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

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.

This document describes an example of an impact data ontology: the Common Impact Data Standard. It briefly explains why and how the Common Impact Data Standard was developed and who contributed. It outlines the particulars of this specific data ontology and provides examples of how the Common Impact Data Standard has been used in practice.

KEY TAKEAWAY

The Common Impact Data Standard is the leading impact data ontology (the only one used by more than one software), and investors can start using it by using aligned software.

A WORLD LEADER

The Common Impact Data Standard was first released in 2020. It quickly became the world's leading impact data ontology. The Common Impact Data Standard is the only impact data ontology that is published publicly and is free to use. It is the only one that has been through academic peer review. It is the only one that is created and governed by a nonprofit entity. It is the only one that is used by more than one software. There are currently a growing number of software platforms in the USA, Canada and Europe that have aligned with or are in the process of aligning with the Common Impact Data Standard.

CLICK HERE TO SEE A COMPLETE LIST OF ALIGNED SOFTWARE

CONCEPTUALIZED BY THE SECTOR

The idea of the Common Impact Data Standard arose from the recommendations of an impact measurement task force that included impact investors, social purpose businesses, evaluators, computer scientists, and software developers. The task force identified an impact ontology as a crucial piece of digital infrastructure needed to improve impact measurement and management.

DEVELOPED BY GLOBAL LEADERS

The Common Impact Data Standard was developed by leading data scientists at the University of Toronto in collaboration with experts from leading standards. This included weekly meetings with the Impact Management Project to represent the **Impact Management Norms** (now housed at **Impact Frontiers**). We also consulted with experts in XBRL and the Common Data Model.

EASY TO USE

Investors and investees use the Common Impact Data Standard by using aligned software. If you already use impact management software, ask them to align if they have not already!

When implemented into software platforms, the Common Impact Data Standard makes it easy to collect and share all this information so that impact measurement analysts can understand the full scope of their data.
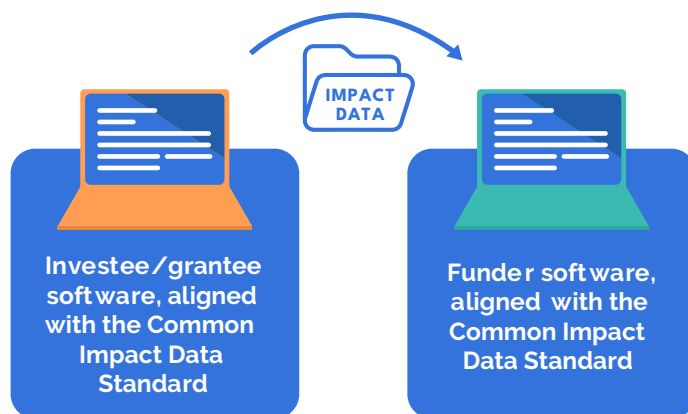

IMPACT DATA

Investee/grantee software, aligned with the Common Impact Data Standard

Funder software, aligned with the Common Impact Data Standard

Figure 3.1

When an investee uses a software platform aligned with the Common Impact Data Standard, there is a place for the investee to record all their impact information.

If the investor also uses a software platform aligned with the Common Impact Data Standard, all this information can be easily shared with the investor. (See Figure 3.1) It organizes neatly into the investors' impact database, giving the investor visibility into underlying assets and the data needed to conduct a strong impact analysis of the portfolio.

Aligned software platforms are equipped to export the impact data in the format of the Common Impact Data Standard. Some are equipped to import the files. This allows investees to send their file to their investors' software.

UNDERPINNED BY CONNECTIVE TECHNOLOGY

The Common Impact Data Standard enables aligned software platforms and, more importantly, their clients to represent their impact in ways that are aligned with the global consensus on impact measurement.

The Common Impact Data Standard is written in OWL (Web Ontology Language), a semantic web language used to represent rich and complex data with relationships. The use of OWL makes the data standard machine-readable, making it accessible and usable across various software.
⟶ Learn more: **https://www.w3.org/OWL/**

The Common Impact Data Standard uses JSON-LD, a platform-independent and standardized way of representing the data. A JSON-LD file contains all the metadata and relationships between the data objects. It helps combine, compare, and aggregate complex, multidimensional, and interconnected data. Think of it as a whole database in a text file.
⟶ Learn more: **https://json-ld.org/**

The Common Impact Data Standard helps investees to record data, and investors to collect data, in ways that make connections between different standards

The Common Impact Data Standard can be used to help investees to record, and thus allow investors to collect, data from different standards in ways that make the connections between them.

IMPACT MANAGEMENT NORMS

The Common Impact Data Standard, at its most basic, represents the five dimensions of impact as defined by Impact Management Norms (what, who, how much, contribution and risk) and **how** that impact is achieved (the drivers of impact). This 'how' dimension goes by many names, including impact pathway, a theory of change, logic model, log frame or impact thesis. We call it an Impact Model.
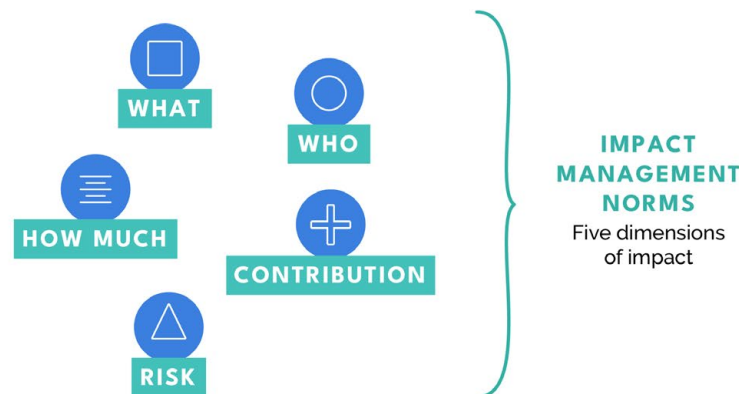
EFFORTS
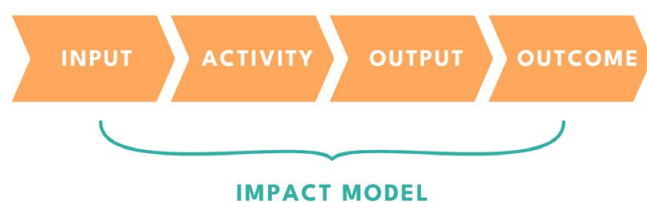
IMPACTS

Figure 3.2

DIFFERENT STANDARDS STANDARDIZE DIFFERENT THINGS; THE DATA STANDARD CONNECTS THEM

The main classes and properties of the Common Impact Data Standard are like a lattice that can be used to connect standards that work together. Figure 3.3 illustrates a small selection of the standards that can be linked using the Common Impact Data Standard.

- Within the **OUTCOMES** class, custom and standard outcomes can be recorded. COMET Outcomes Classification and IRIS+ Strategic Goals are examples of standard outcomes.
- Within **THEMES**, links to standardized themes such as the UN Sustainable Development Goals or IRIS+ themes can be recorded, and so can custom themes.
- In the **INDICATORS** class, IRIS+ metrics, GRI metrics, benchmarks used by the World Benchmarking Alliance, ISO indicators, and any other indicator, including custom indicators, can be recorded.
- **STAKEHOLDER CHARACTERISTICS** can include location using geographic standards and ethnic, racial, and gender attributes such as those defined by the census or some other source.
- Under **ACTIVITIES**, defined activities such as the International Classification of Health Interventions can be recorded.

LINKS TO OTHER EXTERNAL DEFINED TAXONOMIES

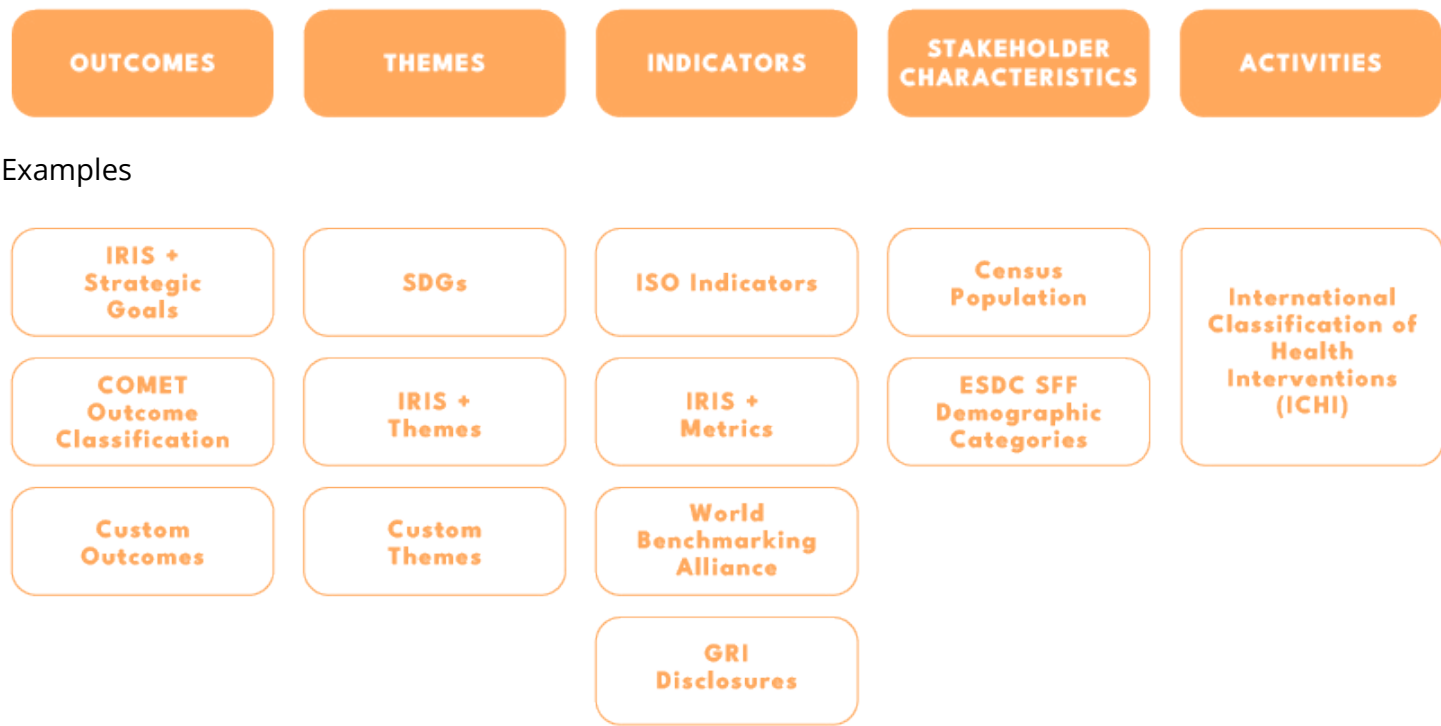The classes that can be linked to external taxonomies

Figure 3.3

AN EXAMPLE: A SINGLE METRIC CAN CONNECT TO MANY STANDARDS

Figure 3.4 illustrates what this looks like in practice. The outcome "provide high-quality affordable housing" and its indicator "resident expenditure on housing" are recorded with information that connects them to other standards.

The outcome "provide high-quality, affordable housing" is shown in green. The investee has identified connections to SDGs: the outcome contributes to SDG 11, specifically SDG Target 11.1. The investee might also choose to link their outcomes to IRIS+ themes. The data standard also records information about the stakeholders (residents) and relevant characteristics, such as average household income, region, and age.

The indicator "resident expenditure on housing" is identified as IRIS+ PI 1409. The indicator is noted to be similar to OECD HC1.1. Scale, depth and duration are identified. In the example illustrated in Figure 3.4, the indicator "number of residents in affordable housing" is used to assess the scale. The indicator "resident expenditure on housing" is used to assess the depth of affordability.

Each time the indicator is measured (each month, quarter, or year), an indicator report is created. That indicator report provides the date (and the format of the date, such as ISO date format), data sources, and any notes about the performance. In the example shown in Figure 3.4, the data source is administrative data.
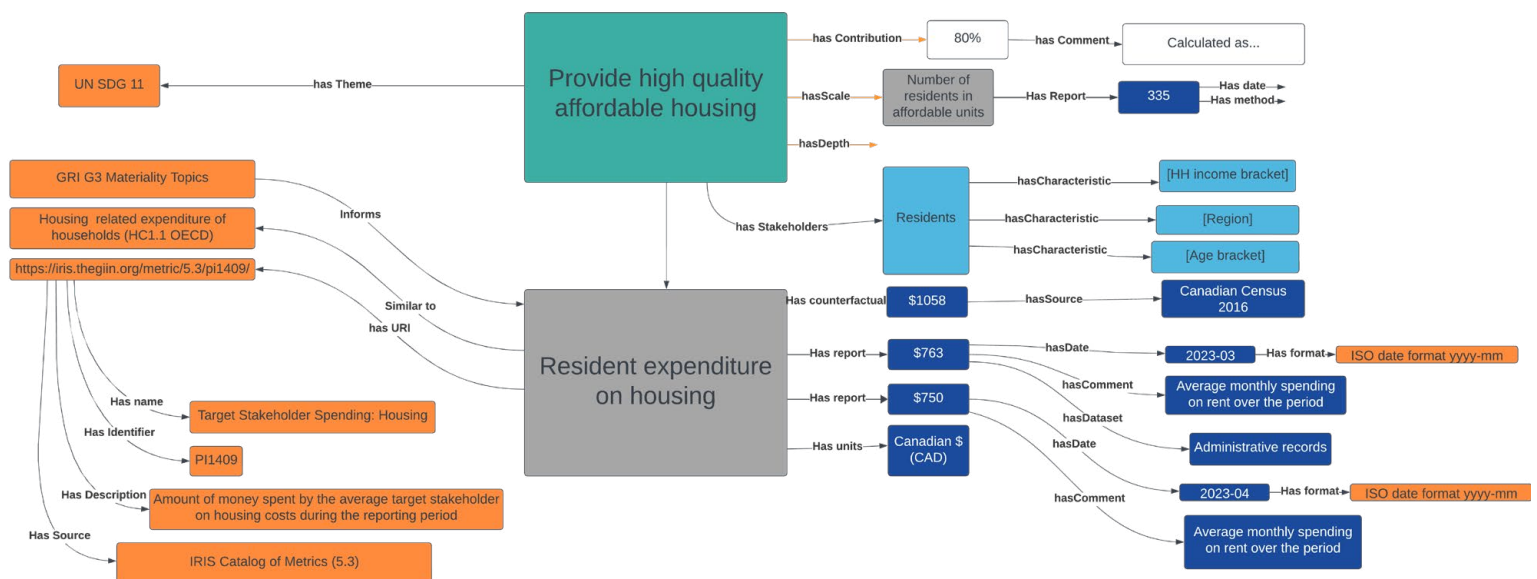

Figure 3.4
See next page for colour key.

Additional fields like baselines, counterfactuals, targets, thresholds, logic models, and geographic location are all able to be collected.

Using aligned software, an enterprise can easily share all this data with its investors without retyping it into a form. The impact investor would receive all this data in one simple import instead of wrestling with spreadsheets that require hours of data cleaning.

TECHNICALLY SPEAKING…
LET'S MOVE FROM THE EXAMPLE TO THE ABSTRACT

The Common Impact Data Standard is a scaffolding that can be used to make impact data machine-readable. It is made up of "classes" and "properties." Each type of information—stakeholder, outcome, etc.— is called a class. Some examples of classes are stakeholder characteristics, outcomes, and indicators. Each class would be a table in a database. Each metric, e.g. "resident expenditure on housing," is called an instance of the class. Each instance would be a row in that table.

The Common Impact Data Standard then defines each of these things and how they are related. For example, it defines indicators as being associated with one or more outcomes. It specifies that indicators can be drawn from an indicator library or can be custom indicators. It states that indicators can connect to vocabularies and taxonomies, like IRIS+, Impact Management Norms and others. It states that each time the indicator is measured, there will be a date, and that date will be in a certain format. It states that there might also be a data source and period that the measurement pertains to (e.g. a quarter, a month, a year) with a beginning date and an end date.
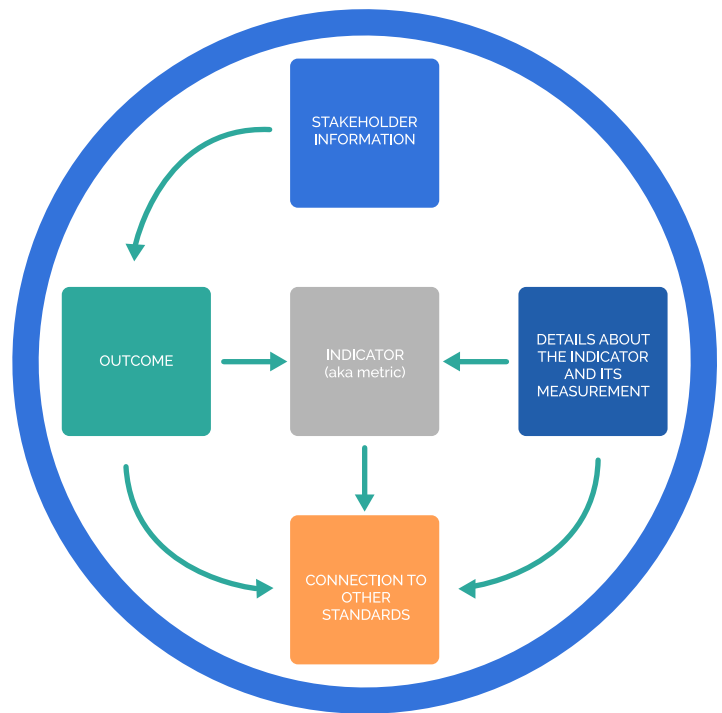

Figure 3.5

Figure 3.5 presents a simplified version of the Common Impact Data Standard to show how it connects types of information. We have also colour-coded the boxes to illustrate the indicator (grey), the associated outcome (green), each measure of the indicator, called the report (dark blue), and stakeholder characteristics (light blue). Orange identifies connections to the other standards. Arrows represent connections between the classes, meaning that an outcome has an indicator, and the indicator is for a stakeholder.

In short, the Common Impact Data Standard brings together data from different sources using different vocabularies and taxonomies and can integrate them into a cohesive dataset. It can help to align that data from different standards according to its defined concepts and relationships and help investors get a more holistic view of impacts.

The Common Impact Data Standard enables easier sharing and deeper understanding

The information captured and shared by the Common Impact Data Standard gives investors better data with more context, equipping more insightful analysis without burdening investees with additional data collection.

ONTOLOGIES ARE BETTER AT CAPTURING CONTEXT
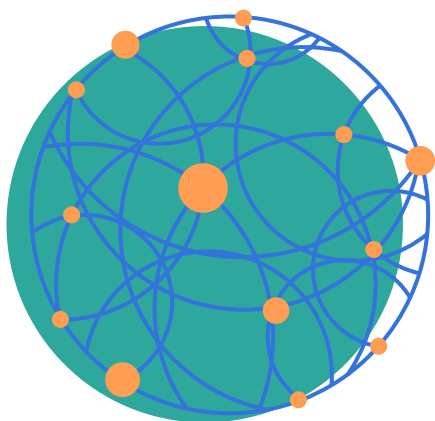
An impact ontology can do more than just knit standards together. It can also provide context data like methods, benchmarks, and data sources, giving greater meaning to data points. It can help illuminate relationships from activities to impact. It can enable funders and investors to trace impact through funds to underlying assets and affected stakeholders.

In short, impact ontologies are better for more complex and more voluminous impact data in ways that illuminate connections and insights, including across disparate standards and metrics.

CONNECT METRICS FROM DIFFERENT FRAMEWORKS

The Common Impact Data Standard can represent indicators from many indicator libraries. If an investee's indicator is the same as, or similar to, metrics from several libraries, all those linkages can be noted. This means that when an indicator appears in more than one standard indicator library, the investor can retrieve it by searching for either library.

Because the Common Impact Data Standard records these linkages, data is shared with asset managers in a form that allows them to pull from their portfolio all the metrics that are similar to IRIS PI 1409, for example.

Because the Common Impact Data Standard records if an indicator is a measure of scale, depth, or duration, the data is shared with asset managers in a format that allows the portfolio's metrics to be grouped and analyzed by scale, depth, and duration.

ANALYZE IMPACT USING DIFFERENT FRAMEWORKS

The Common Impact Data Standard enables the recording and sharing of many-to-many relationships between outcomes and themes. This equips asset managers who are doing impact investing to aggregate and analyze impact metrics by theme.

Any metric, outcome or theme can be associated with as many SDGs as are relevant, making it easy for investors to analyze the impact of their portfolio by SDG. An outcome can be associated with many themes, be they IRIS+ impact categories or an investor's list of priority investment areas. These associations allow the investor to analyze the impact of their portfolio by any of the thematic standards with only a few clicks.

MORE CONTEXTUALIZED DATA ANALYSIS

Enabling investees to effortlessly share the data that they already collecting gives the investors the contextual data needed to better interpret impact metrics without increasing the reporting burden on investees.

For example, the Common Impact Data Standard enables the recording and sharing of many-to-many relationships between outcomes and stakeholders, equipping asset managers to analyze their data by stakeholder group such as age, gender, and region.

EQUIPS FUNDS-OF-FUNDS WITH ASSET-LEVEL DATA

The Common Impact Data Standard helps funds-of-funds access asset-level metrics. Funds-of-funds struggle to measure impact based on the summaries of summaries of impact data that have been reported up the capital chain from enterprise to fund to fund to fund. The Common Impact Data Standard makes it possible, even easy, for enterprise-level data to be reported up the capital chain. This creates opportunities for more sophisticated analysis and more assurable data chains.

The Common Impact Data Standard is a crucial piece of digital infrastructure that is ready to use. It makes reporting easier for investors and investees

BENEFITS TO THE INVESTOR

Effectively use the metrics that investees track rather than require them to measure more.
The Common Impact Data Standard helps investors make sense of investee data. Many portfolios are comprised of investees that use indicators and metrics from different standards as well as their own bespoke indicators. The Common Impact Data Standard is a key piece of digital infrastructure that helps make sense of that diversity.

EXAMPLE

(see Figure 3.6) Fund C invested in Fund A - a portfolio of sustainable food systems—and Fund B - a portfolio of community lenders. Fund C's portfolio manager struggled to make sense of Fund C's impacts using the PDF impact reports produced by Fund A and Fund B. Using the Common Impact Data Standard, Fund A and Fund B were able to send to Fund C the underlying data from each enterprise. Fund C used this data to analyze the impact data by looking at the data of the impact-focused enterprise rather than the summaries produced by their investors.
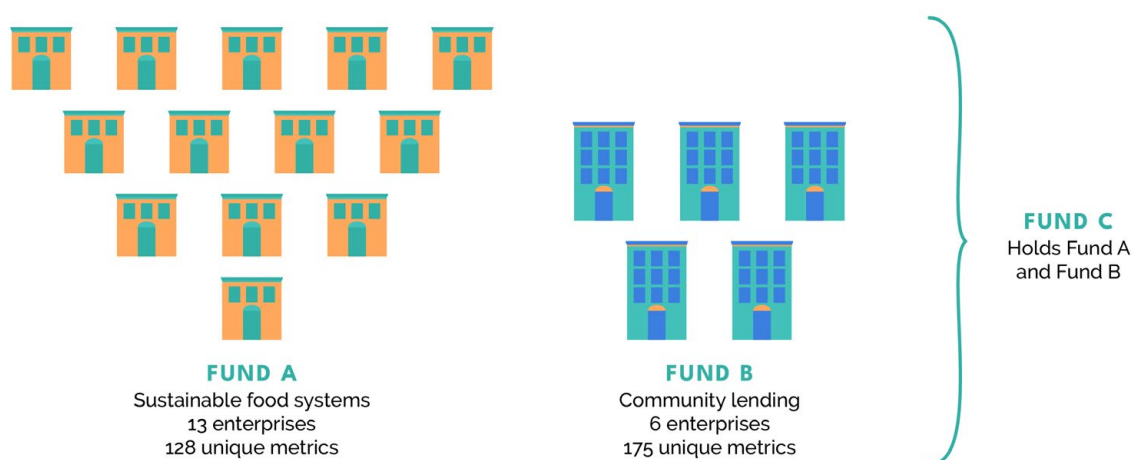
FUND A
Sustainable food systems
13 enterprises
128 unique metrics

FUND B
Community lending
6 enterprises
175 unique metrics

FUND C
Holds Fund A
and Fund B

Figure 3.6

Ditching fillable forms leads to more complete data.
Collecting impact data through forms or spreadsheet templates requires the investor to guess or prescribe what data investees should submit. Investees often have additional data relevant to the portfolio's impact. By using the Common Impact Data Standard to collect information, investors get more complete data.

EXAMPLE

(see Figure 3.6) When Fund B switched to the Common Impact Data Standard instead of collecting data through forms, they received more data from their six community loan funds. Fund B now has data about who is being served and how they are benefitting from the loans. The community loan funds had been collecting this data all along, but Fund B hadn't known about it and thus hadn't asked for it in their form. Fund B is now better able to articulate its impact.

Ditching fillable forms leads to more reliable data and saves investees' time.
Collecting data through forms or spreadsheet templates can lead to unreliable data. If investees do not routinely collect the desired information, they may need to estimate or approximate the data. We have even had investees tell us, "We just make that up because we don't collect that data, and the form doesn't let us submit it unless we enter a number." Instead, when investors collect data using the Common Impact Data Standard, they get the information that the investee has selected as important. This data will be of higher quality because it is the data that the investee believes is most relevant to their decision-making needs.

EXAMPLE

(see Figure 3.6) Fund C had been gathering data from several sources. Some investees sent Fund C their impact report. The portfolio manager had to comb through text to find relevant measures and copy and paste the text into a spreadsheet. Other investees sent spreadsheets that required extensive cleaning. For example, it had "214 people" in a single cell rather than having the value specified in one column and the unit of measure specified in another. Switching to the Common Impact Data Standard reduced the amount of labour involved in data collection.

BENEFITS TO INVESTEES

Easily port data.
Many investees access impact measurement and management software through their investors, who purchase a licence and then provide their investees with seats. This makes sense: investors are more likely to have the budget, and many—if not most—impact measurement and management softwares have been designed with this model. They sell to investors. The trouble with this model is that investees lose access to software when investors exit. The Common Impact Data Standard makes it easy for investees to port their data to new software platforms.

EXAMPLE

A community loan fund had investors provide them with a free licence to an impact measurement software. They were delighted to have free access to the software but were frustrated that the access only lasted for as long as the investment. The organization has had to learn several different software for several different investors and subsequently lost access to each one. They are frustrated by the time spent moving data from one platform to another. With the Common Impact Data Standard, their data can quickly and easily be ported to new software.

Software that suits; no more workarounds.

The software platforms that investors choose for themselves and their investees can be a poor fit for some investees, even if they are an excellent fit for most investees. This can create a needless administrative burden for investees. The Common Impact Data Standard can give those investees the freedom to choose the software that suits their needs.

EXAMPLE

A microloan fund was given a free licence to an impact software selected by their investor. The software was well-suited to many in the investors' portfolio, but not this microloan fund. This software had required fields that were not applicable to the fund. The investor directed them to simply enter fake data so that they could progress to the screen where they could enter their real data. Data entry doesn't get more needless than that! With the Common Impact Data Standard, this microloan fund can use the impact measurement software that suits their needs and effortlessly export that data in a format that will easily import into their investors' software platforms.

Build investees' own data capabilities.

Investees spend much of their impact measurement effort compiling data for their investors. When they are able to share data using the Common Impact Data Standard in a format that will easily import into their investors' software platforms, investees can spend their time focusing more on their own data capabilities.

EXAMPLE

An organic food seller spent so much time filling in investor forms that they had no time to invest in their own data capabilities. With the Common Impact Data Standard, they are, for the first time, considering what software would suit their needs.

CONTINUE TO:

PART
04   **REALIZING THE POTENTIAL**

Infographic   **WHAT IS THE COMMON IMPACT DATA STANDARD?**