Quick Start Guide: National Reporting Platform
DRAFT 4/7/2017

What is a National Reporting Platform (NRP)?

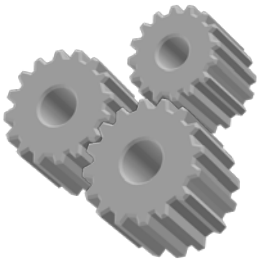
An NRP refers to an integrated web site, databases, and associated IT infrastructure to gather, host, secure, and display information. An SDG NRP is a tool to report national statistics, metadata, and related information for the global Sustainable Development Goal (SDG) indicators. Ideally, an SDG NRP has the following minimum characteristics:[1]

- is managed by national statistical offices;
- features official statistics and metadata according to established standard methodology;
- is publicly accessible;
- allows for feedback from data users; and
- features open source (free) technology.

This power point presentation and webinar introduce the basics of the US NRP.

Why Choose an NRP?

An NRP tool facilitates national reporting by improving communication. NRPs:



- **Gather**, disseminate, and track national data on the SDG indicators, including identification of data gaps,
- **Report** national data to be harmonized for international purposes (i.e., global indicator database),
- Improve **access** to official national statistics and metadata, and
- Improve **communication** between data providers, NSOs, custodian agencies, and other stakeholders.

What does the US NRP cost?

There is no cost associated with copying the US NRP and using it for your own country or region. Some NRPs are commercial, meaning there is a cost associated with using them. However, other NRPs, such as the US NRP, use open source technology. There are no hardware requirements, and the system and software requirements are free and minimal. The US NRP is hosted on the shared, free, open source collaboration platform called *GitHub*.

What are the IT requirements for the NRP?

For developers, the only software requirement is to install *Git* on your personal computer. We recommend installing *Ruby* also so that you can test your NRP website locally. Data managers and data providers do not require software beyond a web browser (we find *Chrome* works best). More advanced users will want to install *Git* locally as well.

[1] To conform to the UN's *Fundamental Principles of Official Statistics*.

Specific Backend IT Requirements:

- **GitHub**[2]: Use the website *GitHub* and install *GitHub* software.[3] Host the NRP on either *Chrome, Firefox, Safari, Microsoft Edge*, or *Internet Explorer*.[4]
- **Jekyll**[5]: Use *Jekyll* to construct your webpage on *GitHub*.[6] It uses the coding language *Ruby*.[7]
- **Prose.io**[8]: Use *Prose.io* to create, edit, delete, and save your content directly on *GitHub*.[9]

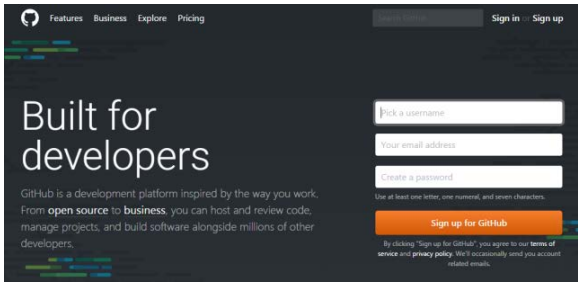
Specific Frontend IT Requirements:

- **U.S. Web Design Standards**: [10] U.S. Web Design Standards provides guides for developers and designers with design resources and code.
- **Chartist.js**:[11] Chartist is a charting library that offers customizable and responsive charts.

Recommended Skills (training links are included in the next section):

- Proficiency in *Github*, *Git*, and basic web development (e.g., html, css in order to set up the tool and repository).
- Proficiency in *Javascript* and *Ruby* to develop the tool.

How Do We Create Our Own NRP?
There are four basic steps.



Step 1: Start with GitHub.

a. Create a *GitHub* Account.
   Go to github.com and create an account.
b. Learn the basics of *GitHub*
   Try this introductory webinar[12] and these resources.[13]
c. Set up your *GitHub* organization and identify relevant users of your IT team.
   Register [14] your organization with *GitHub* if not already registered. IT team members should set up their own GitHub accounts.
   Tip: Within a *GitHub* organization, you can define 'teams.' This can be a useful way to identify users who are part of the project, improve communication among team members, and set specific permissions. See this guide to learn more.

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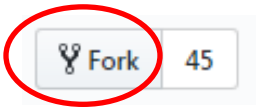
[2] https://github.com/
[3] https://help.github.com/desktop/guides/getting-started/installing-github-desktop/#platform-mac
[4] https://help.github.com/articles/supported-browsers/
[5] http://jekyllbootstrap.com/
[6] http://jekyllrb.com/docs/installation/
[7] https://www.ruby-lang.org/en/downloads/
[8] http://prose.io/
[9] https://github.com/prose/prose
[10] https://standards.usa.gov/
[11] https://gionkunz.github.io/chartist-js/
[12] https://www.youtube.com/watch?v=uNa9GOtM6NE
[13] https://www.digitalgov.gov/2014/06/11/the-api-briefing-quick-guide-to-using-github-fdas-openfda-research-project/
[14] https://help.github.com/articles/creating-a-new-organization-from-scratch/

Step 2: Fork or "copy" the NRP code.



a. Sign in to *GitHub* and go to either the US[15] or the UK[16] platform and click the 'Fork' button at the top right. This creates a complete copy of the code and the statistics. This power point presentation and webinar wals through each step.
b. Your own NRP website address will then be named https://<YOUR-ORG>.github.io/sdg-indicators/. Note: You must complete the steps below before your NRP will function.

Step 3: Customize your NRP. Here are some tips.

a. Edit configuration files.
b. Grant *prose.io* access to the repository.
c. Remove the US statistics and metadata from the repository. The US NRP currently files both the platform code and the SDG statistics and metadata in the same repository (or folder). This means that forking the US NRP will copy both the US data and its style sheets. Therefore, countries will want to remove the US statistics and metadata from their copy of the US NRP. See the script in *Python* the UK used to do this. The script can also be written in *R* (free statistical software).

Case Study: How the UK Forked the US NRP

The UK forked and customized the US NRP code in about week. They streamlined code for their purposes, reviewed data formats, improved chart visualizations, and began enhancement to navigation. The US and the UK now are working together to enhance the platform. All of these enhancements will be shared freely with other countries. For more information on how the UK forked and customized their NRP platform, visit <https://github.com/datasciencecampus/sdg-indicators/issues/31> or contact their team at sustainabledevelopment@ons.gov.uk.

Step 4: Turn the NRP code into a Website using Jekyll

a. Learn how to host a website with *GitHub* here.[17]
b. To convert a forked NRP into a website, go to Settings and switch to Master Branch under *GitHub* pages. This generates a 404 link for your NRP website.

How Do We Put Our Own Statistics into the NRP?

In addition to hosting the NRP, we used *GitHub* to collect input from data providers and maintain version control using five basic steps. You can customize your approach as needed.

Step 1: Conduct a Needs Assessment

a. To assess availability of national data for reporting SDG indicators, we convened an Expert Group. This includes 1) policy experts who have contributed to the formulation of sustainable development goals, targets, and the specification of indicators and 2) Federal

[15] https://github.com/gsa/sdg-indicators
[16] https://github.com/datasciencecampus/sdg-indicators
[17] https://www.youtube.com/watch?v=bwThn0rxv7M&list=PLm_Qt4aKpfKijgP0rDH7FSJOlS9IBGbT1&index=1

statistical agency experts engaged in the production of official Federal statistics relevant to the SDG indicators or contribute to the specification of SDG indicators.

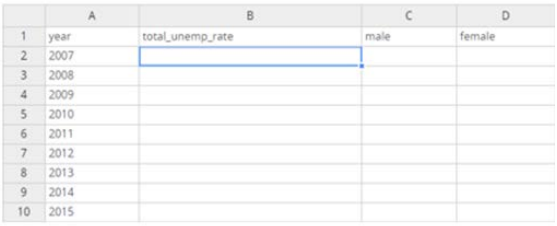
b. This is the web-based survey we distributed to our Expert Group for our assessment.

Step 2: Identify Data Providers

a. The Expert Group identifies Federal data providers for each indicator for which Federal data are available. For statistical indicators, data providers are staff from Federal statistical agencies. For non-statistical indicators, data providers are generally staff from Federal policy agencies.

b. In some cases, the US is not able to identify suitable official data sources to calculate official national statistics for SDG indicators. In a portion of these, the US reports official statistics for similar (i.e., proxy) indicators. These are noted in the NRP national metadata under "Actual Indicator Reported." In other cases, the US examines other, non-official data sources to assess their quality. If found suitable, the US documents (or "curates") the data source, calculates an official statistic, and provides the appropriate metadata.

Step 3: Train Data Providers to Input National Statistics



	A	B	C	D
1	year	total_unemp_rate	male	female
2	2007			
3	2008			
4	2009			
5	2010			
6	2011			
7	2012			
8	2013			
9	2014			
10	2015			

a. Data providers submit statistics through their GitHub accounts using a spreadsheet interface.

b. For each indicator, data providers also submit national metadata to accompany the global metadata provided by UNSD. For a detailed explanation of how the US trained its data providers, watch this webinar[18] or read this training manual.[19]

Step 4: Verify the Submitted Data

a. Statistics and metadata are submitted by providers are routed to a non-public staging area on *GitHub* for review. Then, a notice is sent to reviewers by email from *GitHub*.

b. You authorize reviewers of submissions. When an email notice is received, the reviewer clicks on a *GitHub* link included in the email, and then selects a specific review (or 'pull') request. The data provider and his/her exact changes will be visible to your reviewer.

c. Reviewers examine submissions for incompleteness or function errors. They can then approve by clicking on 'Confirm Merge,' request clarifications or additional information from data providers using 'Comment,' or disapprove by clicking on 'Close.'

[18] https://www.youtube.com/watch?v=gPq3jB_sfFw
[19] https://github.com/GSA/sdg-indicators/issues/457

Step 5: Reporting National Statistics

a. After you have approved the submission from your data provider, the statistics and metadata will be viewable to the public.
b. In the US, we update our NRP through a clearly marked 'staging' or testing site before merging with the 'master,' or official site that the public can find online. This guide describes how to refresh the master site with content from the staging site.