INTRODUCTION
TO THE:

COMMON IMPACT DATA STANDARD

COMMON APPROACH
TO IMPACT MEASUREMENT

SEPTEMBER 2020

The Common Impact Data Standard provides a flexible, reputable standard for representing impact models and impact data electronically.
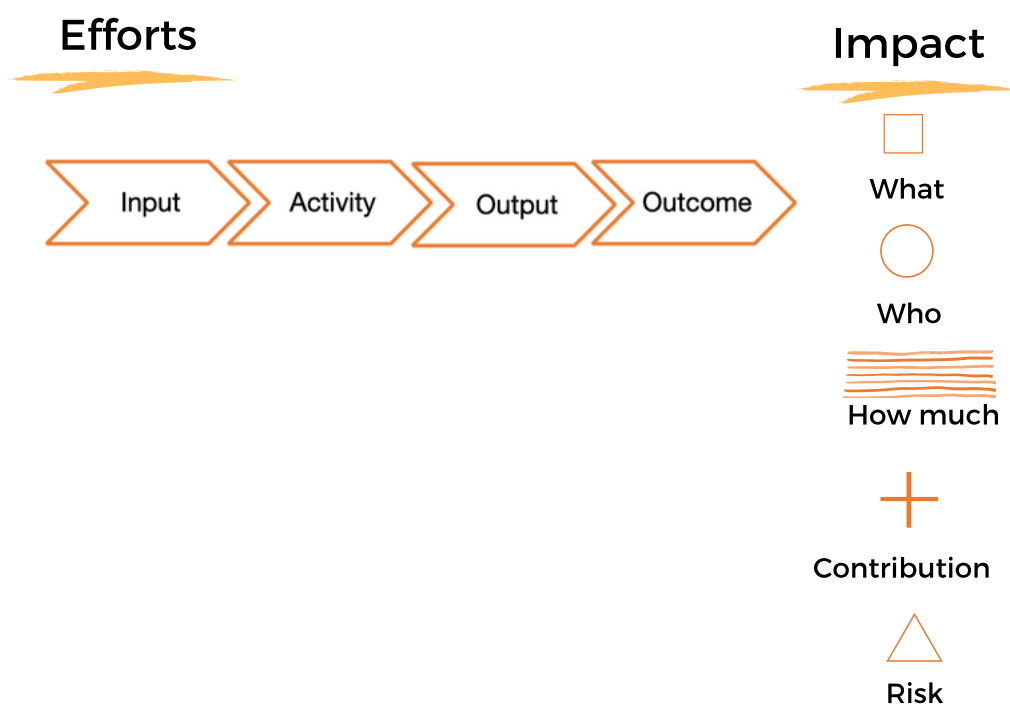
The Common Impact Data Standard:

1 Is a sophisticated and expert-informed concept of impact.

2 Represents impact according to the Impact Management Project's (IMP's) dimensions of impact:
What, Who, How Much, Contribution and Risk.

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3 Includes representation of how an organization delivers impact (related to programs, services, activities, inputs and outputs).

The Common Impact Data Standard defines
how to represent the following impact concepts, called "classes":

Input, Activity, Indicator, Output, Outcome, Impact, Impact Model, Risk, Stakeholder, and Indicator Report (the number or qualitative measure at a specific point in time and place).

The standard also defines the possible relationships between the concepts (i.e. outcomes have indicators) and there can be sub classes within these classes (i.e. impact can have a depth and duration).

Efforts

Impact

Input Activity Output Outcome

What

Who

How much

+
Contribution

Risk

Who should use this data standard?

Use" is a bit of a funny word in this context.
The Common Approach wants all social purpose organizations to use the data standard but without ever knowing they are using it.

Most charities, social enterprises, nonprofits and businesses advancing a social, cultural, or environmental mission will never need to understand the Common Impact Data Standard. Instead, they should use impact measurement software and databases that have adopted the Common Impact Data Standard.

The people that need to understand and work with the Common Impact Data Standard are the **database builders and software developers**. Web content creators might also be interested in using the vocabulary to tag web content so that their websites are more discoverable by search engines.

Why use this data standard?

Organizations who adopt the Common Impact Data Standard are aligning with best practices and cost-effectively position themselves for future growth, knowledge sharing and learning.

Using the Common Impact Data Standard will:

1 Enable the exchange of information in ways that computer systems can understand.

- This makes it possible for software to aggregate impact data across and through varying frameworks, organizations and software providers,
- This makes it possible for software to transform organization-level data and into portfolio and sector-level insights;

2 Enable the tagging of an organization's content on the internet thereby making it easier for search engine users to find impact content on the web.

3 Enhance an organization's use of other indicator and measurement standards, such as the UN SDG Global Indicator Framework, IRIS+ and the International Aid Transparency Initiative (IATI) Standard. The Common Impact Data Standard is a base technology that sits below these standards and is compatible with all of them.

What is the Common Impact Data Standard?

The Common Impact Data Standard makes it easier to share and aggregate data. Using the Common Impact Data Standard, software can be designed more easily to support better analysis.

The Common Impact Data Standard is a way to represent impact data. The representation is specified in ways that computer scientists understand.
The specification can be used to create a database. Non-computer science people can imagine "representation" like an organization system for impact data where there is "a place for everything and everything in its place".
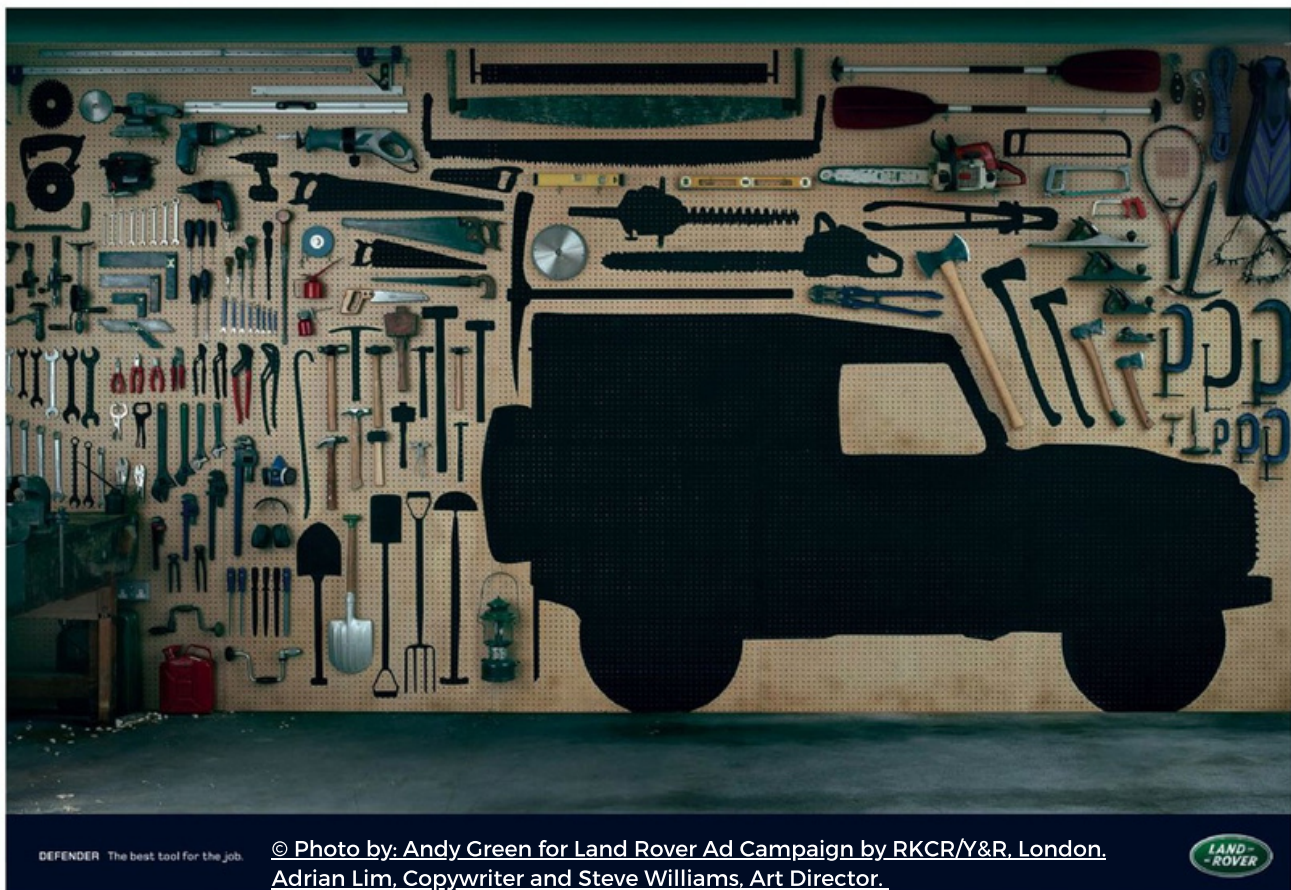
In colloquial terms, the Common Impact Data Standard says: there are these things called Outcomes, therefore, the database needs an object called Outcome. Each Outcome should have at least one Indicator. Indicators are another kind of object. An Indicator can relate to more than one outcome. So, there must be an object called "Indicator" that has many relationships with the Outcome object. Indicators have methods. There should be an object called "Method". Indicators have Indicator Reports. An Indicator Report is the measurement of the Indicator at a specific time and place. There should be an object called "Indicator Report" and each Indicator Report should be associated with an object that specifies the time and an object that describes the place. And so on and so on.

Each Outcome should have at least one Indicator.

The Common Impact Data Standard does not say what the Outcomes should be or what the Indicators should be, just where and how a human should record that information into a database. As an organizing system, you can imagine a tool wall on the garage with outlines for all the tools one might ever need; except in this case it is not tools but types of impact data.

The Common Impact Data Standard is an organizing system for your impact data.

DEFENDER The best tool for the job.   © Photo by: Andy Green for Land Rover Ad Campaign by RKCR/Y&R, London. Adrian Lim, Copywriter and Steve Williams, Art Director.
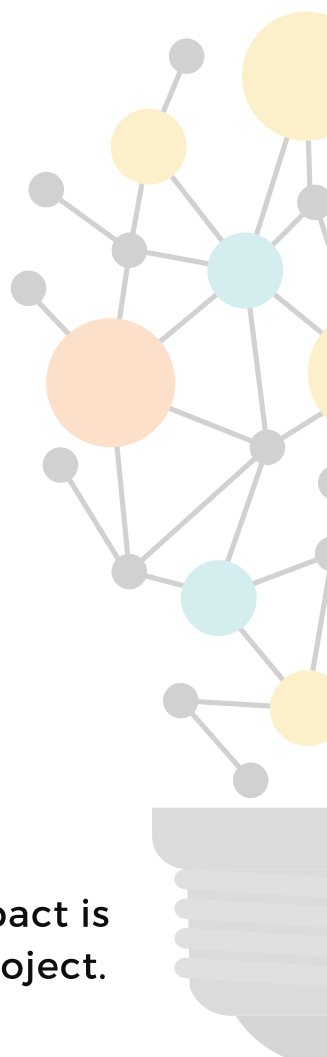
The Common Impact Data Standard is an organizing system for your impact data. Like a well thought out tool wall, there is a place for everything so that you can put everything in its place. This makes it easy to store, share, aggregate and analyze impact data. And because we did our homework, you can feel confident that this organizing system will accommodate your data needs as your organization gets better at impact measurement.

The Common Impact Data Standard's representation of impact is based on leading thinking from the Impact Management Project.

To create the Common Impact Data Standard, the Common Approach consulted with experts and aligned with other leading standards, such as the Impact Management Project, which itself consulted with over 2000 impact professionals. Following the norms identified by the Impact Management Project, the Common Impact Data Standard has defined the necessary objects and relationships to represent the who, what, how much, contribution and risk of impact. These are the five dimensions of impact as identified by the Impact Management Project. In addition to those five dimensions, The Common Impact Data Standard includes information on inputs, activities, outputs and outcomes (as would be in a program logic model or theory of change) to describe how the impact occurs. The *how* is important for questions around "what works".

The Common Impact Data Standard's representation of Impact is based on leading thinking from the Impact Management Project.

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The Common Impact Data Standard represents the:

→ WHO

→ WHAT

→ HOW MUCH

→ CONTRIBUTION &
   RISK OF IMPACT

→ + HOW

This means that the Common Impact Data Standard is sufficiently well specified that it can support the representation of gold-standard impact measurement (there is a space for everything); but it does not oblige, mandate or even facilitate social purpose organizations to populate *all* the fields.

A Place for Everything

The advantage of having "a place for everything" is that social purpose organizations can save time and money when creating their impact measurement data systems. They can feel confident that as their impact measurement improves, they will not outgrow their databases. With the analogy of the tool wall, this is a wall that you can feel confident can hold *all* the tools.

A robust ontology for impact data.

→ Feel confident that your database can grow with your organization.

→ Stop storing important details in a "heap" of sentences.

Another advantage of having "a place for everything" is that everything can be in its place. The advantage of having "everything in its place" is that data can be more easily shared because the structure of the data will be consistent and because the objects will be named in consistent ways. (One might imagine that this kind of convention would have already emerged in the charitable sector, but - except for a handful of data sharing initiatives – it has not.) Back to the tool wall analogy, you can imagine that a robot could find your impact data and take it over to a neighbor's garage and put it in the right place because they have the same tool wall you do.

Another advantage of a Common Impact Data Standard that has a place for everything and everything in its place, is that it gets important data out of long text strings.

Currently, there is considerable impact measurement information that gets left unused because there is no good way to organize it.

For example, many social purpose organizations write down important details like method (e.g. survey, interview, observation), date and place in a document or as sentences in a long cell for "notes" in a spreadsheet. When details are in sentences, jumbled together in a single cell or in a document, that data become very cumbersome to use in analysis; prohibitively so. Back to the tool wall analogy, storing data in text fields is like storing your tools in a pile. Sure, you have the tools, but it is not easy for you to find them. And, since this is about data sharing, it is especially difficult for your neighbor to find them should you lend them the key.
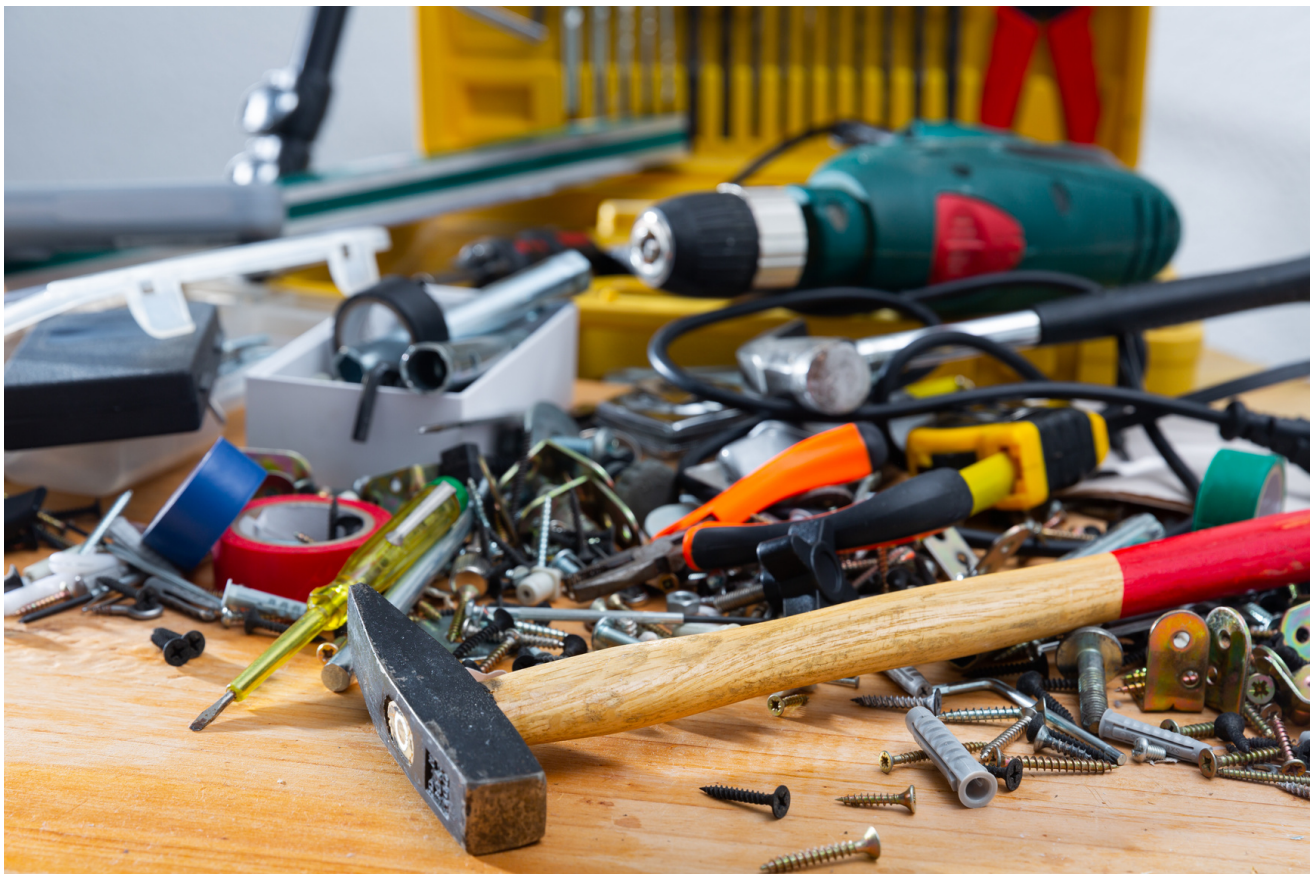
Currently, many organizations collect impact data that they do not know how to organize. Important details like the source of the information and the date the data was collected are stored in text format. Impact data stored in a massive text file is like having a jumble of tools. This makes the data very difficult to find; so much so that the data becomes unusable and is often not shared along with the indicators.

Represent impact data as linked data.

➜ This makes it easier to compare and share data at a portfolio-level.

➜ This makes it easier to assess the similarity of indicators from multiple sources.

The Common Impact Data Standard is represented using linked data, which means that the data can be inter-connected in meaningful ways. To extend the tool wall analogy, imagine a magical strings that connect all the tools used for repairing bikes and all the tools used for gardening and, in the case of sharing, strings linking the tools that you borrowed from a neighbor with the neighbor that you borrowed them from. Some tools are connected with multiple strings. (The strings are magical because they never get tangled.)

Back to impact data, indicators can be connected to methods and dates and places; and methods can be connected to many indicators. Stakeholders can be defined and connected to many projects, outcomes, indicators and organizations. At the portfolio level – for example a funder looking across several grantees, or a collaboration looking across many partners - using linked data makes it possible to pull out an outcome and see all the organizations working toward that outcome, all their indicators, all the methods (to assess comparability) and all their indicator reports. The Common Impact Data Standard provides the organizing system (the objects and their structure) and the linkages (the magical strings). Software and database developers can use the Common Impact Data Standard to create the tools to make it easy for social purpose organizations to input and retrieve data in intuitive ways.

The Common Impact Data Standard is an organization system for your impact data. It does not provide indicators, specify a method, or tell you what sample size you need; but there is a space to record the indicator, survey questions and sample size. To continue with the tool wall analogy, The Common Impact Data Standard is the shapes on the tool wall. The tools themselves are not included.

The Common Impact Data Standard is an organization system for your impact data.

The Common Impact Data Standard works with all sorts of tools.

These include outcomes frameworks, indicator banks, and activity codelists.
To our knowledge, the Common Impact Data Standard does not replicate, duplicate, or replace, any other standard. For detailed information about how the Common Impact Data Standard fits with other data standards
and other impact measurement standards,
please see https//:commonapproach.org.

Some of the frameworks that you can populate the Common Impact Data Standard with are:

SDGs

GRI

Canadian Index of Wellbeing

SASB

IRIS+

Your own custom-created systems

SROI

Impact Weighted accounts

The Common Framework

In the future, the Common Impact Data Standard will be connected to the Common Framework.
The Common Framework is a flexible framework of social and environmental indicators that is being co-created by social purpose organizations.

Many of the above-mentioned frameworks have been created by foundations, investors, and national statistics offices, to meet the needs of aggregating impact measurement. The Common Framework will be a "folksonomy", co-created by social purpose organizations.

Centered around the needs of operating charities and social enterprises, the Common Framework – connected to the Common Impact Data Standard - will allow the flexible aggregation of bespoke indicators, which is the essence of what makes the Common Approach to Impact Measurement different than prior initiatives. You do not need to wait for the Common Framework to be ready. You can use the Common Impact Data Standard today with existing frameworks or your own.

The Common Impact Data Standard offers a uniform representation of an indicator and impact model, but not uniform indicators or impact models.

This is important because it gives each social purpose organization the freedom to specify what they want to measure and how they want to measure it.

Maybe at this point, it is better to drop the tool wall analogy and turn to one that helps convey which sort of things should be uniform and which should be customized to each organization.

Consider the analogy of building a new home. Building codes standardize things like electrical wiring, and foundations. Most families are happy to not think about these details. What is not standardized are the details that affect how a family lives in the home, such as sizes of rooms, the layout of the kitchen or the interior design.

The Common Impact Data Standard offers uniformity at a very base-level but allows each social purpose organization to customize the indicators and outcomes and methods to suit their individual purpose and liking, or turn to a framework like IRIS+ or Canadian Index of Wellbeing, to help identify indicators for chosen outcome areas.

The Common Impact Data Standard is detailed in three levels as outlined via the document links provided in Figure 2 on the next page.

There is also a fourth document that offers examples of the how the Common Impact Data Standard can be used to represent impact for an organization that uses a logic model, a theory of change, or the Impact Management Project. The words vocabulary and ontology have very specific meanings in the context of data standards.

Figure 2: Common Impact Data Standard Levels

The Common Approach Vocabulary

Simple Table

Vocabulary URL:
http://ontology.eil.utoronto.ca/CAO/cav.owl

Namespace:
http://ontology.eil.utoronto.ca/CAO/cav#
Suggested Prefix: ca

The Common Approach Foundation Ontology

Graph Database

**A Linked Data/Semantic Web approach
Ontology URL**
http://ontology.eil.utoronto.ca/CAO/cafo.owl#

Namespace:
http://ontology.eil.utoronto.ca/CAO/cafo#
Suggested Prefix: cafo

The Common Approach Core Ontology

Graph Database

**Common Approach Core Ontology for
representing change models
Ontology URL**
http://ontology.eil.utoronto.ca/CAO/caco.owl

Namespace
http://ontology.eil.utoronto.ca/CAO/caco#
Suggested Prefix: caco

Vocabulary

A vocabulary is a list of concepts and properties (also referred to as "terms") that is used to describe and represent an area of concern. In this case, the area of concern is impact measurement.

Properties have values that are primarily numbers, e.g., number of clients or birthdate, or text, e.g., outcome description or list of indicator names. Vocabularies can aid in data integration when terms are consistently used by like-minded organizations – in this case, social purpose organizations.

Most people do not need to become fluent in the data standard vocabulary.
The vocabulary operates in the background.

A rough analogy is the way you might speak about the paint colour on your wall. In ordinary conversation, you might refer to the colour as light green or soft green. Looking at paint chips, you may start referring to "cypress green" or "silver sage," which are both specific light greens from a particular paint company. For most conversations, light green or soft green are appropriate terms to use and people will understand what you mean.

However, if you want to match or compare the paint colour, you will need the more precise wording, or even better, the number that identifies the colour.

The vocabulary operates in the background.

Ontology for Linked Data

**An ontology goes a level deeper than the vocabulary.
It takes all the things defined in the vocabulary and organizes them in relation to one other.**

The most cited definition of ontologies indicates that they are "explicit formal specifications of the terms in the domain and relations among them". 1
In other words, the definitions of concepts and properties are specified using a formal language that software systems can understand. An ontology transforms a table view of data as defined by a vocabulary, into a graph view of data that highlights the relationships amongst the five dimensions of impact, plus how.

The purpose of the Common Impact Data Standard ontology is to enable linked data, allowing for both a more precise understanding of impact terminology and more sophisticated analysis of impact data. Just as the World Wide Web links pages across the world, systems that share an ontological language can pass data between them with ease. The other useful feature of linked data is that it can connect data about data.

Consider the indicator "number of children with improved mental health." Currently, without linked data, this indicator might circulate with a number – let's say 48 – without any corresponding detail. This makes it very difficult to interpret the impact information. With linked data, however, this indicator can be tied to specific vocabularies for improved mental health, as well as to a data collection method, and a date. The reviewer can know exactly what ages the organization uses to classify "children" and how they define "improved" and "mental health;" the reviewer can also see how and when the organization counted to get to 48. In short, most organizations know the details of the indicators they use, but without linked data the details often get separated from the indicator.

The other useful feature of linked data is that it can connect data about data.

1 Gruber, T. R. (1993). A translation approach to portable ontology specifications. Knowledge acquisition, 5(2), 199-220.

Ontology for Linked Data

There is an advantage to this when sharing impact data. At risk of taking the paint chips too far, two organizations might use the term "light green," yet one is referring to "cypress green" and the other to "silver sage."

Conversely, perhaps two organizations are referring to the colour "silver sage," but one calls it light green and the other calls it soft green. A software system using the ontology will know when organizations are referring to the same thing or not because there are places to specify details and keep those details linked to the data that uses them.

This logic can be applied to impact indicators and their related definitions, such as the "youth" example highlighted above.

The Common Impact Data Standard vocabulary and ontology enables social purpose organizations to share their data – and the linked details – with collaborators, funders and other network partners with minimal effort, as it does not require the alignment of words and databases.
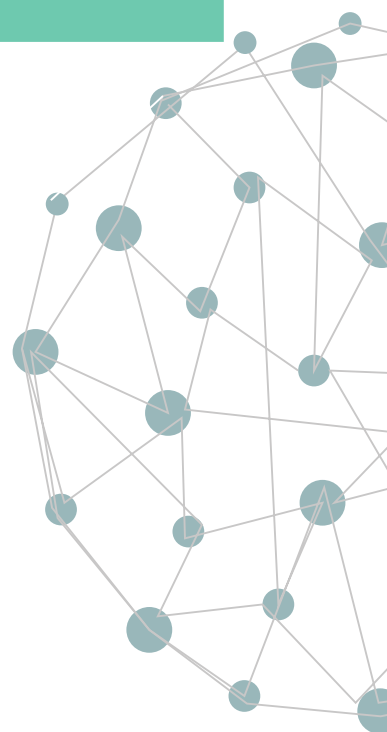
In summary, the standard:

1 Enables the representation of precise definitions of concepts such as Indicator, Outcome, Impact, etc., thereby reducing ambiguity in the interpretation of impact data.

2 Fosters interoperability amongst software providers and users, so that social purpose organizations, their investors, grant makers and network partners are able to understand and merge impact information from currently disparate datasets.

3 Makes the components of impact data interpretable by a computer system so that open source software and other technologies developed for big data can be applied to analyze and interpret the data collected and generated by social purpose organizations. This includes automating the detection of inconsistencies in data, as well as the causes of the observed variations.

Project Background

COMMON APPROACH

TO IMPACT MEASUREMENT

The impetus for this work arose during consultations of the Social Enterprise Impact Measurement Task Force, one of the key initiatives in Ontario's Social Enterprise Strategy 2016-2021. Stakeholders identified capacity and financial barriers to undertaking impact measurement effectively. In particular, the absence of a common approach to social impact measurement was singled out as a key impediment in the effective and efficient evaluation of the success of the social enterprise community. Stakeholders highlighted a desire for greater consistency throughout the sector to reduce measurement costs and produce comparable data. As a result, a consortium of academic institutions, nongovernmental organizations and other agents in the social services domain set out to work on formulating a Common Approach to Impact Measurement as a key component in the development of Ontario's Social Enterprise Strategy. The work has subsequently been funded as part of Canada's Social Development Partnerships Program (SDPP) and Investment Readiness Program (IRP), targeting a broader set of social purpose organizations (not just social enterprises) across Canada (not just Ontario).

FOR MORE INFORMATION:
COMMONAPPROACH.ORG/COMMON-IMPACT-DATA-STANDARD/