IATI’s New Integrated Platform:
Where are we now?

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Why an integrated platform?

- Core recommendation from the 2020 Technical Stocktake
- Decisions approved by Board
- Roadmap shared
- Implementing recommendations

1. System design recommendation

1. The Board is asked to approve a move for IATI towards an integrated architecture approach, as supported by Stocktake workshop participants.

➢ Link to IATI Strategic Plan Objective 3, Strengthen the IATI Standard by consolidating its technical core: ‘Review, consolidate, streamline and maintain IATI’s technical tools and core products, determining which of these need to be in-house and which ones out-sourced, to ensure that our technical infrastructure is fit for the achievement of IATI’s strategic objectives’.

What did the consultant recommend?: The key design recommendation from the Stocktake was that IATI should transition from a siloed set of applications to a single, integrated core architecture.

Current siloed architecture

Proposed integrated architecture
## Technical Roadmap

<table>
<thead>
<tr>
<th></th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>API Gateway</td>
<td>JAN</td>
<td>FEB</td>
<td>MAR</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>APR</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>DEC</td>
</tr>
</tbody>
</table>

- **Validator V2 / Public API**
  - Q1: [Start]
  - Q2: [Start]
  - Q3: [End]
  - Q4: [End]

- **Semantic Data Layer**
  - Q3: [Start]
  - Q4: [End]

- **d-portal v2**
  - Q4: [Start]

- **Publishing Tool Options**
  - Q1: [Start]
  - Q2: [End]

- **Publisher Statistics**
  - Q4: [Start]

- **Consultation/Design**
- **Implementation/Development**
- **Launch**
Technical Roadmap

- **Datastore**
  - Consultation and/or Documentation
  - Maintenance

- **Registry**
  - Consultation and/or Documentation
  - Maintenance

- **Datastore**
  - Consultation and/or Documentation
  - Maintenance

- **d-portal**
  - Consultation and/or Documentation
  - Maintenance

- **Storing Historical Data**
  - Consultation and/or Documentation
  - Maintenance

- **Hosting Publisher XML**
  - Consultation and/or Documentation
  - Maintenance
API Gateway

API’s are specifications of possible interactions with a software component. The API Gateway will manage APIs across our platforms. From the Stocktake:

“Initially, current APIs are publicly published through the API Gateway. Over time additional APIs are added per this proposed architecture and driven by User Personas and Stories, just like the unified User Interface. These microservices are loosely coupled, independent microservices.”

- Complete - Validator API Contract Consultation
- Future - Registry API Contract Consultation
Why does IATI want to use an API Gateway?

- We want to protect our APIs from overuse and abuse, using rate limiting and, where applicable, API key authentication.
- We want to understand how people use our APIs, via analytics and monitoring tools.
- Through that analysis, we might identify real-world use cases which we could better accommodate in future releases.
- Users will be able find all IATI API services, documentation and change logs in a single place.
Public Validator API Development Process

- Requirements gathering exercise
- Designing the draft API contract
- Community consultation on the draft contract
- **Implementing the API contract, which is the present phase**
- Testing the implementation, to include functional correctness, appropriate response times and appropriate load capacity
- Early access for a focussed group of API users
- Release of V2 of the IATI Validator, to include the implemented public API
Validator V2 + Public Validator API

Why?

● Version 2.0 - Migrate to modern, scalable cloud platform (Azure serverless functions) and implementation (Node.js)
  ○ Provide template for unified platform microservices
  ○ Enable a fast Synchronous API

● Public API - Give publishers and publishing tools a way to integrate validation into their workflows
  ○ Increase data quality
Live Demonstration

API Gateway / Developer Portal / Public Validator API / Validator V2
- In Development
- Not Yet Available for Public Use/Testing
- Subject to Change

Registry API
- Available for Public Use Directly (not through API Gateway)
Welcome to the IATI API Gateway!

Your source for information and access to the International Aid Transparency Initiative’s public APIs.

Sign Up  Explore APIs

About us

IATI – the International Aid Transparency Initiative – brings together governments, multilateral institutions, private sector and civil society organisations and others to increase the transparency and openness of resources flowing into developing countries.

IATI data helps meet the needs of a wide range of stakeholders in international development. For example:

- Governments of developing countries need up-to-date information on which development and humanitarian organisations are operating in their country, so they can work with them effectively.
# APIs

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Echo API</td>
<td></td>
</tr>
<tr>
<td>IATI Registry</td>
<td>The IATI Registry is the place to register your organisation and IATI datasets.</td>
</tr>
<tr>
<td>IATI Validator</td>
<td>The IATI Validator Public API is a tool for checking if data aligns with the rules and guidance of IATI Standard. It allows users to check and improve the quality of IATI data to ensure it is accessible and useful to anyone working with data on development...</td>
</tr>
</tbody>
</table>
IATI Registry

The IATI Registry is the place to register your organisation and IATI datasets.

Publisher List

Return a list of the names of IATI publishers. When the authorisation header is provided and the user has sysadmin privileges, the call also returns publishers with a Pending status.

Request

```
GET https://dev-ati-api-gateway.azure-api.net/registry/action/organization_list
```
IATI Registry

The IATI Registry is the place to register your organisation and IATI datasets.

Publisher Details

Return the details of a publisher. When the authorisation header and include_datasets parameter are provided, the call also returns private datasets.

Request

GET https://dev-iati-api-gateway.azure-api.net/registry/action/organization_show?id

Request parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>In</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>query</td>
<td>true</td>
<td>string</td>
<td>the id or name of the publisher</td>
</tr>
</tbody>
</table>
HTTP response

HTTP/1.1 200 OK

cache-control: public, must-revalidate, max-age=0
content-length: 2377
content-type: application/json; charset=utf-8
date: Thu, 08 Apr 2021 07:53:34 GMT
x-cached: MISS

{
   "help": "https://iatiregistry.org/api/3/action/help_show?name=organization_show",
   "success": true,
   "result": {
      "publisher_frequency": "as per donor reporting requirements for specific projects",
      "package_count": 1,
      "publisher_record_exclusions": "n/a",
      "num_followers": 0,
      "publisher_implementaion_schedule": "n/a",
      "publisher_country": "CH",
      "id": "c38dbb9d-ffeb-47bb-9e70-e00dafa127079",
      "publisher_ref": "n/a",
      "publisher_ui_url": "http://actalliance.org/",
      "title": "ACT Alliance",
      "publisher_units": "Activities represent individual funding streams",
      "publisher_contact": "Ecumenical Center, 150 Route de Ferney, 1211 Geneva, Switzerland",
      "state": "active",
      "publisher_contact_email": "arnold.christophe@gmail.com",
      "publisher_field_exclusions": "n/a",
      "publisher_first_publish_date": "",
   }
}
IATI Validator

The IATI Validator Public API is a tool for checking if data aligns with the rules and guidance of IATI Standard. It allows users to check and improve the quality of IATI data to ensure it is accessible and useful to anyone working with data on development and humanitarian resources and results.

**validate**

Endpoint to send a full IATI File (either organisations or activities) and receive a JSON validation report.

**Request**

**POST** https://dev-isti-api-gateway.azure-api.net/validator/validate

**Request headers**

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept</td>
<td>false</td>
<td>string</td>
<td>Indicates the type of response</td>
</tr>
<tr>
<td>Content-Type</td>
<td>false</td>
<td>string</td>
<td>Indicates the media type of the resource</td>
</tr>
</tbody>
</table>

**Request body**

IATI xml file
Response: 422 Unprocessable Entity
If no body is provided or it's in the wrong format

```json
{
  "error": "No body"
}
```

Response: 200 OK
When the XML file is successfully processed by the IATI Validator it returns a JSON validation report.

Response headers

<table>
<thead>
<tr>
<th>Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Type</td>
<td>false</td>
<td>string</td>
<td>Content type of the response</td>
</tr>
</tbody>
</table>
valid IATI organisations file validation report

```json
{
  "type": "object",
  "properties": {
    "schemaVersion": {
      "type": "string"
    },
    "iatiVersion": {
      "type": "string"
    },
    "summary": {
      "type": "object",
      "properties": {
        "critical": {
          "type": "integer"
        },
        "danger": {
          "type": "integer"
        },
        "warning": {
          "type": "integer"
        },
        "info": {
          "type": "integer"
        },
        "success": {
          "type": "integer"
        }
      }
    }
  }
}
```
IATI Validator / validate

**Authorization**
Subscription key

**Parameters**
+ Add parameter

**Headers**
- **Accept**
  application/json
- **Content-Type**
  application/xml
- **Cache-Control**
  no-cache

**Body**

HTTP request

```plaintext
POST https://dev-iati-api-gateway.azure-api.net/validatordata

Accept: application/json
Content-Type: application/xml
Cache-Control: no-cache
```

Send
Sign up

Already a member? Sign in.

Email

e.g. name@example.com

Password

Confirm password

First name

e.g. John

Last name

e.g. Doe
User profile

Account details

Email
First name Nik
Last name Osvalds
Registration date 04/08/2021

Change name Change password Close account

Subscriptions

Subscription details

You don't have subscriptions.
# Subscriptions

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory</td>
<td>Subscribers will be able to run 5 calls/minute up to a maximum of 100 calls/week. No approval is required.</td>
</tr>
<tr>
<td>Full Access</td>
<td>Subscribers have unlimited access to Public IATI APIs with high rate limits. IATI Technical Team approval is required.</td>
</tr>
</tbody>
</table>
# User profile

## Account details

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:nik@nikolaso.com">nik@nikolaso.com</a></td>
</tr>
<tr>
<td>First name</td>
<td>Nik</td>
</tr>
<tr>
<td>Last name</td>
<td>Osvalds</td>
</tr>
<tr>
<td>Registration date</td>
<td>04/08/2021</td>
</tr>
</tbody>
</table>

[Change name]  [Change password]  [Close account]

## Subscriptions

<table>
<thead>
<tr>
<th>Subscription details</th>
<th>Product</th>
<th>State</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>exploratorysubscription</td>
<td>Rename</td>
<td>Exploratory</td>
</tr>
<tr>
<td>Started on</td>
<td>04/08/2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary key</td>
<td>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</td>
<td>Show I Regenerate</td>
<td></td>
</tr>
<tr>
<td>Secondary key</td>
<td>XXXXXXXXXXXXXXXXXXXXXXXXXXXX</td>
<td>Show I Regenerate</td>
<td></td>
</tr>
</tbody>
</table>
Authorization

Subscription key

- Exploratory
  - Primary: exploratorysubscription
  - Secondary: exploratorysubscription
HTTP request

POST https://dev-iat-api-gateway.azure-api.net/validator/validate HTTP/1.1

Accept: application/json
Content-Type: application/xml
Cache-Control: no-cache
Ocp-Apim-Subscription-Key: 9671140b32a54b66b17a8f2b7ff216df

<?xml version="1.0" encoding="UTF-8"?>
<iati-organisations version="2.02" generated-datetime="2018-11-07T05:25:55+00:00">
  <iati-organisation last-updated-datetime="2018-11-07T05:25:55+00:00" xml:lang="en" default-currency="NPR">
    <organisation-identifier>NP-SWC-1234</organisation-identifier>
    <name>
      <narrative>Test Org Nepal</narrative>
    </name>
    <reporting-org type="24" ref="NP-SWC-1234">
      <narrative>Test Org Nepal</narrative>
    </reporting-org>
  </iati-organisation>
</iati-organisations>
HTTP response

HTTP/1.1 200 OK
content-type: application/json; charset=utf-8
date: Thu, 08 Apr 2021 08:06:40 GMT
request-context: appID=c1d-v177c97b7138c7-4b61-8c6b-abfad8d8b15
transfer-encoding: chunked

{
    "schemaVersion": "1.0.1",
    "iatiVersion": "2.02",
    "summary": {
        "critical": 0,
        "danger": 0,
        "warning": 0,
        "info": 0,
        "success": 0
    },
    "filetype": "iati-organisations",
    "validation": "ok",
    "feedback": [{
        "category": "iati",
        "label": "IATI file",
        "messages": [{
            "id": "0.0.1",
            "text": "Congratulations! This IATI file has successfully passed IATI XML schema validation with no errors!",
            "rulesets": [{
                "src": "iati",
                "severity": "success"
            }],
            "context": [{
                "text": ""
            }]
        }
    ]

    "organisations": [{
        "title": "Test Org Nepal",
        "identifier": "NP-SWC-1234",
        "publisher": "NP-SWC-1234",
        "feedback": []
    ]
}
<table>
<thead>
<tr>
<th>HTTP</th>
<th>Curl</th>
<th>C#</th>
<th>Java</th>
</tr>
</thead>
<tbody>
<tr>
<td>JavaScript</td>
<td>PHP</td>
<td>Python</td>
<td>Ruby</td>
</tr>
<tr>
<td>Objective C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HTTP request**

```text
POST https://dev-iati-api-gateway.azure-api.net/validator/validate HTTP/1.1

Accept: application/json
Content-Type: application/xml
Cache-Control: no-cache
Ocp-Apim-Subscription-Key: 9671140b32a54b66b17a8f2b7ff216df

[ iati-act-no-errors.xml ]
```
Reports

API calls

- Total requests
- Successful requests
- Failed requests
- Blocked requests
# Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Successful calls</th>
<th>Blocked calls</th>
<th>Failed calls</th>
<th>Other calls</th>
<th>Total calls</th>
<th>Average response time</th>
<th>Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>9 s</td>
<td>4 Kb</td>
</tr>
</tbody>
</table>

# Subscriptions

<table>
<thead>
<tr>
<th>Subscription</th>
<th>Successful calls</th>
<th>Blocked calls</th>
<th>Failed calls</th>
<th>Other calls</th>
<th>Total calls</th>
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</tr>
</thead>
<tbody>
<tr>
<td>exploratorysubscription</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>9 s</td>
<td>4 Kb</td>
</tr>
</tbody>
</table>

# APIs

<table>
<thead>
<tr>
<th>API</th>
<th>Successful calls</th>
<th>Blocked calls</th>
<th>Failed calls</th>
<th>Other calls</th>
<th>Total calls</th>
<th>Average response time</th>
<th>Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATI Validator</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>9 s</td>
<td>4 Kb</td>
</tr>
<tr>
<td>IATI Registry</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 ms</td>
<td>0 bytes</td>
</tr>
<tr>
<td>Echo API</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 ms</td>
<td>0 bytes</td>
</tr>
</tbody>
</table>
Discussion & Q&A
To find out more...

Technical Stocktake Newspost (Dec 2020):
iatistandard.org/en/news/technical-stocktake-next-steps-iati/

Technical Team Quarterly Update (w/b 19 April 2021)

Contact the Technical Team: support@iatistandard.org