PART 02

THE PROBLEMS THAT AN IMPACT DATA ONTOLOGY CAN SOLVE IF WIDELY ADOPTED

COMMON APPROACH
TO IMPACT MEASUREMENT

Linking Impact Data: How a data ontology can ease impact data collection and analysis

This series of documents explores the data ontology—a crucial part of the digital infrastructure that will be needed to improve impact measurement in the years ahead.

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This document explores how a shared impact data ontology could help impact investors with their impact measurement. It describes the benefits that impact investors and their investees will experience if an impact data ontology is widely adopted. We focus on three benefits:

- Reducing the tedium and repetition of collecting and sharing impact data.
- Allowing investors to reconcile different impact measurement standards used by investees without imposing metrics on them.
- Providing a method for funds-of-funds to gain insights into underlying assets, enabling aggregate impact data across many funds.

KEY TAKEAWAY

Investors and investees have been building data exchange solutions for those two-party (investor-investee) relationships, but the resulting data exchange creates a lot of inefficiencies in the field. An impact data ontology creates the digital infrastructure that optimizes data infrastructure for the impact investing field.

An impact data ontology, if widely adopted, would go a long way to making impact data more informative and less burdensome

WHAT PROBLEMS CAN A DATA ONTOLOGY HELP SOLVE?

Reduce the tedium and repetition of collecting and sharing impact data, which burdens funders and investees/grantees alike.

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Allow funders and investors to reconcile different impact measurement standards used by investees/grantees without imposing metrics on them.

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Specific to investors, it provides a method for fund-of-funds to gain insights into underlying assets, enabling aggregate impact data across many funds.

INVESTEES

Investees spend a lot of time filling in forms, surveys and spreadsheets for their investors. They spend time and money adapting their impact measurement work to accommodate the needs and interests of their investors. If, instead, the system that the investees are using to collect, store and analyze impact data is based on the same ontology as their investors' systems, all this data can be shared at the click of a button, saving form-filling time and giving investors the meta-data they need to work with the metrics that the investees are already measuring. Both of these greatly reduce the burden on the investees.

INVESTORS

Fragmented data streams inhibit performance tracking, benchmarking, and reporting. A data ontology provides the cohesive architecture for a unified analysis of IRIS, SDGs, Impact Norms, GRI and additional standards. It provides the underlying detail that enables investors, and one day AI, to identify when two different metrics can be considered similar enough to aggregate. Investors using the same data ontology as their investees will be able to collect data from investees more easily. They will be able to collect more data, particularly contextual data and asset-level data, even when investing in funds and funds-of-funds. All of this will enable investors to analyze the data in powerful ways.

Key benefits include:

REDUCING THE TEDIUM AND REPETITION OF COLLECTING AND SHARING IMPACT DATA

The most common data-gathering tools are spreadsheet templates, surveys, forms and questionnaires, and software platforms. Each of these is designed to optimize the data exchange between two parties: an investee and their investor. However, investors have many investees, and investees have many investors. A solution that only optimizes data exchange between two parties results in a lot of inefficiencies for the field overall. An impact data standard optimizes data exchange for the field.

An impact data ontology works a bit like a universal template but without the template. It's a little bit like how the Dewey Decimal System is a universal organization system for bookshelves but without the bookshelf. Much like how the Dewey Decimal System allows a book to move from one library to another and still have a correct place on the shelf, an impact data ontology can help facilitate the exchange of impact data from the investee's software/database (no need to enter it into yet another form) to the exact right spot in the investor's software database (no need to wrangle multiple template submissions).

ALLOWING INVESTORS TO RECONCILE DIFFERENT IMPACT MEASUREMENT STANDARDS USED BY INVESTEES, WITHOUT IMPOSING METRICS ON THEM

Most investees mix and match metrics from different standards, and when they can't find a metric that resonates, they invent their own—and for good reason. Investees are the best situated to know which measurements are most relevant to the work they are doing. This bricolage approach allows investees to focus their measurement time and money on topics that matter most.

Many investors find that unless metrics are harmonized, it is a struggle to measure the impact of their portfolio. Investors sometimes require investees to track some KPIs chosen jointly with the investee. This optimizes for the two parties but not the field. However, investors often have limited power to require investees to adhere to a particular standard or track a particular metric. Other times, wary of being burdensome, many investors prefer not to prescribe.

An impact data ontology will make it easier to work with the wide range of metrics that their investees track. It does this by facilitating the exchange of contextual data about those metrics. In this sense, an impact ontology functions like the notes in financial statements. These notes can consist of data such as connections among standards, baseline data and the date the baseline data was collected, targets and the date by which the target is to be met, methodologies, sources, assumptions, estimates, etc. These are the kinds of impact information in an impact data ontology; there are fields in that universal template. And, because an impact data ontology would make it easier for data to travel from one software to another without typing it all out, it is easier to share and make sense of all this data—something that is almost impossible using forms and surveys. With a more complete dataset neatly organized into their databases, investors will be better equipped to analyze the impacts of their portfolios.

Figure 2.1 offers an illustration of how an impact ontology could help investors reconcile different impact measurement standards used by investees without imposing metrics on them. In the example, there is an IRIS Metric. The ontology includes a linkage to the relevant SDG and target (11.1) and the Impact Management Norm dimension of impact (What). It also specifies that this metric was selected by the investee using the G3 Materiality process. The investor has used the ontology to note that the IRIS metric used by one investee is similar to an OECD metric used by another investee. Not pictured is that the OECD metric could also be linked to SDGs, GRI, Impact Management Norms, Social Value International Principles and Impact Weighted Accounts as recommended by the International Foundation for Valuing Impact. A similar diagram could be drawn for an investee's custom metrics.

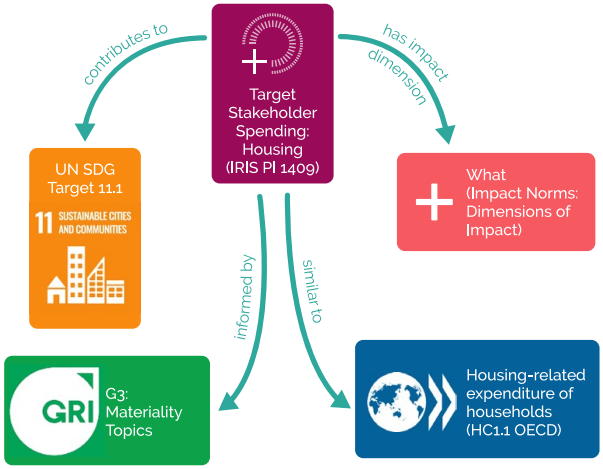


Figure 2.1

Funds-of-funds lack insight into the impacts of the underlying assets, making it near-impossible to aggregate the impacts of many funds. Many impact investors invest in funds that invest in impact-driven enterprises. These investors get their investee's impact summary but do not have good insight into the impacts of the underlying assets, namely the impact-driven enterprises. It is almost impossible to aggregate or reconcile summaries from many funds into a summary for an overall fund. With access to the impact reports of the underlying assets, aggregation becomes possible.

An impact data ontology is a crucial piece of digital infrastructure needed to enable funds-of-funds to collect asset-level data from the funds they invest in. The universal template means that the fund-of-funds does not have to somehow reconcile the bespoke templates used by each fund. Like books moving between libraries that use the Dewey Decimal System, the impact data will sort itself into the correct cells in the fund-of-funds database. We were careful to say that the impact data ontology provides a crucial piece of the infrastructure needed. Another critical piece that is not part of an impact data ontology is the data governance and privacy issues that would need to be addressed.

WHY NOT JUST STANDARDIZE ALL THE METRICS?

Standardized metrics are part of the solution, but investors also need to be able to accommodate non-standard metrics

DIVERSITY OF GOALS AND CONTEXTS

Each organization has unique goals, missions, and contexts. Standardized metrics can oversimplify, thereby failing to capture the range of impacts they seek to achieve. We find that harmonized metrics work best for impacts arising from reduced harm (reduced waste, reduced energy consumption, etc.) and least well for impacts arising from novel solutions.

SPUR AND INFORM INNOVATION

Standardized metrics can make it challenging to represent the impacts of novel innovations. Impact-focused organizations view their unique social and environmental performance as a competitive advantage. Too much standardization could diminish their ability to differentiate themselves based on their distinct impacts.

AVOID THE CORRUPTION OF KEY METRICS

It is widely recognized that the more important a metric becomes, the more it becomes corrupted. This is called Campbell's Law[1] or Goodhart's Law[2]. A limited number of well-defined metrics are more likely to encourage "gaming the system" by directing efforts toward easily quantifiable activities. Each organization's well-chosen relevant measures are more likely to lead to meaningful positive change.

HIGHER DATA QUALITY AS A RESULT OF RELEVANCE

Investors will get the highest quality data when investees share the metrics that the investee thinks matter most. When investees measure primarily for the purpose of reporting to an investor, the data quality is likely to be lower.

[1] *"The more any quantitative social is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor" Campbell, Donald T (1979). «Assessing the impact of planned social change». Evaluation and Program Planning. 2 (1): 67–90. doi:10.1016/0149-7189(79)90048-X*

[2] *"When a measure becomes a target, it ceases to be a good measure»*

The solution: digital infrastructure to accommodate metric diversity and multiple standards

An impact data ontology is a piece of digital infrastructure that, when implemented in software platforms, can help bring greater coherence and interoperability among impact measurement and management standards.

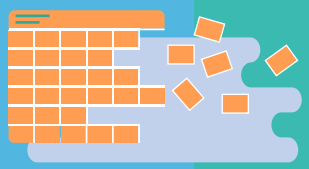
Investors and investees use an impact data ontology by using software that has the ontology in the background. A data ontology is coded into the platforms and software applications that impact investors and their investees use to collect, store, analyze and share impact data. Investors and investees should seek to understand data ontologies well enough to know how it will benefit them and to ask whether their software providers are aligned.

THE EASIEST WAY TO USE A DATA ONTOLOGY IS TO USE A SOFTWARE PLATFORM THAT HAS BUILT THE ONTOLOGY INTO THE BACKEND

"Data ontology" is a computer science term for the conceptual scaffolding that maps how data is organized. It sits behind the software platforms that funders and their investees and grantees use to collect, store, analyze, and share impact data. Investors and investees use a data standard by using an aligned software platform.

An example of an impact ontology is the

Common Impact Data Standard



Yes, this means giving up your spreadsheets!

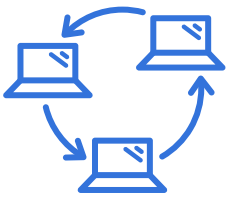
Future-you is not nearly as excited about your impact measurement spreadsheet as today-you.

Impact data is a web of many-to-many relationships. Spreadsheets do not store this data well. Their format limits the complexity of data that can be stored, which limits the analysis that can be done.

A well-developed software platform solves these problems

A data ontology, implemented in software, can help impact investors find new ways to get value from data.

Data represented using a data standard enables:



DATA INTEROPERABILITY

A data ontology allows investment funds to integrate impact data seamlessly into their existing software. Many investment funds already use data management systems to measure financial performance. When investors and investees both use software platforms aligned with the same impact data ontology, it becomes easy to share data without time-consuming data entry and duplication of effort.

ACCOMMODATING DIVERSITY

We need a data standard to create a common data architecture. Without this architecture, as more and more organizations embrace impact measurement, it fuels duplication across disconnected metrics. This makes analysis very frustrating. A data ontology provides a structured perspective to combining interoperable data layers. Definitional links between data types/forms help to identify aspects that are highly linked or similar, as well as areas that are disparate or dissimilar.

EFFICIENCY VIA IMPROVED DATA INTEROPERABILITY

Interoperability between investor and investee approaches around impact measurement and management requires better informational infrastructure. An ontology provides the missing layer, enabling flexible disclosure across frameworks while reducing additional reporting burdens.

ILLUMINATING UNDERLYING DATA SOURCES

Transparent assessment demands tracing impact data points back to sources and ensuring visibility around interpretations at each stage. An ontology systematically maps these interconnected data flows to enhance traceability and credibility as data is further analyzed and shared.

BETTER ANALYSIS AND DECISION-MAKING

Based on more consistent and reliable data, an ontology allows more nuanced data analysis, visualization, and risk management. It enables investment funds to identify patterns and correlations between impact indicators or even identify potential impact risks. This leads to more informed investment decisions and strategic planning, whether selecting projects to fund, evaluating the impact of an existing investment, identifying new development opportunities or mitigating impact risks.

COLLABORATION

A data ontology fosters collaboration and knowledge sharing within the impact investing community. The interoperability facilitates data sharing and collaboration among players (investors, investees, government, researchers, etc.). Greater data sharing can build trust and engagement through network effects, contributing to more transparency and accountability.

In short, this is how an Impact Data Standard can benefit impact investors

CHALLENGE	Impact Data Standard ENABLES...	RESULTING IN...
Gathering data from investees is tedious; it burdens investees and investors alike	Interoperability	Gathering data from investees is tedious; it burdens investees and investors alike
Investors do not wish to impose metrics on investees, yet they struggle to reconcile the different impact measurement standards and bespoke metrics their investees use.	Less burdensome data collection means that investees can easily share—and investors can easily collect—data about the data. This makes it easier to group and aggregate indicators that are similar, even if they are not identical.	Investors receive the information to reconcile different impact measurement standards. Investors better understand investee businesses.
Funds-of-funds lack insight into the impacts of the underlying assets, making it near-impossible to draw insights about the overall impact of the fund of funds.	Less burdensome data collection combined with interoperable data means that funds can share asset-level data with investors. Funds-of-funds get detailed data.	The person leading impact measurement at an impact fund will more easily be able to match standards and metrics.
		Better analysis and decision-making and better collaboration will enable improved impact management.

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Infographic WHAT IS A DATA ONTOLOGY?

PART 03 THE COMMON IMPACT DATA STANDARD: AN IMPACT DATA ONTOLOGY