Draft Functional design DASH

From a high level, we can distinguish 5 areas of functionality in DASH:

Connect — Connect to external data sources. This could be Akvo data sources, such as FLOW or RSR, or external ones, such as IATI, data.worldbank.org, NASA, weather data, population density data, etc. Support for google docs/drive, dropbox, url, salesforce, etc.

Transform — Filter and aggregate data, data facets, join data sets together, enrich datasets with geocoding and other computed columns.

Visualise — Create dashboards consisting of different visualisations of data, including graphs, tables, charts, etc.

Publish — Make the visualisations and dashboards available for dissemination as website, iframe, widget, etc, on a variety of devices, and with a variety of access possibilities.

Admin — All the administration tasks, such as user management, roles and permissions, security, resource use, etc.

High-level functionalities

Connect
- Connect to RSR API, and get full project info
- Connect to FLOW API, and get full info on surveys and data
- Connect to IATI registry
- Upload / connect to shapefiles
- Number of standard GIS datasets, such as GAUL, world population density, etc.
- Number of standard numeric datasets, such as from data.worldbank.org
- Upload csv, excel, …
- regular updates of a remote data source
- connect to dropbox, google drive, etc.

Transform
- filters
- facets
- data cleaning
- aggregates (by column, by GAUL GIS boundaries)
- predefined time filters / aggregations (like in Kibana) (day of week, hour of day...)
- computed columns. Formulas are data
- join datasets
- quality check data set columns

- capture and replay transforms
- share transforms
- undo / redo transforms

Visualise

- create and save histogram, charts, graphs, pivot tables
- combine visualisations in a dashboard
- dynamic dashboard, supporting user selections
- timeline / historic graph of indicator

Publish

- publish single visualisations
- publish dashboards
- access on both desktop and mobile devices, eg, responsive
- downloadable in multiple forms, such as png, jpg, svg, etc.
- send link to visualisation by email
- password-protected visualisation/dashboard
- login-protected visualisation /dashboard
- include vis in iframe
- publish datasets
- customise look and feel of dashboards (logo, colours, etc) using a theme per tenant

Admin

- invite users to join Akvo DASH
- assign roles and permissions to users
- manage users
- Overview of resources used
- transaction log of changes
- web traffic stats
- increase security by 2 factor auth
- a simple pricing model (do we charge for storage? connected data?)