INDIGO Hack and Learn: Technical and Learning Report

September 2023

BLAVATNIK SCHOOL OF GOVERNMENT
UNIVERSITY OF OXFORD
GOVERNMENT OUTCOMES LAB

Insper METRICIS
Center for Socio-Environmental Impact Management

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This report is part of the GO Lab-supported International Network for Data on Impact and Government Outcomes (INDIGO). The report aims at reflecting on the learnings and challenges from participants and challenge leaders of the September 2023 edition of the Hack and Learn event. This is not an academic research report nor is it an evaluation.

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Executive summary

This report reflects on the learnings and experiences of the participants of the INDIGO Hack and Learn event that took place between September and October 2023. Participants include attendees that participated in one or more teams, challenge leaders (team leaders) and co-host representatives. The objective is to collect all of these experiences in a single document, forming the basis for a discussion on how to move forward with different pieces of work, and how to design and improve future Hack and Learn events.

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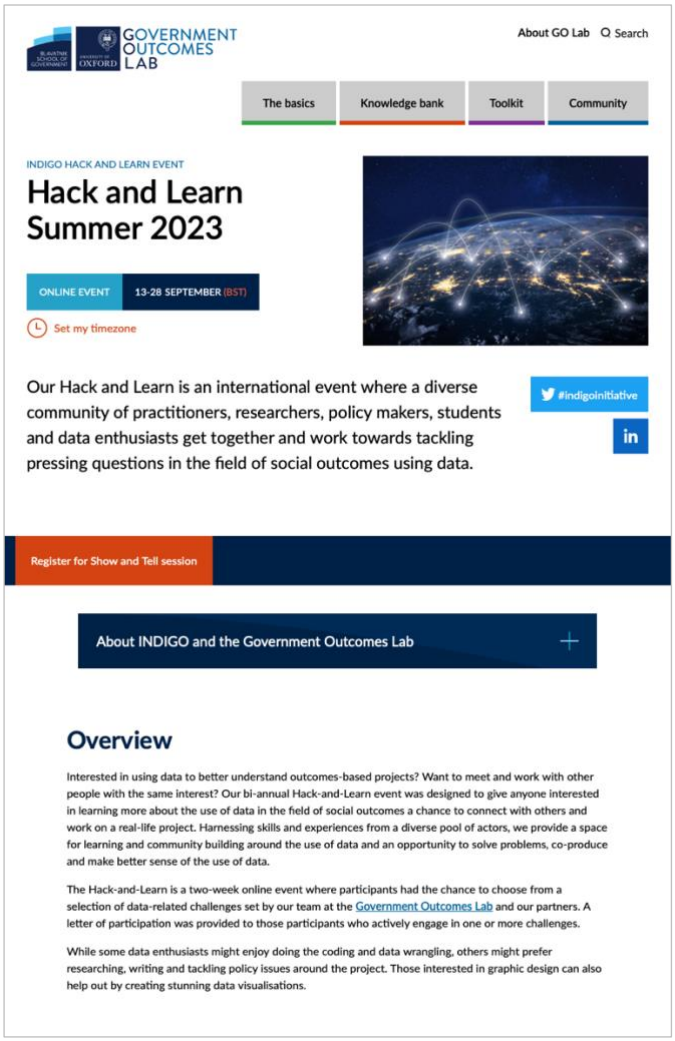
Introduction

The International Network for Data on Impact and Government Outcomes – INDIGO - is a community of researchers, policymakers and data enthusiasts who share an interest in using and reusing data on social outcomes. INDIGO is set up as a data and learning collaborative where different organisations share their data on a voluntary basis and learn from each other. The Impact Bond Dataset is an example of this collaborative approach. We believe that collecting more and better data on outcomes-based contracts and offering it to the community of practitioners in an accessible format is a key part of our mission.

In that context, our Hack and Learn events are one of our INDIGO engagement activities. We run these events twice a year and strongly encourage our friends and colleagues to join us for two weeks of hacking and learning. It is a unique opportunity to meet people from different backgrounds and collectively think of potential solutions to complex social problems. Participants include a range of policymakers, practitioners, students and senior researchers who bring their diverse perspectives to the table and co-create an output to share at the end of the event.

Figure 1. Invitation to our 2023 Summer Hack and Learn event



Who should read this report?

If you participated at our September 2023 Hack and Learn, you may wish to reflect on your own learnings, and those of your peers. In addition, as there is little time to think about other groups' projects in the intense two-week event, this is an opportunity to have a look at the work of others.

If you did not participate, this report offers a summary of two weeks of intense teamwork. You will find out about our initial proposal to participants, the work of each team, and the outputs they presented at the end of the two weeks. Some of the new teams might be developing ideas that align with your work and this report will help you identify them. We also hope that you will be inspired to sign up for the next Hack and Learn event.

What is a Hack and Learn event?

Hack and Learn events are one of our INDIGO engagement activities. The 'hack' part of the event refers to our data investigations. We test new ideas, experiment with different analyses and visualisations of the numbers, and seek to fill gaps in the data. The 'learn' part refers to our policy orientation and collective knowledge sharing. We bring together policymakers, practitioners, students and senior researchers who share an interest in solving complex problems in a data-driven way.

Figure 2. Image of our kick-off session on September 13, 2023

We kick off our event with a plenary meeting where we explain the available challenges to our participants. Each challenge has a challenge leader, who gets only 5 minutes to pitch their idea. After this, participants decide which team/teams to

join, and receive access to our Slack channel. Participants join as many group chats as they like. Generally, they actively work for one or two teams, but many are curious observers in other chats. In addition, participants have the opportunity to propose their own challenge. If they have a topic and some relevant data to work on, they can get 5 minutes to pitch their idea.

These teams then have two weeks to work on their challenge. The agenda is rather open: teams can develop a potential solution, use a pre-existing dataset to better understand a topic, or develop tools or prototypes to help practitioners with a particular problem.

After two weeks, we all get together at our Show and Tell session. Every team designates a presenter, who gets 10 minutes to tell the other participants what they worked on, which challenges and difficulties they faced, and how they plan to move forward with their work.

Figure 3. Image of our Show and Tell session on

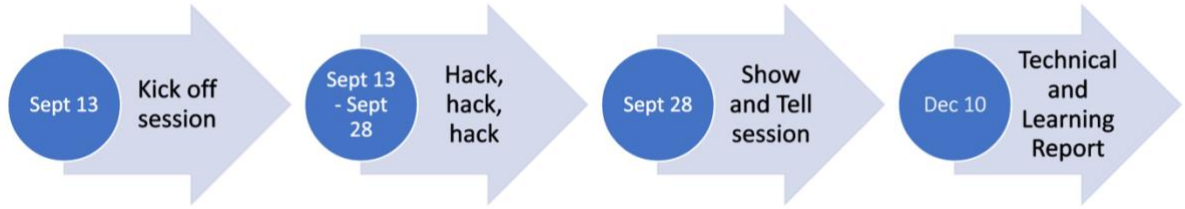
The end of the Show and Tell session is not the end of our Hack and Learn event. After the session, we invite all participants to share reflections on their experience at the Hack and Learn.

We have collated all these stories in this report, which will form the basis for a discussion on how to move forward with these different pieces of work, and how to design and improve future Hack and Learn events.

Our timeline for this Summer Hack and Learn

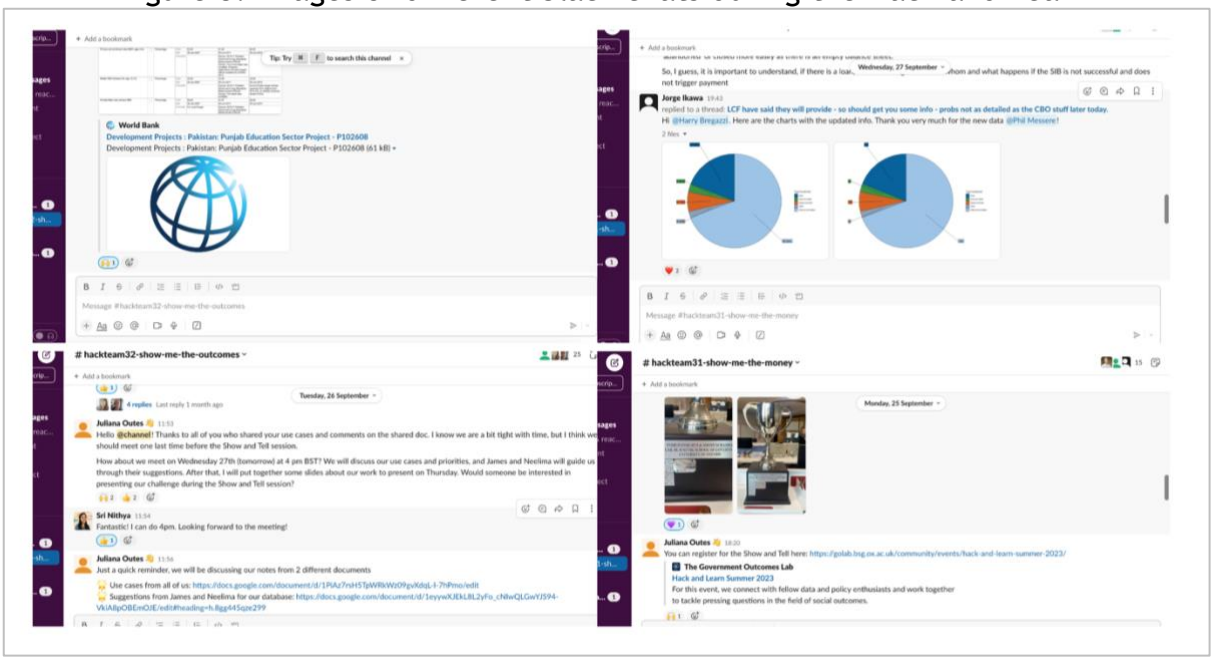
All of the challenges were carefully curated by the group of Hack and Learn co-hosts: INSPER Metricis (Brazil), the South African Medical Research Council (South Africa) and the Government Outcomes Lab (UK). Each of these co-hosts designated two or three representatives to participate in the event.

Figure 4. Timeline of Hack and Learn activities



The kick off session took place on 13 September and the Show and Tell session on 28 September. In those two intervening weeks, the different teams organised their work in such a way that every participant could contribute according to their time zone and availability. Every team had its own Slack chat where they could coordinate their asynchronous work. All the teams shared ideas, provided feedback for others, created data visualisation or undertook basic data analysis.

Figure 5. Images of different Slack chats during the Hack and Learn



Finally, before we get into the particular challenges, we want to give a special thanks our discussants. They are a group of expert researchers on these matters, who kindly attended our final session and provided feedback for our participants: Dr Elaine De Gruyter, post-doctoral researcher at the Government Outcomes Lab, and Jonathan Ng, Senior Legal Counsel with the United States Agency for International Development (USAID). If you would like to watch the recording of this final session, you can access it here.

Our challenges

Together with the co-host partners, we prepared two challenges for our participants.

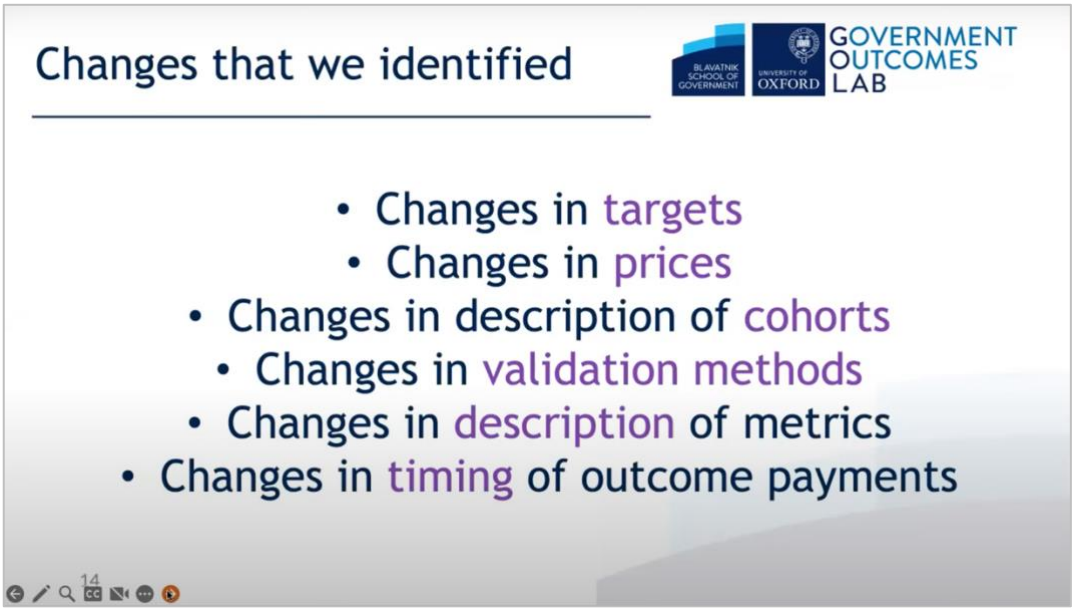
1. **Show me the money! A data harvest of impact bond funding arrangements.** Some of the trickiest variables to reliably gather and accurately record in INDIGO regard a project's financial details. This challenge was an attempt to improve our knowledge on one such key variable – the type of capital used in impact bond projects. There are typically two funding streams: (1) the upfront capital used to fund the service; and (2) the payments made by the outcome payer to the investor, including any returns. We commonly use the language of 'investment' when discussing these structures. But in reality, are impact bonds actually arranged as an equity stake? As a debt? Might they better be understood as a series of grant funding exchanges? This challenge is an attempt to get under the shiny wrapper of impact bonds and find out what's going on inside. We will collate the existing information we have on the type of capital used in the INDIGO projects, and then initiate a data harvest - contacting key stakeholders to ask them about the nature of the 'investment' arrangement in their project. Gathering this data will give us a better understanding of how the capital used in impact bonds is arranged, and will allow for critical reflection on the purpose, advantages, and disadvantages of using innovative funding approaches to fund public services.

Figure 6. Image of challenge 1 presentation during Kick off session

2. **Show me the outcomes! Rethinking our data model to capture the evolution of projects over time.** In this challenge, we worked to rethink the data model and design more complex data visualisations that can show how projects' achievements compare not to one, but to several targets. This work

opens further questions around the relational nature of these projects: How and why did projects renegotiate their targets? How and when do they change metrics, prices or other aspects of their programmes? And, most importantly, are these adjustments beneficial to the service users and their outcomes? During the Social Outcomes Conference 2023, we will release one version of the data visualisations on outcome achievements. The target for each outcome is set using data from a project's preliminary best-case scenario forecast. However, comparing targets and achievements at this point might be tricky. As stated, the data released is only interim. Most of the Life Chances Fund projects are yet to finish, and none of them are expected to have achieved the overall target yet. Some of these projects have renegotiated their targets several times (both up and down). We will work together to tweak and improve our INDIGO data visualisations to make sure that they tell a more comprehensive story about the life of impact bond projects.

Figure 7. Image of challenge 2 presentation during kick off session



Our learnings

The aim of Hack and Learn is not just to improve data in the field, but also to share learnings with others. At the end of the two weeks, we hosted a Show and Tell session on 28 September at 1.00pm BST for each team to share their reflections and outputs. Along with our partners, we collated these lessons and shared them in this section.

Challenge 1: Show me the money! A data harvest of impact bond funding arrangements

This section was written by Jonathan Ng, Senior Legal Counsel at United States Agency for International Development (USAID)[1] and GO Lab Visiting Fellow of Practice, and Harry Bregazzi, Postdoctoral Research Fellow at the Government Outcomes Lab.

The financial details of impact bonds represent a major gap in the INDIGO database. As of November 2022, the variables 'outcome pricing' and 'maximum potential return', all have less than 5% coverage (Nagarajan, 2023).

Challenge #31 was an attempt to improve our coverage and understanding of one such financial variable – 'investment type'. Investment type is defined in the INDIGO data standard as follows: 'identifies whether [the] investment qualifies as debt, equity or a combination of both' (INDIGO, no date). We therefore sought to answer the question: 'what kind of funding capital is used in an impact bond structure?'

An impact bond involves at least three main parties: the service provider; an upfront funder (or 'investor'); and the outcome funder. As such, this question contains two components: (1) the type of funding provided by the upfront funder (investor) to the service provider; and (2) the type of funding provided by the outcome funder to repay the upfront funder if outcomes are achieved.

While this challenge began with a simple question, complications soon presented several challenges to effective data collation. Before describing the experience, it is first worth explaining *why* the matter of funding capital is of relevance for policy and practice.

Debt, equity, grants, or something else: Why it's important

Impact bonds use the language of investment. However, it is generally unclear what the nature of the 'investments' are, so confusion pervades discussion of the matter. As often remarked, they are called impact *bonds*, but they are not, in fact, bonds. Similarly, when we talk about an upfront funder as an 'investor' seeking to 'make a financial return on its investment,' do we mean 'profit'? If so, where does the profit come from? If it comes from the outcome funders' willingness to repay the upfront funders a little more than what they provided initially, then isn't that simply a success fee? Or does the profit come from the upfront funder making an actual

[1] The views and analysis expressed here are the authors' alone, and do not represent USAID or the US Government.

financial investment in the service provider through equity or debt, where the service provider generates profit as a return on the equity or repays the loan with interest? If so, then what is the point of the outcome funder? And is equity even possible given that most service providers are non-profit organisations?

Though seemingly matters of technical detail, understanding the financial arrangements underlying impact bonds has important policy implications. Principally, it relates to the costs and benefits of 'innovative finance' in public service provision and ensuring that assessments are based on a clear understanding of the innovation. Does structuring the funding as a financial product introduce complication and costs without sufficiently compelling benefits?

Answers to that question will differ, of course. Either way, the assessments and critical discussion ought to be grounded in a clearer understanding of how the funding of impact bonds is arranged. In this challenge, we aimed to contribute to that clarity.

What we did

The team adopted three strands to investigate the type of funding capital used in impact bonds: (1) we examined the existing data recorded in INDIGO; (2) we searched published evaluations of impact bonds to see if they provided detail on the type of funding capital used; and (3) we sought to solicit additional information from project stakeholders.

(1) What we found - Existing data

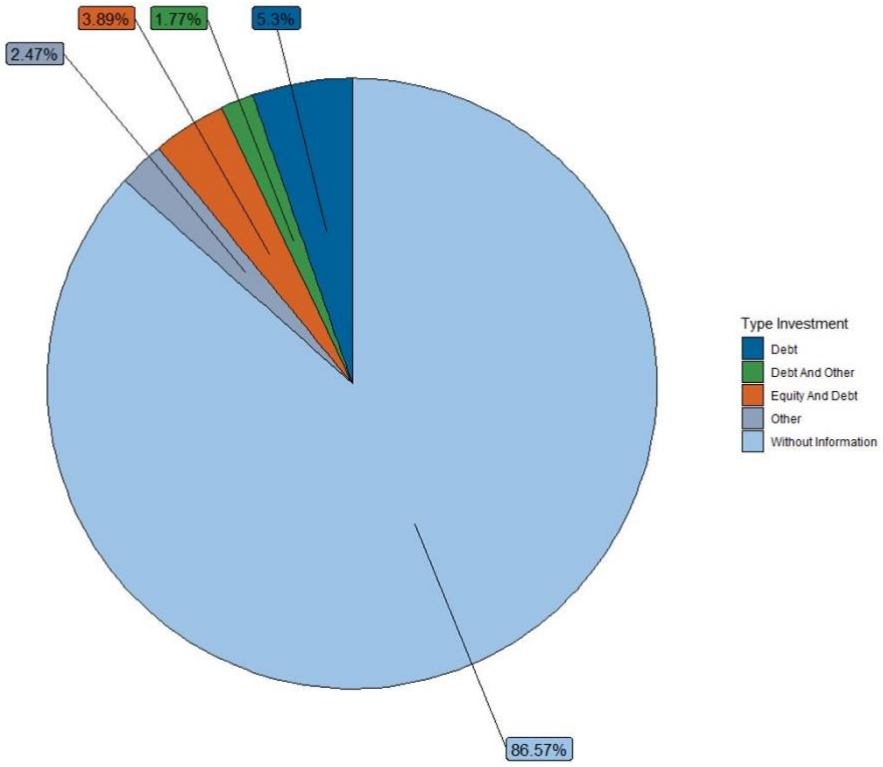
The INDIGO impact bond dataset currently includes 283 projects.[2] Of these, we found that only 38 had recorded information for 'investment type'. Although the pre-defined categories were 'debt', 'equity', or 'combination', it became apparent that a much more diverse terminology has been used to describe the investments. Here is a list of all the additional terms that were recorded in the existing data:

- Quasi-equity
- Senior debt
- Senior loan
- Subordinate debt
- Subordinate loan
- Convertible loan
- Deferred services
- Recyclable grant
- Philanthropic investment
- Grant
- 0% maximum potential loss
- Deferred fees
- Commercial (subordinate)
- First loss
- Capital preservations (senior)
- Investment from endowment
- Investment with debt characteristics
- Risk share payment in case of underperformance

We investigated the definitions of these terms, and established which could be placed under the heading 'debt', which under 'equity', and which could not be clearly categorised as either ('other'). This allowed us to make a first visualisation of the investment landscape as recorded in the impact bond dataset (Figure 8). None of the projects were recorded as having only 'equity'. This may not be a surprise, due to the status of most of the service providers as non-profits. It does raise the question, however, of how the equity is arranged for those projects that do have at least a proportion of equity (alongside debt) in their funding arrangement.

[2] Figure accurate on 23 October 2023.

Figure 8. Initial record of 'investment type' for 283 impact bonds in the INDIGO dataset.



(2) What we found – published evaluations
Using the GO Lab's systematic review evidence-base, the team drew up a list of published impact bond evaluations, and searched within them for any additional information on type of funding capital.

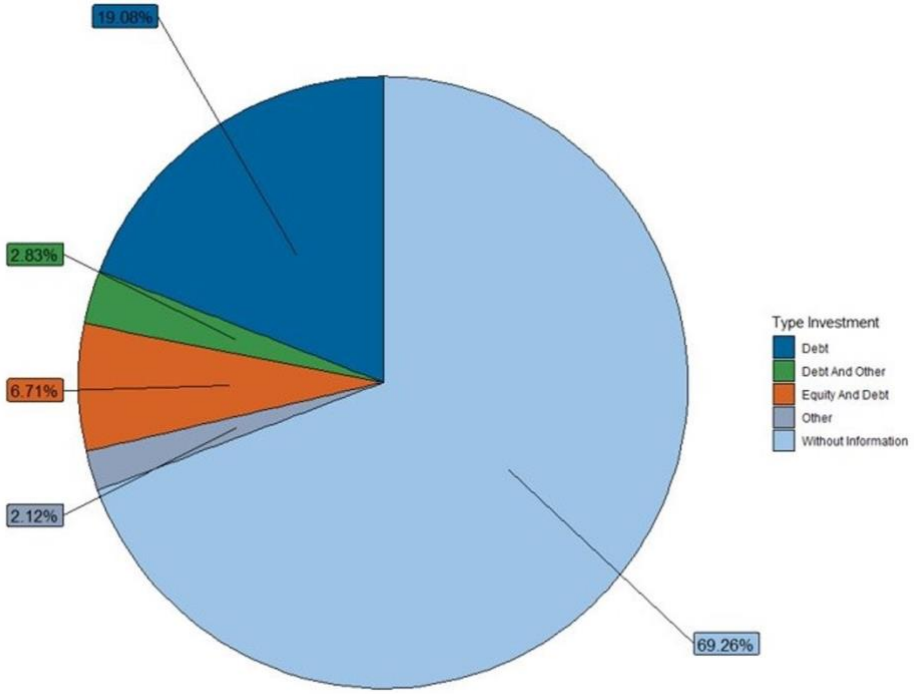
Of the evaluations that we read, there was very little information provided on this. The only projects for which we did find explicit information on the type of funding capital used were ones for which the information was already recorded in INDIGO, and thus did not add anything further to our dataset.

Beyond that, we found some instances of information that hinted at the capital arrangement – but the detail was not sufficient to confidently record 'debt' or 'equity' in INDIGO. There was too much ambiguity. Overall, it appears that the type of funding capital used is not readily reported in published evaluations of impact bonds. Note, however, that in the two weeks of the Hack and Learn Challenge we could not be exhaustive in our search strategy of published material. A longer-term review would be required to achieve a comprehensive search.

(3) What we found – stakeholder intel

One member of the challenge team was a stakeholder in multiple UK-based impact bonds.[3] As such, they were able to provide us with information on investment type for an additional 53 projects – more than doubling the coverage for this variable in our data set. Adding the new information to the existing record, we revised our original visualisation of the investment landscape (Figure 9)[4].

Figure 9. Updated record of 'investment type' for 283 impact bonds in the INDIGO dataset.



As can be seen in the updated figure, the pure 'debt' category increased to account for well over half of all the recorded projects. The combination categories ('debt and other'; 'equity and debt') also increased, though proportionally less than pure debt. As with the initial data, none of the updated projects were funded with pure 'equity'.

Another member of the challenge team highlighted the possible risk of being too simplistic by claiming that a loan is by definition a debt instrument. For example, a shareholder loan made to a special-purpose vehicle (SPV) is administratively agile to manage, yet if the impact bond does not meet the agreed outcomes, the loan to the SPV will not be reimbursed and hence, despite the label "loan", it is in substance an "equity" type of capital.

[3] The team had initially planned to contact multiple stakeholders. Data protection regulations meant that the GO Lab were unable to distribute contact details among the team, however, so we were not able to do so.

[4] Due to time availability, we have not triangulated this information with other sources. We would welcome the opportunity to discuss investment types with other investors, fund managers and intermediary organisations.

Commentary

Clarity of terminology
More clarity and simplicity are needed regarding the diverse terminology used to describe 'investment type' in the existing data as listed above. Given the variety of terms used, INDIGO could seek to provide clear definitions of each, whilst also trying to simplify (e.g., where different terms are used to designate the same thing, they could be combined under a single category). Further investigation of the details of different types of funding arrangement is also required, including those in the 'other' category. For example, to what extent does 'other' simply mean grants or other grant-like contributions?

Furthermore, as a mechanistic interpretation of labels to type of investment may not capture the underlying nature of capital, it may be helpful to develop processes and procedures to check with involved stakeholders that available information is interpreted correctly.

By understanding the type of funding capital used in impact bonds, especially what kind of funding is provided by the upfront funder (investor) to the service provider, we can better assess the veracity of the claim that impact bonds help bring in new capital from private sector investors, including institutional investors. To what extent are upfront funders also using their own commercial capital (compared to philanthropic capital through an affiliated foundation)?

Debt and equity: More questions
The information uncovered during this challenge prompts a number of normative policy questions.

Regarding the debt categories:

- Why is a loan from an upfront funder (lender) an appropriate way to provide the initial funding needed by a service provider? If the purpose of upfront funding is simply to enable the service provider to begin its work, how is a loan better than a grant?
- If the service provider is responsible for paying back the loan, then what is the purpose of the outcome funder? And is this contrary to one of the intentions of an impact bond where the financial risk is borne by the upfront funder (lender)?
- If outcomes are achieved, and the loan is creatively designed such that the outcome funder pays back the principal plus interest to the upfront funder (lender), is the added complexity of such a design necessary?
- If outcomes are *not* achieved, and the loan is creatively designed as a forgivable loan so that the upfront funder (lender) still bears the financial risk, is the added complexity of such a design necessary?
- To what extent does the process, including legal documentation, for a loan add extra costs for the overall transaction, and additional burdens on the service provider?

Regarding the equity categories, as mentioned above, most service providers are non-profit organisations, and therefore cannot offer equity shares. Even when equity

may be possible, institutional investors find it unappealing to be asked to provide equity (and risk losing the capital) and yet be offered a capped return. Several questions follow:

- Why is an equity investment from an upfront funder (investor) an appropriate way to provide the initial funding needed by a service provider?
- In what kinds of interventions and what types of sectors are equity investments feasible?
- If outcomes are achieved, and the upfront funder (investor) can successfully exit its investment by selling its stake for a profit, then what is the purpose of the outcome funder?
- Or if the equity investment is creatively designed to keep any profits within the service provider, and the outcome funder instead provides a return to the upfront funder (investor), then is the added complexity of such a design necessary?
- To what extent does the process, including negotiation over valuation and pricing, and legal documentation, for an equity investment add extra costs for the overall transaction, and additional burdens on the service provider?

A provocation: A case for grants?
When it comes to the type of funding capital used in an impact bond, it remains unclear why the added complexity of using debt or equity funding would be better than using grant capital. Grant funding (or grant-like contributions) seems more appropriate and straightforward than debt or equity. This includes providing a grant (or grant-like contribution) by the upfront funder to the service provider to begin its work. It also includes providing a grant (or grant-like contribution) by the outcomes funder to repay the upfront funder. If outcomes are achieved, the upfront funder's 'return on investment' comes in the form of a success fee as part of the outcome funder's grant. In this case, an impact bond can be characterized more simply as a creative reallocation of grant or grant-like capital between the outcome funder, upfront funder, and service provider.

Challenge 1: Comments from participants

"In this Hack and Learn, I specifically contributed to the 'Show Me the Money' challenge, by aiding the review of literature sourced by GO Lab's SyROCCo Machine Learning tool. The tool helped us to identify over 70 relevant sources, from its bank of 2,000 academic and grey literature publications – read more about this tool here: https://golab.bsg.ox.ac.uk/community/blogs/the-hitchhikers-guide-to-syrocco/.
Unfortunately, this was not a fruitful document search, with us unable to find any concrete funding arrangement classifications for detailed projects. At best, we could only source hints to classifications. For me, as a Data Officer within the team, this exercise underscores the need for better clarity regarding funding arrangements, alongside wider improvements in data transparency within the sector. It also highlights the importance of those practitioners who are currently striving to uphold open data practices. Without such, we would not have made such appreciable headway in this data collection task – collecting funding classifications for 54 INDIGO impact bond projects from an industry contact!" ***Eve Grennan, Data Officer at the Government Outcomes Lab, October 2023.***

"I was part of the "Show me the money" challenge. We aimed at collecting data and classifying the investment types into debt, equity, or a combination of both. It was not an easy task. Firstly, due to the data availability. Secondly, the classification between debt and equity is not so clear. The financial world seems more complicated, and trying to fit all the investment types in some pre-defined boxes is not so simple. It was an interesting challenge! My focus was to classify the available data from the Impact Bond Dataset. As a result, I produced figures showing how complete the data is considering the investment type, and the proportion of investments classified as debt, equity, or a combination of both. I'm looking forward to being part of the next Hack-and-Learn!" ***Jorge Norio Rezende Ikawa, INDIGO Data Steward in Brazil, October 2023.***

Challenge 2: Show me the outcomes! Rethinking our data model to capture the evolution of projects over time.

This section was written by Juliana Outes, Senior Data Steward at the Government Outcomes Lab, and James Baster, Developer at Open Data Services Coop.

This challenge was inspired by the questions: how do social impact bonds adapt to unexpected changes in circumstances? And how can we make sure that we collect data that represents those changes? After our work with the data release from the Life Chances Fund[5], we realised that social impact bonds face challenges. For the most recent impact bond projects in the UK, the main challenge was the COVID-19 pandemic. For other projects, challenges include lack of referrals, unexpected changes in service delivery, and difficulties with measurement and monitoring systems, among others.

When projects face these problems, the main stakeholders get together to find a solution. Using the flexibility that the impact bond model allows, some of these projects have renegotiated their targets (both up and down), included more service users in the cohort (or excluded service users), included or excluded outcome metrics, brought more stakeholders into the partnership, changed the type of service that they were delivering, etc. These changes show how the flexibility of the model operates in practice. At the same time, these changes become an issue for the INDIGO Data Stewards.

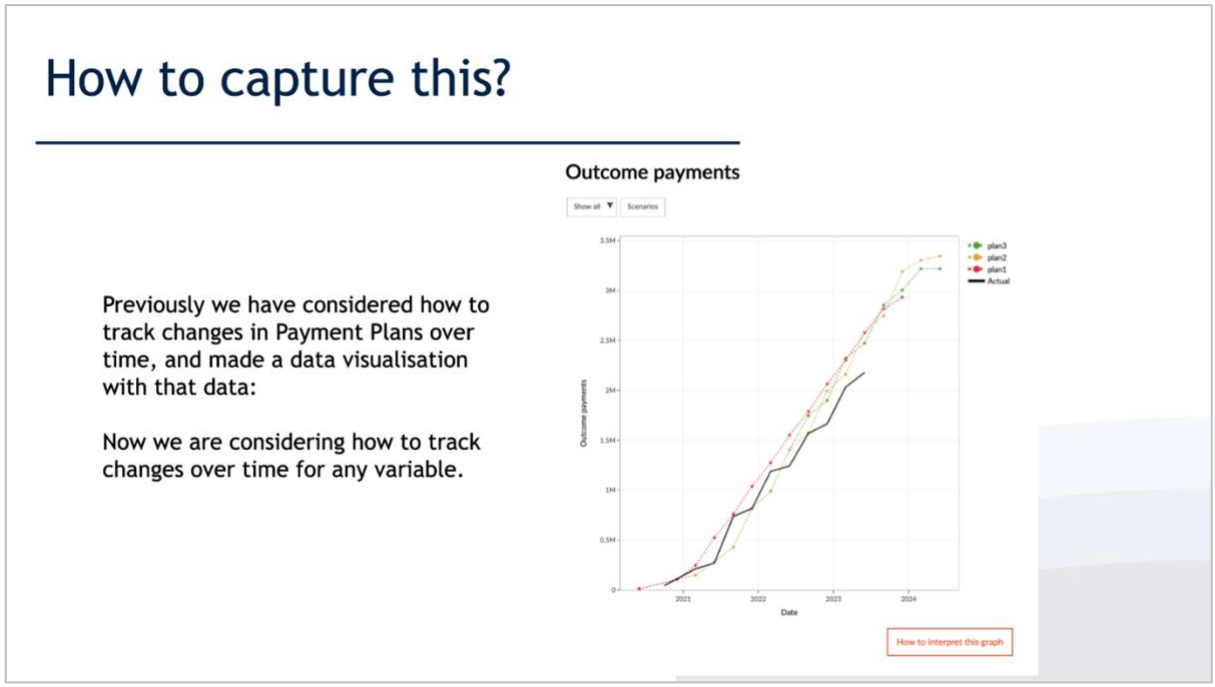
As of November 2023, for every variable of the INDIGO Impact Bond Dataset, the Data Stewards can only input one value. If a project decides to change the size of the cohort, the Data Steward will access the database, remove the old value, input the new value and save the change. This means that the INDIGO Impact Bond Dataset is not keeping track of old values, it is just capturing the latest value that we know of. In sum, the Impact Bond Dataset cannot tell the whole story of some of the impact bonds where we know that several changes have occurred. The goal of this

[5] The Life Chances Fund (LCF) is an £80m fund, committed by the UK central government to help people in society who face the most significant barriers to leading happy and productive lives. The Government Outcomes Lab is the official evaluator the Life Chances Fund. More information on the GO Lab's role with the LCF can be found here: https://golab.bsg.ox.ac.uk/about/outcomes-based-contracting/life-chances-fund-lcf-evaluation/

Hack and Learn challenge was to explore different ways in which we could keep track of changes and be able to tell a full and honest story.

Previously, we have set up a system to track changes in Payment Plans over time. This has allowed us to produce visualisations that shows multiple plans, so people can see the projects initial plan and final plan; and evaluate the project fairly. However now we considered how to track changes for any variable, and what this would mean for the data set.

Figure 10. Outcome payment plans (dotted lines) versus actual outcome payments for a social impact bond project – prototype data visualisation.



We met several times with members of the team, and also with the Open Data Services Cooperative, who provide technical assistance for the Hack and Learn event.

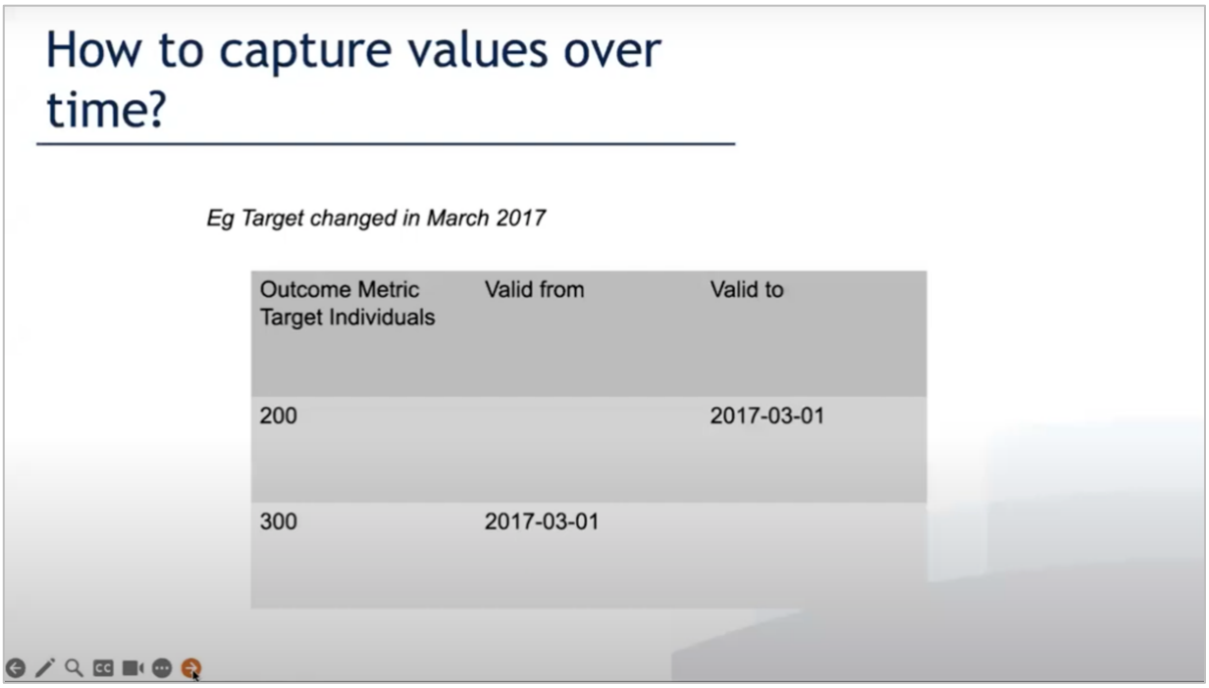
We learned about bi-temporal databases. These databases offer the possibility of associating two different dates for a particular value. We already track when a value was recorded in our database - this is important so we can trace the source of data and ensure its correctness. Adding a second date value could be useful for the INDIGO Impact Bond Dataset, as it would enable us to keep track of both when we found out about a change and when the change actually happened. Often, we do not find out about a change till long after it happened, so we need to record both dates. Bi-temporal database systems are often used in other places for the same purpose, such as financial reporting systems.

For instance, if a project was working with 200 people, and they decide to work with 300, we would be able to capture the change, and specify that (Figure 11):

- From the beginning of the project up to March 2017, the project expected to work with 200 people.

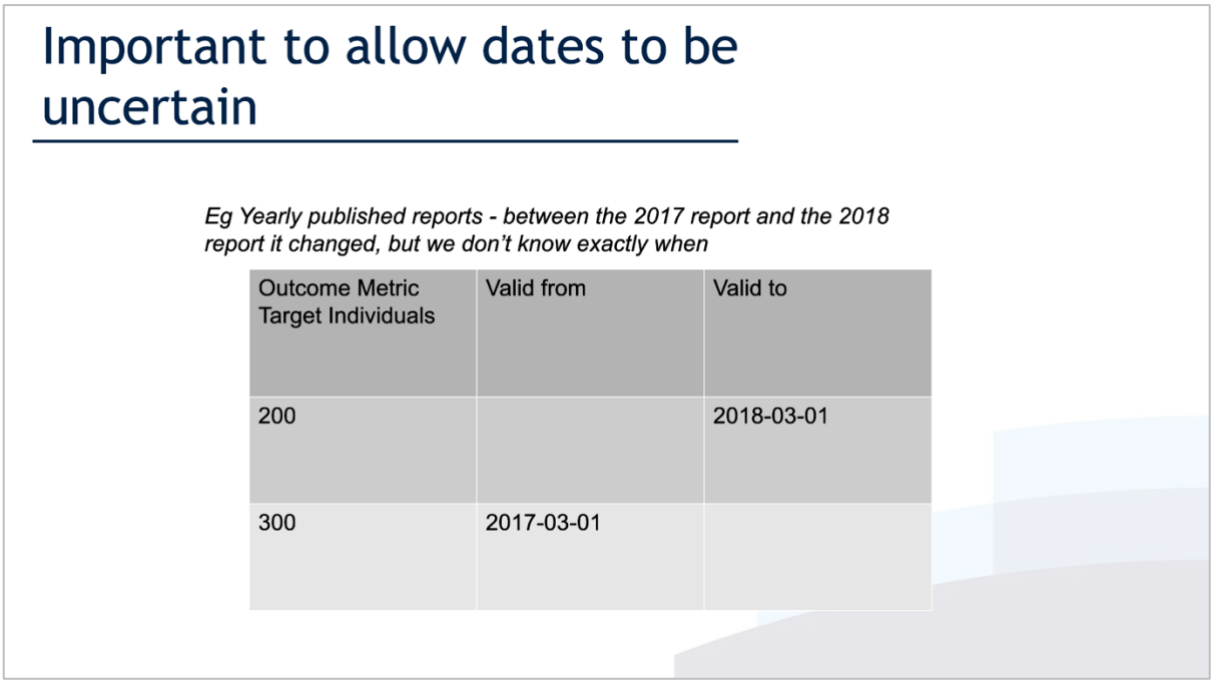
- From March 2017 to present, the project expects to work with 300 people.

Figure 11. How to capture values over time with bitemporal databases? Presentation of challenge 2 at Show and Tell Session



It's also important to be able to capture ambiguity in the dates, as we may not know exactly when a value changed. For example, a project may publish yearly reports and we may see that between the 2017 report and the 2018 report a value changed, but we don't know exactly when. We thought about ways that can be expressed by allowing overlapping dates

Figure 12. Importance to allow uncertainty around dates in the INDIGO database



We noted that a bi-temporal database makes data contribution, entry and use more complicated, and it is important to make the data as easy to use as possible. We discussed different ways in which we can make it easy for people to contribute data and see data, such as simpler forms, how the data stewards can help people contributing data, and how people can read data with simpler values but be signposted to more complex data if it is available and they want to see it.

We believe that this type of database would enable us to tell a comprehensive story about impact bond projects. However, we also spent time thinking about the advantages and disadvantages of changing our database to a bi-temporal one. Participants reflected on the fact that the new database would be capturing changes correctly, but would not be offering any data on why those changes happened. The team considered that it is equally important to understand what changes and *why* it changes when it comes to cross-sector partnerships and impact bond models. If the database does not offer any data on the reasons behind the changes, there is a considerable risk of misinterpretation or misjudgement of these projects, which the INDIGO initiative does not want to encourage.

After our conversations about the risk of misinterpretation, we discussed approaches to recording and highlighting why something changed, such as using sources and note fields, using documents for longer writing, recording narratives about the changes and including documents with data download, to make sure that INDIGO users can access both quantitative and qualitive data. These actions could be done whether we move to a bi-temporal database or not.

We also discussed reasons in favour of changing to a bi-temporal model. A data model that encourages people to think in this way and record data in this way acknowledges the complexity of projects and sets expectations on how to think about these projects and how to evaluate these projects. The data model tells

people what date we consider important, and what it is good practice to capture, and so we should make sure it is as fair as it can be to projects. People may see basic data about projects and jump to unfair conclusions, and having complete data helps guard against that.

Also, by having data in standard form, it is possible to create visualisations like the example earlier and set up evaluations and comparisons (when fair methodologies have been agreed).

We will continue this conversation as it speaks to the core of the INDIGO initiative. One of the main roles for INDIGO is to set a data standard for impact bond projects to share data with a broader community, and this conversation really tackles the question of how a data standard can be a good tool to achieve this. Is it worth keeping track of changes as one more good practice to follow? Is this adding a burden to projects which already have other burdens? Can we share the reasons for the changes to data to avoid misinterpretation from users? All these questions remain unanswered and will be great questions to kick start another Hack and Learn challenge in 2024.

Challenge 2: Comments from participants

"In the 'Show Me the Outcomes' challenge, I collaborated to enhance the data model's ability to visualize the progression of projects over time. I tried to show other contexts where evolution from other projects is captured in the data model, such as in the World Bank repository. Additionally, I examined a use case where a crucial step - the evaluation of projects - might undergo alterations due to evolving contractual agreements. Throughout this endeavour, I came to appreciate the intrinsic value of all information, particularly in comprehending how projects evolve and how commissioners and other stakeholders adapt to potential challenges. In sum, I believe this task is ongoing, and our objective should extend beyond merely displaying changes; we must also endeavour to elucidate the underlying reasons that instigate them." ***Gabriel Luis Lourenço Caetano, INSPER Metricis (Brazil), October 2023.***

"The imperative to preserve historical data within the GO Lab's Impact Bond dataset for numerous projects was the driving force behind the Summer Hack and Learn 2023 challenge, entitled "Show Me the Outcomes." This time-stamped historical data, alternatively phrased as data documenting changes across multiple outcome variables throughout the lifespan of an Impact Bond, represents an invaluable resource not only for me as a Data Officer at GO Lab but also for the broader community of practitioners and researchers who regularly utilise the Impact Bond dataset.

Currently, all updates pertaining to an Impact Bond are stored within a specific field and are overwritten each time a change occurs. Consequently, any historical information is rendered untraceable within the existing relational database. This framework does not allow for comprehensive time series analysis, which would provide critical insights into the true narrative of a project's evolution.

During the intensive two-week collaborative session, in-depth discussions and insights were exchanged regarding the most effective methods of data capture. A notable highlight of this challenge was the suggestion to modify the database architecture into a bi-temporal database. As a Data Officer, I recognise the significance of this proposal; nevertheless, I harbour concerns related to resource availability, feasibility, the time value of the effort required, and the potential impact of such a substantial restructuring.

It was mutually agreed upon that the extent of overhaul needed was substantial, primarily because the data with this desired level of granularity could only be achieved for a select few projects. Although this discussion has been instrumental in shedding light on the feasibility of preserving historical data, the focal point of our deliberations remains the depth and breadth of information that the data should encompass. Enhancing the data's quality emerged as an extended discourse.

*Furthermore, the idea of capturing qualitative narratives from the projects to create a more comprehensive story surrounding the relationships and lifecycles of Social Impact Bonds (SIBs) gained traction. These two weeks undeniably unveiled numerous potential opportunities to enrich and expand the Impact Bond dataset, resulting in a more detailed and comprehensive resource." **Madhu Chauhan, Data Officer at the Government Outcomes Lab, October 2023**.*

"I participated in the challenge "Show me the Outcomes" and looked at how social impact bonds adapt to changes. The virtual kick-off engagement was held on 13 September 2023 and concluded with 25 team members two weeks later. During this period, an online media platform enabled the sharing of ideas that were further discussed during contact sessions on how to change the Impact Bond Dataset model that will influence its current Impact Bond Dataset shared online through the GO Lab website.

The team's focus was how to better capture the evolution of the impact bond projects in the data model over time when there are changes such as changes in targets, prices, payment timing, cohorts, inclusion or exclusion metrics or even validation methods. Updates and adaptations can also be required due to changes in stakeholders, unforeseen cost, low levels of delivery resulting in incentives/KPIs for providers, or adjustments in financial, metric, or outcomes after an interim evaluation.

During the deliberations, the following types of adaptations appeared to be priorities for future changes to the data model: changes in the outcome metric targets, changes in outcome prices, changes in cohort beneficiaries and inclusion/exclusion of new metrics.

*Given that the SAMRC is in the beginning of the implementation of the Imagine SOBC, I found the contribution from more experienced team members very useful. Although changes in data collected and reported for impact bonds might not be ideal, the importance of having changes documented and notes added in the Reporting template was emphasised as the challenge was concluded." **Petro Rousseau, INDIGO Data Steward in South Africa, October 2023**.*

"We help organisations across the world to use data standards to drive social change – for example tracking aid and humanitarian spending, managing climate and disaster risk, and mapping fibre optic broadband infrastructure. When we begin working on a new data standard, it's crucial for us to understand what a data initiative is trying to achieve. What change is the project seeking to make in the world? When that's clear, we work to understand if a data standard is the right tool. What information do data publishers have? What needs do data users have? Does the data standard provide a fair representation of the domain and the work in it? What analysis is - and isn't - possible with that data? And what tools do people need to use that data effectively?

This discussion touched on all these ideas, and it's really great to see people thinking about the INDIGO project in so much depth. I'm really looking forward to continuing these discussions!" ***James Baster, Open Data Services***

Looking forward

What are we doing next?

At the GO Lab, we believe that learning with the community is a key part of our work. Keeping in touch with our participants is a key priority. Our Slack channels will remain active through the year, and we will keep sending invitations to learning activities or other opportunities through that channel. Those who expressed an interest in being added to our mailing list will be included in the INDIGO mailing group and receive invitations to peer learning sessions and other events.

Finally, we are now planning our next Hack and Learn event for March-April 2024. Your feedback and learnings will be used to design and improve this event. If you want to share your thoughts with us or suggest new challenges, you can send us an email to indigo@bsg.ox.ac.uk

I am interested in being part of INDIGO, how can I contribute?

INDIGO is a diverse community of peers with an interest in better data for better social outcomes. You can help us grow our community by attending our quarterly peer learning sessions, joining future Hack and Learn events and signing up for our mailing list. If you prefer social media, engage on Twitter using @golaboxford and #indigoinitiative.

If you are involved in the delivery of an impact bond project, you can share data with us. Email us at indigo@bsg.ox.ac.uk if you if have any questions.

References

INDIGO (no date) *INDIGO Data Standard documentation*. Available at: https://indigo-data-standard.readthedocs.io/en/latest/data-dictionary/project.html#investments (Accessed: 20 October 2023).

Nagarajan, S. (2023) *Whose data is it anyway?*, *The Government Outcomes Lab*. Available at: https://golab.bsg.ox.ac.uk/community/blogs/whose-data-is-it-anyway/ (Accessed: 20 October 2023).