programmatic activities, or process materials on an ongoing basis.
- Ongoing support and liaison with NDOH program officials and technical staff.

#### Activity 4. Marketing and Communications

The objective of this activity is to implement a marketing strategy to promote increased use of the KH platform and to support the creation of marketing materials. This activity includes efforts to ensure that NDOH programs, potential users, and managers are aware of the services, events, courses, and resources that are being added to the KH platform.

The activities in this area may include:

- Updating the KH communication and demand generation strategy and creating a content calendar with a schedule of when and where to publish new content.
- Updating and creating marketing materials for the KH platform, including writing content, editing, and graphic design of:
  - Brochures
  - Presentations
  - Newsletters
  - Promotional infographics, videos, animation, and graphics about KH courses, content, and webinars
  - How-to guides
  - Social media posts (Facebook, LinkedIn, Twitter, and Instagram)
  - Course brochures and adverts
  - Website and eLibrary content
  - Webinar adverts
- Multi-level communication with the following structures:
  - NDOH and provincial directorates, regional training centers (RTCs), districts, and sub-districts
  - Health-related professional councils, associations, universities, colleges, unions, the Health and Welfare Sector Education and Training Authority, and the Department of Public Service and Administration
  - District support partners, non-profit organizations, nongovernmental organizations, and donor/funding agencies
- Direct communication with all healthcare workers via mailing lists, sourcing email addresses from provinces, district support partners, and professional councils/bodies.
- Identifying relevant websites, newsletters, and other relevant publications to add to the KH website. This includes but is not limited to provincial DOH (PDOH) websites, NDOH apps, professional councils, health parastatals, nursing colleges, universities (health and related faculties), private hospitals/facilities, etc.
- Preparing and posting KH-related content on the NDOH internal communications newsletter, called Rihanyo.

- Presenting and hosting webinars to showcase the KH to relevant NDOH/PDOH training and program committees, HRD units, RTCs, and master trainers.

## Other Direct Costs

The other direct costs included in this budget cover the remaining necessary services or products that are needed to implement the KH programmatic activities. They include:

### Hosting the KH for a 12-month period

The pricing in this budget is based on the Xneelo pricing for a backup server and for a fee for the following servers:

- Development Server
  - Dedicated Virtual Server
  - 1 virtual CPU
  - 4 GB of RAM
  - HDD 160GB
- Database Server
  - Dedicated Virtual Server
  - 6 virtual CPU
  - 24 GB of RAM
  - SSD 250GB
- Live Website Server
  - Dedicated Virtual Server
  - 8 virtual CPU
  - 24 GB of RAM
  - HDD 500GBA

### Zoom hosting fee for a 12-month period

The pricing in this budget is based on the Zoom webinar plan for video webinars for 3,000 attendees (link to pricing page: <https://zoom.us/pricing/events>).

## BUDGET BY LINE ITEM CATEGORY

The second way the budget summary is organized is by line item category. The budget summary breaks down the budget by main cost type. The main identified cost types are based on NBA's recommendations and include personnel and other direct costs. Personnel refers to the people who spend time supporting KH system maintenance or programmatic activities. Other direct costs refer to the cost of the server hosting and the subscription to a conference call platform required for hosting webinars.

Other line item categories could include those listed below. They are not currently included in the budget tool because these costs do not apply. However, they are defined below should they be relevant or applicable in the future. The budget tool has sections where these budget line items can be added, if needed.

- Equipment and supplies

- Examples include computers or devices, office supplies, and other materials that are used to complete tasks or activities for the overall program.
- Training and workshops
  - Examples include scheduled large-scale training to orient staff to a system or process, workshops with staff or stakeholders in support of the current system or future strategic planning, or creation and maintenance specifically for training or onboarding materials.
- Subcontracts/Grants
  - Examples include agreements with contractors who are working directly on the activity that is being budgeted. In this case, for example, a long-term service agreement or subcontract with NBA or another service provider.

Additional details about the budget categories of personnel and other direct costs are given in the following sections.

## Personnel

Personnel included in the comprehensive budget are specified under the assumption that the KH platform is implemented with the ideal team composition that can support all roles and responsibilities needed for the KH system and for its programmatic activities. The following table presents a list and a description of the roles and responsibilities.

Role/Responsibility	Summary	Personnel
<b>Management of Training and Competencies</b>	Lead the development and/or selection, assessment, and implementation of learning and e-learning technologies, methodologies, and interventions appropriate for training adult learners in limited-resource settings in the public health sector. Support an appropriate health competency model for improving system performance and ensure alignment of learning and development of health professionals with defined competencies for improved service delivery.	Project Director Project Manager Assistant Manager Instructional Designer
<b>Management of Course Quality Assurance and Credentialing</b>	Ensure the integrity and fit-for-purpose of available role-specific healthcare professional development resources, and the overall quality of resources and indicator-linked professional development activity content. Develop and implement strategies to optimize the use of healthcare professional development opportunities in the KH by overseeing the effective functioning of the registration and assessment processes in the KH.	Project Director Project Manager Assistant Manager Instructional Designer
<b>Program Management</b>	Responsible for the day-to-day management of the KH. The program manager delivers the programs end to end within the constraints of time, budget, and resources, communicating these expectations to the program team. The program manager provides regular progress updates (both in terms of program delivery and financial reporting) to relevant stakeholders and program team members.	Project Director Project Manager Assistant Manager
<b>Administration of Programs</b>	Handle the administrative functions of the KH platform and its programs, and support course administration and communication.	Project Director Project Manager Assistant Manager
<b>Management and Administration of Courses</b>	Oversee the course daily functions to ensure that deadlines and compliance requirements are met.	Project Manager Assistant Manager

<b>Role/Responsibility</b>	<b>Summary</b>	<b>Personnel</b>
<b>Coordination of Communications</b>	Responsible for executing and monitoring communications strategies. This includes creating public relations and marketing materials, such as press releases, blog posts, and newsletters, including social media content and community management.	Project Manager Assistant Manager Social Mobilizer/Online Digital Marketing
<b>Instructional Design</b>	Responsible for planning and analysis, visual designing, structuring, implementing, and evaluating eLearning content. Delivers a solid learning experience based on learner needs and desired learning objectives.	Instructional designer Subject matter expert Multimedia/Video editing
<b>Copy Editing</b>	Proofread text and correct spelling, grammar, and punctuation errors. Verify factual correctness of information, such as dates and statistics. Check text for style, readability, and adherence to editorial policies.	Professional Language Editor
<b>Research/Monitoring and Evaluation</b>	Conduct qualitative research to analyze participants' thoughts and feedback on a range of services.	Assistant Manager
<b>Administration and Monitoring of Systems</b>	Ensure the technical integrity of the KH's functionality, provide user support, and implement reporting requirements as determined by national, provincial, and district-level leadership. Ensure ongoing hosting and development of the KH.	System developer Learning management system administrator Database administrator
<b>Technical Support and Maintenance of the KH System</b>	Design and develop KH system plans, upgrades, and new features. Assist with troubleshooting technical issues and risk mitigation planning. Collaborate with project leads and information and communication technology (ICT) team to resolve issues and ensure solutions that are viable and consistent. Create system guidelines and manuals. Run training sessions and workshops on system processes. Conduct regular reviews of systems and generate reports on efficiencies and improvement areas. Structure and prioritize business requirements and communicate plans with stakeholders for review and approval.	System developer Learning management system administrator Database administrator
<b>Technical Development of System Architecture and Functions</b>	Responsible for building an accessible knowledge management architecture and technology solution using a combination of open-source technology (Drupal, MySQL etc.), cloud-based visualization tools, and a learning management system.	System developer Learning management system administrator Database administrator
<b>Operation of Help Desk</b>	Help desk support specialists provide technical assistance and user support. Responsible for answering queries and addressing system and user issues in a timely and professional manner.	Help desk staff System developer
<b>Management and Creation of Graphic Design for KH Content and Marketing Materials</b>	Graphic designers create visual communications to convey messages in an effective and aesthetically pleasing manner. This incorporates several tasks and responsibilities, including designing web pages, brochures, logos, signs, books, course covers and artwork, advertisements, and other communication materials.	Graphic designer/Animator
<b>Development of Multimedia</b>	Design, create, manipulate, and tailor graphics, images, sound, animation, video, and text to create integrated multimedia programs for courses.	Multimedia/Video editing

Role/Responsibility	Summary	Personnel
<b>Data Capturing</b>	Collate and capture entries/data on the KH platform. This may include gathering approved documents from various sources for the eLibrary, users, webinars, and courses. It may also include extracting information from these materials for capturing data in the system.	Data capturer

## Other Direct Costs

This is the same information that was summarized in the previous Other Direct Cost section. It is repeated here because this category of cost is included as an item in both types of budget summaries. The other direct costs section included in this budget covers the remaining necessary services or products that are needed to implement KH programmatic activities. They include:

### Hosting the KH for a 12-month period

The pricing in this budget is based on the Xneelo pricing for a backup server and for a fee for the following servers:

- Development Server
  - Dedicated Virtual Server
  - 1 virtual CPU
  - 4 GB of RAM
  - HDD 160GB
- Database Server
  - Dedicated Virtual Server
  - 6 virtual CPU
  - 24 GB of RAM
  - SSD 250GB
- Live Website Server
  - Dedicated Virtual Server
  - 8 virtual CPU
  - 24 GB of RAM
  - HDD 500GBAsdf

### Zoom hosting fee for 12-month period

The pricing in this budget is based on the Zoom webinar plan for video webinars for 3,000 attendees (link to pricing page: <https://zoom.us/pricing/events>).

## Funding

The KH system has been funded through several mechanisms over its lifetime. In 2015, during the ideation phase, seed funding from the Public Health Enhancement Fund to help support the setup of the Academy for Leadership Management in Health Care in South Africa led to the development of the KH system. From 2016 onwards, the KH system was entirely funded directly by donor

organizations. The CDC funded 100 percent from 2016 through 2019. Support of the KH system transitioned to 100 percent funding by USAID from 2019 through its current status in 2022.

Funding for the KH's objectives is required at three levels: direct operational expenses; technical and other support; and development/training activities. In the medium to long-term, funding the KH through the National Treasury (Medium-Term Expenditure Framework) will require an allocation from the NDOH budget.

In the near term, it is possible for the KH to be funded through existing opportunities for partner mobilization. To ensure that such partner-linked funding is sufficient, the NDOH will need to engage with the United States President's Emergency Plan for AIDS Relief (PEPFAR), CDC, and USAID, and with private sector and development partners to support the current three-year strategy. The funding of KH training activities will require targeted endowments from the skills levy and other relevant sources.

Potential financial mechanisms to be explored for supporting the KH system are listed below, divided into direct and indirect funding mechanisms. This is not an exhaustive list but it does provide preliminary resources to consider.

## DIRECT FUNDING OPTIONS

National Treasury (NT): equitable share, COVID funding, and grant allocated to human resource development.

- The NT financial cycle schedule is as follows:
  - *October*: NT sits to analyze and review new projects and requests.
  - *November*: Feedback is sent by the NT to the Department. This feedback includes approval of the request or amendments and recommendations for resubmission.
  - *December*: Final feedback is provided by the NT.
  - *February*: Minister of Finance announces allocations to the Departments.
  - *March*: Budget is transferred from the NT to the Departments.
  - *April 1st*: Spending can commence on the approved activities.
- Sponsored expertise, via secondments
- Skills levy (value is equal to 1% of the total compensation of the employee's allocation)

## INDIRECT FUNDING OPTIONS

- Funding provided by donors:
  - PEPFAR (CDC and USAID)
  - Global Fund
  - Clinton Health Access Initiative
- Regional Training Centre budget allocation to support personnel and KH activities
- Ad hoc funding by the Health and Welfare Sector Education and Training Authority
- Health parastatals such as:  
*(These organizations are included as potential collaborators that do not currently have active partnerships with the KH team but could potentially be considered for collaboration to explore*

*how they could potentially cover relevant costs for related NDOH programs to host materials on the KH.)*

- Human Science Research Council
- Council for Medical Schemes
- South African Health Product Regulatory Authority
- South African Medical Research Council
- Office of Health Standards Compliance
- National Health Laboratory Services
- Council for Scientific and Industrial Research
- Government conditional grants
- International organizations and development programs:
  - World Health Organization
  - United Nations Children's Fund
  - Joint United Nations Programme on HIV/AIDS
  - United Nations Educational, Scientific and Cultural Organization
- Health professional councils and statutory bodies:
  - Health Professional Council of South Africa
  - South African Nursing Council
  - South African Pharmacy Council
  - South African Dental Technicians Council
  - Allied Health Council of South Africa
  - Interim Traditional Health Council
- Universities and colleges of nursing



# Annex 1. Budget Workbook Instructions

## OVERVIEW

This workbook summarizes the overall one-year (12-month) operating budget for the KH eLearning Platform, a portal for healthcare professionals to access online courses, key health information resources, and webinars provided by the NDOH. The purpose is to allow a user to estimate the total operating budget of the KH system, based on personnel costs and other direct costs.

## SUMMARY OF TABS

Tab 0 (0\_Instructions) contains the instructions for how to use this file to calculate an estimated budget for the operation of the KH system over the course of a year (12 months).

Tab 1 (1\_Overall Budget) summarizes the overall budget by the four main activities to support the KH system and its direct costs, and shows the same overall budget by budget line item (instead of by activity).

Tab 2 (2\_Personnel Summary\_LOE) lists the recommended personnel and the direct costs needed to support the KH system. On this tab, the user can adjust the percentage level of effort (%LOE) of the personnel to calculate the full operating cost of the KH system. Specifically, this tab provides the user the ability to change the %LOE input as the way to adjust and determine the overall budget.

Tab 3 (3\_Personnel Summary\_Days per Mo) also lists the recommended personnel and the direct costs needed to support the KH system. However, on this tab, the user can adjust the number of days per month for each personnel to calculate the full operating cost of the KH system. Specifically, this tab provides the user the ability to change the number of days per month input (as opposed to the %LOE) as the way to adjust and determine the overall budget.

## HOW TO USE THIS FILE

This workbook is meant to help summarize the overall operating budget of the KH system for one year. The primary tab to view the budget totals is Tab 1 (1\_Overall Budget). This tab pulls inputs from the line item budget tabs (either Tab 2 or Tab 3) to display the overall budget. Tabs 2 and 3 fulfill the same purpose—to allow the user to adjust the personnel or staffing supporting for the KH system to determine what the overall budget is, inclusive of personnel costs and the direct costs. Tabs 2 and 3 differ in that they allow the user to change different kinds of inputs to determine the overall budget. Tab 2 allows a user to adjust the %LOE of each individual personnel, and Tab 3 allows the user to adjust the total days per month of each individual personnel. Because these are two different ways to calculate the personnel budget and subsequently the overall budget, the user needs to make any updates or adjustments in either Tab 2 (by %LOE of each individual personnel) or in Tab 3 (by # days/month of each individual personnel) and then on Tab 1, indicate from which tab (either Tab 2 or Tab 3) they would like the budget information to be referenced.

To do so, the user needs to select either “LOE” (to pull from Tab 2\_Personnel Summary\_LOE) or “Days per Mo” (to pull from Tab 3\_Personnel Summary\_Days per Mo) in cell C3 on Tab 1, which is highlighted in yellow. This will then control from which tab the inputs for each of the two tables is referenced to display the overall budget.

## TO EDIT THE BUDGET

There are two ways to change the budget, and Tab 2 and Tab 3 provide the user with the two ways to do so. The inputs are based either on adjusting the %LOE of each personnel (Tab 2) or on adjusting the # of days/month of each personnel (Tab 3). A user can go to either Tab 2 or Tab 3, make changes as needed, and then go back to Tab 1 to see the overall budget.

### Tab 2 – %LOE

This tab contains two tables:

- The first table (Overall Project Budget, columns A through J) lists personnel and other direct costs. It includes information about the individual personnel role's status in reference to the current team of staff at the HRD unit and ICT units (as of February 2022; role's status is categorized as internal to the NDOH team, on the ICT team, or external, meaning they are vacant or will need to be filled), their daily rate, and the amount of time per month the personnel are allotted to work on the KH system and corresponding activities. The other direct costs categories are below the personnel, and include the current recommendations for software costs, and space to add other direct costs should they be needed. This Overall Project Budget table sums the total costs for the KH system, inclusive of applicable overhead and applicable VAT.
- The second table (Breakdown by Activity, columns L through W) shows the personnel cost category broken down further into the four main KH system and program activities to display how the staffing is spread across these activities, and the total personnel costs per activity.

The user can adjust the budget information in Table 1 on this tab by changing 6 types of inputs (all are highlighted in yellow):

- The days/month (cell D2); this input will impact the calculation that determines the number of days per month for each personnel. The default is set to assuming an average of 21.5 days per month across a 12-month year.
- The daily rate (column C); this input will impact the monthly rate and yearly cost calculations, but allows the user to adjust the rates of each individual personnel.
- The %LOE (column E); this input will impact the calculation for the # of days per month, and the overall calculations for total cost, and is meant to allow the user to adjust the budget based on the projected %LOE that each personnel has or is expected to devote to the KH activities.
- The applicable VAT (column I) that could be applied if relevant to the personnel or direct costs. The cost of NDOH labor should not levy the VAT tax, but if the personnel listed are through a contractor or a consultancy or other external staffing outside of the NDOH, VAT may be applicable. The user can indicate 'yes' or 'no' to control to which costs VAT will be applied.
- The applicable overhead (column J) that could be applied if relevant to the personnel or direct costs. The cost of NDOH labor should not include overhead, but if the personnel listed are through a contractor or a consultancy or other external staffing outside of the NDOH, overhead may be applicable. The user can indicate 'yes' or 'no' to control to which costs overhead will be applied.
- The % of applicable overhead (cell G40) can be adjusted to the correct percentage if applicable. The default in the workbook was set to 5%.

Below the personnel section of Table 1 are the sections for the other line item categories. These sections can also be edited or adjusted, and users can add specific items that fall within these categories, if needed, so that they are included in the budget estimates.

Table 2 (Breakdown by Activity) does not have any inputs that are meant to be adjusted and will update based on the inputs as they are adjusted in Table 1 (Overall Project Budget).

### Tab 3 – Days/Month

This tab is similar in structure to Tab 2, the major difference being the inputs the user can adjust (highlighted in yellow). They are in two tables:

- The first table (Overall Project Budget, columns A through J) lists personnel and other direct costs. It includes information about the individual personnel role's status in reference to the current team of staff at the HRD unit and ICT units (as of February 2022; role's status is categorized as internal to the NDOH team, on the ICT team, or external, meaning that they are vacant or will need to be filled), their daily rate, and the amount of time per month the personnel are allotted to work on the KH system and corresponding activities. The other direct costs categories are below the personnel, and include the current recommendations for software costs, and space to add other direct costs should they be needed. This Overall Project Budget table sums the total costs for the KH system, inclusive of overhead and VAT.
- The second table (Breakdown by Activity, columns L through W) shows the personnel cost category broken down further into the four main KH system and program activities to display how the staffing is spread across these activities, and the total personnel costs per activity.

The user can adjust the budget information in Table 1 on this tab by changing 6 types of inputs (all are highlighted in yellow):

- The days/month (cell D2); this input will impact the calculation that determines the number of days per month for each personnel. The default is set to assuming an average of 21.5 days per month across a 12-month year.
- The daily rate (column C); this input will impact the monthly rate and yearly cost calculations, but allows the user to adjust the rates of each individual personnel.
- The # days/month (column D); this input will impact the calculation for the %LOE, and the overall calculations for total cost, and is meant to allow the user to adjust the budget based on the projected number of days per month that each personnel has or is expected to devote to the KH activities.
- The applicable VAT (column I) that could be applied if relevant to the personnel or direct costs. The cost of NDOH labor should not levy the VAT tax, but if the personnel listed are through a contractor or a consultancy or other external staffing outside of the NDOH, VAT may be applicable. The user can indicate 'yes' or 'no' to control to which costs VAT will be applied.
- The applicable overhead (column J) that could be applied if relevant to the personnel or direct costs. The cost of NDOH labor should not include overhead, but if the personnel listed are through a contractor or a consultancy or other external staffing outside of the NDOH, overhead may be applicable. The user can indicate 'yes' or 'no' to control to which costs overhead will be applied.
- The % of applicable overhead (cell G40) can be adjusted to the correct percentage if applicable. The default in the workbook was set to 5%.

Below the personnel section of Table 1 are the sections for the other line item categories. These sections can also be edited or adjusted, and users can add specific items that fall within these categories, if needed, so that they are included in the budget estimates.

Table 2 (Breakdown by Activity) does not have any inputs that are meant to be adjusted and will update based on the inputs as they are adjusted in Table 1 (Overall Project Budget).

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