

Social Impact Measurement  
Industry Connections Activity Initiation Document (ICAID)  
Version: 2.8, April 28, 2020

IC19-002-03 Approved by the IEEE SASB 4 June 2020

## Instructions

- Instructions on how to fill out this form are shown in red. It is recommended to leave the instructions in the final document and simply add the requested information where indicated.
- **Shaded Text** indicates a placeholder that should be replaced with information specific to this ICAID, and the shading removed.
- Completed forms, in Word format, or any questions should be sent to the IEEE Standards Association (IEEE-SA) Industry Connections Committee (ICCom) Administrator at the following address: [industryconnections@ieee.org](mailto:industryconnections@ieee.org).
- The version number above, along with the date, may be used by the submitter to distinguish successive updates of this document. A separate, unique Industry Connections (IC) Activity Number will be assigned when the document is submitted to the ICCom Administrator.

## 1. Contact

Provide the name and contact information of the primary contact person for this IC activity. Affiliation is any entity that provides the person financial or other substantive support, for which the person may feel an obligation. If necessary, a second/alternate contact person's information may also be provided.

Name: Mei Lin Fung

Employer: MLF Associates, Inc.

Affiliation: People-Centered Internet - <http://peoplecentered.net>

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Sponsors and Activity officers who are responsible for IEEE work items.

## 2. Participation and Voting Model

Specify whether this activity will be entity-based (participants are entities, which may have multiple representatives, one-entity-one-vote), or individual-based (participants represent themselves, one-person-one-vote).

Individual Based

## 3. Purpose

### 3.1. Motivation and Goal

Briefly explain the context and motivation for starting this IC activity, and the overall purpose or goal to be accomplished.

Motivation:

A. In the field of social impact investment, the tools available to support the essential act of assessing project viability are far from sufficient in their approach to both data and methodology.

- A lack of a common language means we lose the opportunity to aggregate data or compare approaches. Different organizations report data against different metrics. Non-standardized metrics lead to data-siloing - a situation where data from one organization is not comparable and aggregable with another.
- Collaboration and learning potential between different scale organizations is lost. Compatible and interoperable standards and metrics can increase collaboration and learning among large, medium and small philanthropies and global and regional development organizations.
- The methodology and data behind some impact measurements is lacking. Lack of uniformity makes scoring projects or portfolios problematic because metrics vary widely and are often difficult to compare. In addition, the rigor of collection and the quality of the underlying data is unclear. Methodology behind analytical models is many times undiscoverable or deficient.
- Rich databases exist, but it is difficult to use them in combination. Rich census and socio-economic data is available in databases maintained by governments, development agencies, and international organizations, but since these are not normalized in geography or taxonomy, it is extremely difficult to combine the different data sources for studying correlations, causations, and/or visualizing diverse data.
- It is difficult to see trends and uncover insights across portfolios. The absence of comparable data and fundamental data management capabilities, such as the ability to search across project portfolios to find trends and uncover insights makes it frustrating for investors, communities and project-doers alike. As an example, it inhibits the rapid expansion of funding to address the SDGs and other social objectives.
- Small- and medium-sized organizations face more standardization challenges than large organizations that are able to maintain their in-house standards. Generally, the level of formal standardization decreases with the size of the organization, assessment budgets are smaller, capacity is lower, and projects are more varied.

Aside from lack of tools, coordination, poor-quality data, these challenges often result in the underreporting of impacts and attribution of successful endeavors, while failures are not documented and therefore repeated. Building capabilities and increasing coordination, transparency and data management tools will result in rigorous, trusted evidence of impact, in addition to improving awareness and understanding of what works sustainably.

To take one example, the UN might not realize the full potential of having convened 190+ countries to agree upon the Sustainable Development Goals (SDGs). Data reported for the millions of projects supporting the SDGs is not comparable because they either use different metrics/indicators to measure quantifiable impact, or they simply report non-quantifiable impact. We want to contribute to reducing the *SDG-impact-investment gap, which has amounted to US\$2.5 Trillion annually since 2014.*<sup>1</sup>

Creating a collaborative, public data management system that interconnects the metrics used by different organizations would not only enable the comparison-, translation-, and definition-mapping of the metrics, but also the aggregation and analysis of the data reported against the interconnected metrics.

B. Data and how it is collected, managed and applied (outside of major global institutions like the World Bank and the UN Development Program) has been largely left to the integrity of the funders, researchers, coders and developers. The principles and practices for the ethical and inclusive design and data usage in social impact are largely undefined. This can lead to outcomes that in the short or longer term are unforeseen, with few avenues to raise the alarm, record the outcomes, and respond to the harms. Regulation, certification, and customer (and supplier) requirements for control over the data associated with or tracked about them is an arena that is tricky for all involved in both the for-profit, not-for-profit, research, education and government sectors. There is no clear global consensus on how data is treated or used in the following partial list:

- Data and algorithms - application, collection, storage, access and control lack oversight. This gap causes fraught chaotic battlegrounds on the digital frontier where diverse stakeholders are left to jockey for raising their values and agenda as the priority. For example, where to store data, who can access and analyze it and the issue of cross-border data flow already brings up issues related to national sovereignty.<sup>2</sup>
- Harmful intentions and frauds, cyberattacks, and ransomware abound. Already rampant in the current environment outside of social impact, these harms can be expected to invade anywhere data is collected, like social impact.

---

<sup>1</sup> UNCTAD. 2014. "World Investment Report: Investing in the SDGs: An Action Plan." United Nations Conference on Trade and Development. UNCTAD (2014) estimated financing needs for developing countries. UNCTAD figures on financing needs came out before launch of SDGs and the formal adoption of the 2030 Agenda for Sustainable Development by the 193-Member United Nations General Assembly on September 2015. UNCTAD estimated current annual investment at around \$1.4 trillion. Given that the mid-point estimate of total annual SDG-related investment is about \$3.9 trillion, subtracting current annual investment gives a mid-point estimated investment gap of \$2.5 trillion

<sup>2</sup> Victoria Espinel CEO of Software.Org is working on an open data sharing framework between public and private sectors - she co-leads the World Economic Forum Global Future Council on Digital Economy and Society. <https://www.bsa.org/about-bsa/staff/victoria-espinel>

- Lack of responsible data governance and practices can also result in unknown and unintentional harms. Data transparency is lacking as are the capabilities to understand and question algorithms and data to verify data quality and safeguard the security and privacy of individuals and groups from where data is taken.
- Regulation and laws cannot keep up. Regulation and legislation cannot keep up with the real time inventiveness of criminality, pornography, human trafficking, denial of service attacks and enterprising ransomware entrepreneurs, just to name a few of the emergent harms.
- Lack of sharing and learning leaves progress slow and fitful, driven by catastrophic events. Without the means to track where data is mis-used or algorithms mis-applied, we cannot even define what misuse or misapplication means. Thus coders, designers and engineers are unaware of known flawed approaches, and trial and error re-starts with every system.
- Practices that increase disinformation and propagate it; Whistleblowers have few avenues to raise the alarm, even if the alarm is about life-threatening or systems failure. Mere concerns, at best, are raised to management then are ignored and undiscussed. Bringing up uncomfortable issues puts the issue-raisers at risk of losing their bonuses, promotions or jobs.
- Age-appropriate design is in its infancy. How data is used and applied should not harm children, the elderly or people who are racially or culturally different from the system designers and coders.
- IEEE is uniquely placed and able to make a significant contribution to this global effort. Doing so would raise the effectiveness of public and private funds desiring to improve social impact locally and globally and drive an evolving improvement in the use and application of data. Already the IEEE has pioneered Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems. Further work supporting age-appropriate design to address unforeseen consequences of system design and application of data and algorithms that cause harms, would benefit from having a citation system.

Goal: A citation system for data, algorithms and data usage.

Funders whether private, public, philanthropic or for-profit can blend their funds into appropriate projects that do not spread harms. To facilitate this, we aim to track project inputs and outputs more transparently, in ways that can be audited, with focus especially on projects with sustainable outcomes. We recognize that it is the information made available for analysis and audit on an evolving basis that is critical to achieve this goal.

Our goal is not a universal standardized quantitative measure and the "10 commandments" of data usage. This is not possible, just as financial accounting is uniquely performed, even for publicly listed companies, and just as laws evolve based on case law precedents and are different in different jurisdictions. We intend to achieve our goal by proposing:

- a. A nomenclature approach to data and algorithms that enables interoperability between different impact ecosystems and allows rigorous citation of sources.
- b. A case-law tracking approach to data usage, with "case" precedents cited as in law precedents.
- c. A "due-diligence" approach for verifying the content of structured data sets with the unstructured online sources like the dark web, social media and others.

Operationally, we propose to derive the ICSIM citation system in five ways:

1. Connecting and empowering users--driving engagement through a deep one-to-one relationship between users, their data and global impact
2. Interconnecting metrics--metric clearinghouse of catalogs, connecting and aligning metrics to reveal contribution to global impact.
3. Impact data--curation and cataloging of published demographic, income, output and outcome monitoring and evaluation data.
4. Data Usage Case Tracking--modeled on how British Common Law evolved as the basis of the UK's legal system.
5. Communicating and getting feedback on an evolving framework for responsible data policies – addressing ethical, legal, social and privacy-related challenges like who owns data, what is it used for, how is data collected and managed.

The ICSIM Citation system we propose has 2 parts:

1. HyperCatalog for Data and Algorithms,
  2. Categorized list of usage principles for the application of algorithms to data.
- 1) HyperCatalog is a collaborative, public data management system that interconnects the metrics used by different organizations for comparing, translating and mapping the definitions, and aggregates and analyzes the data reported against the interconnected metrics. The HyperCatalog includes both algorithms and data.
- a) Algorithms include formulae, models and processes that are used in a project, including those that are used to derive the social benefit of projects.

A citation system enables open review, discussion and critique. For example, Open Source enables "many eyes" scrutiny, resulting in more robust software.

- b) Structured Data includes input, output and outcomes, with links to published data sources and documented data calculations, which can include links to the models or algorithms used to derive data.
- c) Unstructured Data includes input and output projections using unstructured data from listening posts and various online data scraping efforts

2) Categorized List of Data Usage Principles to guide the application of algorithms to data in a culturally and contextually sensitive manner. Where misapplication leads to harms, this will be noted in the categorized list. Stakeholders could be any group of people involved with the project - community members, project doers, project funders, investors, donors, regulators, etc. We start with an initial list and intend to evolve it through dialog in public, private, civic and business communities. Data usage principles will consider that:

- People want private data to remain private.
- People should know that private information will be treated confidentially.
- People want a transparent view of how their data is being used or sold, and the ability to manage the flow through third party applications.
- Data Collection, Storage, Analysis and Machine Learning should augment human lives and serve the collective good.
- People can feel safe from unfair biases due to sex, race, religion, nationality, residence, etc.

### 3.2. Related Work

Provide a brief comparison of this activity to existing, related efforts or standards of which you are aware (industry associations, consortia, standardization activities, etc.).

Over the course of 2019, we have come to realize the truth of these statements:

Mandating a fixed set of measures across all organizations will not work, but enabling well-informed analysis could.

"Accepted wisdom is that we can solve the comparison problem with better impact measures (methods, definitions, and standards). This works on a small scale; many grantmaking foundations and impact-investing firms solve their comparison problems by mandating common measures across their portfolios. But on a larger scale—when initiatives and enterprises differ in mission; theory of change; or socio-economic, cultural or geographic context—common measures don't work as well. Those closest to the impact sound a familiar refrain: Common measures ask the wrong questions, measure the wrong things, and miss the *real* impact. Context

affects how we ought to measure impact. The definition of “job,” for example, might specify a living wage and full-time hours in some contexts, but allow entrepreneurial self-employment in others. The more contexts vary, the more likely it is that a rigid approach displaces a more insightful one. In other words, the more we rely on common measures to solve the comparison problem, the more we end up compromising the meaningfulness of social impact measures themselves. This is why measurement alone cannot solve the comparison problem.

We can, however, achieve comparability by focusing on the analytical skills needed to compare social impacts without mandating a rigid set of required metrics. The premise is that efficient capital markets demand analysts who are capable of interpreting and comparing apples and oranges. Why? Because they understand fruit. The market is best served when each organization can measure its social impact in the way that is most meaningful and insightful to its aim and operations, as long as it follows common principles for good measurement. Drawing insights from financial accounting, good analysts focus on measures that are flexible and adaptable to different contexts (within limits), applied consistently (organizations pick an approach and stick to it), and well disclosed (bring on the fine print!). We achieve comparability not at the moment of measurement, but after the analysts adjust, aggregate, and interpret the measures that get reported.”<sup>3</sup>

Assessing the outcomes of efforts has become more difficult as ideas are scaled up, and unaudited environmental, social and governance scores are losing credibility.

“We discovered that the search for scalability and standardisation has the unforeseen consequence of widening the distance between impact investing professionals and the disadvantaged people and countries we seek to support. Site visits to beneficiaries have become rare — we meet the managers, but how often do we meet the communities they are meant to be helping?”<sup>4</sup> How are we to know if we did harm when we don't look for the harm that could have been done?

The dismay of finding that social impact industry has increasingly focused on meaningless, unaudited environmental, social and governance scores. So much so the term “Green washing” has been coined, because there is a whole industry devoted to “white washing” social impact initiatives so they sound good, and this industry gets away with it because the ground truth is not sought, as no one seems able to or want to pay for it.

Investing based on categories linked to the UN sustainable development goals under the current approach to social impact is useless, because there are no ways for an investor to find out if the money is doing any good for the people supposed to benefit. To advance humanity with technology, and then we have to understand the human situation that is impacted by social impact interventions, we would approach due diligence differently and there would be no room for the rampant

---

<sup>3</sup> [https://ssir.org/articles/entry/next\\_frontier\\_in\\_social\\_impact\\_measurement#](https://ssir.org/articles/entry/next_frontier_in_social_impact_measurement#)

<sup>4</sup> Financial Times May 6, 2019 by former Impact Investing professional Stephanie Cohn Rupp



greenwashing that is currently underway, even as worthy projects go unfunded because undiscovered.

Parallel efforts can complement our work, and we will learn from and support on the work of others.

"To allow investors to aggregate and compare impact performance results, the GIIN launched *Evaluating Impact Performance* in October 2019, the industry's first collaborative effort to assess annualized impact performance results. The first two sectors featured in this family of reports are clean energy access and housing.<sup>8</sup> Through ongoing collaboration with advisors from the GIIN's Investors' Council, study participants, field-builders, and third-party sector experts, the GIIN developed an approach to rigorously and transparently aggregate, contextualize, and compare investments' impact. This represents a first step toward differentiating investments based on impact so that investors can factor impact into their decision-making alongside risk and return."<sup>5</sup>

Quoting from GIIN's The State of IMM Practice<sup>6</sup>:

Effectively interpreting impact results requires and understanding of the project context.

"Context is critical to interpreting impact results in a robust and reliable way. Impact performance varies based on impact objectives, target stakeholders, geography, product or service, and investment features of the investment. In order to compare results in a meaningful way, this context is woven into the approach."

The impact measurement arena presents very hard problems because

- i. Impact investors are often reluctant to share their real results (though they would love to compare their own outcomes against others!)
- ii. The community does not use standardized measures, though fledgling efforts are underway to normalize;
- iii. The context really matters.

During 2019, [IEEE HAC](#) investigated a specific assessment approach known as Social Return on Investment or SROI, two members of ICSIM were closely involved: Kartik Kulkarni (HAC Chair) and Mei Lin Fung (HAC Standards Association Liaison). Five IEEE HAC projects were subject to SROI with the assistance of three groups of external consultants. We concluded that the SROI approach was not feasible for bridging differences in social impact measurement approaches. The differences in calculated results for the same projects was significant and arguably subjective. At the current state of development, SROI cannot bring different social impact ecosystems to alignment.

---

<sup>5</sup> GIIN, Evaluating Impact Performance <https://thegiin.org/research/publication/evaluating-impact-performance>

<sup>6</sup> GIIN, The State of IMM Practice (2nd edition 2019)

<https://drive.google.com/file/d/1jCJE9TVbfwHH1Ad69USH7kZty6dKR8d7/view?usp=sharing>



We looked for global bodies already working on these problems who might welcome our participation and contribution as an IEEE initiative where our technical lens might be of benefit. [Ashoka](#) champions the "Everyone a Changemaker" approach, which aligns with the IEEE commitment to grassroots, community-based humanitarian projects. Ashoka coined the term "Social Enterprise". ICSIM member Bob Spoer is the Chief People Officer of Ashoka. The Ashoka Fellowship is a mutual support group, the world's first professional association of leading social entrepreneurs in 90+ countries, with a nomination process that has elected 3,500 Ashoka Fellows worldwide since 1980. By helping entrepreneurs work with each other, Ashoka has engaged with and earns and builds the respect of partners in business, government, academia, and other influential institutions. With the COVID-19 crisis and even before, Ashoka saw society approaching a tipping point that would make it possible to solve critical problems through widespread systemic change. This system change requires new measures and nomenclature of the kind that ICSIM is pioneering.

The 2018-19 United Nations [High Level Panel on Digital Cooperation](#) (HLPDC) was set up by Secretary-General Guterres. He is not just the first electrical engineer to become UN SG, but also a former professor who taught Systems theory and telecommunications signals.<sup>7</sup> Chaired by Jack Ma and Melinda Gates with panelists who included Vint Cerf, one of the fathers of the Internet, the HLPDC produced eight recommendations,<sup>8</sup> which were highlighted at the 2019 Internet Governance Forum in Berlin by the UN Under-Secretary-General Fabrizio Hochschild who heads the Office of Digital Cooperation. ICSIM chair Mei Lin Fung facilitates the Digital Cooperation and Diplomacy (DCD) meeting series working closely with USG Hochschild and ITU-Development Bureau Director Doreen Bogdan, with Vint Cerf moderating. DCD currently focuses on applying and accelerating Recommendations in response to the COVID-19 Crisis and the UN SG's call<sup>9</sup> to shape the recovery and the work to recover better together. This important initiative, which could benefit all of humanity, requires research and coordination with scientific and standardization bodies such as IEEE, ITU and ISO in order to succeed. The UN Secretary-General has set forth six principles for COVID-19 Response:

---

<sup>7</sup> [https://en.wikipedia.org/wiki/Ant%C3%B3nio\\_Guterres](https://en.wikipedia.org/wiki/Ant%C3%B3nio_Guterres)

<sup>8</sup> The eight areas of work are:

- 1A Global Connectivity
- 1B Digital Public Goods
- 1C/D Digital Inclusion and Data
- 2 Digital Help Desks
- 3A/B Digital Human Rights
- 3C Artificial Intelligence
- 4 Digital Trust and Security
- 5A/B Digital Cooperation Architecture

<sup>9</sup> <https://www.un.org/press/en/2020/sgsm20051.doc.htm>

1. As we spend huge amounts of money to recover from the coronavirus, we must deliver new jobs and businesses through a clean, green transition.
2. Where taxpayers' money is used to rescue businesses, it needs to be tied to achieving green jobs and sustainable growth.
3. Fiscal firepower must drive a shift from the grey to green economy and make societies and people more resilient.
4. Public funds should be used to invest in the future, not the past, and flow to sustainable sectors and projects that help the environment and the climate. Fossil fuel subsidies must end, and polluters must start paying for their pollution.
5. Climate risks and opportunities must be incorporated into the financial system, as well as all aspects of public policymaking and infrastructure.
6. We need to work together as an international community.

ICSIM system proposes working with the Digital Cooperation and Diplomacy initiative to enable several of these UN principles. For public and private funding, social impact quantification will be needed for the people of the world to understand how the people of the world benefit from the projects.

### 3.3. Previously Published Material

Provide a list of any known previously published material intended for inclusion in the proposed deliverables of this activity.

[Social Impact Assessment Strategy Report, HEC, 2019](#)

[To keep track of the SDGs, we need a data revolution, WEF Davos 2019](#)

[Measuring and Improving Social Impacts – A Guide for Nonprofits, Companies, and Impact Investors, Epstein, Yuthas, 2014](#)

[The 2030 Agenda: An Unprecedented Statistical Challenge, McFeely, 2018](#)

[Elite networks and the rise of social impact reporting in the UK social sector, Julia Morley, 2016](#)

[COVID-19 & Digital Rights: Document Pool, EDRi, 2020](#)

[Examining the Black Box -Measuring algorithmic impact, Ada Lovelace Institute, DataKind, 2020](#)

[Responsible Data Resource Lit, The Engine Room, 2020](#)

[The 2019 Ethical Digital Study Tour: Making Good, Leading Edge Forum, 2019](#)

### 3.4. Potential Markets Served

Indicate the main beneficiaries of this work, and what the potential impact might be.

Project implementers (on the ground) Measurement & Evaluation teams

Program managers (regional) Program Managers, Development Teams, Executives

Analysts (individuals/organizations interested in researching and using data, trends etc.

Social impact-interested (huge range from academics, data journalists, business strategists etc. etc.)

Funders – private, public, impact investors

ICSIM looks at how we might develop a solution that will help overcome constraints to improving the process and quality of social impact quantitative and qualitative measurements in a complex ecosystem. Including:

Global level constraints: Institutional norms, sector-specific silos, geographical and cultural complexities, funding incentives and mis-alignment, timing of funding cycles, entrenched practices.

Organizational level constraints: Capacity challenges in terms of time, money, and resources, transitional nature of workforce.

Team level constraints: Designing programs without insight into the implementation team, inheriting programs designed by others, lack of knowledge, time, resources or money. Knowing where to go for help and where to find support.

Person level: Lack of knowledge, skill and motivation. Volume of work, volume of information to sift through.

The UN SDG's principles require scientific approaches to measurement combined with sensitivity to how data is collected, algorithms are developed, and data is used. Only with systematic, transparent measurement, open data and community support can public and private funders apply money for the intended purpose and achieve sustainable results. The amount<sup>10</sup> that will be spent for the COVID-19 response, may be the largest coordinated or uncoordinated financial expenditure with a single triggering threat in human history:

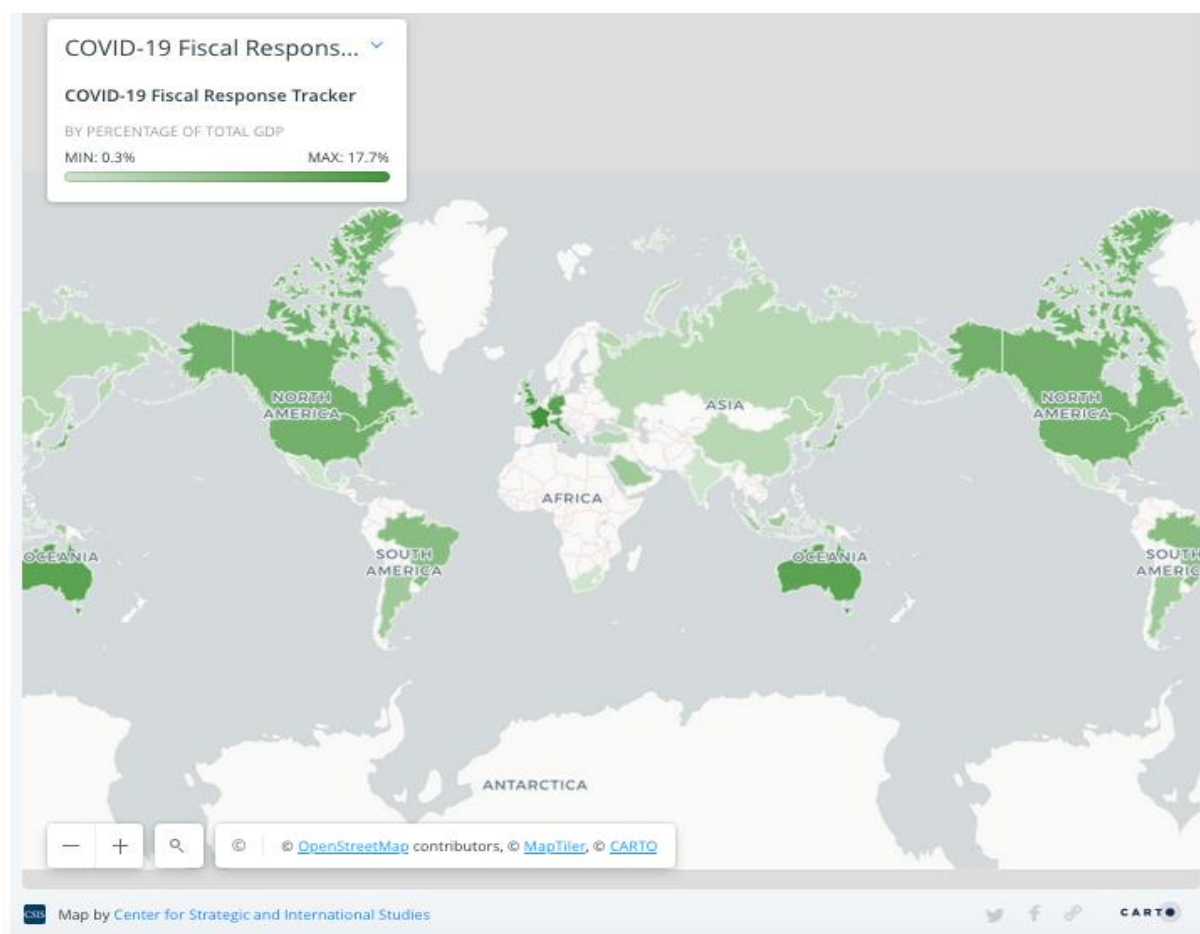
*" At a March 26 virtual summit, leaders of the Group of Twenty (G20) major economies [said](#) they were spending over \$5 trillion, equivalent to 7.4 percent of 2019 G20 countries' gross domestic product (GDP), to 'counteract the social, economic, and financial impacts of the pandemic.' Since then, G20 governments have added to this figure as the extent of the economic fallout has become clearer."*

---

<sup>10</sup> Center for Strategic and International Studies, April 13 2020 <https://www.csis.org/analysis/breaking-down-g20-covid-19-fiscal-response> - this is not comprehensive but already the largest ever response. The IMF has tracked 193 countries response - <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> and is ready to assist country by country. <https://www.imf.org/en/About/Factsheets/Sheets/2020/02/28/how-the-imf-can-help-countries-address-the-economic-impact-of-coronavirus>

We can materially help with better measurements on the ground and at the policy level, to IMPROVE the data and analysis needed in this crisis faced by humanity.

Private sector investors, such as foundations, high net worth individuals<sup>11</sup> and institutional investors are increasingly interested in making investments that have both a social and a financial impact - but they lack the grass roots data and quality deal flow necessary to streamline that process. While this is true in ordinary times, it is much more urgent in the COVID-19 response. Community groups and journalists will help gather the local insights necessary for de-risking impact capital, in exchange for living wages. People worldwide will be helped if the COVID-19 Response funds are not wasted in corrupt and incompetent delivery. Transparent measures and open data will help achieve sustainable results.



### 3.5. How will the activity benefit the IEEE?

<sup>11</sup> Family Foundations are investing more and more in ESG (environmental, social and governance):  
<https://medium.com/@FINTRX/family-offices-trending-toward-esg-investing-54e41be09cce>

The IEEE would serve as curator and gatekeeper to standardize measurement for impact investment and grants, generating licensing, certification and accreditation fees for granular levels of access, search, curation, review, entry, authoring and update of information/data.

In the larger scheme of things, IEEE could use this ICSIM initiative in this time of COVID-19 Response to live up to its tagline "Advancing Technology for the Benefit of Humanity". As the COVID-19 crisis has shown, Digital technology<sup>12</sup> is becoming an inescapable part of people's lives. With the requirement to socially distance, online work, shopping and learning have accelerated globally, at a pace unimaginable in early March.

The social impact of digital transformation cannot be estimated if it cannot be measured. IEEE can help humanity at this time of crisis, to expand measurement beyond the purely technical as technology is being embedded into every facet of life, accelerated by COVID-19.

#### 4. Estimated Timeframe

Indicate approximately how long you expect this activity to operate to achieve its proposed results (e.g., time to completion of all deliverables).

- REVISING due to [IEEE HAC ICSIM report Fall 2019. Re-proposing ICAID for ICSIM](#) - Re-launch and recruit participants to fill open positions: Secretary, Standards Guide, Africa-representative, South America representative, and others TBD.
- Working Group Meetings via teleconference - Held monthly June 2019 - present.
- Foundational research – June 2020.
- Collaborative virtual workshops (s) – July 2020 .
- Produce Roadmap for next two years for: August 2020-June 2022, by August 2020.

Expected Completion Date: June 2022

IC activities are chartered for two years at a time. Activities are eligible for extension upon request and review by ICom and the IEEE-SA Standards Board. Should an extension be required, please notify the ICom Administrator prior to the two-year mark.

We request an extension for an additional year due to revision of our terms of reference and the COVID-19 Crisis.

#### 5. Proposed Deliverables

Outline the anticipated deliverables and output from this IC activity, such as documents (e.g., white papers, reports), proposals for standards, conferences and

---

<sup>12</sup> <https://www.zdnet.com/article/covid-19-crisis-pushing-organizations-into-digital-transformation/>

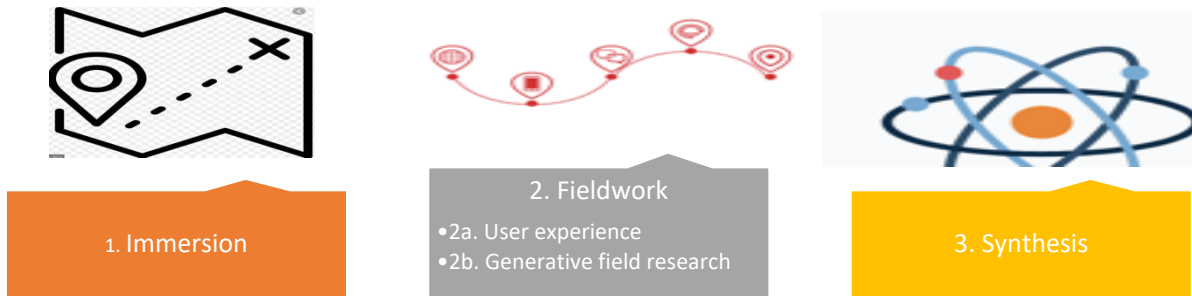
workshops, databases, computer code, etc., and indicate the expected timeframe for each.


1. A Metrics Catalog for every organization: Impact-Convergence-Consortiums such as United Nations, GIIN (Global Impact Investors Network), GRI (Global Reporting Initiative), WaSH (Water and Sanitation Health), can list their catalogs of metrics on the HyperCatalog platform. For example. SDGs, SDG-targets, and indicators can be listed under the UN's catalog.
2. Inter-Catalog relationships: Many of the IRIS metrics can be mapped to one or more UN SDGs and their targets. Most of the WaSH metrics can be mapped to UN SDG 6. Likewise, many other organizations can map their custom metrics to the SDGs. Also, overlap in metrics definitions across the catalogs can be addressed by marking metrics as synonyms or translate-ables.
3. Formulas for \$-quantification of impact: Research organizations can publish their impact measurement studies as formulas (as opposed to papers) on the HyperCatalog platform. For example, the marginal damage done by carbon emissions is a widely studied research topic and there are multiple \$-value damage estimations for 1 Ton of carbon emissions depending on the geographic location. Researchers can publish formulas that take data reported environment conservation projects against metrics such as carbon-emissions-prevented and geo-location and output the \$-value of the environmental benefit created by the project. Publishing such formulas will automatically help all the environmental projects that report their impact data against the carbon-related metrics.
4. Enabling third party impact-auditing: Having clearly listed output and outcome metrics enables third parties to perform independent analysis of whether the reported impact can be validated. Comparing the investment and the outputs will enable understanding the efficiency of the projects.
5. Discovering and comparing related projects: Inter-catalog relationships enable browsing projects that are reporting the data against similar or related metrics. In a highly-siloed landscape such as the social impact sector it is very important to be able to know what else has been done or being done in the similar thematic or geographic areas. This enables learning-lessons from each other, and collaboratively evolving solutions.
6. Citation Index for Data Usage: Define initial set of principles and outline a Case-Law precedent tracking system.
7. A feedback system for evolving responsible data policies community by community - who owns data and the output of algorithms applied to data, what happens when third parties get access to data, what rights are

available to whom. What is the data to be used for, how is data collected and managed and other issues?

A. Research Plan for the HyperCatalog - Deliverables 1-5

Our plan of action contains three phases




1. Immersion	Foundational research to better define and understand the problem space and opportunity for the platform.
Objectives 	<ul style="list-style-type: none"> <li>• Map Impact Data Ecosystem and Journey Maps               <ul style="list-style-type: none"> <li>○ Data supply and demand</li> <li>○ Key stakeholders, institutions</li> <li>○ Primary data collectors/curators/communicators</li> <li>○ Data demanders/users – e.g. funders</li> </ul> </li> <li>• Analogous experiences, the ICT4D space, etc., to further inform or support hypothesis and concepts generation</li> <li>• Initial ideation concepts – technical - stack, interfaces, etc. service – tools, training, etc.</li> </ul>
Inputs	<ul style="list-style-type: none"> <li>• Desktop research – available literature, academic research, analogous platforms/communities’ resources, etc.</li> <li>• SME and initial stakeholder/user interviews</li> <li>• Alignment participatory workshop – validate ecosystem, user journey maps, challenges, opportunities etc.</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Maps – ecosystem, stakeholder journey maps</li> <li>• Establish key user/supplier framework and target use cases to investigate etc.</li> <li>• Generate hypotheses, identify key research questions, and create appropriate research strategies to meet our objectives during the generative ‘user’ research phase.</li> </ul>

Motivating Research Questions in the Immersion Phase

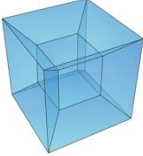



- What/where are existing assets/tools/platforms, human resources, communities, knowledge?
- What are the social dynamics around MERL - practice as a whole/public/private sectors?
- What are current perceived/measured impacts and outcomes for projects - current key metric creation, use, reporting, sharing processes, etc.?
- What are the theories of change for practice and knowledge adoption at the scale of the individual, a project, a department, an organization a community of practice?
- Initial ideation. What might success look like - initiative, users? Key challenges?

2a. User Experience (Fieldwork)	Field research to better define and understand the problem space and opportunity for the HyperCatalog. Mixed-method research approaches combining multi-faceted quantitative and qualitative research methodologies to inform a holistic picture of the current data, metrics use and experience.
Objectives	<ul style="list-style-type: none"> <li>• Validate ecosystem and journey maps</li> <li>• Understand current data/metrics/M&amp;E experience with target users – supply and demand</li> </ul>
<p>Inputs</p> 	<ul style="list-style-type: none"> <li>• Depth interviews across organization – MERL, field teams, Development, Program Management etc.</li> <li>• Short surveys</li> <li>• Profile maps</li> <li>• Observation – unmoderated talk through of current platforms, tools, protocols etc.</li> <li>• Resources and support activity – prioritization matrix Journey Map activity</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Document current data processes, metrics use and stakeholder experience today</li> <li>• Current methods of data collection</li> <li>• List of justified and flawed assumptions about data literacy</li> <li>• Ways in which data is secured today</li> <li>• List of responsible data practices and policies (note dysfunctional examples)</li> </ul>

Motivating Research Questions in the User Experience Phase

- What are the overall experiences of generation data to impact metrics communication etc. What works, challenges and key constraints etc?
- How do we understand data - data literacy etc.?
- How do we collect, manage and analyze data?
- Who decides what we measure and how? External e.g. F Indicators versus internal measures – monitoring, evaluation, impact metrics?
- How do we understand data literacy current-needs assessments?
- How do we secure data – responsible data practices and policies etc.?
- Who are the users of metrics – internally/externally?

2b. Generative Phase (Fieldwork)	Field work to inclusively test concepts and generate ideas/concepts across diverse stakeholder groups. Generate data and insights with target users to inspire future HyperCatalog/system elements – platform, service and engagement.
Objectives	<ul style="list-style-type: none"> <li>• Validate ecosystem and journey maps with impact ecosystem participants</li> <li>• Understand current data/metrics/Measuring and Evaluation (M&amp;E) approaches in the impact eco system and the constraints under which they operate</li> </ul>
Inputs	<ul style="list-style-type: none"> <li>• Trust Map activity</li> <li>• Concepts review and generation potential concept rating; Ideal platform pitch etc.</li> </ul>
Outputs 	<ul style="list-style-type: none"> <li>• Define target users for the HyperCatalog and their unmet needs today</li> <li>• Document criteria for success for HyperCatalog</li> <li>• Describe the HyperCatalog in operation that fulfils the need of diverse stakeholder groups and impact eco system participants</li> </ul>

3. Synthesis 	Daily synthesis in field and collaborative sessions at end of data collection. Inclusively externalize data and conduct combined analysis: Desktop research; Survey data; Stakeholder/Key Informant interviews Participatory research data etc.
---	--

## B. Research plan for Data Usage Citation and Feedback System - Deliverables 6-7

### 1. Review British Common Law History and its applicability to the digital frontier

2. Outline considerations for applying lessons to this situation - [Report by Justin Bryant](#)
3. Recruit legal expertise
4. Integrate with HyperCatalog development plan
5. Synthesize and integrate with IEEE Ethically Aligned Design Version 2.
6. Architect input and reporting mechanism for ease of use in input, assuring integrity and searchability.

#### 5.1 Open Source Software Development

*Indicate whether this IC Activity will develop or incorporate open source software in the deliverables. All contributions of open source software for use in Industry Connections activities shall be accompanied by an approved IEEE Contributor License Agreement (CLA) appropriate for the open source license under which the Work Product will be made available. CLAs, once accepted, are irrevocable.*

Will the activity develop or incorporate open source software (either normatively or informatively) in the deliverables?: **No**

#### 6. Funding Requirements

*Outline any contracted services or other expenses that are currently anticipated, beyond the basic support services provided to all IC activities. Indicate how those funds are expected to be obtained (e.g., through participant fees, sponsorships, government or other grants, etc.). Activities needing substantial funding may require additional reviews and approvals beyond ICom.*

This Industry Connections Initiative will seek support within IEEE given the humanitarian crisis we currently face. This will be complemented by outside contributions from other networks, like Ashoka and the UN-affiliated Digital Cooperation and Diplomacy team, for identified work products. Supplemental funding may be sought for engagement with specialist experts, licensing and development fees for demonstration and testing purposes.

We propose to seek IEEE Standards Association and HAC seed funding and target to get EU research funding for this purpose.

#### 7. Management and Procedures

##### 7.1. IEEE Sponsoring Committee

*Indicate whether an IEEE sponsoring committee of some form (e.g., an IEEE Standards Sponsor) has agreed to oversee this activity and its procedures.*

Has an IEEE sponsoring committee agreed to oversee this activity?: Yes

*If yes, indicate the sponsoring committee's name and its chair's contact information.*

IEEE Global Humanitarian Activities Committee,

Chair Kartik Kulkarni - kulkarni@ieee.org

*IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Sponsors and Activity officers who are responsible for IEEE work items.*

## 7.2. Activity Management

*If no IEEE sponsoring committee has been identified in 7.1 above, indicate how this activity will manage itself on a day-to-day basis (e.g., executive committee, officers, etc).*

The Activity will be managed by an Executive Committee as defined in the Activity's Policies and Procedures.

## 7.3. Procedures

*Indicate what documented procedures will be used to guide the operations of this activity; either (a) modified baseline Industry Connections Activity Policies and Procedures, (b) Sponsor policies and procedures accepted by the IEEE-SA Standards Board, or (c) Working Group policies and procedures accepted by the Working Group's Sponsor. If option (a) is chosen, then ICom review and approval of the P&P is required. If option (b) or (c) is chosen, then ICom approval of the use of the P&P is required.*

This activity will follow a modified Industry Connections Activity Baseline Policies and Procedures

## 8. Participants

### 8.1. Stakeholder Communities

*Indicate the stakeholder communities (the types of companies or other entities, or the different groups of individuals) that are expected to be interested in this IC activity, and will be invited to participate.*

IEEE  
Ashoka  
IBM  
UN Office of Digital Cooperation  
ITU  
Hasso Plattner Institute School of Design Thinking

### 8.2. Expected Number of Participants

*Indicate the approximate number of entities (if entity-based) or individuals (if individual-based) expected to be actively involved in this activity.*

Number of individuals: 7-12

### 8.3. Initial Participants

Provide a number of the entities or individuals that will be participating from the outset. It is recommended there be at least three initial participants for an entity-based activity, or five initial participants (each with a different affiliation) for an individual-based activity.

Use the following table for an entity-based activity:

Use the following table for an individual-based activity:

Individual Name		Employer	Affiliation
Mei Lin Fung	Chair	Self	<a href="#">People-Centered Internet</a> Cofounder
Mei Lin Fung (acting)	Secretary		
Karen Robbins	Treasurer	AmTech USA	
Maria Dayton	Executive Committee Member At Large	Self	<a href="#">Transterra Media</a> Co-Founder
Karen Wilson	Executive Committee Member At Large Impact Investment Expert	Self	<a href="#">OECD</a> liaison to The <a href="#">Impact Management Project</a> Author, <a href="#">OECD</a> report
Kartik Kulkarni	Executive Committee Member At Large Liaison to IEEE HAC	Oracle	IEEE Humanitarian Activities Chair
Katryzna Wac	Executive Committee Member At Large Geneva University	Self	Professor and Head of Quality of Life Lab, Geneva University