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IATI Technical Audit team report

General remarks

The IATI technical audit involved a stocktaking exercise of some of the current IATI software setup. The discussions were hosted by Oxfam Novib and led by the IATI tech team, who presented a draft capacity work plan. The group commented on the work plan, and made recommendations about the future direction of products and priorities. This document contains a summary of those discussions. It received extensive comments from the audit team and was edited by Development Initiatives.
Governance matters were also discussed, resulting in several governance recommendations.

Summary of key findings & recommendations:

- The current IATI software infrastructure does not meet the requirements for continued growth of IATI. There exists a backlog of critical technical work and there are problems with the maintainability and usability of several IATI software components such as the IATI data validator. The IATI techteam is responsible for a heterogeneous and complex software landscape. Without additional measures, this situation is not sustainable. Therefore the audit team advises the board to:
    - Reduce the complexity of the IATI software landscape by focusing the responsibilities of the tech team on the IATI core data products
    - Maintain D-portal until an improved IATI datastore is available and D-portal can be redesigned under the responsibility of the IATI Data Use Task Force (or its successor) or the Secretariat manages it as a communications product.

- Focus the effort in the short term on improving the data validator and datastore, since these are 2 critical core components on which many other components depend and which have serious shortcomings in the current situation
- Reuse existing software if possible because of limited time and budget available.
- Review existing validation tools and the potential for (re)use

- Validation and the datastore are the first priority for till end of May 2019 with the IATI-harvester (for updating the metadata in the registry) as a second level priority. Further work (aside from routine maintenance on existing applications) should not be planned until the new datastore is up and running. This [Roadmap](#) document shows more detail.

- Concerns regarding DI BA and DEV capacity were expressed, this capacity needs to be assessed in light of roadmap and plan, changing roles, by increased outsourcing of core application, may also require different skills. Short term contracting of community developers should be explored for the first quarter when capacity of technical team is limited.

- For the IATI budget planning requested prior to Board meeting in September, broader technical budget line is required instead of product by product budgeting. Reporting can give the detail as to how the budget has been spent on products.

Governance findings & recommendations

The current IATI Governance structure doesn't allow for a forum where technical guidance can be gathered from within the community. The group referred to as the TAG has expanded to encompass all those interested in IATI both technical and non technical; meaning that the function of convening community experts separately is not being met. This leads to the following recommendations:

- An Expert Advisory Group on technical work - EAG is to be formed, a TOR to be developed. The EAG chair sends recommendations and advises the board. EAG can convene a meeting on Standards inviting the stakeholders that should input. The EAG should be accountable to the IATI community.
- The TAG should be rebranded so that it is called IATI Community, reflecting the focus on being inclusive of newcomers to IATI and a focus on Data Use. IATI Community should have a Chair that sits on the EAG. This should be effective asap, Nepal meeting could be an IATI Community meeting.
- This document should be shared with the IATI Community on IATI Discuss.
- IATI Board may also wish to share their reaction to these recommendations on IATI Discuss.

Product review table

Product	Who is it for?	Dependencies	Issues	Opportunities	Recommendations
d-portal	Universal - anyone to see all IATI activities.	New datastore to be delivered before future of the product can be really decided.	No product identity. Not wired to datastore. Low maintenance budget previously.	This is a very popular product among data users and there is no other comparable product around. Once the new datastore is available this could be used as a back-end for D-Portal. Interim working group on the product purpose. (DUTF)	Don't shut it down, run on a small maintenance budget. It was recognised that in the short term additional resource might be required to keep maintaining d-portal with the current developer team (not IATI core) and allow for review of a few of the long backlog of new feature requests. Consider potential product management moving to the comms function of the Secretariat or the DUTF. In the long term, d-portal was not seen as core IATI product. Consider integrating look & feel with other IATI tools and services.
Registry	Publishers. Technical users.	Bespoke customisation of CKAN.	CKAN customisation causes issues. Registration process isn't user friendly. Metadata issues.	Simplify by layering on top of CKAN, removing the bespoke nature so that outsourcing of CKAN doesn't require any IATI knowledge.	Focus on core CKAN capabilities scope. Build additional scripts to manage metadata as a service external to the registry. This needs to be estimated. Review publisher registration. Once work to de-bespoke CKAN is complete, in the long term consider cost/benefit of replacing CKAN.
Standard (SSOT)	Publishers. Technical users.	Schema Codelists Rulesets	Governance challenges (e.g. lack of clarity around process) with hard-to-resolve	Harmonisation and clear understanding of each	Clear API for access to schema, codelists and rulesets, for use by Validator, Datastore, and other users.

			issues (e.g. ongoing issue with activity-status)	element by the whole community.	Governance challenges can be discussed in future EAG meetings.
Validation	Authoritative service accessible by anyone including humans and machines eventually consisting of following validation functionality: - XSD schema - Codelists - Machine readable rules (e.g. percentages adding up to 100) - Non-machine readable rules (e.g. Valid identifiers)	Extra-documentation Core standard and interpretation. An authoritative list of business rules (input for the design process, to be maintained in a repository).	Set of tools but not a consumable service, Technical issues concerning maximal allowed XML file size, Scalability. Limited to XSD validation only.	Independent service multi dimensional. API endpoint. Library. Human readable and easy to understand messages. Different severity levels.	We need a validation service (API and code library). Levels of validation support and confidence in data use. Assessing what is out there so that this doesn't start from scratch, reusing existing software as much as possible. Defining a definite list of validation rules first (a rule repository) to reduce the dependency between validator and standard.
Python library (pyIATI)	Primarily for internal use (to be included in other tools). Not a product in itself.	Standard (SSOT)	Widely misunderstood. Not yet feature complete. Secretariat stated that development has been discontinued.	Provides a more robust standard. Could, depending on make or reuse decision, potentially form the basis for new validator.	Publish lessons learned from development of pyIATI.
Dashboard	Internal tool shown publicly. Used by a small number of external users that wish to check elements of the data.	IATI stats	Refactor vs rebuild, to be assessed when the senior developer starts. Current internal coding standards aren't adhered to (documentation etc).	Simplify the product and reduce the maintenance burden.	Investigate cost/benefit of splitting away publisher statistics completely / splitting away publisher statistics frontend / not splitting. Add a banner to the non publisher stats part of the dashboard that states it is an internal tool.

			Uses python 2 (which is only supported until end of 2019). Frontend is confusing for users and could do with some redesigning.		This wouldn't necessarily need to have UI improvements. New datastore could allow users to check elements of the data, though this is not in the current TOR.
Publisher statistics	Universal.	IATI stats Currently linked to dashboard.	Publisher statistics can get highly political. Logic needs tidying up. Humanitarian dashboard stats are broken (e.g. scores of nearly 600%). Must be separate from validation. Grand Bargain dashboard relies on stats. Global Partnership Transparency indicator also uses the stats.	Opportunity to be a good data quality tool. To show progress over time. To show progress against other.	Explore whether outsourcing the technical work or methodology could reduce burden on tech team from resolving political issues created by assessing publisher data quality. This would need an improved UI.
Quality service	Publishers.	Validation.	Actional by users.	Lower manual labour required for ppl to improve data, e.g. through providing clear recommendations. Data quality.	This is a future data quality feedback tool that could be designed to email publishers actionable notifications if there is a data issue.
Datastore	Developers / Other 3rd Party Applications. Users wanting bulk downloads.	Registry Validator (but with a more permissive set of rules)	Existing datastore built in 2013 and only nominally maintained since then New Datastore currently under procurement.	As the product develops other tools can be built on it API	The current Datastore is maintained till the new Datastore is ready to take over. Where possible, maintain consistency in API endpoints between the old Datastore and the new one, to avoid breaking existing applications. Tools such as the Dashboard and d-portal are dependant on the datastore.

IATI Website	Universal.		Need to add a search feature and translation to French. Still other elements of the IATI site are existing on other microsites. Single Source of Truth needs to remain in version control.	Opportunity to improve data use and publishing experience to reduce BA time.	IATI standard continues to be maintained in version control. Only urgent bug fixes are done on the website but other features (search and translation) are not started on till after the delivery of the data validator and the datastore (currently planned for May 2019)

Other recommendations and suggestions:

- Publish Terms of Service for each IATI "core" product. This should include: when the IATI tech team will respond to issues, and how much scheduled downtime to expect (e.g. uptime targets).
- Previewer is not a core IATI product.The group recommends that the tech team stops maintaining the tool and it is deprecated once datastore is up and running.
- CSV converter to be deprecated. CSV Converter links could be replaced with equivalent datastore links.
- Some additional BA capacity may be needed to write and review rulesets for validation.
- There should be public consultation on any new validator rulesets (i.e. additional to the existing SSOT standard ruleset). All rules should be an exact reflection of the IATI standard functionality.
- The Datastore should attempt to include as much IATI data as possible, i.e. it will include data that does not conform to the full IATI validation ruleset.
- Keep open source license / don't change license info. We discussed changing from "open source" to "coding in the open". While we understand the limited capacity of the tech team, open source should still be the goal. It can support a healthy and open relationship with the community in addition to a net benefit in time savings and tool improvements. This could mean setting aside explicit time to go through priority pull requests and merge priority bug fixes where possible. Pull requests that add new features would generally only be considered in the course of the relevant part of the work plan. The contribution guidelines could be updated to reflect this distinction between bug fixes and new features, and should be updated to more accurately reflect the process, in order to manage expectations. Make an effort to respond to PRs (by adding labels on Github) to say if something is a priority and when it might be possible for it to be reviewed. The tech team can seek advice from the EAG on more contentious pull requests and EAG can help the tech team in recommending which PRs should be prioritised.

- Put certain ideas out on discuss for developers, ie ask if anyone wants to work on splitting off Publisher Stats, IATI Harvester.
- The position of Community Manager in the future would be beneficial.
- Present analytics (e.g. to understand number of existing users) before deciding whether to discontinue or increase support for particular tools.
- Sysadmin as a role should be considered to take the operations burden off the developers and let them focus on writing/maintaining code.

Diagram of Dependencies