EXPLORING TRACEABILITY WITHIN IATI DATA: METHODOLOGY USED TO DEVELOP IATI TRACE

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1   INTRODUCTION

Over the past 10 years, IATI has more and more become a common language for exchanging information about international development between a range of stakeholders: donor governments, multilateral organizations, international and national CSOs. IATI allows these different actors in the development chain to share data about the activities they carry out in an open, standardized data format.

One of the key characteristics of IATI is its ability to show relations with donors and implementing partners – in IATI terms 'traceability' – which can be used for improving transparency and gaining insight in the network of organizations and activities involved in the chain of development activities.

Over the past years IATI traceability has successfully been used for accountability towards donors and as a means to improve mutual insight by partners who collaborate on programs. Multiple donors have made traceability a key part of their IATI requirements, including the Netherlands Ministry of Foreign Affairs, the UK Department for International Development, the Belgian government and the Danish Ministry of Foreign Affairs.

This traceability however, is not only interesting from a donor point of view, but also from a local perspective: being able to discover the network of organizations and activities related to an activity that takes place on the ground allows local users of the data to understand which parties are involved and how, which donors fund the activity, if the activity is part of larger plans or efforts, what the political context of a certain activity is, etc.

In order to gain a better insight in the current state of IATI for local traceability, EyeOpenerWorks' team in Uganda has analyzed and visualized 6 'delivery chains', using the methodology described below.

1.1 APPROACH

To analyze the actual traceability of these selected delivery chains in IATI and to visualize them, the team used a systemized approach for each of the chains.

First of all, starting from a given activity in each chain – not necessarily the 'top' activity – any 'upstream' (towards the initial funders) and 'downstream' (towards actual implementing organizations) links were identified.

In the upstream analysis, each IATI activity was scanned for the presence of:

- Incoming transactions (type 1 and type 11) containing `provider-org/@ref` or `provider-org/@provider-activity-id`
- `Related-activity` element of type '1' - Parent

- Participating organizations with `participating-org/@role` '1' – Funding
- If present, for the existence of `participating-org/@activity-id`

In the 'downstream' analysis, each activity was scanned for the presence of:

- Outgoing transactions (type 2 and type 3) containing `receiver-org/@ref` or `receiver-org/@receiver-activity-id`
- `Related-activity` element of type '2' - Child

- Participating organizations with `participating-org/@role` '4' – Implementing
- If present, for the existence of `participating-org/@activity-id`

Who funds this?

Starting point

Who is involved in the implementation?
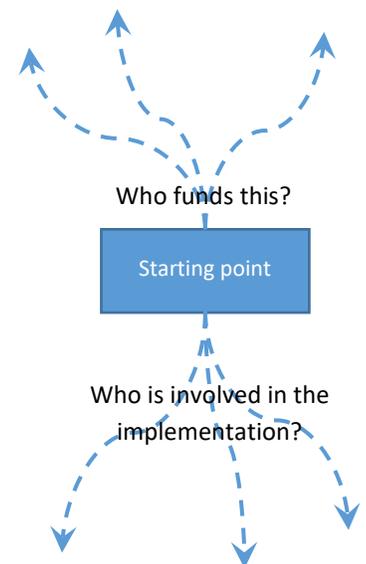
Each new activity found results in a new **node** in the visualization, each reference resulting in a new **link** between two nodes.

Furthermore, the activity was checked for the presence of sub-national `location` data, `document-links` and `results`.

Once the activity was thoroughly checked for all the activities that it references to, then the found activities (originating from the first activity) were examined in the same way. And this process was repeated until all references were exhausted.
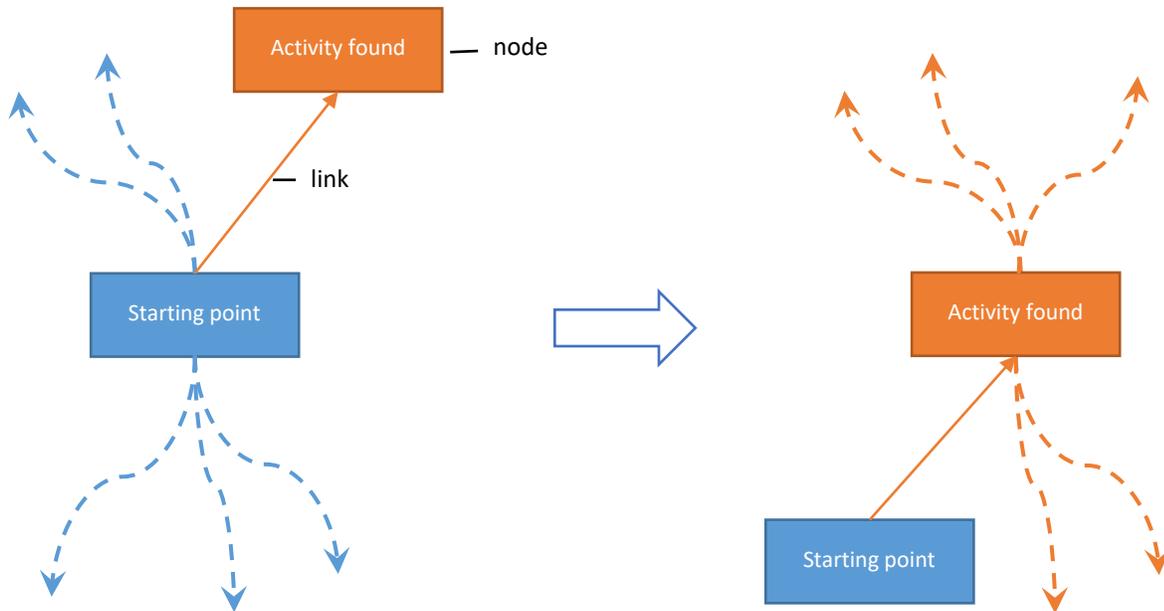
A first round of analysis following this approach was carried out using d-portal.org. More details on how this analysis was carried out can be found in the next chapter. Afterwards, by looking at the code, the results were checked and – where possible – enhanced by using the new IATI datastore API. This step in the analysis is decribed in further detail in chapter 3 of this document.

1.2   TRACEABILITY ANALYSIS USING D-PORTAL

STEP 1: GO TO A SPECIFIC ACTIVITY

In this case we're starting at https://d-portal.org/ctrack.html#view=act&aid=**GB-CHC-1038860-28437** or by typing **GB-CHC-1038860-28437** in the d-portal.org search box.

STEP 2: UPSTREAM ANALYSIS – WHO FUNDS THIS ACTIVITY?

Look for relations to other activities or organizations, using the elements 'Provider-activity-id', 'Related-activity' and 'Participating-organizations'.

`Provider-activity-id` *in the Transactions section (under Incoming commitment and Incoming funds).*
In d-portal each orange link under 'Provider' contains a link to the providing activity.

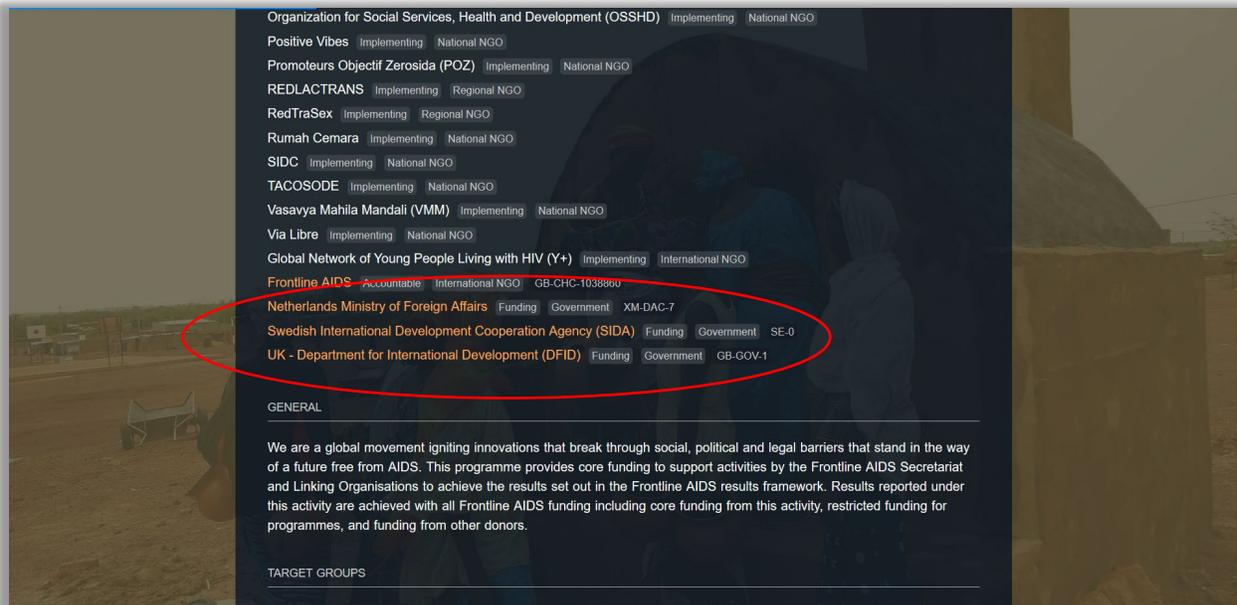In this case we find 3 different funding activities:

- XM-DAC-7-PPR-28437,
- SE-0-SE-6-5404014501-GGG-13040 and
- GB-1-202557-101.

`Related-activity` *of type 'Parent'*
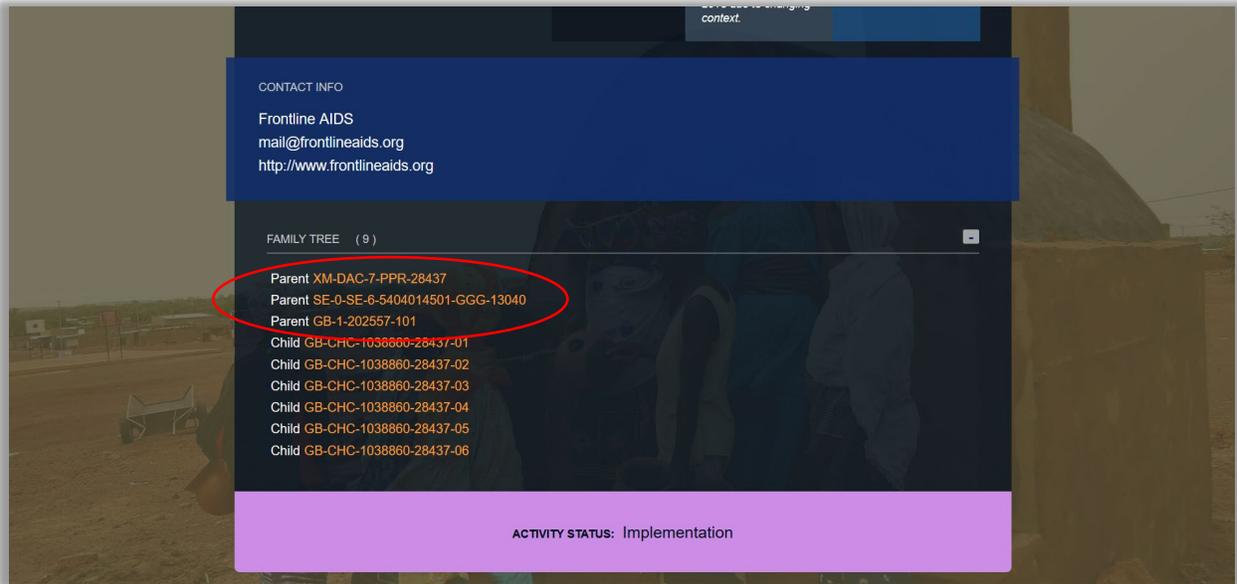
There are 3 'Parent' activity under Related activities: XM-DAC-7-PPR-28437, SE-0-SE-6-5404014501-GGG-13040 and GB-1-202557-101, the same as we found above.

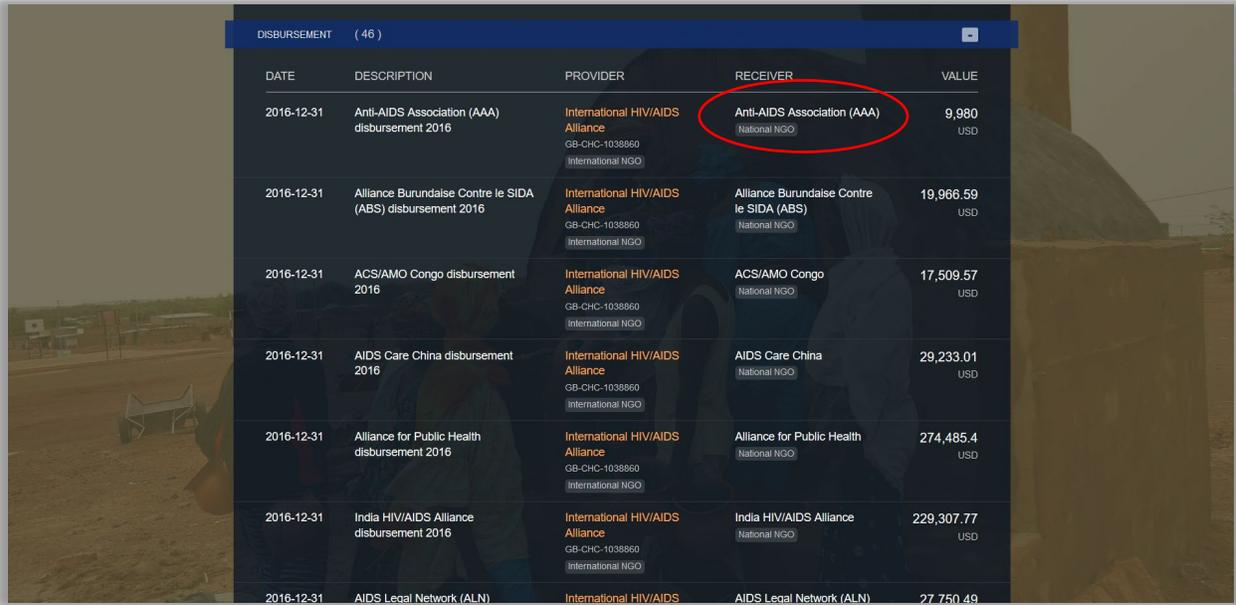**`Participating-organizations` *of type 'Funding'***

Again, the same three donors – and their activity identifiers – are found

STEP 3: DOWNSTREAM ANALYSIS – WHO IS INVOLVED IN THE IMPLEMENTATION?

Look for relations to other activities or organizations, using the elements 'Receiver-activity-id', 'Related-activity' and 'Participating-organizations'.
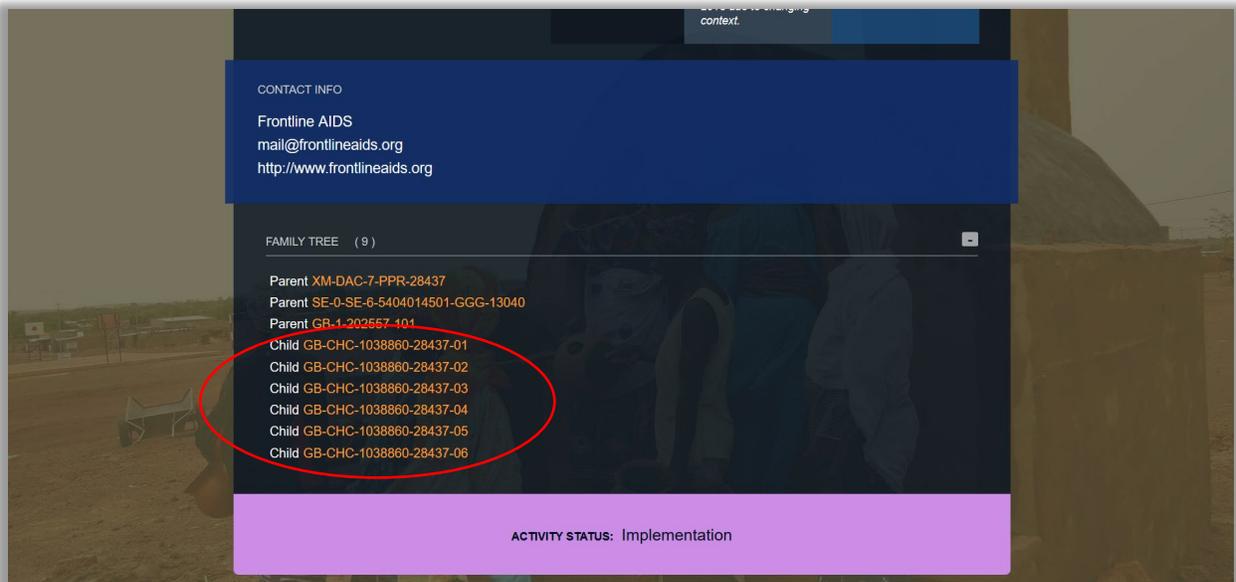
`Receiver-activity-id` *in the Transactions section (under Outgoing commitment and Disbursements).*
This activity does not point to receiving activities, but only mentions the names of receiving organizations.

`Related-activity` *of type 'Child'*

There are 6 child activities:

- GB-CHC-1038860-28437-01
- GB-CHC-1038860-28437-02
- GB-CHC-1038860-28437-03
- GB-CHC-1038860-28437-04
- GB-CHC-1038860-28437-05
- GB-CHC-1038860-28437-06

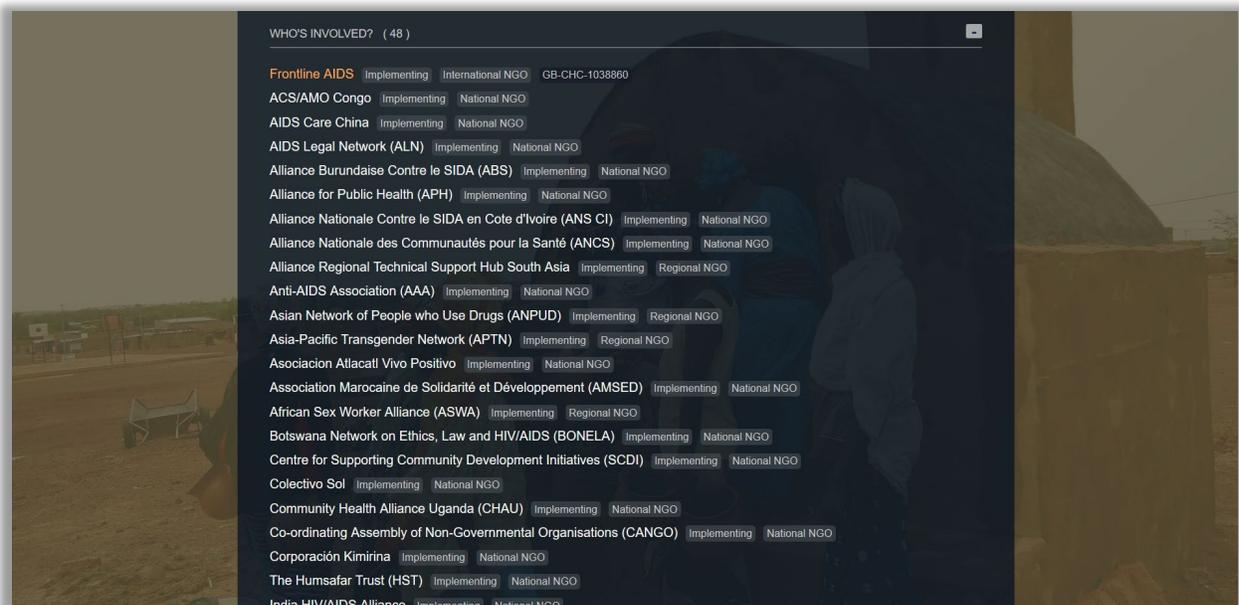**`Participating-organizations`** *of type 'Implementing'*

This activity mentions 43 implementing organizations, excluding Frontline Aids.

> NOTE: d-portal does not allow for a more sophisticated analysis of downstream activities, asking questions such as *"Which other activities point at this activity?"*, for those purposes the IATI datastore was used (see the next section).

STEP 4: REPEAT STEPS 1 TO 3 FOR ALL THE ACTIVITIES FOUND

The next step is to repeat the analysis for all the activities found.

Eventually this will result in a long list of activities and relations, which can be used to visualize the network.

1.3   TRACEABILITY ANALYSIS USING THE IATI DATASTORE API

The following paragraphs describe how the traceability analysis was carried out using the IATI datastore API. Please note that the screenshots on the following pages were taken using the latest Firefox browser, which has a built-in JSON viewer. If there is no JSON viewer installed in your browser, your JSON output may look more like this:
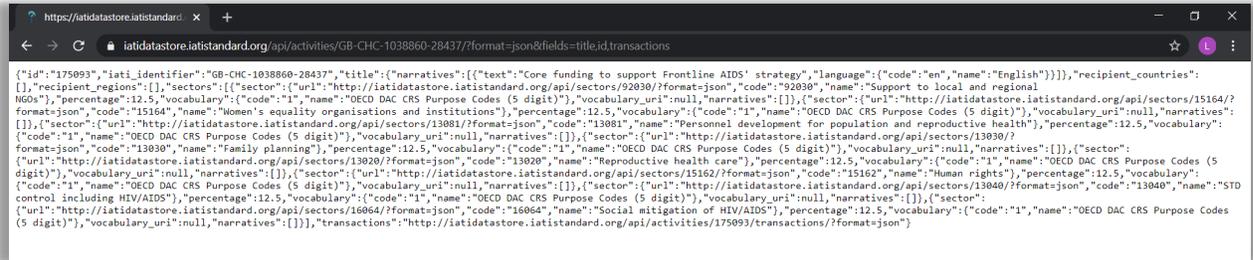
In that case, please install a JSON viewer for your browser. Some popular (open source) JSON viewers are:

- Chrome: JSON Formatter
- Microsoft Edge: JSON Formatter
- Safari: JSON Peep

For other browsers, just search for the name of your browser + "JSON viewer"

### STEP 1: UPSTREAM ANALYSIS – WHO FUNDS THIS ACTIVITY?

In the same way we used d-portal, we look for relations to other activities or organizations, using the using the elements 'Provider-activity-id', 'Related-activity' and 'Participating-organizations'.

`Provider-activity-id` in the Transactions section (under Incoming commitment and Incoming funds).
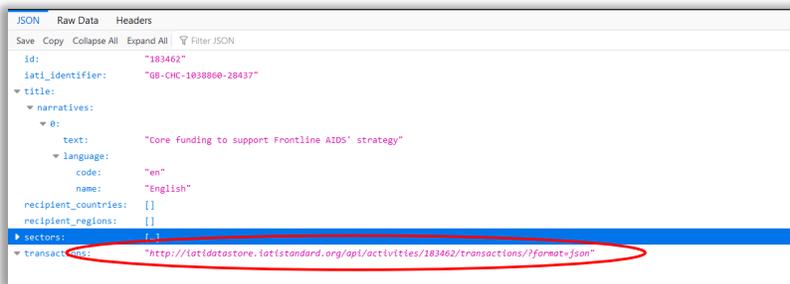
https://iatidatastore.iatistandard.org/api/activities/GB-CHC-1038860-28437/
?format=json&fields=title,id,transactions

leads to a page with JSON output.

Click on the arrow in front of the 'sectors' section to collapse it
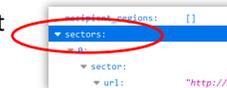
Then click on the link to see all the transactions:

Going through the resulting pages, they show incoming commitments (type 11) from XM-DAC-7-PPR-28437, SE-0-SE-6-5404014501-GGG-13040 and GB-1-202557-101

Related-activity *of type 'Parent'*

https://iatidatastore.iatistandard.org/api/activities/GB-CHC-1038860-28437/?format=json&fields=related_activities

Shows XM-DAC-7-PPR-28437, SE-0-SE-6-5404014501-GGG-13040 and GB-1-202557-101 as the Parent activities.

Participating-organizations

https://iatidatastore.iatistandard.org/api/activities/GB-CHC-1038860-28437/?format=json&fields=participating_organisations

Gives a full list of all participating organizations, including the three funding organizations.

STEP 2: DOWNSTREAM ANALYSIS – WHO IS INVOLVED IN THE IMPLEMENTATION?

Like in d-portal, for the downstream analysis we look for the elements 'Receiver-activity-id', 'Related-activity' and 'Participating-organizations'.
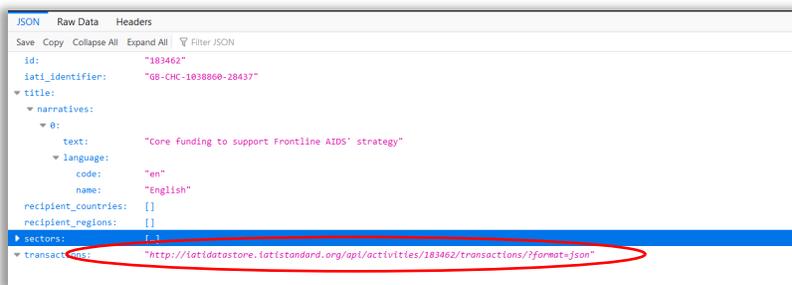
Receiver-activity-id *in the Transactions section (under Outgoing commitment and Disbursement).*

https://iatidatastore.iatistandard.org/api/activities/GB-CHC-1038860-28437/?format=json&fields=title,id,transactions leads to a page with JSON output.

Click on the arrow in front of the 'sectors' section to collapse it

Then discover click on the link to see all the transactions:

Going through the resulting pages, shows no receiver-activity-id's on outgoing transactions. (type 2 – outgoing commitments or 3 - disbursements)

`Related-activity` *of type 'Child'*

https://iatidatastore.iatistandard.org/api/activities/GB-CHC-1038860-28437/?format=json&fields=related_activities shows there are 6 child activities:

- GB-CHC-1038860-28437-01
- GB-CHC-1038860-28437-02
- GB-CHC-1038860-28437-03
- GB-CHC-1038860-28437-04
- GB-CHC-1038860-28437-05
- GB-CHC-1038860-28437-06

`Participating-organizations` *of type 'Implementing'*

https://iatidatastore.iatistandard.org/api/activities/GB-CHC-1038860-28437/?format=json&fields=participating_organisations

Gives a full list of all participating organizations, including the 43 implementing organizations (excluding Frontline Aids).

So far, the analysis using the API resembled the analysis using d-portal. However, the datastore API also allows for more sophisticated questions, such as:

Which other (downstream) activities, mention this activity as their provider, using the **`provider-activity-id`**:

https://iatidatastore.iatistandard.org/api/transactions/?provider_activity=GB-CHC-1038860-28437&format=json

Unfortunately in this specific case, the query returns no results.

Which other (downstream) activities, mention this activity as their 'Parent', using the **`related-activity`** *element:*

https://iatidatastore.iatistandard.org/api/activities/?related_activity_id=GB-CHC-1038860-28437&fields=iati_identifier,related_activities&format=json

In this case we see that the 6 child activities also contain a reference to GB-CHC-1038860-28437 as their Parent.

STEP 3: REPEAT THE ABOVE STEPS FOR ALL THE ACTIVITIES FOUND

The next step is to repeat the analysis for all the activities found.

Eventually this will result in a long list of activities and relations, which can be used to visualize the network.

After studying the selected delivery chains through the systemized approach described in the previous paragraphs, the team focused on visualizing the results of the analysis.
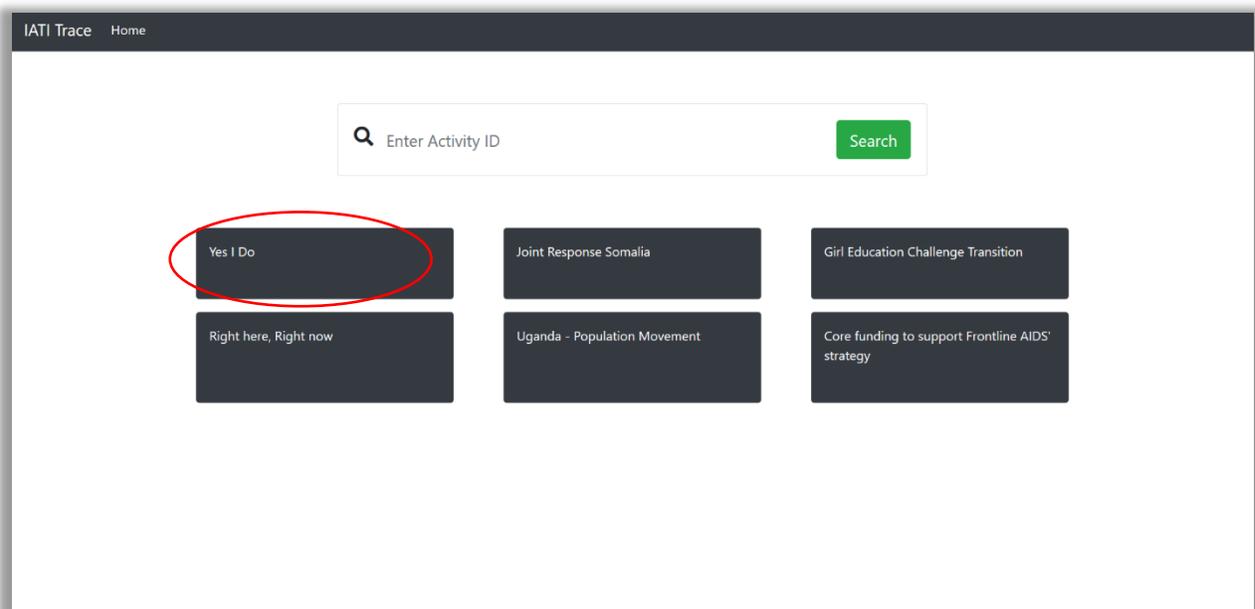
MANUAL VISUALIZATION

All the links collected through the manual analysis of the 6 value chains were turned into JSON ['from', 'to'] pairs, which were visualized using a D3.js library, where each node is represented as a dot, and each link as a connecting line.

Clicking on a node (an activity), results in an API-call to the new IATI datastore, which then provides the available activity data in the box on the right.

The results of this 'manual' effort are shown at www.iatitrace.org. The six buttons lead to the visualizations of the six different networks.

AUTOMATING THE PROCESS

Based on the experiences from the manual exercise, rules were derived to automate this visualization process using API calls to the new IATI Data store.

Based on a given activity identifier in the search box, the datastore API is called for:

- Any `provider-activity-id`'s this activity contains
- Any 'parent' `related-activities` this activity contains
- Which other activities refer to this activity using the `provider-activity-id`
- Which other activities refer to this activity as their 'parent' using the `related-activity` element

To try this functionality, just enter an existing IATI Activity in the search box. Clicking a node will result in another API call, looking for referred to and referring activities.