

**CONSULTATION**

Digital Infrastructure and Open APIs Working Group

# **CONSIDERATIONS FOR GOVERNANCE OF MRV METHODOLOGIES AND DIGITAL INFRASTRUCTURE AS PUBLIC GOODS**

Date 26 January 2023

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Consultation deadline 25 February 2023

# 1. INTRODUCTION

## 1.1 PURPOSE

In early 2022 Gold Standard, with co-leads ClimateCHECK and IOTA Foundation, secured a grant from Google Charitable Giving to support the [Open Collaboration](#). The Collaboration has launched multiple working groups to develop principles, knowledge products, and prototypes for transformative next-generation digital solutions to advance the state of Digital MRV and the carbon market infrastructure and ecosystem that support it. The work of the Collaboration includes recommendations about the use of distributed ledger technologies in the carbon markets. Collaboration outputs are public goods.

The focus of the *Digital Infrastructure and Open APIs Working Group* is to “connect the ecosystem of market participants while promoting trust, transparency, interoperability, and access”. In support of this focus, this public consultation seeks input on the draft outline of a model framework and related processes that could enable the carbon markets to operate more openly and efficiently.

## 1.2 CONTEXT AND BACKGROUND

Governance of Monitoring, Reporting and Verification (MRV) methodologies refers to the organisations that manage the inflow of new methodologies and their larger acceptance for the use in issuing carbon credits (often referred to as ‘offsets’). These methodologies have traditionally been analogue, challenging to implement and audit against, can be susceptible to human error, and often resulting in greenwashing concerns. Carbon market Standards are responsible for approving methodologies against which project impacts can be verified and certified. Anyone can currently develop and propose a methodology, and we hope to explore how utilisation of an open Github based model for submission and refinement of methodologies and other factors can enhance transparency, enable interoperability, and accelerate innovation in the industry.

There are also various external organisations that provide input into the voluntary carbon standards for methodology development, validation, verification, and certification. These organisations provide the supply of project reports and submissions that are verified by Validation and Verification Bodies (VVBs) and then certified for the creation of carbon credits. The validation and verification process is predominantly analogue and complex, relying on a small number of individuals for verification and validation of projects looking to generate carbon credits through the voluntary market.

It is envisaged that these new processes, once revised and implemented, could work to drastically reduce friction in the creation of new methodologies for verification of impact across projects, and ultimately shorten the time required for issuance of carbon credits or sustainability impacts outside of carbon markets. The elements of the model framework may point the way towards a new phase of open development, process standardisation, and interoperability across the carbon market as a whole. Thereby accelerating collaboration across the industry and flattening the curve for reaching the global goals.

## 1.3 CONSULTATION PROCESS

As part of the Open Collaboration, the *Digital Infrastructure and Open APIs Working Group* invites views from public stakeholders on a draft model framework intended to accelerate the development and governance of open digital MRV methodologies, infrastructure, digital assets, and APIs, to better enable interoperability and transparent peer review processes in the carbon markets. This consultation is published on behalf of the Open Collaboration, and not by Gold Standard in its own capacity as a standard-setting body.

On the following pages, the Working Group has outlined ten elements in which guidance is sought as part of a model framework. The Working Group invites comments across these elements, as well as general comments. In some areas, the Open Collaboration seeks views on whether stakeholders agree with a proposed approach; in others, we are seeking information and evidence to inform the approach that we may ultimately recommend. Public

input will be collected through Formstack as outlined in the press release, but organisations are also welcome to begin experimenting with discussion on [the Github](#) and to submit ideas and recommendations as outlined in the supporting document, [IEP 1 - Purpose and Guidelines](#). Feedback that is gathered via Formstack will be made publicly available for the sake of transparency. However contributions received through Formstack will be anonymised to ensure as much feedback is received as possible.

We are aware that stakeholders may be submitting feedback and comments on this topic to other standard-setting bodies. In the interest of efficiency, we will accept and consider feedback that may have been prepared for any separate consultations.

To respond to this consultation please complete [the form](#). Should you prefer, you can also submit responses via email to [myarger@digitalmrv.io](mailto:myarger@digitalmrv.io).

## 2. CATEGORIES

The model framework is in early-stage draft development. The model framework is being developed [natively in Github](#), with the objective to enable more open peer review and discussion of methodologies, digital assets, and digital infrastructure and APIs.

The Working Group proposes that the submission of inputs into the model framework be in the form of three distinct types of “Impact Enhancement Proposals (IEPs)”: Informational, Process, and Standard. Inputs of the Standard IEP type will be further classified by sub-type: Methodologies, Monitoring and Reporting Interfaces, Digital Verification, Digital Infrastructure, and APIs. This proposed taxonomy supports a large degree of scalability, flexibility and transparency, as well as insights into specific industries and their digital MRV capabilities and capacity.

The term Standard is used with relation to Standards IEP submission to reference technical standards, as there are various technical elements that can be referred to as standards and standardised to enhance interoperability. Those technical elements that can be standards or be standardised are envisioned to align with the defined sub-types. For example, a methodological standard, standardised API recommendations,

standardised forms of Digital Verification, and standard Monitoring or Reporting interfaces to enhance digitisation efforts for various stakeholders.

The Working Group further proposes the following categories to frame the development of the model framework:

MODEL	The model used to create new IEPs and the process to submit them into the model framework.
IEP TYPES	Variations on the types of IEPs, and how they map to infrastructure within the carbon market and wider sustainability ecosystem.
IEP STATUS	Variations on status classifications for IEPs.
IEP STANDARDS SUB-TYPES	Variations on sub-types of IEPs, specifically Standards track focused submissions and their core requirements.
IEP ROLES	Draft requirements for various users and stakeholder pertaining to IEP submissions, review, approval, and certification stages.
IEP TEMPLATES	Draft model standardised templates for an IEP submission to progress through the governance workflow.
IEP SUBMISSION PROCESS	Draft recommendations for informational requirements on how to submit IEPs into an open submission hub via GitHub.
IEP REVIEW AND REVISION	Draft recommendations pertaining to peer review of IEPs, including the review and revision of new informational IEPs, new processes for managing IEPs, submission of open methodologies, infrastructure, digital assets, and APIs.
IEP GOVERNANCE	Draft considerations on the limitations and requirements for progressing the IEP within the model framework.

## IEP ATTRIBUTION

Draft considerations and guidance on options for licensing and attribution for submissions made into the Open Collaboration process.

The Working Group seeks input from the public consultation on each of these categories in the model. Further information and consultation questions for each element are provided on the following pages.

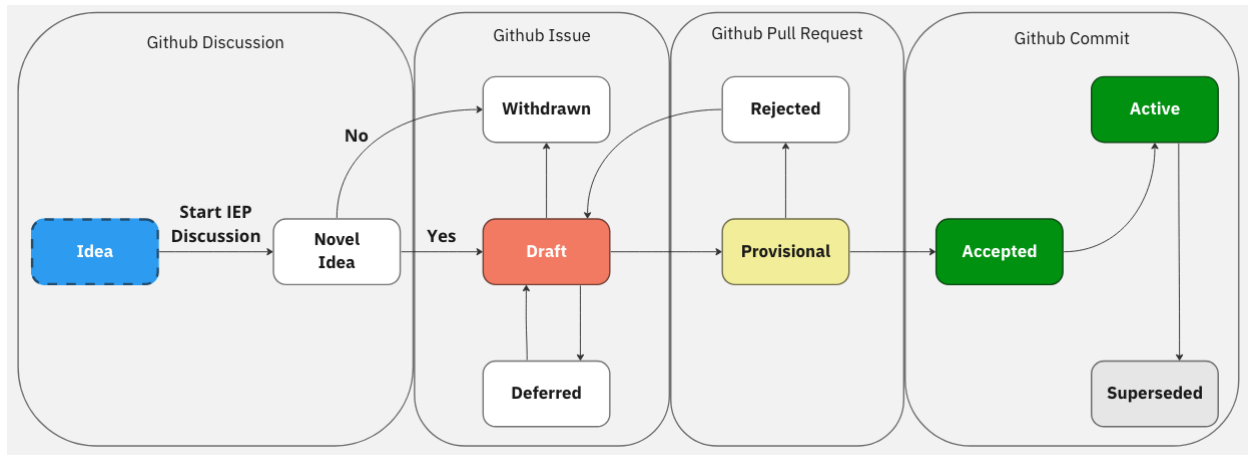
We envisage testing these conditions as part of the model framework submissions. Some are upfront checks to enable easier submission of new methodologies and iterative advancements on digital climate infrastructure. Others identify new tools and processes such as the creation of an Impact Enhancement Proposal and its submission into the open submission hub on Digitising for Impact. And still others pertain to how an IEP progresses through the peer review process and ultimately gets certified.

## 2.1 MODEL

The model framework for Impact Enhancement Proposals (IEPs) will follow a model similar to other open models currently in practice in various digitally focused industries. Two industry models that stand out include, but are not limited to, the Python programming communities [Python Enhancement Proposal](#) process of which the initial Impact Enhancement Proposals documentation is based, and the [Ethereum Improvement Proposal](#) process which is actively utilised for the improvement of the Ethereum protocol and various standards, smart contracts, and other facets of how the protocol is developed.

The recommended model framework submission process is outlined diagrammatically in the image below. It includes a requirement to begin new ideas with a form of discussion which has been enabled natively in GitHub, and works through to the review and acceptance processes for new IEPs.





## QUESTIONS

- *Are there other models aside from the referenced models of PEPs and EIPs that should be taken into deeper consideration for the development of the model framework under consideration?*
- *Is the overall flow and stages of the submission process for IEPs coherent and easy to follow?*
- *Would you like to share any additional comments on this topic?*

## 2.2 IEP TYPES

Impact Enhancement Proposal Types refers to the categorisation of impact proposals into Informational, Process, and Standards driven features outlined for use within the larger climate and sustainability ecosystems. These categories also contain several sub categorisations to help refine the definition of the type of improvement being suggested.

Informational IEPs contain guidelines, publications, reports and studies to guide the Digitising for Impact collaborations, as well as the sustainability ecosystem as a whole. They provide resources to participants to provide guidance for impact-based decisions and may include, but are not limited to, citations from international agreements such as the Paris Agreement, IPCC reports and findings, Environmental Impact Assessments, etc. These IEPs would act more as a set of research tools than a set of rules.

A Process IEP contains suggestions for updates to the model framework and related ecosystem processes. This can include updates to governance policies as well as submission and consensus policies. Recommendations to changes of the tools and environments accepted for use by members would also be considered Process based proposals. These IEPs act as a set of ground rules for interaction with the ecosystem as a whole, and are requirements for usage of the model Framework.

Standards IEPs outline the interoperability standards necessary to align member implementations within the ecosystem. Digital methodology suggestions, changes to existing methodologies, API and infrastructure specification recommendations would fall under this category. These standards have the goal of reducing friction in the fragmented MRV processes of the existing analogue standards, while providing new open standards for ecosystem members to use for expedited acceptance by Carbon Market Standard.

## QUESTIONS

- *Are the fundamental IEP types and categorizations coherent and easy to follow?*
- *Should the Open Collaboration on Digitising for Impact develop anything else to accompany the IEP Types and following sub-types to as part of the model framework to ensure all stakeholders are appropriately accounted for?*
- *Can you recommend other types besides the fundamental IEP types of Information, Process and Standard driven submissions that cover the spectrum of potential submissions?*
- *Would you like to share any additional comments on this topic?*

## 2.3 IEP STATUS

Impact Enhancement Proposal Status refers to the current state of the proposals lifecycle. When in a draft state, the proposal does not have a status, but once it has been submitted for review, a status may be applied to it by the reviewing parties and the Steering Council. Throughout the course of its review and submission this status may change until it has reached the point of being Active, Withdrawn, or Rejected. A proposal can also be



Superseded by another proposal (for example a governance update) or Deferred if a draft remains unattended too long. A full list of the status classifications is below, and is expanded upon in the [IEP 0 -Index of Impact Enhancement Proposals](#) document.

- **A** — *Accepted*: Normative proposal accepted for implementation
- **A** — *Active*: Currently valid informational guidance, or an in-use process
- **D** — *Deferred*: Inactive draft that may be taken up again at a later time
- **<No Letter>** — *Draft*: Proposal under active discussion and revision
- **F** — *Final*: Accepted and implementation complete, or no longer active
- **P** — *Provisional*: Provisionally accepted but additional feedback needed
- **R** — *Rejected*: Formally declined and will not be accepted
- **S** — *Superseded*: Replaced by another succeeding IEP
- **W** — *Withdrawn*: Removed from consideration by sponsor or authors

## QUESTIONS

- *Do the proposed status classification for an IEP in review align with the workflow defined in IEP 1 from your perspective, or should we include other status classifications that are not yet currently defined?*
- *Would you like to share any additional comments on this topic?*

## 2.4 IEP STANDARDS SUB-TYPES

Impact Enhancement Proposals classified as a Standards IEP can consist of various sub-types due to the variability of what standardisation can represent. The Open Collaboration is working to identify elements along the carbon market value chain that can be standardised to ensure interoperability. This includes: Digital MRV methodologies, interfaces utilised for monitoring and reporting on project emissions and activities, guidelines and implementations for various forms of digital verification, infrastructure available for reporting and sharing information on project activities and emissions, and APIs that can be utilised for monitoring, reporting, verification. More information on what standards IEP sub-types are meant to represent can be found in [IEP 1 - Purpose and Guidelines here](#).

## QUESTIONS

- *Does the structure of the various IEP Standards sub-types align with your or your organisation's perspective?*
- *Could you recommend other sub-types, or even an alternative structure that could more appropriately represent various categories that need to be standardised across the sustainability and climate sectors that should be included?*
- *Would you like to share any additional comments on this topic?*

## 2.5 IEP ROLES

The Impact Enhancement Proposal process and the Digitising for Impact Submission Hub that facilitates it requires various roles and responsibilities to govern the process. We currently envision three such roles consisting of;

- **IEP Editors**, who help guide the IEP ideation, drafting, submission and review process.
- **IEP Administrators**, who focus on the development and improvement of various tools and capabilities for integration with the submission hub.
- **The Steering Council**, who is responsible for reviewing and approving provisional IEP submissions that have been accepted by IEP Editors.

It is also recommended that Editors not be the same across the various IEP types, and should consist of members working in the space or experts on the various types of IEP submissions. As an example, someone who is familiar with developing methodologies may not be familiar with developing infrastructure or APIs, so they would not be a good fit for an Editor role fostering the submission of Infrastructure or API sub-type Standards IEPs. More information on these roles and their responsibilities can be found in [IEP 1 - Purpose and Guidelines](#).

The process for becoming an administrator or editor is not yet defined, but would be a welcome submission as an initial Process IEP in the submission hub. If you would like to make a recommendation on the requirements and process for becoming an editor, please [visit the submission hub which is](#)

[hosted in GitHub here](#), and propose a new discussion to begin defining the process.

## QUESTIONS

- *Do you see other roles with regard to governing IEP submission and administering the submission hub that are currently not outlined above?*
- *What key stakeholders or positions do you believe to be best fit for the various roles that are outlined above?*
- *Would you like to share any additional comments on this topic?*

## 2.6 IEP TEMPLATES

In an effort to make the user experience and submission process as simple as possible, the Open Collaboration on Digitising for Impact is aiming to centralise as much as possible of the process outlined in the “*IEP Purpose and Guidelines*” in one open and transparent platform. It has been agreed upon by members of the Open Collaboration that GitHub would be the best fit for this. By utilising GitHub's native tools and capabilities, it is a straightforward process to create templates for submissions of the various IEP types that will be submitted and reviewed.

Currently, the Standards IEP template is in development and the discussion entry has been started which [can be viewed here](#). As the submission hub reaches a point of maturation, the Open Collaboration sees benefit in standardisation of submissions in alignment with various Carbon Market Standards requirements for new methodologies being submitted for approval. It would be best to align these templates with existing industry standards for submissions and standardisation such as through the currently centralised processes that each Carbon Market Standard maintains. The base templates that are targeted at being completed by the end of the current foundational process (roughly June 2023) include the following.

- Informational IEP Template
- Process IEP Template
- Standards IEP Template - Sub-Type Methodology
- Standards IEP Template - Sub-Type Interface
- Standards IEP Template - Sub-Type Verification

- Standards IEP Template - Sub-Type Infrastructure
- Standards IEP Template - Sub-Type API

If you would like to recommend a template, your contributions to the submission hub would be welcome in [the discussions section](#) to begin the process. If you have template documents from various stakeholders or sources that should be considered, then please start an idea categorised discussion and share your reference document in your post.

## QUESTIONS

- *Please recommend the existing standard and methodology templates that you're aware of that are in use by various Carbon Market Standards, sponsor organisations, or other stakeholders involved in the standardisation process that should be considered.*
- *What core requirements for a Methodology must be outlined and submitted through the IEP process across various sectors?*
- *Would you like to share any additional comments on this topic?*

## 2.7 IEP SUBMISSION PROCESS

The IEP Submission Process consists of 4 major stages. These stages include ideation, drafting, review, and approval. The stages are currently aligned with various capabilities native to GitHub which can be seen in the diagram in Section 2.1, above which is subject to change. The stages and workflow are broken down in detail in [IEP 1 - Purpose and Guidelines](#).

The process is driven around **open discussion** utilising the 'GitHub Discussions' capability. This is seen as a major improvement on existing processes, which may be siloed within the Carbon Market Standards and various stakeholders in the ecosystem. By opening up this process and centralising it around open discussion, the model framework seeks to increase community engagement to problem solving and collaboration across the climate and sustainability focused industries.

The recommended process also results in decreased barriers to entry, enabling open peer review, enabling some degree of autonomy, and accelerating our combined impact on international environmental objectives.

This also assists existing organisations by helping potentially remove bottlenecks in existing centralised processes, allowing organisations such as Carbon Market Standards to focus on goals that create more direct impact and less on administrative hurdles.

One aspect that members are conscious of, is that GitHub is predominantly an engineers' platform, and many stakeholders in the industry may not be familiar with it. To address this, the Purpose and Guidelines aims to reach finalisation as a form of Standard Operating Procedure that outlines the various interactions with the submission hub through examples and visuals. The members are also conscious that markdown and reStructured Text formats may not be utilised by all stakeholders, and are currently reviewing various tools and capabilities that could ensure all stakeholders can be involved in the submission and review process. This includes hosting the initial IEPs as Google Docs for easier access and review by members uncomfortable with GitHub. The existing IEP Editors and Administrators will transition input from the public consultation that happens in the Google Docs to the GitHub for those that are not familiar with interacting on GitHub yet but would like to ask for as much feedback as possible to go directly into the Submission Hub.

## QUESTIONS

- *What tools or capabilities would you recommend the editors and administrators review for integration into the submission hub to ensure all stakeholders are accounted for?*
- *After reviewing the breakdown of the stages in the Purpose and Guidelines, can you make recommendations to improve the proposed stages and workflow?*
- *Do the stages and workflow look clear and easy to follow?*
- *Would you like to share any additional comments on this topic?*

## 2.8 IEP REVIEW AND REVISION

Once an Impact Enhancement Proposal has been submitted, it enters a Provisional stage and begins the review process for approval. The review process will be governed by a Steering Council which has a requirement to consist of Carbon Market Standard representatives and non standard

representatives alike. Many Standards have Advisory Councils that currently fill this governance process in their current workflows, and the IEP Steering Council is meant to reflect this existing process, while exploring governance methods that could lead to cross industry collaboration, standardisation and interoperability between the various stakeholders. By abstracting some aspects of governance and development to be more openly led, we hope to explore potential for reducing bottlenecks in existing processes for methodology development, verification and validation. Ideally, the Steering Council would consist of representatives from many Carbon Market Standards and Voluntary Carbon Registries, and enable rapid open feedback loops and progressions of proposals working towards interoperability.

A detailed breakdown of the Review and Revision processes for IEPs, as well as Maintenance of IEPs and change conditions are meant to be part of the initial IEP 1 - Purpose and Guidelines release and is currently drafted [in the document](#). As part of this public consultation, please review those sections of IEP 1, and provide feedback for their revision and improvement prior to finalisation, either directly in the document as a comment, or in [the submission hub here](#).

One aspect that also needs further open discussion and exploration is the implementation of a '*Grandfather Clause*' which will ensure that projects implementing approved IEPs have a set time frame of 5 years to build on the version of the IEP that they started with, in the event that an IEP is updated to a new version outlining different requirements. This is done in an effort to ensure that organisations contributing to sustainable impact do not hit unforeseen barriers with their reporting and verification processes after they've already made financial commitments that align with an approved IEP's requirements. This also places a technical requirement for backward compatibility to be taken into account when defining new IEPs which will need further discussion and exploration.

## QUESTIONS

- *What should the criteria be for the Steering Council to approve an IEP that is in a provisional state?*

- *What key stakeholders other than existing Carbon Market Standards, should the members of the Open Collaboration on Digitising for Impact aim to get involved in the Steering Council?*
- *Do you see any changes to the Grandfather Clause that need to be taken into account before finalisation of the Purpose and Guidelines?*
- *Would you like to share any additional comments on this topic?*

## 2.9 IEP GOVERNANCE

IEP Governance will be finalised through a Steering Council which currently consists of the Open Collaboration Secretariat, but could transition to a more openly governed steering council upon the completion of this foundational phase of development. It has been established that the Steering Council must consist of representatives from the Carbon Market Standards. This currently includes Gold Standard, with input from the American Carbon Registry as a member of the Open Collaboration. As outlined in the previous section, we are seeking consultation on what other key stakeholders are recommended for inclusion in the steering council.

When the Steering Council convenes for review and voting on IEPs that are submitted into the submission hub, governance requirements must be established to ensure fair and equitable circumstances for all stakeholders involved. Governance requirements have not yet been established for the steering council to follow, but initial input on what needs to be considered to establish these governance requirements is part of the intended outcome of this public consultation. To that effect, if you have recommendations or ideas on the initial minimum governance requirements, they would be welcome feedback and a welcome contribution as [an Idea in the submission hubs discussion section](#).

### QUESTIONS

- *Could you provide some examples of existing governance models that would align well for the submission hubs steering council to follow?*
- *How do we ensure that governance of IEPs is equitable and inclusive of developing nations?*
- *Would you like to share any additional comments on this topic?*



## 2.10 IEP ATTRIBUTION

Impact Enhancement Proposals need to include a degree of attribution to ensure that the originating authors are known and recognised appropriately in any works that stem from their IEPs. This can be done by placing their submissions in the public domain under a creative commons licence, such as the [CC0 Universal licence](#). Or it could also be done by aligning with one of the various [Open Source Initiative licences](#) currently established such as Apache 2.0, MIT, BSD or GNU General Public License types and more.

Each licence has different requirements for attribution to the originating author or organisation and could align with various intellectual property requirements set forth by originating organisations. The members of the Open Collaboration on Digitising for Impact agree that submissions should be placed in the public domain with public repositories, but feedback is necessary on what degree of attribution or licensing needs to be in place.

### QUESTIONS

- *What licence requirements do you believe should be in place as a requirement for submission?*
- *Do you believe that the requirement for public domain submissions will limit or impede the progress of the climate community towards standardisation and interoperability across Carbon Market Standards and their various platforms?*
- *Would you like to share any additional comments on this topic?*

## IN CLOSING

Thank you for taking the time to review this public consultation and provide input into the development of the Open Submission Hub and the Governance of MRV Methodologies and Digital Infrastructure. We value the time and detail you and your organisation were able to provide to help guide the developments being taken by members of the Open Collaboration on Digitising for Impact. And we look forward to iteratively advancing on addressing global challenges and accelerating our collective sustainable impact.

## QUESTIONS

- *Do you consider there to be potential advantages and disadvantages for your organisation through the utilisation of the open governance framework and open submissions system as outlined in this consultation?*
- *Would you like to share any additional comments not covered by questions included in this consultation?*
- *Do you consider there to be uses of digital infrastructure with regard to MRV methodologies more seamlessly connecting and reporting to Carbon Market Standards and stakeholder organisations that should be distinguished and treated differently?*