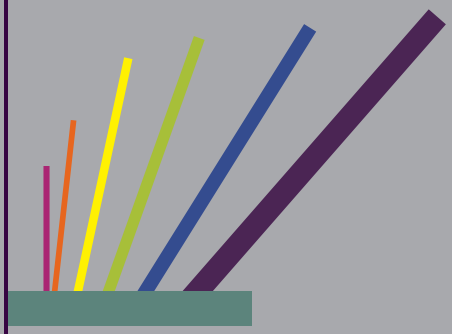
Digital Assessment Tool
Add-On Module



Health Information System

Stages of Continuous Improvement

Toolkit

USAID
FROM THE AMERICAN PEOPLE

HEALTH DATA COLLABORATIVE

MEASURE Evaluation

Digital Assessment Tool
Add-On Module

Health Information System

Stages of Continuous Improvement Toolkit

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
TEL: 919-445-9350
FAX: 919-445-9353
www.measureevaluation.org

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ABBREVIATIONS

CDC	United States Centers for Disease Control and Prevention
HDC	Health Data Collaborative
HIS	health information system(s)
HISSM	Health Information System Strengthening Model
ICT	information and communication technology
LA	Learning Agenda
M&E	monitoring and evaluation
MOH	Ministry of Health
OpenHIE	Open Health Information Exchange
RHIS	routine health information system(s)
SOCI	Stages of Continuous Improvement
WHO	World Health Organization

INTRODUCTION

This add-on module is designed to accompany the full User Guide for the Health Information System (HIS) Stages of Continuous Improvement (SOCI) Toolkit, available at https://www.measureevaluation.org/resources/publications/ms-19-158. The guide was developed by the United States Agency for International Development-funded MEASURE Evaluation project, the United States Centers for Disease Control and Prevention, and members of the Health Data Collaborative's Digital Health and Interoperability Working Group. Users of the digital assessment should review the full User Guide before using the digital version of the assessment. A description of the toolkit and its background and the assessment timeline and process can be found there. This document provides only technical guidance to use the digital version of the SOCI assessment.

A. General

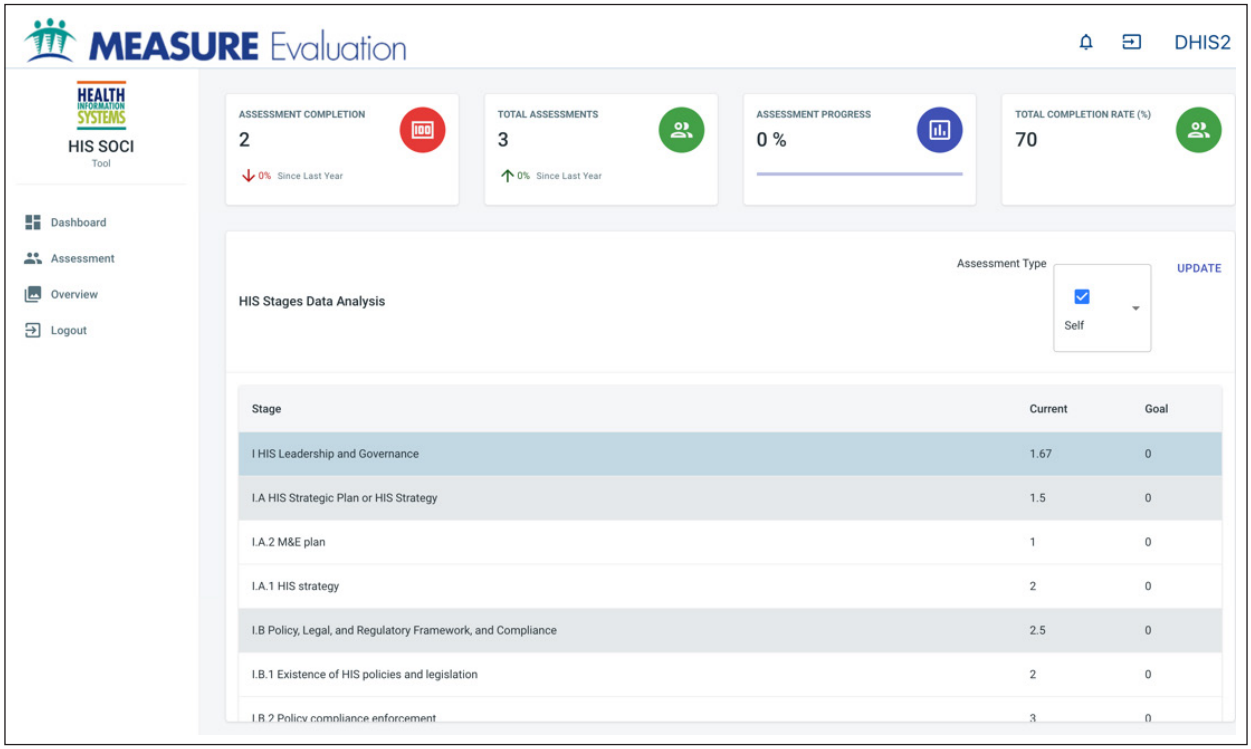
Accessing the HIS Stages of Continuous Improvement (SOCI) Application

The digital version of the HIS SOCI tool is a web-based application (hereafter, "app") used for assessment purposes. The app is based on the Excel-based toolkit, which can be accessed on the MEASURE Evaluation website.[1] The app can be installed and run on the District Health Information Software, version 2 (DHIS2) platform, so long as the version used is greater than 2.30. The HIS SOCI can therefore be accessed via an Internet browser such as Google Chrome (recommended), Safari, or Mozilla Firefox. To access the assessment portion of the app, you will need to have a unique URL that was created for you by the administrator of the assessment.

To access the app:

1. Open your Internet browser.
2. Copy and paste the **URL link that you received in the email** from the assessment leadership in the address bar of your browser to access the login screen.
3. Enter your username and password. If you are not an existing DHIS2 user, a separate email will be sent with login credentials for that platform.

Figure 1. HIS SOCI dashboard as accessed through link provided in email



[1] Full link: https://www.measureevaluation.org/his-strengthening-resource-center/his-stages-of-continuous-improvement-toolkit

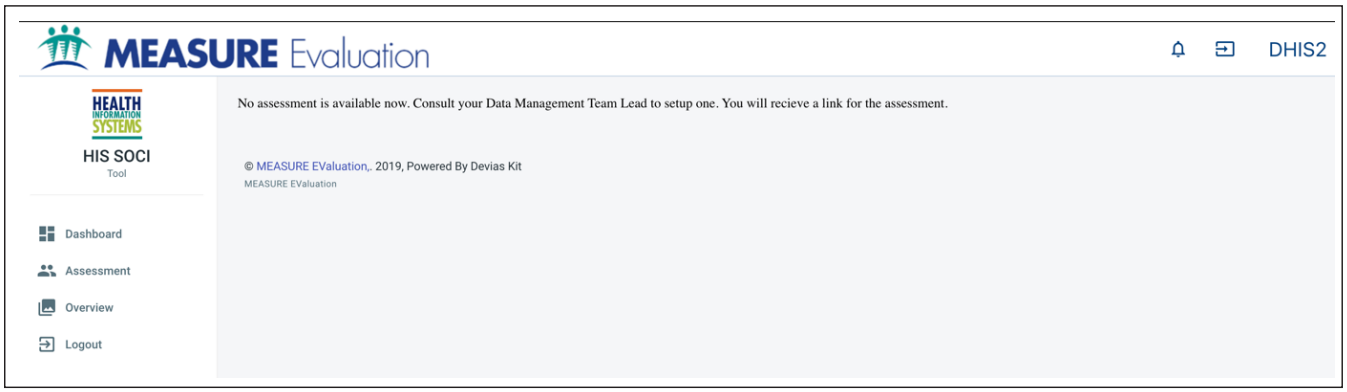
App Features Explained

On the left-hand navigation bar, you can access the tool's features.

Dashboard: The top portion of the dashboard shows an analysis of the assessment completion rate and the number of assessments you have done (e.g., if a user has completed the assessment in previous years). Once you have completed the assessment, you will be able to view your individual responses for each subcomponent (current and goal status). By scrolling down, you will see the aggregate scores for components and domains, both for current and goal status, based on your responses.

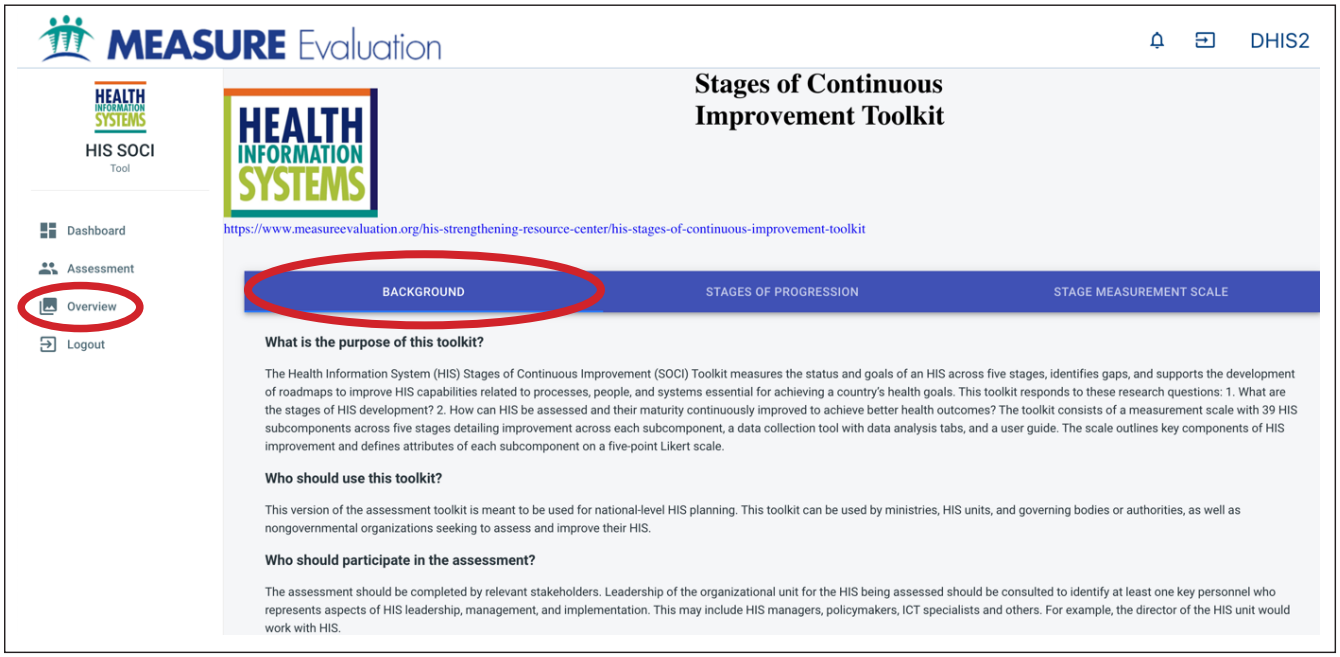
Assessment: This section shows the different domains for which the HIS is assessed. The assessment module will only be accessible through the direct link sent to the user's email (see *Getting Started*, below). Otherwise, the screen will display the message "no assessment is available now," as shown in Figure 2.

Figure 2. HIS SOCI dashboard when not accessed through link



Overview: This section provides guidance on the purpose of the tool, a description on the different stages, and the measurement scale for each of the subcomponents across the five stages.

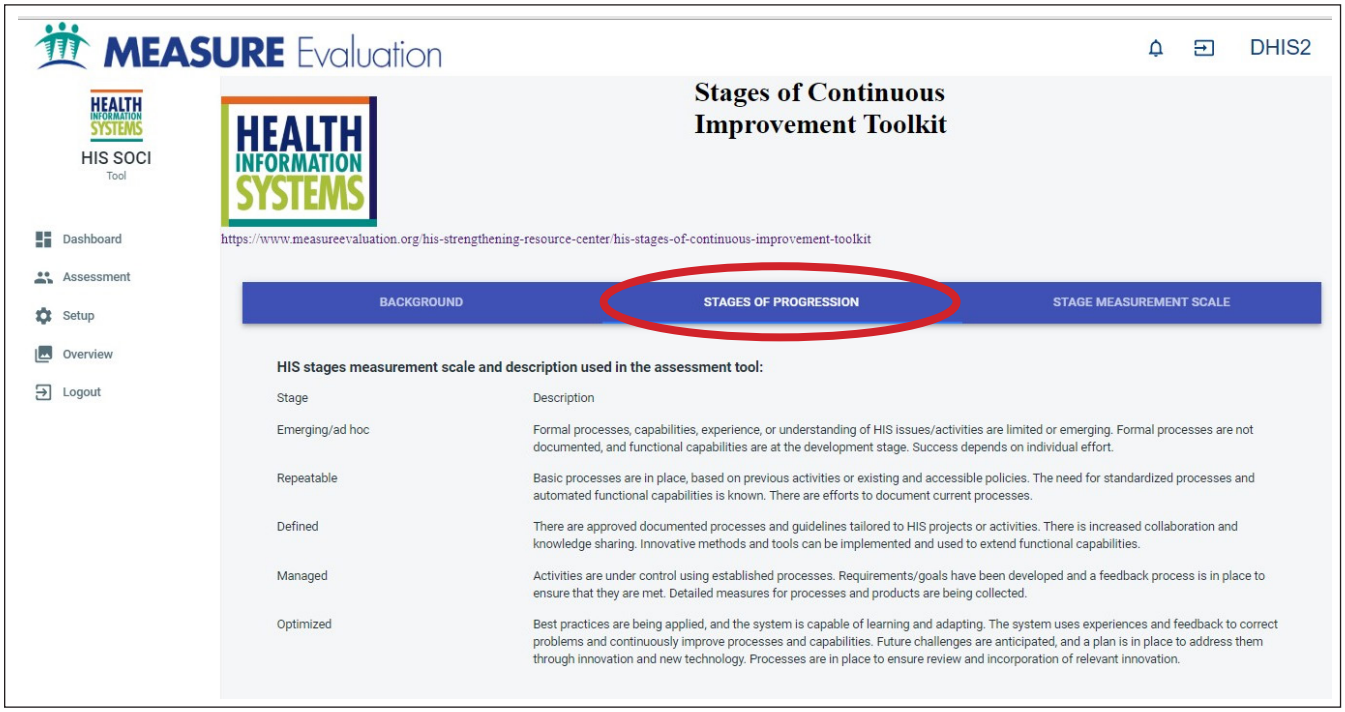
Figure 3. HIS SOCI overview section



In the **Overview** section, click the *Background* tab to learn more about the purpose of the toolkit, guidance on who should use it and who should participate, and how the assessment should be completed.

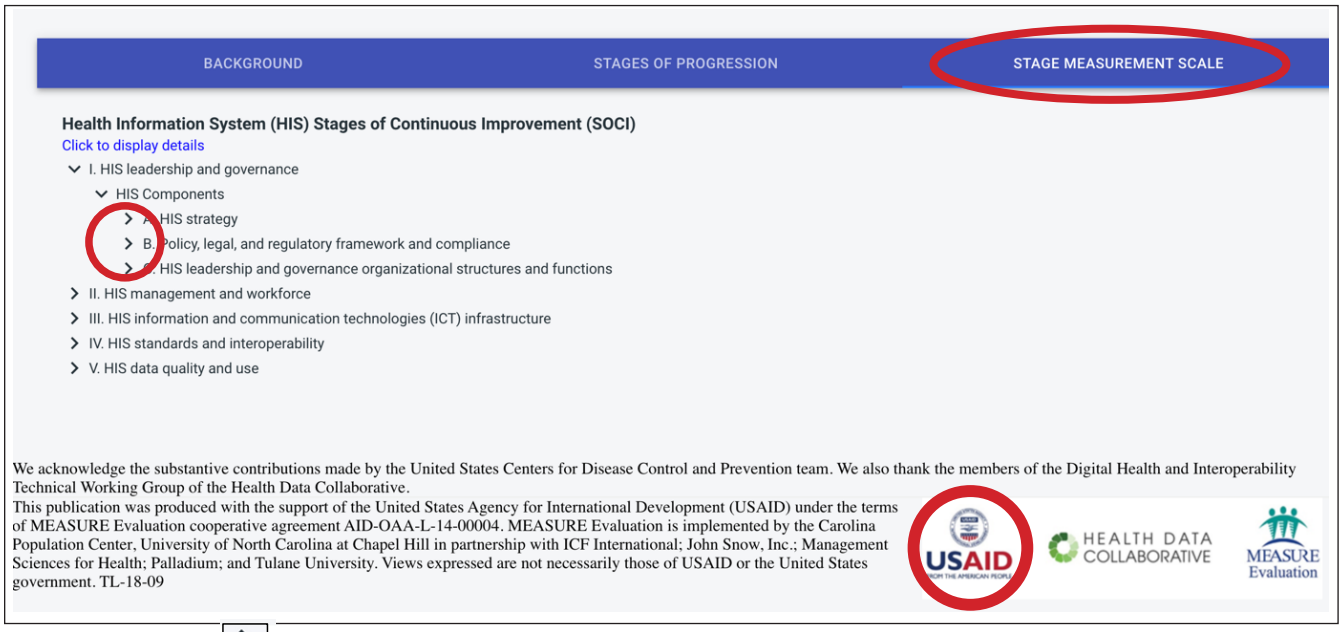
Click the *Stages of Progression* tab to see how each stage or level is defined: Emerging/ad hoc, repeatable, defined, managed, and optimized (see Figure 4 below).

Figure 4. HIS SOCI stages of progression tab



Click the *Stage Measurement Scale* tab to see how each domain is scored and scaled; this tab provides further details for each domain (see Figure 5 below).

Figure 5. HIS SOCI stage measurement scale tab



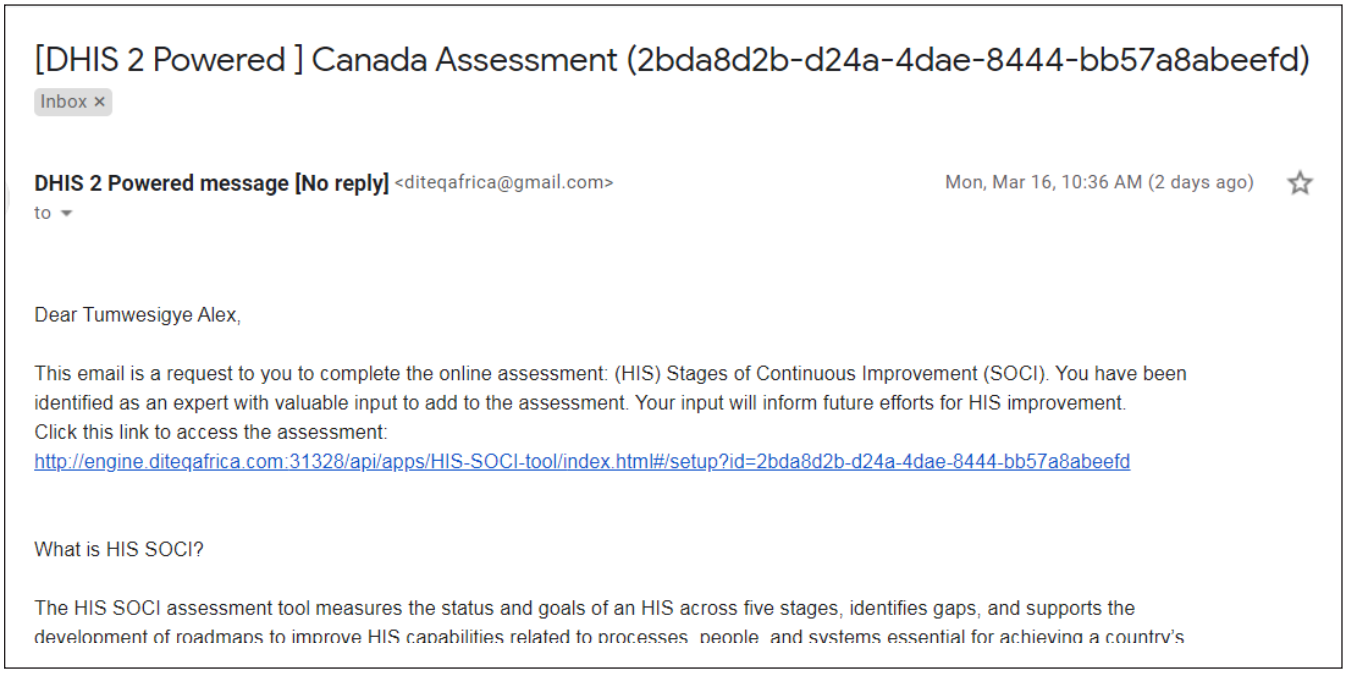
Click the arrows [>] to expand and navigate through the domains.

B. Getting Started

In order to access the assessment:

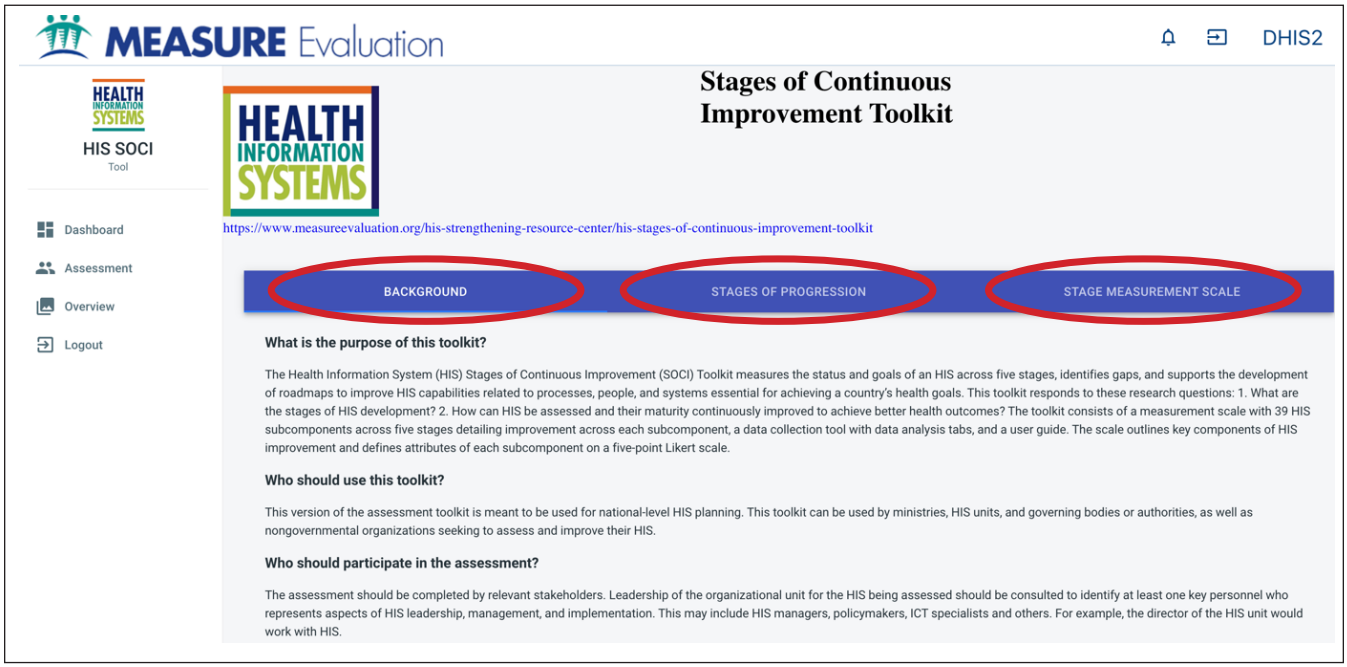
1. You will receive a link in your email generated by the assessment administrator in the DHIS2 system. Emails sent from the DHIS2 system will contain the words **DHIS2 Powered** in the subject line.

Figure 6. Sample email



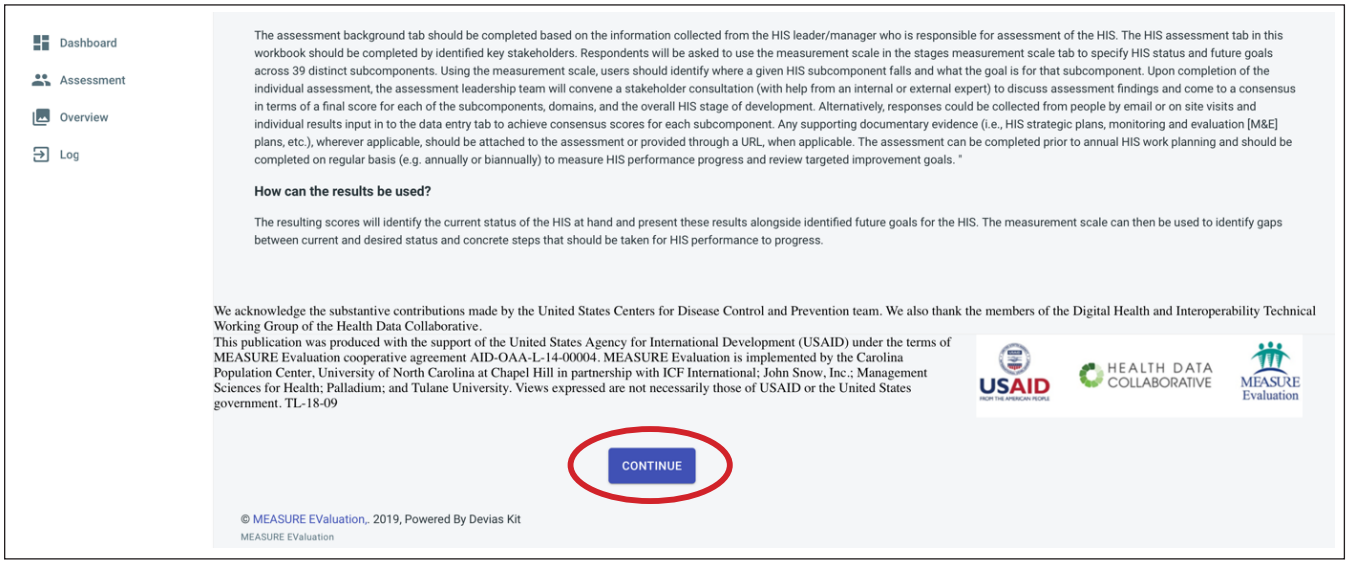
2. Click the link to access your unique version of the assessment in DHIS2. Alternatively, you can copy the link and paste it into the URL bar of your browser to access the assessment.
3. Enter your login details (these will be provided by the assessment administrator for non-DHIS2 users).
4. Successful login will redirect you to the page pictured in Figure 7 below.

Figure 7. Background and stage management scale



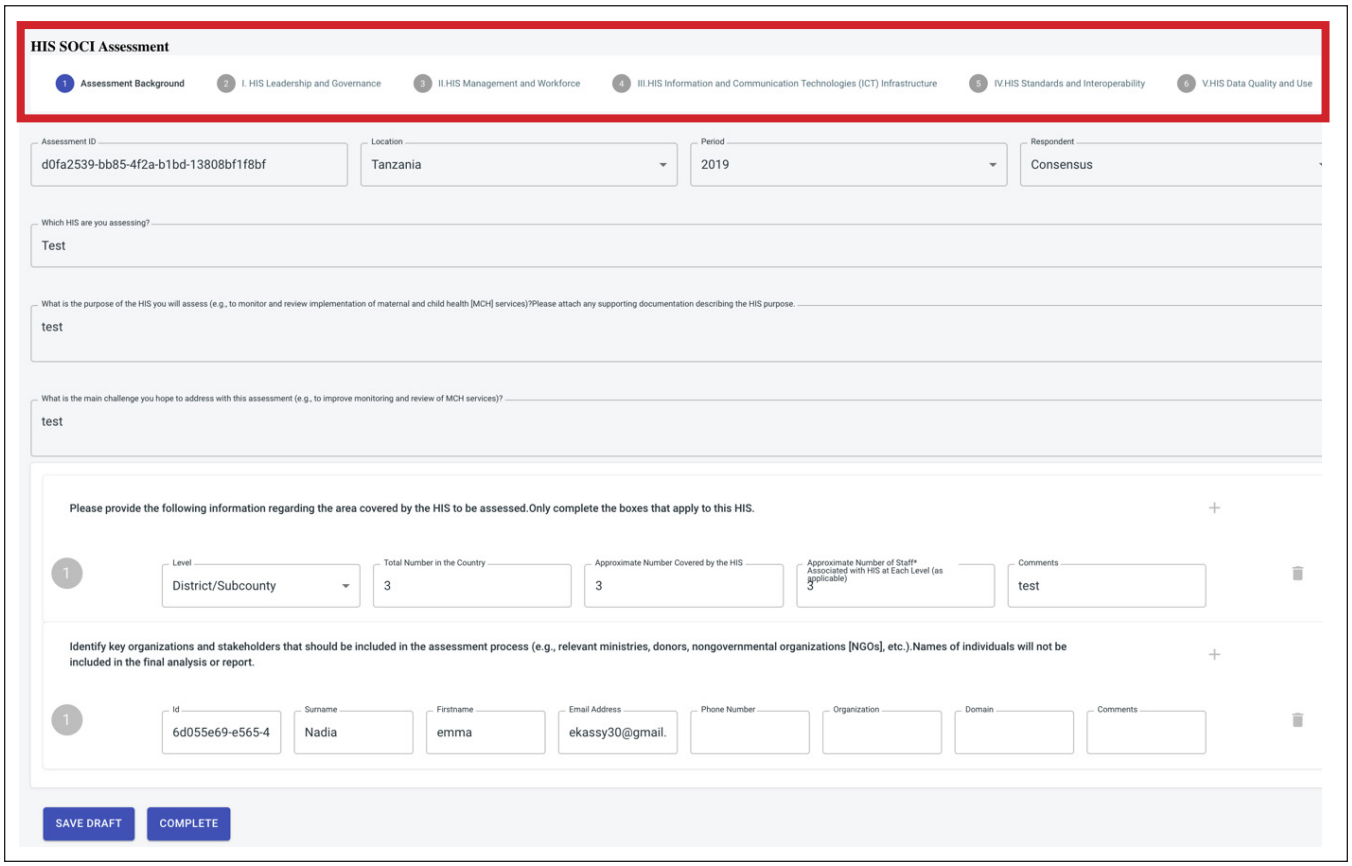
5. First, read through the *Overview, Stages of Progression,* and the *Stage Measurement Scale* tabs.
6. After reading the content of each tab, click *Continue* to open the assessment module (Figure 8). **Important: If you do not first read the contents of each tab and select *Continue,* you will not be able to access the assessment.**

Figure 8. Continue button



The assessment screen is pictured in Figure 9.

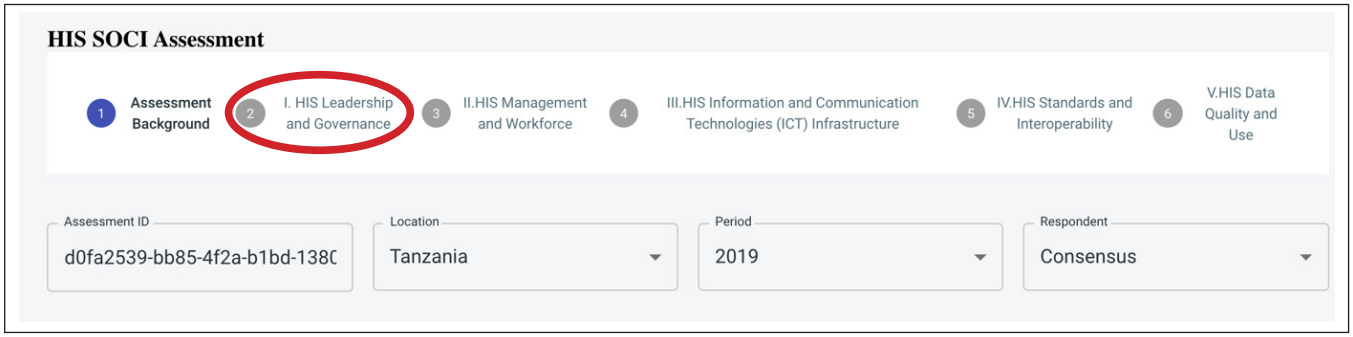
Figure 9. Assessment screen



Note: Fields in the *Assessment Background* section are prepopulated by the assessment leadership team and cannot be edited.

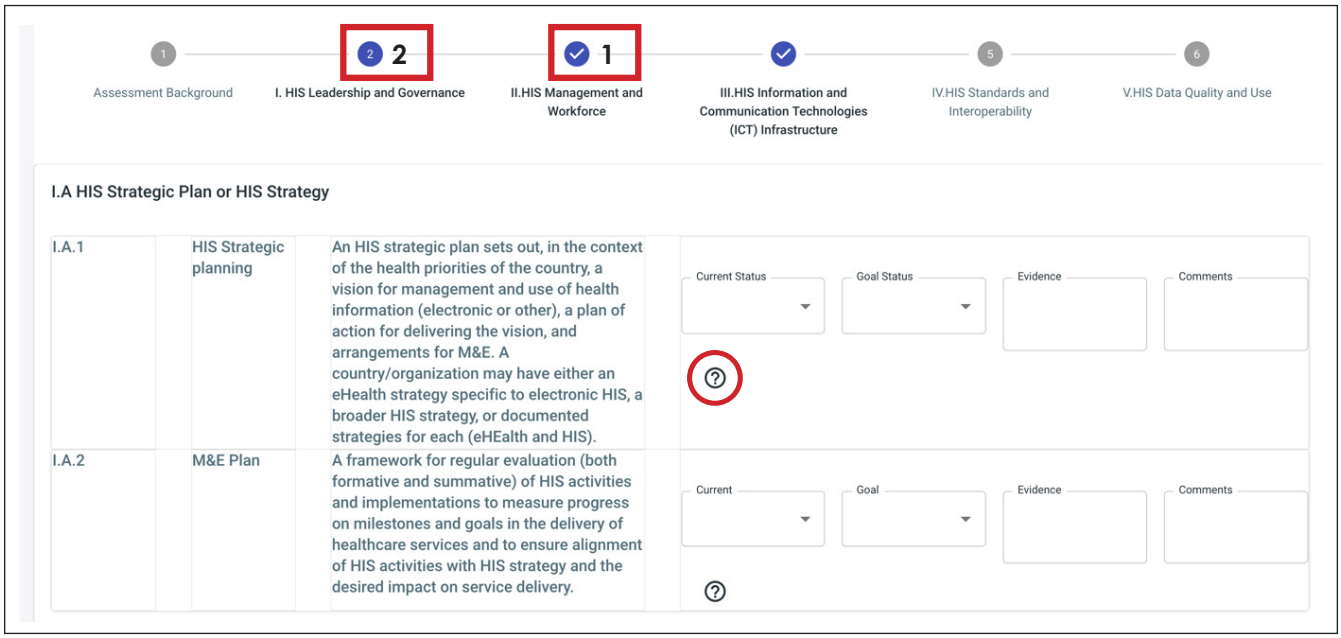
Click the domain of interest across the top ribbon (example below, in red) in order to fill in data. For example, select *Domain 1. HIS Leadership and Governance*.

Figure 10. Assessment domains



This action will take you to the screen for Domain 1. HIS *Leadership and Governance* data entry in each of that domain's corresponding subcomponents.

Figure 11. Domain 1: HIS Leadership and Governance



You will then be asked to determine the *Current* and *Goal Status* of each HIS subcomponent in this domain. Select from the dropdown option list under *Current Status* or *Goal Status* to complete data entry and choose the appropriate stage. Mouse over the icon to view the *Stage Measurement Scale* description.

Note: Be sure to save your inputs before toggling between tabs.

1. A blue checkmark represent a saved form/domain
2. A blue number shows the currently open domain or form

You will also be asked to note any relevant *Evidence*. For example, in the row for *Subcomponent I.A.1*. if there is a strategic plan available, you will want to note that here and provide a link, if one is available. You may not need to fill in *Evidence* for each subcomponent. In the *Comments* section, you can provide any relevant notes (e.g., "HIS strategic plan is available in draft form but not yet published").

Click *Save and Continue* to continue later or *Submit* to finish the data entry. **Note:** You must complete the assessment before navigating back to the dashboard section.

Figure 12. Save and continue

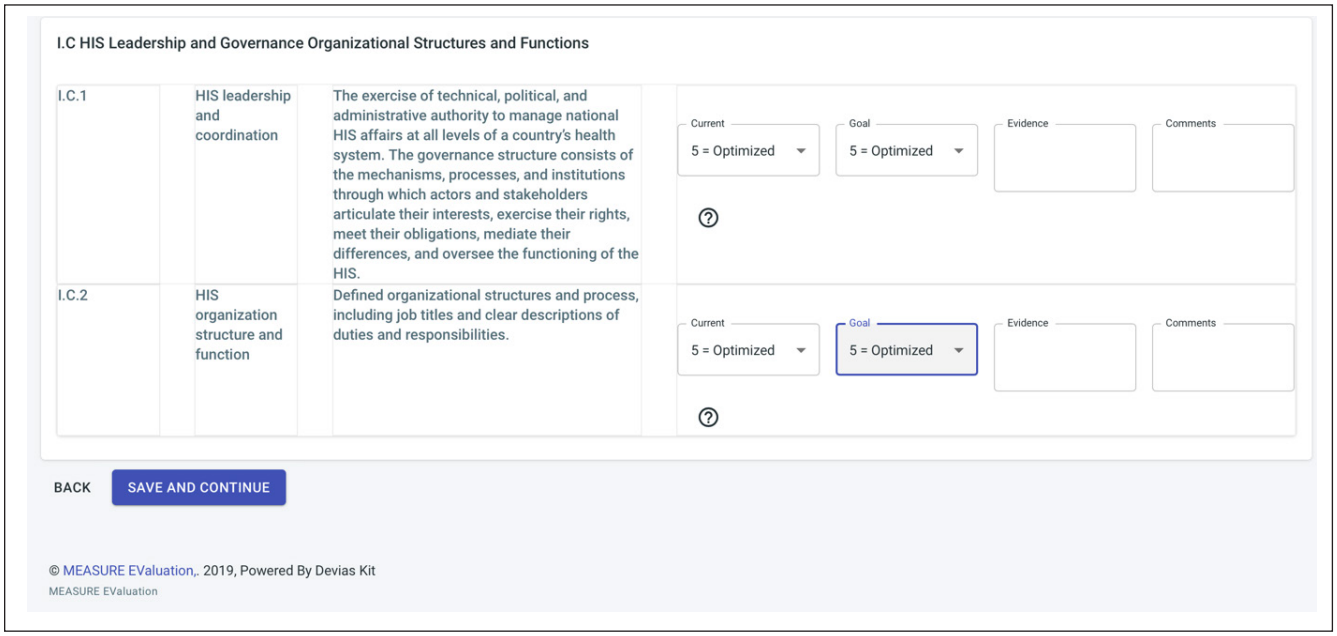
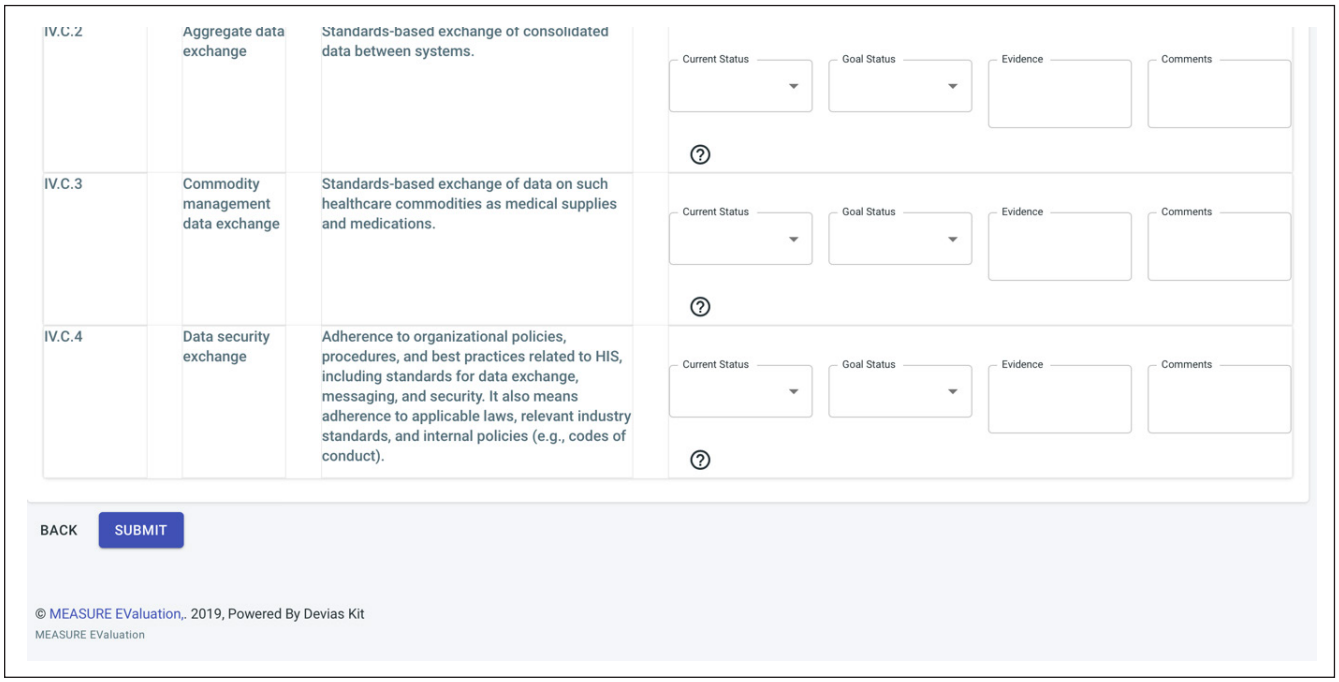
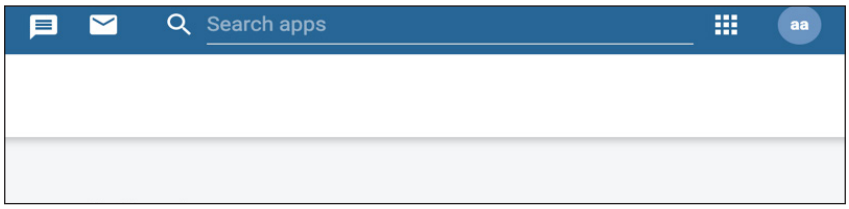


Figure 13. Submit



Note: Make sure to click the *Save and Continue* button before you leave the page. In case you did not complete the assessment and need to return to it, you will have to refer back to the link sent to your email and click it to return to your previously saved assessment.

Figure 14. DHIS 2 Search Apps bar



Note: To view the app in DHIS2 without completing an assessment, navigate to Search apps (Figure 15) and search for the **HIS SOCI Tool.** Successful navigation will lead you to the HIS SOCI dashboard.

C. Administration Access

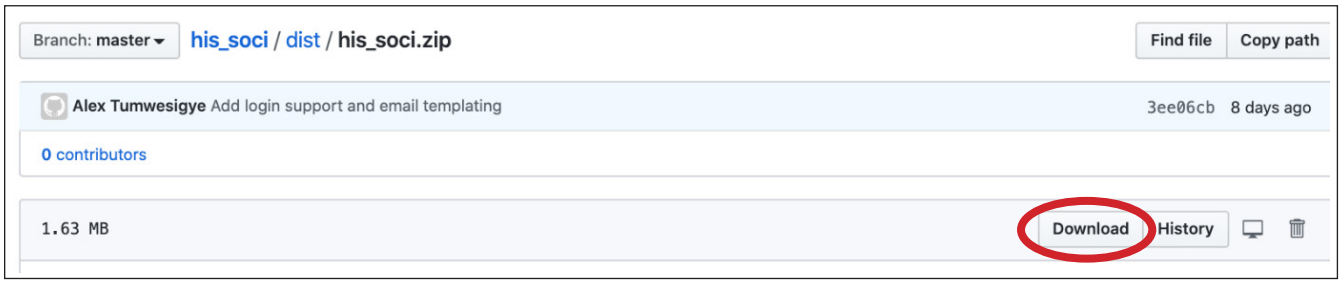
This section is for the assessment leadership team, who will organize the assessment.

The system admin/team lead should be part of the *HIS_SOCI_Admin* group in order to access not only the ***Dashboard***, ***Assessment,*** and ***Documentation*** screens but also the ***Set Up*** screen**.**
Note: It is recommended that the leadership team, with the help of the server admin, should conduct a trial run before emails are sent out to a larger group of people. If the test email is not received within 24 hours, advise the team members to check their junk (and other filtered) folders.

Installing HIS SOCI on the DHIS2 Platform

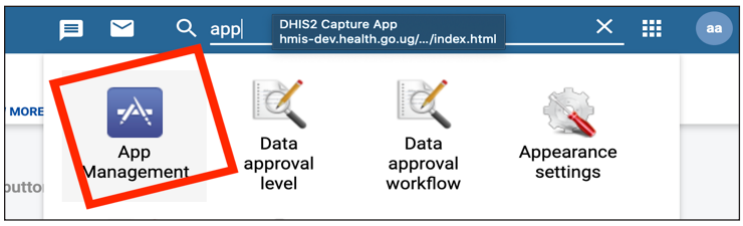
1. Download the HIS SOCI app from GitHub through this link: https://github.com/talexie/his_soci/blob/master/dist/his_soci.zip
2. Click ***Download*** and save the SOCI app on a local computer.

Figure 15. GitHub screen



3. Login to the DHIS2system.
4. Navigate to ***App Management.***

Figure 16A. Adding the HIS SOCI app to DHIS2 app management

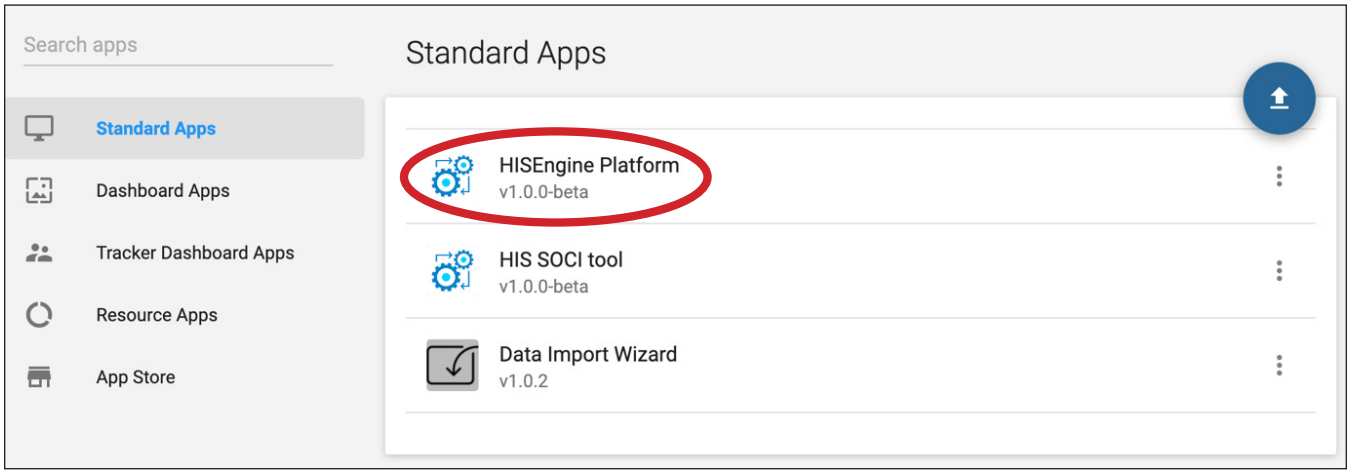


5. Select ***Standard Apps.***
6. Click the arrow to upload the **HIS SOCI** tool saved on your local computer.

Figure 16B. Adding the HIS SOCI app to DHIS2 app management

7. Successful installation will display the **HIS SOCI** tool under ***Standard Apps***.

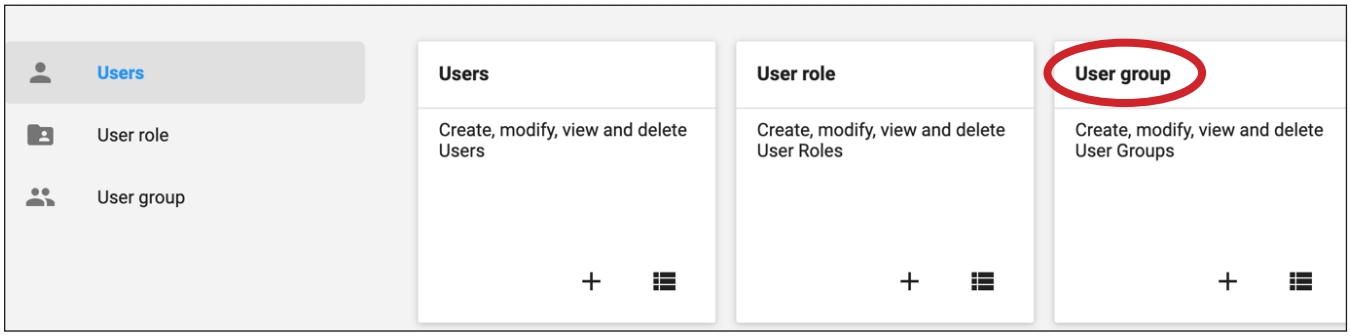
Figure 16C. Adding the HIS SOCI app to DHIS2 app management



Granting Admin Access

1. Navigate to ***Search Apps*** and select ***User group.***

Figure 17. Adding HIS_SOCI_Admin to a user group



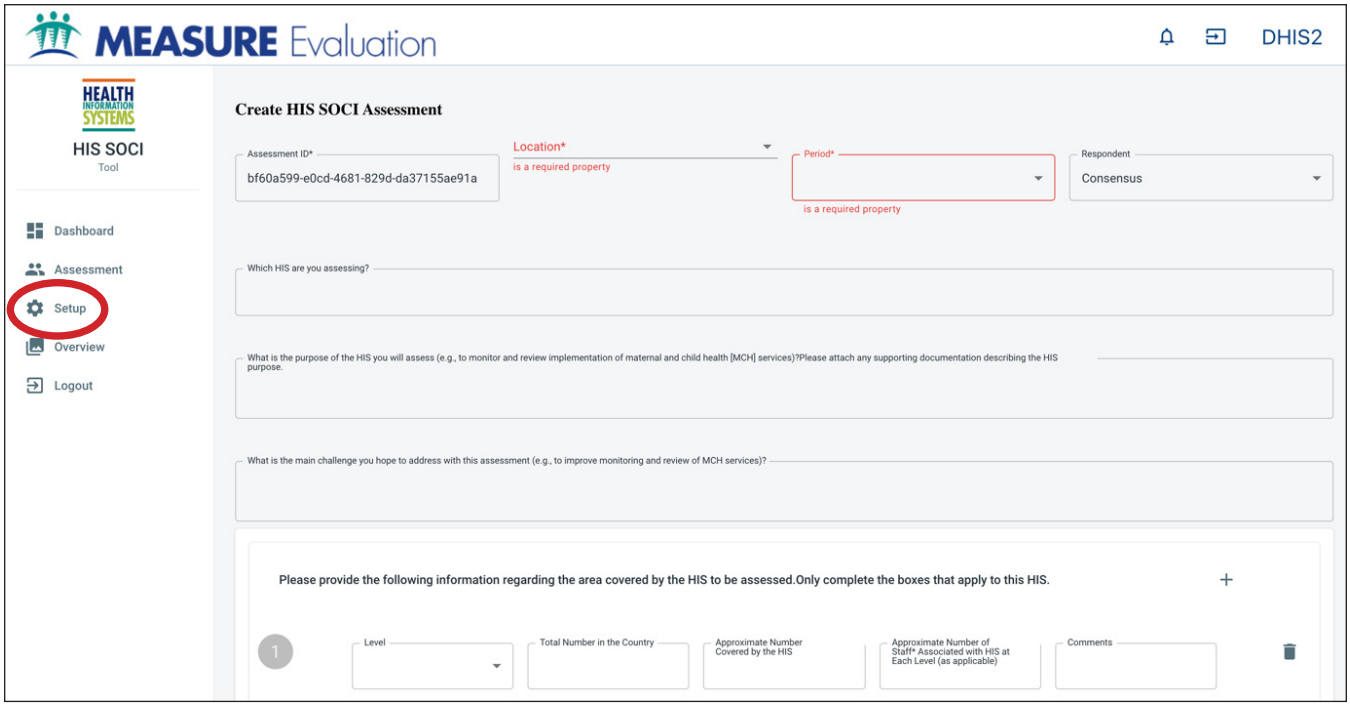
2. Create the user group **HIS_SOCI_Admin.**
3. Assign members to the group by double-clicking usernames.
4. Click *Save.*

Note: Only members assigned to this group will be able to see the *Setup* tab. The server manager or system admin can install the HIS SOCI app on the server. The team can then identify team leads who can send out emails to the assessment group.

Creating an HIS SOCI Assessment

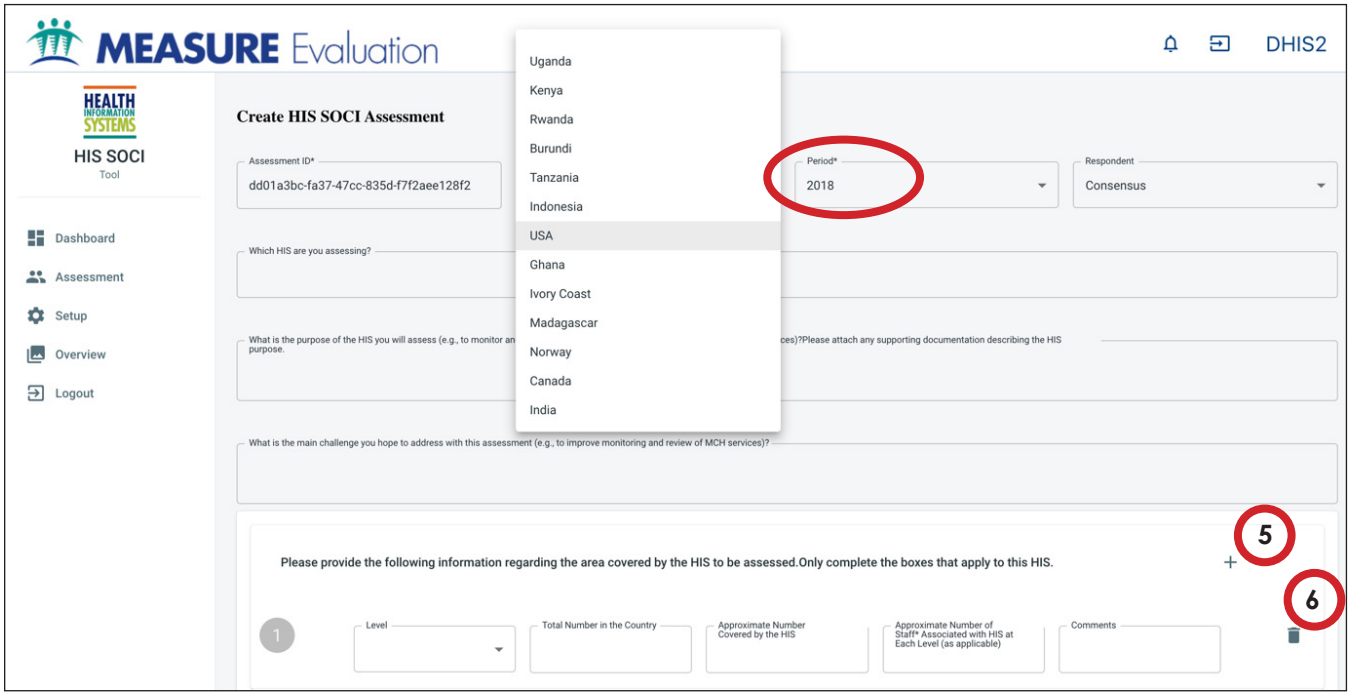
A member of the *HIS_SOCI_Admin* user group will be able to see the screen below (Figure 20) with the ***Setup*** tab enabled.

Figure 18. Setup tab



1. Click the **Setup** tab.
2. Fill in the *Location* and *Period* (both the *Assessment ID* and *Respondent* fields will be automatically prefilled. *Location* represents the entity or organization conducting the HIS SOCI Assessment.

Figure 19. Location and period



3. Fill in information on which HIS is being assessed, the purpose of the HIS, and the main challenges to be addressed through this assessment. This should be decided in consultation with the assessment leadership team.
4. Provide information about the area covered by the HIS being assessed.
    a. Choose the level of the HIS being assessed.
    b. Click the **+** icon to add additional areas to be covered.
    c. Click the ***bin/trash*** icon to delete an area.
5. Fill in the stakeholders involved.
    a. Click the **+** icon to add individual stakeholders.
    b. Click the ***bin/trash*** icon to delete if you've made a mistake.
    c. Fill in all the stakeholder information, the app/tool uses the email address to send the link to individual users' emails. Make sure the correct email is filled in.
6. Click *Submit.*
7. An invitation email with a link to the assessment will now be sent to the stakeholders' email addresses.
8. An email will also be sent to the system administrator with a link to complete the assessment tool during the consensus building process. This will happen **AFTER** all the individual assessments are completed. The system administrator will be able to generate a report for the DHIS 2 platform of aggregate scores in each subcomponent once the stakeholders have completed the assessment. For more on the consensus-building process, see the full user guide.

    Note: If the HIS SOCI admin wishes to complete a self-assessment, they should include their email address in the stakeholder's section. They will receive two emails, once for consensus and another for self/individual assessment.

Users can access and copy the app's code to adapt as needed. The code is available in GitHub: https://github.com/talexie/his_soci/archive/master.zip

APPENDIX A. LETTER TO STAKEHOLDERS

Dear xx,

This email is a request to you to complete the online assessment: (HIS) Stages of Continuous Improvement (SOCI). You have been identified as an expert with valuable input to add to the assessment. Your input will inform future efforts for HIS improvement.
Click this link to access the assessment: _____

What is HIS SOCI?
The HIS SOCI assessment tool measures the status and goals of an HIS across five stages, identifies gaps, and supports the development of roadmaps to improve HIS capabilities related to processes, people, and systems essential for achieving a country's health goals.

This toolkit responds to these research questions:

1. What are the stages of HIS development?
2. How can HIS be assessed and their maturity continuously improved to achieve better health outcomes?

The assessment is based on a measurement scale consisting of 39 essential HIS subcomponents across five stages from emerging to optimized. The scale outlines key components of HIS improvement and defines attributes of each subcomponent on a five-point Likert scale. For more information about the full toolkit and its creation, visit: https://www.measureevaluation.org/his-strengthening-resource-center/his-stages-of-continuous-improvement-toolkit

How do I complete the assessment?
For each of the 39 subcomponents, you will be asked to determine the current and goal status of your national HIS by selecting appropriate response from the drop-down options. The stage for each individual subcomponent is defined in detail in the **Overview** tab, under the **Stages of Progression**. The User Guide details the process of completing the assessment.

In order to complete this assessment, you will need to login to the web-based application built using DHIS 2 to access the assessment and related analytics. Please note responses from all the participants of the assessments will be aggregated and used to guide the stakeholder consultation process. The stakeholder consultation will discuss and interpret scores for each of the components and sub-components and then determine the final score. The final score will be used to develop the HIS improvement roadmap.

Thank you for taking the time to complete the assessment.

If you have any clarifying question, please write to <insert contact email for SOCI leadership team>

Sincerely,

Name(s), organization(s) or country
HIS SOCI assessment leadership team
<insert date>

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
TEL: 919-445-9350
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