INATBA

International Association
for Trusted Blockchain Applications

SOCIAL IMPACT MODEL FOR SMALL AND MEDIUM-SIZE BLOCKCHAIN PROJECTS

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This paper was written by the SISWG members Mariana de la Roche Wills, Laura Kajtazi, and Åsa Dahlborn, edited by David Phillips and reviewed by the following members of the Academic Advisory Board of INATBA: Professor Paolo Giudici, University of Pavia; Dr. Gustavo Prieto, Ghent University; Professor Lisa Short, La Trobe University.

Disclaimer: Understanding social and environmental impact and measuring it is key to aligning actions among projects Disclaimer: INATBA does not set any standard and this document represents the exploratory work from SSIWG. Hence, this model does not intend to replace IRIS, ISO, or any other international standard for social impact and sustainability measurements but instead supports small and medium-sized projects that are not subject to those standards to understand some of the key steps they need to follow to measure their impact through the project life cycle. Once the project/organization grows and scales, it should comply with the international standards for impact measurement.

Problem statement

New technologies have always impacted societies and how individuals behave. Understanding social and environmental impact and measuring it, is key to aligning actions among projects and organizations in the social impact space. One of the most well-known innovations today is Distributed Ledger Technology (DLT). A reliable measurement of the impact of these innovations would help pursue the increase of positive impact of these technologies on our society. But a measure is only useful in achieving increased impact if it is widely accepted and used by a community. However, social impact is a complex concept encompassing a multiplicity of facets that are not always easy to measure. This can be especially noticed by the outcome of the report conducted by the Social Impact and Sustainability Working Group (SISWG) on "Blockchain for Social Impact Report" which concluded three major challenges faced by DLT projects when approaching social impact including the lack of a unified framework to measure social impact and the access to funds (de la Roche et al., 2021).

Therefore, providing a unified measurement that helps create comparable reports for stakeholders could help projects raise funds to increase their positive impact on society steadily. This is particularly important for small and medium-sized organizations, for which it is difficult to measure impact, as they, in contrast to big corporations, have less experience or no experience in impact reporting. A unified model will also be a contributor to key compliance requirements in 2026 when the EU Commission Corporate Sustainability Reporting Directive (CSRD) taxonomy timeline will require ESG reporting. To tackle this problem this paper focuses on a series of steps for impact measurement for small and medium-sized DLT-based projects. It is important to point out that when we talk about SMEs, we are referring to organizations that have less than 250 employees. Similarly, in the Blockchain for Social Impact Report (de la Roche et al., 2021), the definition of SMEs was based on the condition that the organization employs less than 250 people. This derivation is based on the SME definition of the OECD (OECD, 2017).

Methodology and Analysis

Following Corvo's (2021) literature review, a review of the five different papers and the description of the different models listed by Corvo's (2021) has been undertaken. Herein, the SISWG decided to refer to the paper by Grieco, C., Michelini, L., & Iasevoli, G. (2014) on "Measuring value creation in social enterprises", since according to Corvo (2021) this paper seem to be the most recent mapping of social impact assessment models and seem to be the most extensive and complex as it integrates seven variables to analyze the different models. The Models and its variables in Grieco, C., Michelini, L., & Iasevoli, G. (2014) have been mapped subsequently. Grieco, C., Michelini, L., & Iasevoli, G. (2014) ordered the models across four clusters: Simple Social Quantitative, Holistic Complex, Qualitative Screening, Qualitative Screening. As the models in the cluster Holistic Complex primary goal is obtaining funding and according to de la Roches et al. (2021) report one of the main challenges for the small and medium-sized organizations is obtaining funding so the SISWG decided to focus on the models in that particular cluster.

To receive an overview of the twenty models, the year in which the model was published, whether the model has been mentioned in other papers listed in Corvo's (2021) paper, the general description of the framework, and the steps the framework specifies were listed. For two Models details on the aforementioned point could not be found so the Models to be reviewed has been reviewed from twenty to eighteen models. To further analyze the models the SISWG hosted internal meetings to discuss the findings and divide these models into three categories. green, yellow and red to classify to what extent the models may be practical for small and medium-sized blockchain projects.

The green cluster includes models that are relevant and not too complex and the red cluster includes models

that are too complex for the target group or require external experts, toolings, or license. During the process, as a step in-between also a yellow cluster was created, that included models that are relevant but slightly more complex and which were later re-distributed in a to either the green or the red clusters. To assess the relevance of the models and divide them into the three clusters the following aspects have been taken into account:

Is the model linked to the SDGs?

Is the model focused on an internal assessment?

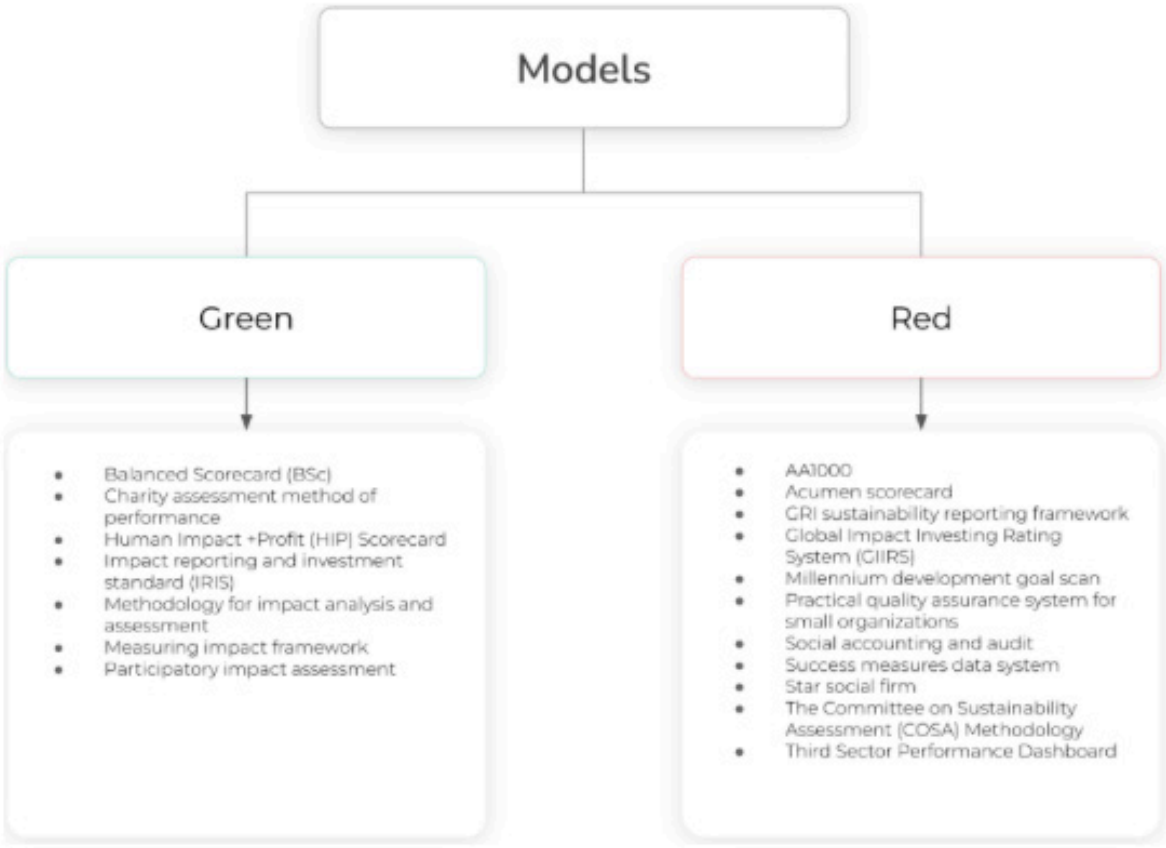
Is the whole model relevant?

If the model is not relevant, are there relevant parts of the model?

Below in figure one the outcome of the categorization can be viewed.

Figure 1

Overview Categorization of Models

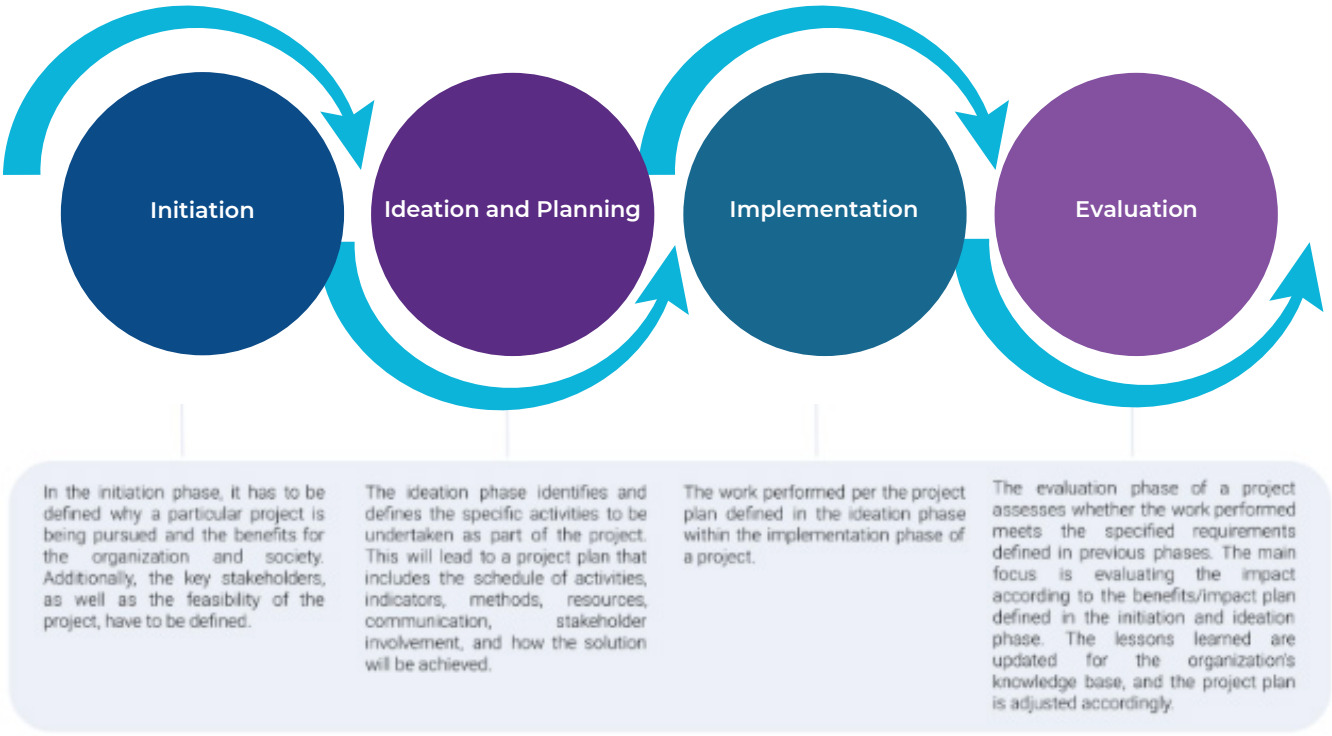


After the categorization of the models the focus has been set to the green cluster as this included the models that are relevant but not too complex for the target group to put into practice. Thereby the goal is to categorize the different steps of the models into project phases and identify different steps/categories within the project phases and create subcategories according to the topic they address..

To define the phases, the SISWG considers the phases of the project life cycle according to Westland (2007) which consists of Initiation, Planning, Execution and Closure. The terminology the SISWG agreed on differs slightly from Westlands (2007) however they represent the same phases as in Westland, which can be viewed below. For clarity the terminology by Westland has been added in the brackets:

Figure 3

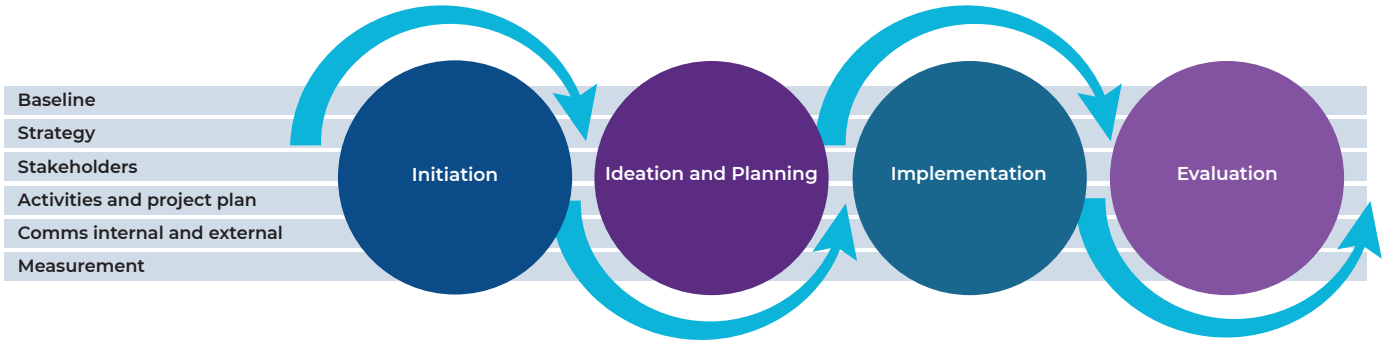
Project Phases



Recognizing that many repetitions of identified steps/categories were likely to be encountered among the different models, these steps have been consolidated as part of the sub-clustering according to the topic they addressed and which resulted in the following:

Figure 3

Steps during the Project Phases



Important to note for the category baseline is that the SISWG noted that most models do not mention a specific step for setting a baseline, although step one of IRIS (Identify impact areas: Determine the primary social and environmental impacts associated with the organization's activities as well as any other impacts that are material to the organization's stakeholders) and step one of BSc (Assessment: Analysis of the current internal and external environments and re-validation of high-level elements) could be interpreted as baselines. Hence, the members agreed that a baseline definition is crucial for measuring impact and noted that a step for this purpose is indispensable to the guide.

Once the phases were defined, the four meetings were coordinated to review and discuss each of the steps on the model and cluster them.

The SISWG then simplified and described the steps and built the new model with the identified steps. During the simplification of the steps, they were further reviewed, which led to a few adjustments to the steps as they had previously been defined. The SISWG paid close and special attention that the selected steps were easy to implement by small and medium-sized projects with minimal or non-experience in impact measurement.

The Solution: The New Model

The following model presents a series of steps that should be taken into consideration when implementing blockchain projects with the designed capacity to measure social impact . In total, the model consists of **46 steps** that provide guidance for the various project phases of initiation, ideation and planning, implementation and evaluation, and the subcategories within these phases. The steps were identified in the course of analyzing and categorising steps of the existing models that have been recognised as suitable for small and medium-sized blockchain projects.

A summary of the total steps at each stage of the model is provided below the first table. The subsequent tables describe each of the steps per stage in detail. For example, the letter A in the first table represents the recommended steps to be taken during the baseline initiation stage, and the specific steps are described in the following table titled "A INITIATION PHASE: BASELINE."

	Initiation	Ideation and Planning	Implementation	Evaluation
Baseline	A			
Strategy	B	C	D	E
Stakeholders		F	G	
Activities and project plan		H		
Comms internal and external			I	J
Measurement		K	L	M

A I INITIATION PHASE: **BASELINE**

STEP	DESCRIPTION
1. IDENTIFY THE PROBLEM THAT WILL BE ADDRESSED	Have a clear idea of the problem that will be addressed in order to use it as a starting point to later define the mission and vision. The problems should be specific.
2. ANALYSIS OF THE EXTERNAL ENVIRONMENT AROUND THE PROBLEM THAT WILL BE ADDRESSED	The analysis of the external environment should take different factors where the problem occurs into consideration. The factors that should be analyzed should be relevant to the problem and can include for example demographics, history, and financial situation of the region or context in which the problem takes place. It is important to get the full context in which the problem occurs to understand the causes and potential consequences. We recommend you to conduct a Causal tree process: It is useful to use a Causal tree template to understand the potential factors that influence the problem and their direct and indirect effects are identified and analysed.
	Identify potential stakeholders: Who would be affected by the project and who could influence the development/ implementation of the project? Stakeholders cover all actors from immediate stakeholders such as direct partners to people that are affected by the outcome of the project. Identify the key stakeholders that have the biggest influence/ interest in the project outcome. This will help to understand who needs to be involved and at which point.
	Interview with potential stakeholders to understand their needs: Potential stakeholders considered important for the project (for example due to their understanding of the problem to be addressed, the degree to which they are affected by the problem, or the resources that can contribute to the project, etc.) should be interviewed. The questions should carefully be reviewed to ensure that they facilitate the understanding of the problem and can reflect the perspective of the stakeholders. This is a good way of building relationships to later involve them in the project implementation.
3. ANALYSE IF THE CURRENT STRUCTURE AND CAPACITY OF YOUR ORGANISATION CAN SUPPORT THE PROPOSED PROJECT	Is it feasible for the organisation to handle the solving of the problem with the currently available resources? If not, it should be addressed what would be required for the organisation to tackle the problem? This will ensure that the organisation will be able to implement the project.
4. CONSOLIDATION AND ANALYSIS OF THE BASELINE TO UNDERSTAND GAPS AND OPPORTUNITIES	The external environment analysis and the information collected during the stakeholder interviews (step 2) is consolidated and analysed. The overall picture represents the baseline. It is important to have a baseline to return in order to compare the status-quo and the state of the context after the implementation of the project.

B | INITIATION PHASE: **STRATEGY**

STEP	DESCRIPTION
5. DEFINE VISION	The vision should represent a high-level desired state that the project aims to reach. Ideally it is a word in which your project will not be needed anymore. An example of a vision for a project working on fighting poverty could be: "a world where no one lives below the poverty line."
6. DEFINE MISSION	The mission should describe how the project pretends to tackle the problem. Mission statement example (from WWF: "The mission of World Wildlife Fund is to conserve nature and reduce the most pressing threats to the diversity of life on Earth."
7. SUSTAINABILITY/SOCIAL IMPACT STATEMENT. DEFINITION OF THE SOCIAL IMPACT AND SUSTAINABILITY PURPOSE.	Define the areas of social impact and sustainability that the project wants to address. This can be done by defining how the project aims to generate social impact/foster sustainability. Especially with new technologies it is a good idea to give to the public a topic with which they can easily relate.
8. DEFINE BOUNDARIES	Review the boundaries of your organisation in order to assess whether the project is within those boundaries. Consider boundaries such as the sector in which the organisation is operating as well as values and principles of your organisation.
9. DEFINE GEOGRAPHICAL LOCATION	Define the geographical location that the project intends to impact in terms of country, region, or city, etc. This will help to focus the scope and goals
10. DEFINE OBJECTIVES	Which objectives will the project aim to achieve? The objectives should align with the vision and mission statements. It is recommended to have SMART objectives.
11. DEFINE POTENTIAL TIMELINES	How much time is the project expected to potentially require?
12. DEFINE MEASUREMENT METRICS. SUGGESTION: DETERMINE POTENTIAL APPLICABLE IRIS INDICATORS.	The proposed definition of social impact requires it to be measurable. To this extent, the IRIS social impact measurement framework provides an extensive catalogue of metrics to measure impact. If your organisation has the resources and the time to use these, we recommend incorporating these indicators from the early stages.

C | IDEATION AND PLANNING PHASE: **STRATEGY**

STEP	DESCRIPTION
13. ANALYSIS OF POTENTIAL IMPACT OF SOW ON STAKEHOLDERS	How will the scope of work of the project impact different stakeholders? Analyse which stakeholders are expected to experience which effect and to what degree. Suggestion: do a stakeholders mapping analysis.
14. ANALYSIS OF THE POTENTIAL IMPACT ON SOCIETY	Use your previously baseline to consider how the project activities impact the society as a whole. Include all aspects of society in the analysis, from individuals to institutions, keeping in mind your stakeholder map and estimate how they will be affected by the project's outcomes and impact.
15. DESIGN AND INCLUDE A PARTICIPATORY APPROACH TO HAVE FEEDBACK LOOPS WITH STAKEHOLDERS AND BENEFICIARIES	It is recommendable to plan regular feedback sessions with stakeholders and beneficiaries. The plan could include a suggested schedule for the feedback sessions as well as a strategy for implementing the feedback to the project activities. Having these feedback sessions help to keep stakeholders involved and interested in the project as well as to identify changes in stakeholders priorities that can impact the project lifecycle.
16. DEFINE THE ACTIVITIES AND SOW IN LIGHT TO THE VISION AND MISSION AND GOALS PREVIOUSLY DEFINED	How does the SOW align with the vision and mission statements? Do the activities of the SOW contribute to their fulfillment? If not, adjust the SOW to ensure that the activities are aligned with the vision & mission and goals.
17. REVIEW THAT THE PROJECT BOUNDARIES ARE ALIGNED WITH THE ORGANISATIONAL STRATEGY	Are the project scope, timelines and vision and mission statement aligned with the strategy of the organisation? If not, analyse where there are disparities and make the necessary adjustments to ensure that the project is feasible to implement with the organisational strategy. These steps help to align the project with the overall organisation's strategy to not generate additional burners.
18. DEFINE THE SOW	What does the project scope include? What does the project scope not include? Make sure that the activities align with the boundaries of the organisations.
19. REVIEW FEASIBILITY OF OBJECTIVES	Review that objectives are feasible with the available resources. If not, which adjustments are needed to make the objectives feasible?
20. REVIEW FEASIBILITY OF GEOGRAPHICAL LOCATION	Analyse the geographical location in order to make sure that the project is feasible to carry out in the region/country or city. Which resources are available in the region? Which obstacles could be encountered and how would they be solved? Consider also language barriers and regulatory challenges.
21. REVIEW FEASIBILITY OF THE PROJECT	Review the available resources to ensure that the activities within the project scope can be carried out with them, and that it is feasible to leave out of scope activities out of scope.
22. REVIEW FEASIBILITY OF TIMELINES ITY OF THE PROJECT	Is it feasible to complete the project within the estimated timeline? Estimate potential delays during the project that can affect the overall timeline and consider how to mitigate them. Which deadlines need to be met in order to ensure that the project as a whole is delivered on time? Which activities are interdependent? Suggestion: identify priority tasks, which delay can heavily impact the project.

F | IDEATION AND PLANNING PHASE: STAKEHOLDERS

STEP	DESCRIPTION
24. IN DEPTH STAKEHOLDERS ANALYSIS INCLUDING WHO IS INVOLVED, THEIR POTENTIAL CONTRIBUTION AND THEIR PARTICULAR CHARACTERISTICS	Who are the stakeholders involved and what interests do they have in the project? Analyse each stakeholders' characteristics such as power, level of agreement with the project activities and interest in the project outcome. How can these stakeholders facilitate the project activities (or hinder them)?
25. WHAT IS THE CONTRIBUTION EXPECTED FROM EACH STAKEHOLDER?	Analyse each stakeholder and their estimated contribution to the project. Do the stakeholders possess resources that would facilitate the project, and are they willing to provide these resources?

H | IDEATION AND PLANNING PHASE: ACTIVITIES AND PROJECT PLAN

STEP	DESCRIPTION
26. DEFINE THE SCOPE OF WORK (SOW)	Define all the activities to be included in the scope of work of the project. The scope of work should include the activities with their respective expected outcomes or deliverables as well as the estimated time and workforce necessary to carry out the activities and the required team to perform the activities.
27. DEFINE THE KEY OUTCOME TO ACHIEVING IMPACT	What outcome should the project have to achieve the desired impact? How is that outcome generating the impact the project aims for?
28. REVIEW THE CAUSAL TREE (STEP 2) AND ANALYSE THE IMPACT OF THE PLANNED ACTIVITIES	What potential effect will the SOW have in light of the problem you are trying to solve? Consider its impact on the causes and consequences of the problem.
29. RISK MAPPING EXERCISE AND MITIGATION PLAN	Which risks could be encountered during the implementation of the project, and how can they be measured? Consider both internal (organisational) and external risks covering everything from, for example, internal delays, cyber and IT breaks, political risks in the region that could affect the project. Qualify how probable the risks are and their expected impact on the project (e.g. low, medium or high). Define a measurement and mitigation strategy for the major highly probable risks

K | IDEATION AND PLANNING PHASE: MEASUREMENT

STEP	DESCRIPTION
30. DEFINE THE KEY OUTCOME TO ACHIEVING IMPACT	What outcome should the project have to achieve the desired impact? How is that outcome generating the impact the project aims for?
31. DEFINE KEY INDICATORS FOR EACH ACTIVITY	Which measurable indicators will be used to assess the progress of the activities and whether the activities are generating the desired impact? Suggestion: Define success criteria.
32. CHOOSE THE METHOD AND SAMPLE	Consider which method will be used to measure the impact of the project. The method could be interviews, polls, collection and analysis of data, generation of simulated data, etc. It is basically to define how the data will be collected or generated and which samples will be used.

D | IMPLEMENTATION PHASE: STRATEGY

STEP	DESCRIPTION
33. PRIORITISATION OF ACTIONS AND PROJECTS THAT ARE CRITICAL FOR THE STRATEGY	Review the actions planned for the project in order to decide which are critical and less critical for the success of the project. Make sure that these actions are prioritised accordingly during the implementation of the project. Suggestion: use Agile methodology.
34. PERIODICAL MONITORING OF THE IMPACT OF YOUR ACTIONS	The impact of the project activities and in general the overall project performance should be assessed on a regular basis in order to ensure efficiency of the strategy and identify potential issues that need to be addressed. If certain actions do not demonstrate the desired impact, the actions should be reviewed and adjusted.This will help to mitigate any negative impact on the project, the organisation and its stakeholders.

G | IMPLEMENTATION PHASE: STAKEHOLDERS

STEP	DESCRIPTION
35. CONSTANT COMMUNICATION AND FEEDBACK LOOPS WITH STAKEHOLDERS. KEEP TRACK OF THE STAKEHOLDER ANALYSIS	Organise feedback sessions with stakeholders on a regular basis and adjust the project actions according to their feedback if necessary. The stakeholder analysis should be reviewed on a regular basis to consider potential new stakeholders during the course of the project as well as stakeholders that may not be relevant for the project anymore. Consider that stakeholder characteristics such as power, interest in the project and potential contribution to the project also may change during the project.

E | EVALUATION PHASE: **STRATEGY**

STEP	DESCRIPTION
42. IDENTIFY KEY QUESTIONS	Identify questions and consider who should answer these evaluation questions. Consider the different factors that intervene during the project implementation. **Advice for creating a questionnaire:** 1. Figure out what information you want (and need) When creating a questionnaire, they may seem like the ideal place to learn every single thing that's on your mind, resist the temptation. Instead, focus on a handful of key points that you'd like to learn and tailor your questionnaire around them. 2. Keep your questions simple and consistently written. Possibly use few questions and few alternative answers for each question (at most four) One of the biggest reasons why people fail to complete a questionnaire is that the questions are jumbled, confusing and pointless. Try to write your questions in the same, professional manner all the way through. 3. Use only one or two answer methods, like fill-ins and check boxes Creating a questionnaire that is easy to fill out will increase your completion rate. Stick to one or two different answer methods throughout your questionnaire. However, this doesn't apply to personal information or feedback boxes that require the survey-takers to write in their answers. 4. Create your questionnaire so it takes 5 minutes or less to complete **Examples of questions you could consider:** How many people did the project impact? How many stakeholders were involved? What was the overall general reaction of stakeholders towards the project? What changed in the implementation context since the project started? Did you achieve your goals? What are the next steps for the organisation to keep pushing its agenda towards achieving their mission? - will it be replication/escalation?

J | EVALUATION PHASE: MEASUREMENT

STEP	DESCRIPTION
43. WHAT WAS THE IMPACT OF THE PROJECT OUTCOMES?	Use different methods to determine the impact of the project outcomes by including multiple datasets, theories and/or investigators to address the project outcomes.
44. COLLECT FEEDBACK FROM TEAMS AND STAKEHOLDERS	Organise feedback sessions with the project team and stakeholders to collect feedback on the project implementation. What worked well and what did not work well? What are the lessons learned from this project? Found out as well their general perspective of the project.
45. EVALUATE IF THE PROJECT HAS ACCOMPLISHED DESIRED RESULTS	Review your initial assumptions and your baseline and compare with the KPIs you obtained at the end. The question defined in step 45 help to understand the outcome of the overall project. Use the success criteria previously defined to determine if the project was successful or if there are gaps between the desired impact and the impact achieved.

M I EVALUATION PHASE: COMMS INTERNAL AND EXTERNAL / COMMUNITY MANAGEMENT

STEP	DESCRIPTION
46. PUBLISH FINAL REPORT OF FINDINGS	Systematise your process, project implementation and outcomes in a final project report. This can be published in order to showcase the impact to stakeholders and other interested actors. The report should include a description of the project, the method and indicators used to measure impact and the project results, measurements and risk assessment. Consider using both technical and non technical language so more people can understand what you did. Consider organising or attending events to present your project to gain attention and interest to replicate or scale.

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To consider:

The information presented here reflects the Master Thesis titled Social Impact Model for Small and Medium-sized Blockchain Projects - Proving Impact in the Blockchain Sector, written by Mariana De La Roche as part of her Masters Progam. To read the whole piece please get in contact with us.

About INATBA

The International Association for Trusted Blockchain Applications. INATBA offers public and private developers and users of DLT a global forum to interact with regulators and policymakers and bring blockchain technology to the next stage. INATBA facilitates positive change in the blockchain ecosystem.

About the Social Impact and Sustainability Working Group

The INATBA Social Impact Working Group (SIWG), established in May 2019, consists of approximately 28 individual members, among them the IOTA Foundation, iPoint-Systems and Kunfud. The SIWG focuses its efforts on highlighting the vast potential of blockchain and other distributed ledger technologies (DLTs) to tackle some of today's most pressing issues, including climate change, modern slavery, poverty, inequality, food waste, fraud, corruption and other areas addressed by the UN Sustainable Development Goals (SDGs) which aim to provide a blueprint for a better and more sustainable future.

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