Technical and Learning Report INDIGO Hack and Learn

September 2021

BLAVATNIK SCHOOL OF GOVERNMENT
UNIVERSITY OF OXFORD
GOVERNMENT OUTCOMES LAB

Insper Institute of Education and Research
Inspiring to Transform

UNIVERSITY OF CAPE TOWN
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ASHOKA UNIVERSITY

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 2021 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 August and September 2021. 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.

Both participants and challenge leaders have expressed that this activity was full of learnings. In particular, participants enjoyed the possibility of networking with an international community of people who share the same interests. They also valued the opportunity to gain first-hand experience at data analysis through the challenges, allowing them to develop their data skills. For some participants, these challenges generate new interests, such as data science or outcomes-based contracting as an innovative way of solving complex problems.

Challenge leaders, who tend to be more experienced than participants, used this opportunity to test ideas, advance a piece of work or get new perspectives on an ongoing project. They also valued the possibility of improving their team and project management skills.

Finally, both participants and challenge leaders were motivated by the opportunity to have an active role in our 2021 Social Outcomes Conference. While it was many participants' first time taking part in an academic event, challenge leaders seized the opportunity and networked with other researchers and colleagues.

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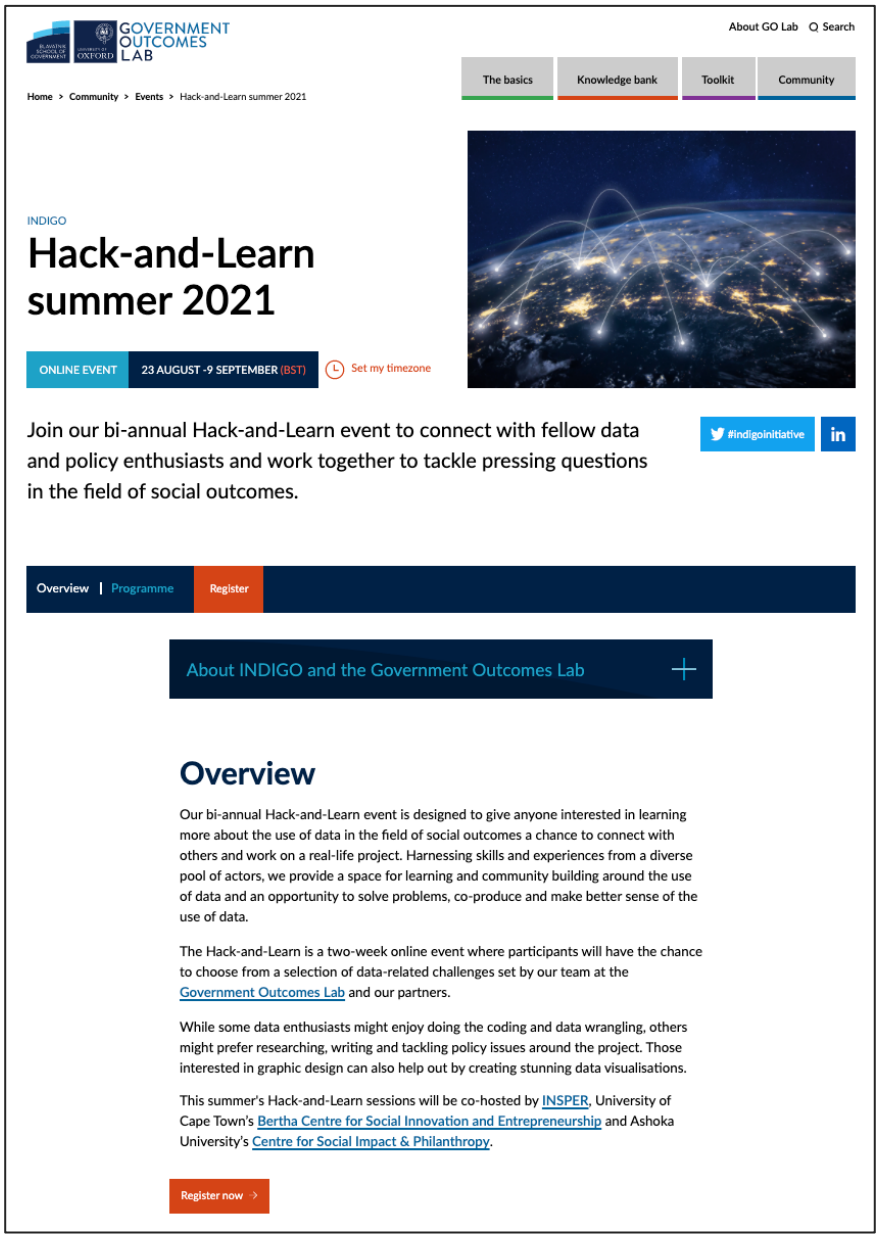
Introduction

The International Network for Data on Impact and Government Outcomes – INDIGO - is a community of researchers, policy makers and data enthusiasts who share an interest in using and reusing data on social outcomes. The INDIGO initiative includes community activities, a system for sharing data and various datasets available as open data on the GO Lab website. We believe that bringing together peers from different countries and policy domains with an interest in analysing data and creating new insights 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 2021 Summer Hack and Learn event



Who should read this report?

If you participated at our September 2021 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!

What is a Hack and Learn event?

Our Hack and Learn events are one of our INDIGO engagement activities. Even though the name includes the word 'hack', the event is not a hackathon. Hackathons are usually associated with computer programmers and software developers, or tech-related professions. Instead, our event focuses on the word 'learn'. 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 August 23, 2021

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 get only 5 minutes to pitch their idea. After this, participants decide which team/teams to

join, and receive access to our Slack channel. Participants joined 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 with their challenge. The agenda is rather open: they 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. In the next section, the descriptions of these challenges will provide good examples of how varied the outputs of the event can be.

After two weeks, we all get together at our Show and Tell Session, which for this edition was part of our 2021 Social Outcomes Conference. Every team designate a presenter, who get 10 minutes to tell the other participants what they worked on, which challenges and difficulties they faced, and how they planned to move forward with their work.

Figure 3. Image of our Show and Tell session during the Social Outcomes Conference

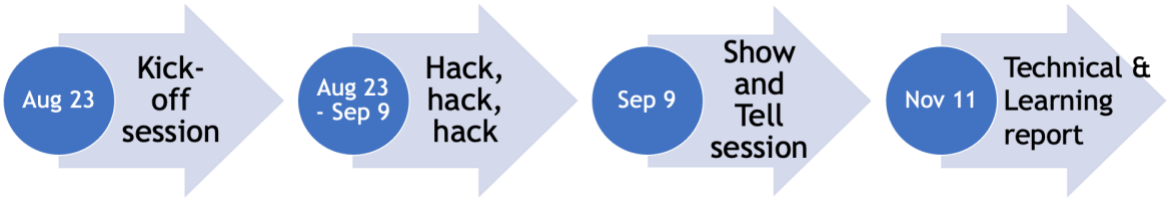
The end of the Show and Tell session is not the end of our Hack and Learn event. After the session, we invited all participants to share a short story about their experience at the Hack and Learn.

We have collated all these stories in this report and aim to present this to our INDIGO community at our next peer learning session, on November 11, 2021. This report 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

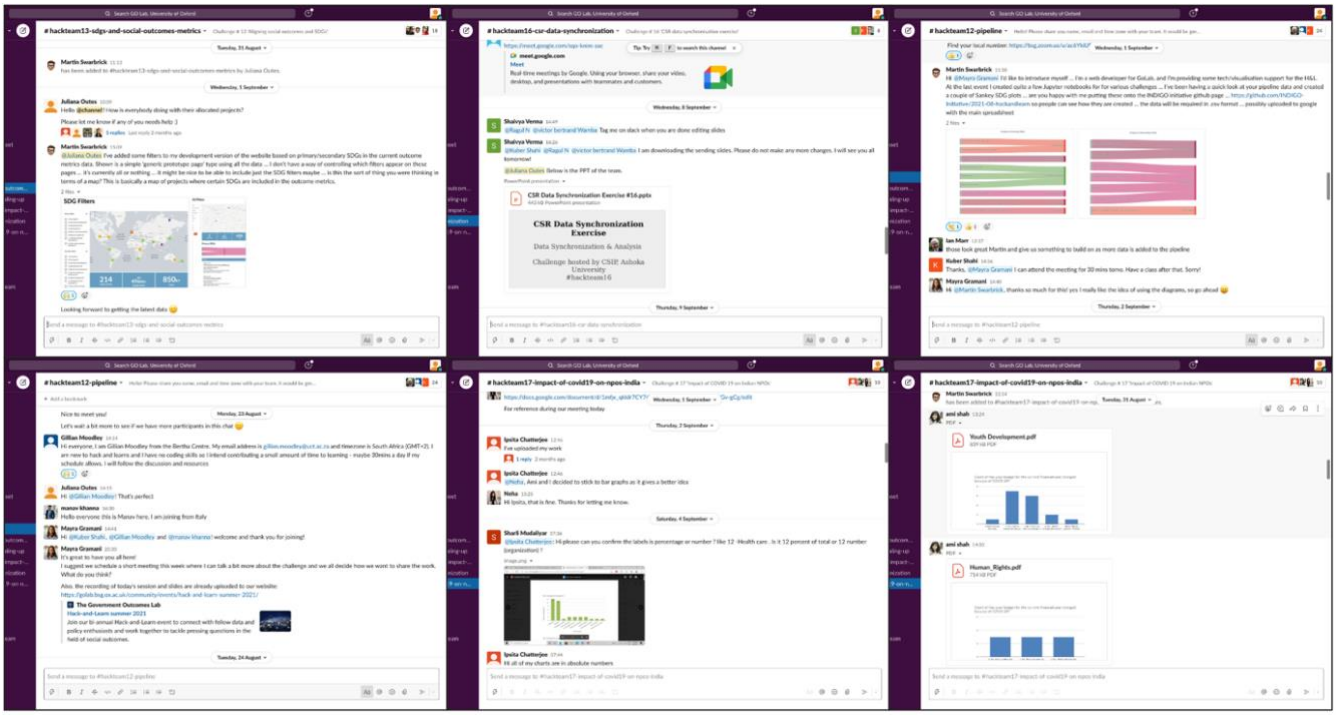
Except for challenge seven, which was a suggestion from Crowd Funded Cures, all of challenges were carefully curated by the group of Hack and Learn co-hosts: INSPER Metricis (Brazil), the Centre for Social Impact and Philanthropy of Ashoka University (India), Bertha Centre for Social Innovation and Entrepreneurship (South Africa) and the Government Outcomes Lab (UK). Each of these co-hosts designated two or three challenge leaders who would be in charge of leading the different teams. While some challenges were exclusively led by a particular co-host, other challenges were jointly led by two co-hosts, such as the 'SDG challenge' or the 'Pilot projects and scale up versions'.

Figure 4. Timeline of Hack and Learn activities



The kick off session took place on August 23 and the Show and Tell session on September 9. In those two 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 worked hard for two weeks and actively participated in their chats: they shared ideas, provided feedback for others, created data visualisation or did 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. Toby Phillips, Executive Director of the Oxford Covid-19 Government Response Tracker, provided feedback for teams 1 and 2. Leandro Pongeluppe, Ph.D. Candidate in the Strategic Management Department at Rotman School of Management - University of Toronto, provided feedback for teams 3 and 4, while Swati Shresth, Research Director at Centre for Social Impact and Philanthropy - Ashoka University, gave suggestions to teams 5, 6 and 7. If you would like to watch the recording of this final session, you can access it here.

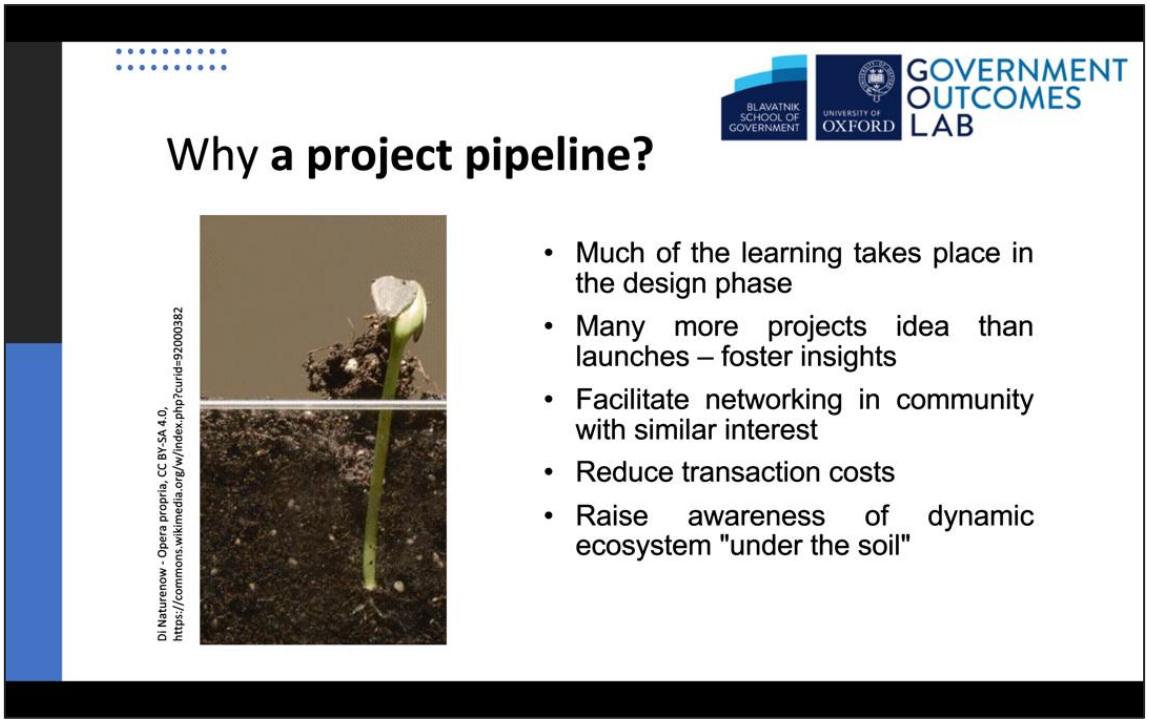
Our challenges

Together with the co-host partners, we prepared six challenges for our participants. All of them had one thing in common: they aimed at improving our understanding of a complex social problem. Some challenges were focused on outcome-based contracts, while other were designed to analyse the impact of the COVID-19 pandemic in not-for-profit organisations or looking at some basic data visualisations for corporate social responsibility in India.

A few days before our kick off meeting, one of our participants contacted us and offered to run a new challenge about using an innovative financial mechanism to realign incentives towards Public Good medicine. Crowd Funded Cures designed and led on challenge seven, where participants explored if a social impact bond mechanism was could incentivise drug repurposing in the pharmaceutical industry.

1. A pipeline of upcoming outcome-based projects (also called 'the project nursery'): During the last Hack-and-Learn (March,2021), one of our teams built a series of variables and data definitions for a new dataset about upcoming outcome-based projects. This time, the team decided to go even further. They wanted to play around with some real data from early design stage projects and produce a prototype report on these upcoming projects. The idea was to test some data and data visualisations to explore what this pipeline dataset would look like.

Figure 6. Image of pipeline challenge initial pitch during the kick off session

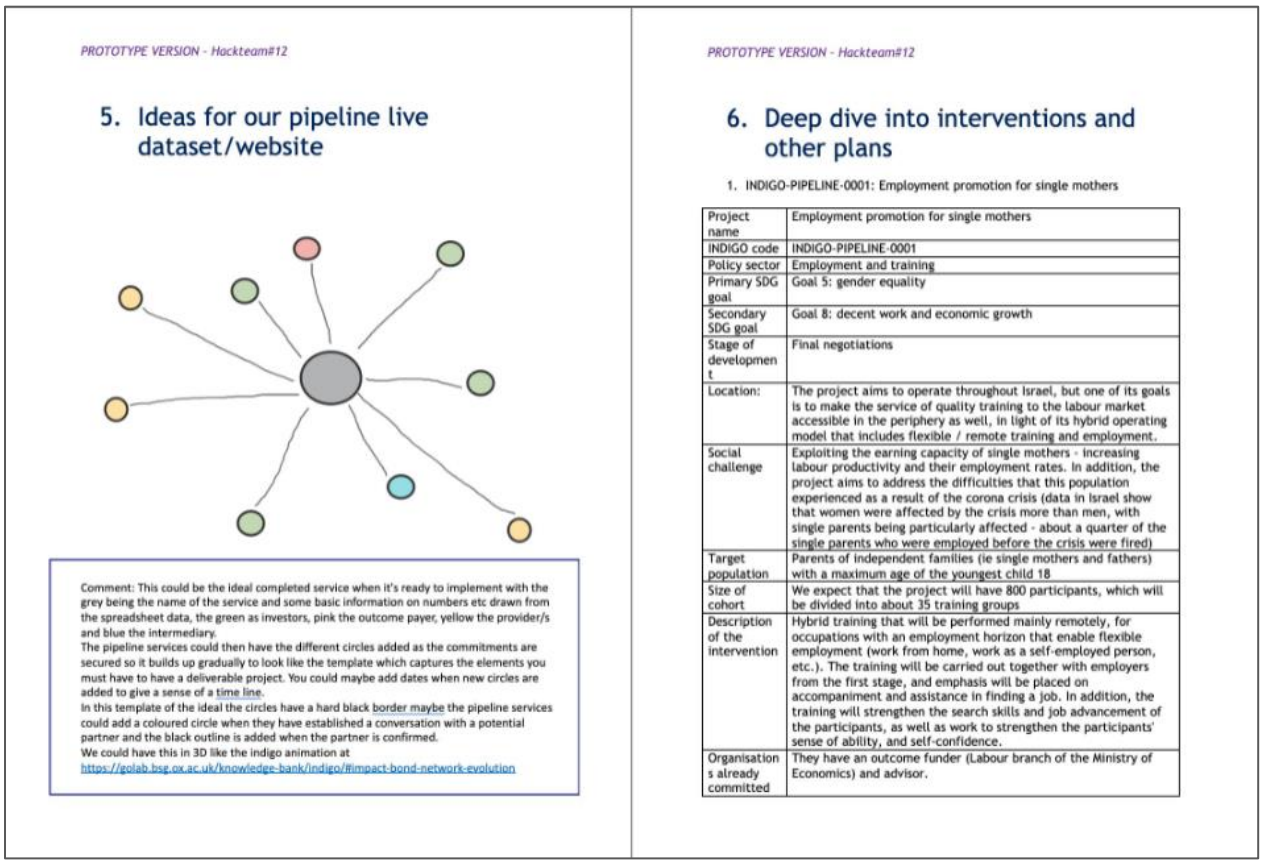


Seeking to design a pipeline report that could be useful for investors, outcomes payers and practitioners, the team first looked at what was already available from the last Hack and Learn and what they wanted to develop. They already had a list of variables defining when a project should be included in the pipeline and data definitions; and wanted to develop a pipeline report and a pipeline prototype site. The team had a list of projects from Israel to start working on. The data was collected through a survey filled in by stakeholders in Israel who are working on the design of future SIBs to be launched[1].

The group started brainstorming what they wanted from the pipeline report and prototype. The result was a report in which the upcoming SIBs appear in a map, so it's possible to see where in the world they are being developed. Then, each of the projects will be organised according to their stage of development – which vary in a spectrum going from early to late stage. This provides a snapshot of the different phases in which these projects are. After that, the team decided to looked at the distribution of the projects across policy sectors and build a Sankey diagram showing the projects' alignment with the Sustainable Development Goals. The team also created some ideas for potential data visualisations that could be part of the live dataset. Finally, the team built a prototype report with all the key information and graphics that they would like to see in a future pipeline report.

[1] We are very grateful to Social Finance Israel who kindly shared data on their upcoming impact bond projects for this challenge.

Figure 7. Image of some pages of the pipeline prototype report presented at the Show and Tell session



PROTOTYPE VERSION - Hackteam#12

5. Ideas for our pipeline live dataset/website

Comment: This could be the ideal completed service when it's ready to implement with the grey being the name of the service and some basic information on numbers etc drawn from the spreadsheet data, the green as investors, pink the outcome payer, yellow the provider/s and blue the intermediary.
The pipeline services could then have the different circles added as the commitments are secured so it builds up gradually to look like the template which captures the elements you must have to have a deliverable project. You could maybe add dates when new circles are added to give a sense of a time line.
In this template of the ideal the circles have a hard black border maybe the pipeline services could add a coloured circle when they have established a conversation with a potential partner and the black outline is added when the partner is confirmed.
We could have this in 3D like the indigo animation at
https://golab.bsg.ox.ac.uk/knowledge-bank/indigo/#impact-bond-network-evolution

PROTOTYPE VERSION - Hackteam#12

6. Deep dive into interventions and other plans

1. INDIGO-PIPELINE-0001: Employment promotion for single mothers

Project name	Employment promotion for single mothers
INDIGO code	INDIGO-PIPELINE-0001
Policy sector	Employment and training
Primary SDG goal	Goal 5: gender equality
Secondary SDG goal	Goal 8: decent work and economic growth
Stage of development	Final negotiations
Location:	The project aims to operate throughout Israel, but one of its goals is to make the service of quality training to the labour market accessible in the periphery as well, in light of its hybrid operating model that includes flexible / remote training and employment.
Social challenge	Exploiting the earning capacity of single mothers - increasing labour productivity and their employment rates. In addition, the project aims to address the difficulties that this population experienced as a result of the corona crisis (data in Israel show that women were affected by the crisis more than men, with single parents being particularly affected - about a quarter of the single parents who were employed before the crisis were fired)
Target population	Parents of independent families (ie single mothers and fathers) with a maximum age of the youngest child 18
Size of cohort	We expect that the project will have 800 participants, which will be divided into about 35 training groups
Description of the intervention	Hybrid training that will be performed mainly remotely, for occupations with an employment horizon that enable flexible employment (work from home, work as a self-employed person, etc.). The training will be carried out together with employers from the first stage, and emphasis will be placed on accompaniment and assistance in finding a job. In addition, the training will strengthen the search skills and job advancement of the participants, as well as work to strengthen the participants' sense of ability, and self-confidence.
Organisations already committed	They have an outcome funder (Labour branch of the Ministry of Economics) and advisor.

The Hack and Learn is always a great opportunity to get together with people from all around the world with a shared interest in data and outcome-based contracts. It was really incredible to see the development of this challenge - it started in the last Hack and Learn, and continued in this one. In the previous edition, we made the first steps towards designing a pipeline for SIBs - what would be the criteria for including the projects on the pipeline? How can we gather the necessary data?

In this edition, we went further and actually started designing the pipeline, so the work we had started before actually came to life and became practical. At the end of it, we had a prototype version of how the pipeline will look at in the future.

It is really amazing to see so many different people, from different countries and backgrounds, coming together to work on common challenges. It was a pleasure to have participated in the last two H&Ls - and I'll sure be on the next one!

Mayra Gramani,
Research Assistant
Government Outcomes Lab, Blavatnik School of Government, University of Oxford, UK.

I was invited to join the Hack and Learn in early August 2021. I must admit that at first, I was nervous. Being 6 months into a new job where I had just learnt about Impact Bonds, I felt the Hack and Learn was the wrong place to be and that it would involve coding! Upon meeting my fellow teammates and facilitators Juliana and Mayra in the Pipeline/Nursery challenge, I breathed a sigh of relief because it was more of a collaborative and brainstorming process rather than complex algorithms of which I was clueless. We had a wealth of experience from Ian Marr, Kuber Shahi shared innovative suggestions for data visualizations and the week prior to presenting, Martin Swarbrick put together the visualizations that would go live on the INDIGO website. We made use of the Slack Instant Messaging platform and the Jam Board to blurt out our ideas which showed up as kaleidoscope of sticky notes. These were complemented by two Zoom meetings where we got to interact with each other. I thoroughly enjoyed the creative process, being challenged in new ways, contributing when I was able to, learning from other contexts and meeting new colleagues working in similar fields.

The Social Outcomes Conference was well organized, and the platform was user friendly. I was a little nervous to be the very first presenter, but we were all there to learn and grow. It feels good to know that we have contributed to data visualizations that will potentially be used by decision-and policymakers in future. I will continue to follow updates on the various platforms, contributing to the final product of the SIB nursery/pipeline and sharing the South African experience of Impact Bonds in the next few months.

Thank you, GO Lab team, for the opportunity to participate!

Gillian Moodley
Senior Project Manager
GSB: Bertha Health, University of Cape Town, South Africa.

2. Social outcomes and Sustainable Development Goals (SDG): Building on our existing Sankey diagram created at the last Hack and Learn, this group honed in on the data to select a particular policy sector and focus on the social outcomes metrics of projects within the area. The analysis was based on SDGs alignments and regional differences. In particular, they asked themselves: Which SDGs are being targeted in Latin America, Africa and Asia? Which SDGs are not targeted at all? Why these types of contracts seem to be better at tackling certain SDGs?

Figure 8. Image of the SDG challenge pitch during the kick off session

This team was building on the work of hackteam#4, another team that participated in our March 2021 Hack and Learn event. The idea of these teams is to populate our Impact Bond Dataset with data for SDG alignment. If you are new to the framework of the UN Sustainable Development Goals, you can look at the official United Nations SDGs website.

Most impact bond projects have more than one social outcome metric. These outcome metrics can be aligned with several SDG goals and targets. The idea was to link every outcome metric to its corresponding SDG goal and target. The group decided on a particular set of projects to work with (due to time constrains, it was not possible to work with all the projects from the dataset) – they chose all projects related with Health and Child and Family Welfare. After this decision, the challenge leader provided a master spreadsheet with every single outcome metric of those projects. They divided the rows between participants and each one completed their cases at their own pace. Once the spreadsheet was complete, the GO Lab Data Steward uploaded the new data to the database and *voilà*! The prototype SDG Sankey diagram has more data and enables more and better insights on how aligned social outcome metrics are with SDGs. This group would like to keep working on this task and complete the rest of the policy domains in future editions of the Hack and Learn event.

Having heard about INDIGO's Hack and Learn through Shaping Horizons, I took it as an opportunity to grasp a practical insight into research. After the kick-off, participants were inspired to get stuck in and huddled into different hack-teams.

Choosing hack-team#13, not only did I learn more about the stakeholders involved in social impact bonds and outcome-based contracts, but by getting a granular understanding of how different interventions aligned with the SDGs, the metric count visualisation helped illustrate the synergies of each impact bond. The opportunity highlighted how each impact bond brought forward a value proposition in fulfilling the broader aims set by the UN.

The event itself was an exciting opportunity to meet a diverse group of people from different corners of the world. We coordinated well in the ideation process, cross-referencing, project evaluation and presentation. The virtual meetings and the Slack workspace offered a positive feedback loop where team members could clarify any misunderstandings, learn more about each other as well as stay connected through the project.

All in all, it was a collaborative effort that I am glad to have taken part of. I look forward to many more in the future and the impact they bring!

Jakaria Uddin,
Undergraduate student at the University of Cambridge, UK.

I was exceptionally fortunate because several of the challenges were closely related to what I've been researching. This semester, I've joined the "social outcomes and SDGs," "pilot projects and scale-ups," and "what is next" teams. Apart from profiting from insights, this was an opportunity to share my research with other members. Besides, having an eye on different teams, I could see how the challenges are linked together. In essence, outcomes-based contracts are evolving (and scaling) as they tackle a variety of SDGs, proving if they are efficient across settings. But no matter what, scaling is challenging. Some SDGs seem to relate to higher-scale projects, and "projects" are becoming more complex, varying from SIBs/DIBs and other recent constructs.

Further, as a challenge leader, I could observe that a few engaged members can make a difference; small-group challenges might be highly productive. Once again, I struggled with creating a flexible but also pragmatic workplace as I co-led challenges. It is challenging not to stay stuck in the middle. Finally, it was a pleasant experience. I truly appreciated learning and working together with colleagues from around the world.

Fernando Deodato Domingos,
PhD candidate
INSPER Metricis, Brazil.

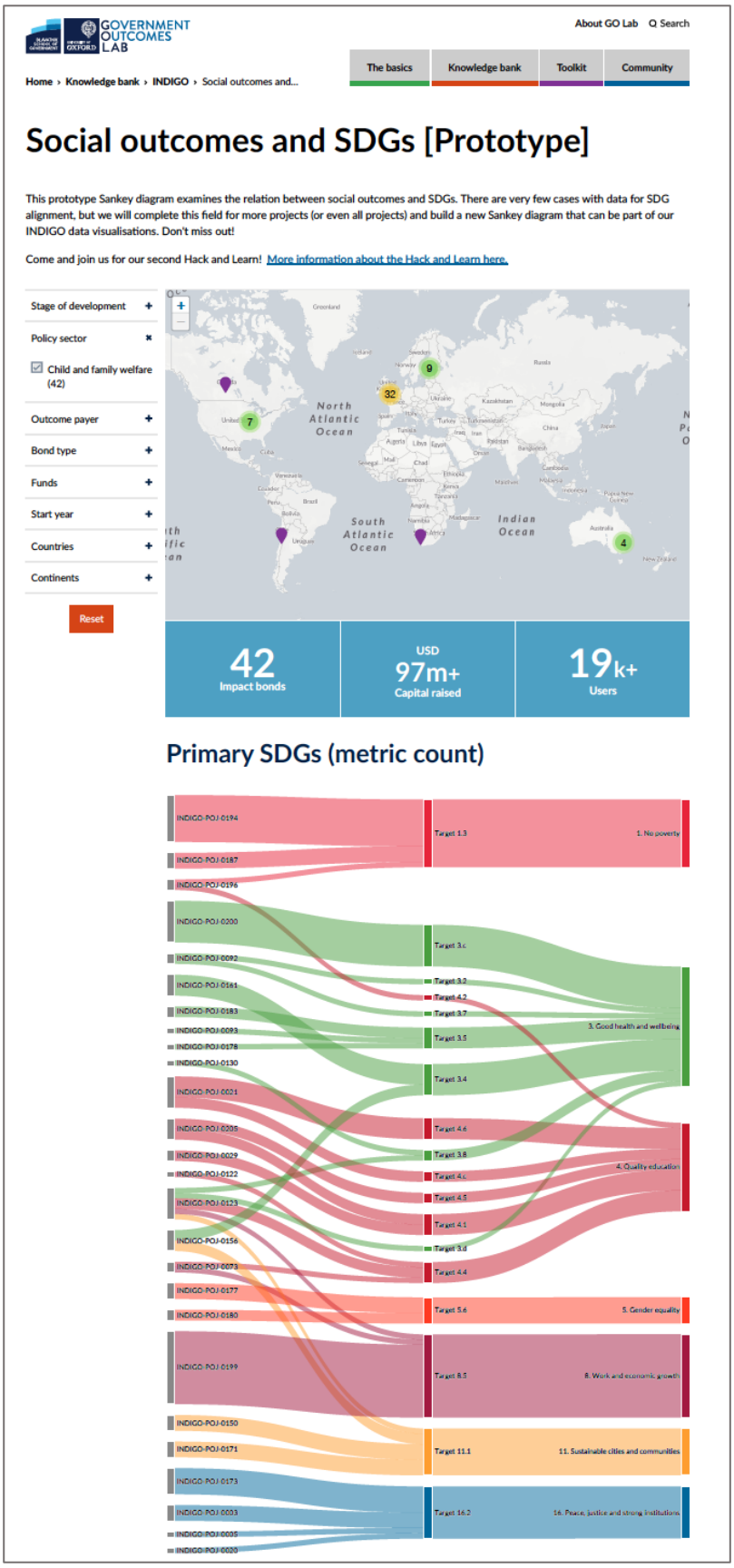
I've always had a knack for learning about and solving complex challenges so when my team leader Juliana pitched her project at the Hack and Learn kick-off event, I was instantly interested! I understood that this opportunity was not only extremely exciting, but it also complemented my previous experience and interest in the SDGs (think of a win-win situation!)

The challenge Hack Team #13 took on was to analyse and link different social outcome metrics to the SDG they best targeted. In the two weeks that we worked together, our team ultimately compiled an excel spreadsheet where we connected the different impact bonds with their target SDGs. We also uploaded data and helped complete the Sankey diagram. Throughout the process, what seemed to be the most interesting part was how not all linkages were clear or straightforward. We saw that while there were straight alignments between certain social outcomes and SDGs (Health, for example), there were also social outcomes, like Child and Family Welfare, that had no straight alignments. The outcomes of some bonds were connected to SDGs other than their target SDGs — Child and Family Welfare, for example, seemed to be achieving goals other than that of its target SDGs.

I had the opportunity to be one of the presenters of our project at the final event and it was an incredible experience, to say the least! Considering how imperative data has become to make better decisions — whether it is personal or collective — seeing how INDIGO is spearheading activities to use data for better social outcomes is not only so important but also so ingenious. Although the duration of the hack event was short, I enjoyed working with my team and listening to all the other interesting projects on the final day. I hope to see (and hopefully participate in!) other events organized by INDIGO in the future!

Arunima Sen,
Ashoka University, India.

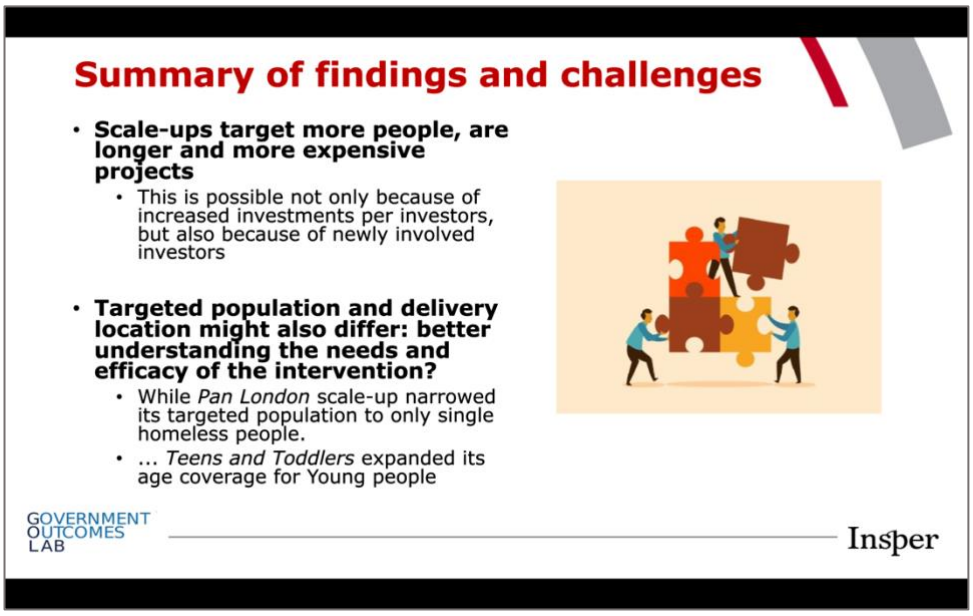
Figure 9. Image of our Social Outcomes and SDGs prototype



3. Social impact bonds: pilot projects and scale up versions2: Sometimes practitioners decide to run pilot projects on a smaller scale and test whether it's sturdy enough to be scaled up. This challenge addressed the analysis of pilot and scale up projects and asked: How do you know when a project has the power to scale up and go bigger?

However, they realised that, to answer that question, they needed to analyse the pairs of pilots and scale up version first and identify similarities and differences between these pairs. What do typical pilot projects look like? How do they decide to scale up? Do they get more service users? Do they receive more upfront investment? Do they provide their service in more locations?

Figure 10. Image of the 'Pilot projects and scale-up versions' presentation at the Show and Tell session



The team focused exclusively on UK projects, as the Impact Bond Dataset had data on pilots and scale up versions only for UK cases. This team's findings can be summarised in five key points:

- Scale up versions tend to target more people, are longer projects and receive more upfront investment.
- Target users and delivery locations change from pilot projects to scale up versions. Maybe this indicates that there is a better understanding of the needs and efficacy of the intervention?
- Outcome metrics might be adapted too.
- In terms of data, it is difficult to keep track of all the actors involved in the project.
- Finally, all the projects that they analysed were linked to an Outcome Fund, so they concluded that the availability of funds on the government side was a key factor.

[2] For an overview on social impact bonds (SIBs), please refer to the GO Lab introductory guide.

In the future, this team would like to have access to some data from other parts of the world to check if pilot and scale up projects have the same characteristics as in the UK.

The UK Government, through its delivery of the £70m Life Chances Fund, seeks to increase the scale and improve the accessibility of social impact bonds as an outcomes-based contracting mechanism. The UK Government's White Paper on Open Data, 'Unleashing the Potential', makes clear the commitment to getting more data in the public domain in order to improve choice and improvements in public services. We also believe that the sharing of data on social outcomes will help commissioners and practitioners to better understand what does and does not work and inform future decision-making in this area. Given the Life Chances Fund's explicit focus on scaling social impact bonds, we are delighted that the INDIGO community has been able to make use of existing and publicly available data from the Fund in order to help understand the ways in which projects may be scaled-up, as well as the conditions which might give rise to this.

William Ixer,
Policy Advisor
Civil Society Impact Funding team - Public Sector Commissioning
Department for Digital, Culture, Media and Sport.

"What makes an OBC, an OBC?" and "What it takes to a pilot project to scale up?" were the two questions that guided my efforts in this H&L. Having these issues in mind, our team proposed challenges that revolved around spotting the differences between contracts. We observed some patterns in the contracts. For example, scale-up projects are better defined and bigger than their pilot counterparts are, and financing is key to differentiate types of OBCs. We presented these ideas in textual and diagram forms. These outputs were satisfactory however, we perceived more engagement in tasks that were light and clear - that is, activities that do not demand too much time or prior knowledge and that have a clear set of steps and resources. I would say that I learned that people are more willing to keep with the pace if we start by jogging, rather than running a marathon.

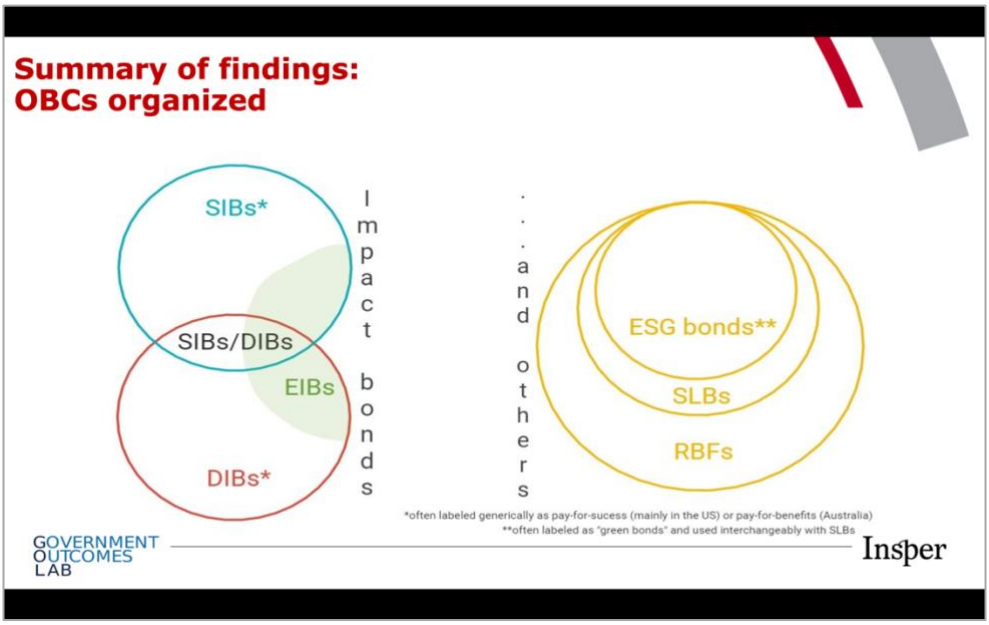
Ícaro Bernardes, UFBA
Federal University of Bahia, Brazil.

4. What is next after Impact Bonds? Exploring the OBCs Alphabet Soup: This group was looking into the new types of contracts and bonds that will be prominent in the medium- and long-term future. They wanted to produce a typology of outcome-based contracts that would guide a potential expansion of

our current Impact Bond Dataset to a broader Outcomes-based Contracts Dataset.

The group started by defining outcomes-based contracts as contracts targeting social or environmental results with payment conditional on the achievement of certain outcomes. They quoted a few examples in that category: Social impact Bonds (SIBs) and Development Impact Bonds (DIBs), Environmental Impact Bonds (EIBs) and Sustainability Linked Bonds (SLBs), mentioning that there might be others.
Their challenge was to explore the acronyms and understand the variety of OBCs. How do you differentiate OBCs to properly understand what is new? And how might you find and use available information to better understand this variety? The group organised OBCs in two groups, called 'Impact Bonds' and 'others', as you can see below:

Figure 11. Image of the 'Exploring the OBCs alphabet soup' presentation at the Show and Tell session (I)

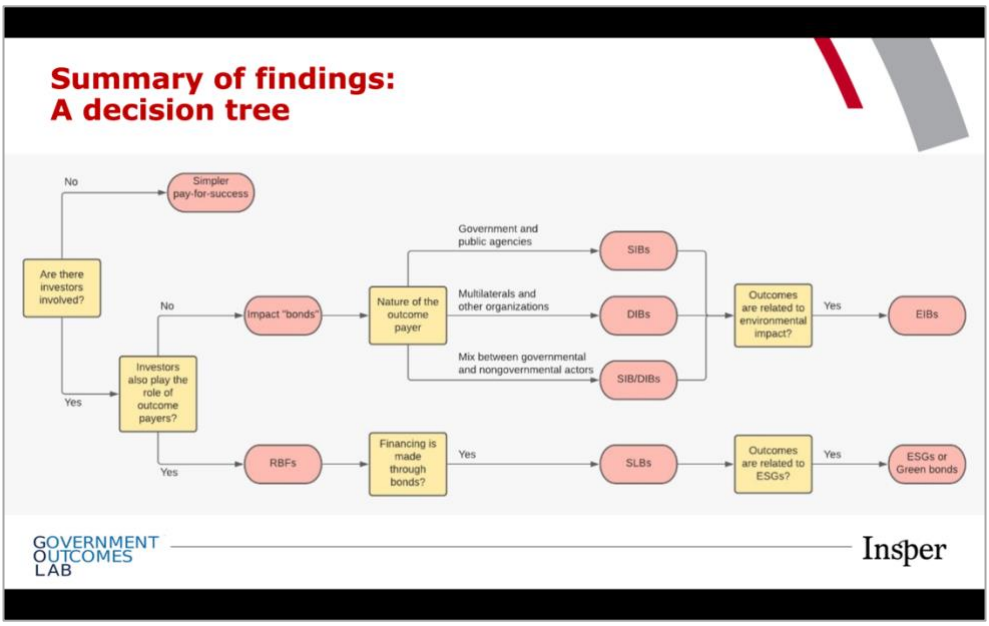


The group then came up with a decision tree to identify which type of contract one is dealing with when talking about OBCs. Once you have an OBC, you should first ask 'are there investors involved?' - if the answer is no, you're dealing with a simpler payment-by-result contract[3]. If the answer however is yes, then you go on to the next question (see figure 14).

The team finished with the insights that the next steps should be returning to the data available and observing if the designed framework helps in understanding the variety of OBCs that exist. Any innovation that is found can be then incorporated to the decision tree, which is meant to be a dynamic tool to help understanding and categorising OBCs.

[3] The group used 'simpler pay for success' to refer to these contracts, however pay for success is generally synonymous with an impact bond. As a result, in this report we refer to this type of contract as 'simpler payment by results'.

Figure 12. Image of the 'Exploring the OBCs alphabet soup' presentation at the Show and Tell session (II)



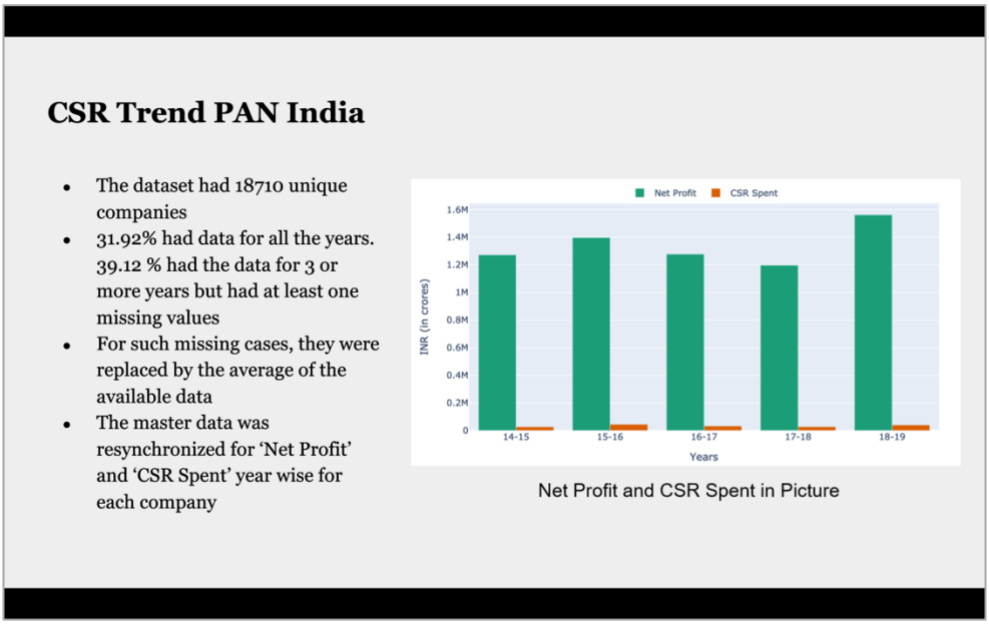
Participating in the H&L was an amazing experience for me, not just because I could work with colleagues from around the world, but because I also could learn more about OBCs. I had the opportunity to work in two challenges. The first was "Exploring the OBCs Alphabet Soup: SIBs, DIBs, EIBs, SLBs…. And what else?", where our team dove into the characteristics of already well known OBC types, such as SIBs and DIBs, and emerging ones, such as SLBs. The second one was "Scalability of SIBs: is it possible?". To better understand it, we analysed some project contracts to understand what made them go big, and this was a good opportunity to see OBCs in practice. So, being part of these two challenges was a good match. Moreover, this was my second experience on the H&L, but this time I was co-leading one of the challenges, and even though it was challenging for me, it was a good opportunity to learn how we can engage people in the activities, and that keeping it simple is truly the key. Finally, being part of the H&L was a chance to develop my professional and personal skills - I'm looking forward to the next one!

Gabriela Caceres
Master Candidate at INSPER Metricis, Brazil.

5. Corporate Social Responsibility (CSR) Data Synchronisation exercise: The Ashoka University Centre for Social Impact and Philanthropy (CSIP) has been collating funding data on corporate social responsibility. This challenge invited people seeking to learn the basics of data management and data analysis to bring about synchronicity among the datasets and collate all historical data into one big database.

The team were challenged to start to standardise and compact data collected by the CSIP on Corporate Social Responsibility (CSR). CSR requires businesses to spend part of their average net profits on CSR activities such as COVID, education, gender equality, poverty and hunger.

Figure 13. Image of the 'Data synchronisation exercise' presentation at the Show and Tell session



The team worked on some data visualisations using the available dataset on CSR. They included a map showing the geographical distribution of CSR funding across India. The team noted a gap in CSR funding between North and South India, which they suggested may be due to a demand-supply mismatch. Then the team developed a graph that shows that high-income states are getting more CSR from the other high-income states than the low-income ones. Another graph shows that corporates in high-income states are not spending on low-income states.

Finally, the team presented a few challenges and suggested next steps. They pointed out that it would be important that the data is validated before added to the master dataset to avoid gaps. Also, they suggested the development of an app to facilitate and verify the quality of the data and produce visualisations in real time.

I worked on a CSR Data Synchronization Exercise during this summer's edition of Hack-and-Learn. It was my first time taking part in this type of event. We had Phd Shaivya Verma as challenge leader. I enjoyed working with Kuber Shahi and Ragul Natarajan who have different backgrounds, experiences and continents. We had to combine 20 Excel sheets of four different years to form the master sheet for further access and use. We used tools such as Tableau and Python to analyse and produce visualizations. I learned more on how to use Python, the type of visualization produced and their interpretation. I also discovered another aspect of Corporate Social Responsibility. It is not mandatory in my country. At the end, I was selected to present our work at the Show and Tell session/Social Outcomes Conference. It's true I am used to speaking in front of a small audience in French, but using English in front of so many people was an awesome experience. See you at the next Hack-and-Learn!

Victor Bertrand Wamba,
Civic tech, AfroLeadership, Cameroon.

Leading and coordinating hack and learn challenge was a learning experience. The challenge did not only give us the opportunity to exchange ideas but also the opportunity to work with people from different backgrounds.

Coordination and working with people from different time zones becomes a challenge. I learned that it is important to have one kick-off meeting with all the participants to understand the time each one can contribute towards the challenge and also the convenient time for the meetings during the period of challenge. The kick-off meeting is also important to lay down the expectations from the participants in terms of output; time and effort required from the participant's side.

Further breaking the challenge into smaller tasks and timelines become extremely important to stick to the deadline. Do not leave the division of work to the team rather have a meeting to understand participants' interests and accordingly divide the tasks among the participants. Lastly, encourage participants to interact with each other.

I absolutely enjoyed hosting the challenge!

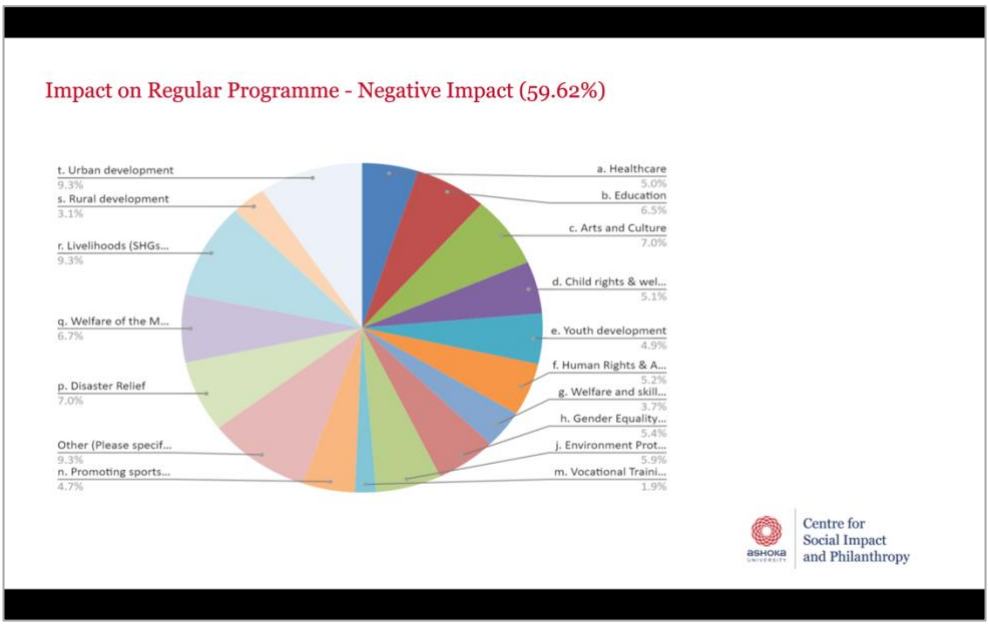
PhD Shaivya Verma,
Senior Manager,
Centre for Social Impact and Philanthropy, Ashoka University, India.

6. Revisiting COVID Impact Data for Sectoral Analysis of the Impact of COVID-19 on NPOs: As part of its research mandate, CSIP conducted a study on the impact of COVID-19 on the operations of Indian non-profit organisations (NPOs), including impact on regular programmes; recovery; challenges faced; engagement with funders; and modes of operations. We invited participants to do a sectoral analysis of the impact of COVID-19 using the data available.

In terms of operations, this team found that 120 organisations from India (from a sample of 312 not-for-profits) suspended some regular programmes because of COVID but added new activities. Only 23 organisations did not change their planned activities and 11 organisations suspended all their programmes and events. The top three challenges reported by these organisations were related to programme execution, financial insecurity and employee's safety.

As for funding issues, more than 50% of the organisations said that the funding that they received under the COVID-19 pandemic was lower than typically expected. Only 8.19% of organisations said that their funding was higher than typically expected. More than 65% of organisations took cost cutting measures, and more than 80% of organisations made changes to their funding strategy. Finally, 59% of these organisations said that the pandemic had a negative impact on their regular programmes.

Figure 14. Image of the 'COVID Impact Data for sectoral analysis' presentation at the Show and Tell session



In sum, this team concluded that there were several missing values in the dataset and that posed an additional challenge to their analysis. As opportunities of future research, this team identified the possibility of using machine learning techniques, so they could use this data to build a benchmark of potential problems that these organisations could face.

The Hack and Learn 2021 was a great learning experience. I was impressed by the sheer diversity of projects, which included linking social outcomes projects to SDGs, analysing the impact of COVID-19 on NPOs in India, understanding the factors involved in assessing scalability of projects and expansion of data around outcomes-based contracting. Even though it was tempting to be a part of all the fascinating challenges, I could only be a part of two teams. Hack Team 13 looked at matching social outcome metrics with the SDG number which fits that metric. Our work was to go through the given outcome definitions and then match the primary and secondary SDG goals corresponding to it. Hack Team 17 which worked on identifying and presenting the sectoral differences in the way NPOs have been impacted by COVID-19 in India. We did a preliminary analysis of challenges faced by the NPOs such as program execution, financial insecurity, lack of digital infrastructure, remote team management among many others. Both the challenges provided a platform to apply the data analysis skills I have learnt over the years and to interact with talented peers and learn from experienced researchers in the social impact sector from all over the world. In addition, I had the privilege of presenting the findings of both the teams at the Social Outcomes Conference 2021. I look forward to being a part of forthcoming challenges so that we can work on many more intriguing and fun challenges.

Ipsita Chatterjee, Ashoka Scholars Programme 2022, Ashoka University, India.

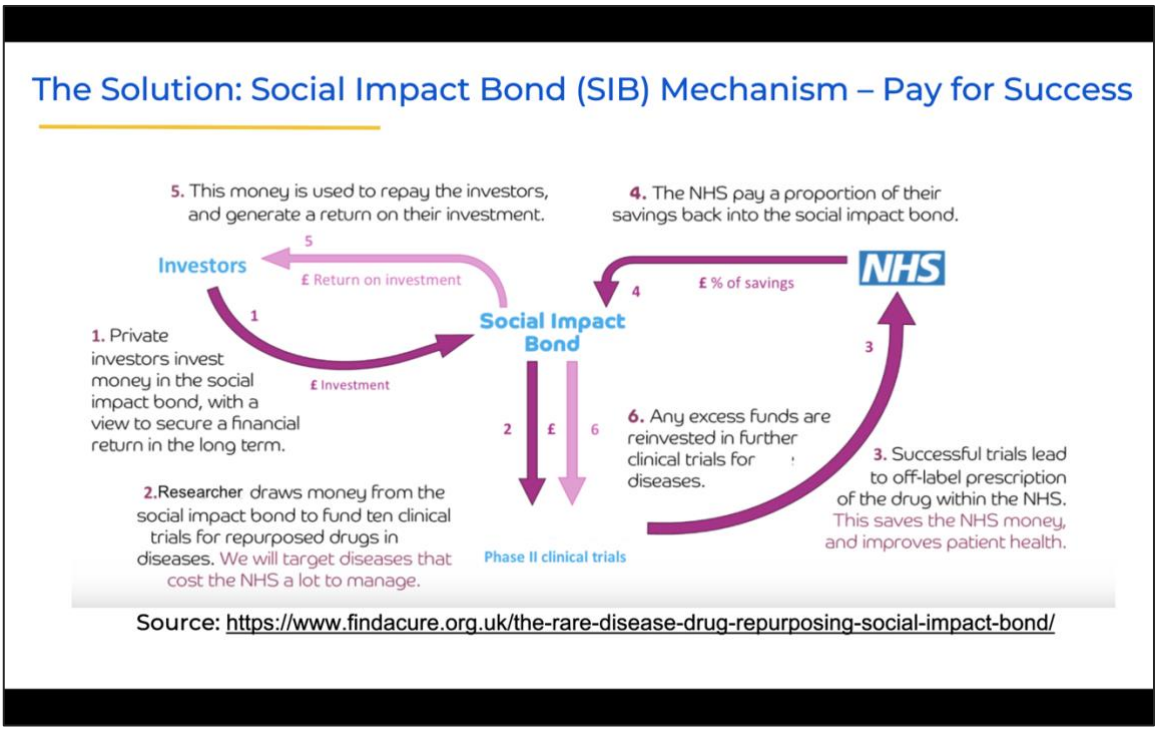
As a social scientist who had largely worked in the field, the whole concept of 'Hack and Learn' initially seemed a bit alien and somewhat challenging to get on. However, the pre-event meetings gave me the opportunity to be oriented to the idea and purpose of the event. With my interest piqued, I found myself bracing for one of my biggest fears-numbers!

Once the event started and the challenge team was formed, the sheer excitement of excellent young challengers was really inspiring. While it was stimulating to hear their ideas on what can possibly be done with the existing data, what was really satisfying was the fact that by the end of the event, they were well aware of the problem they were analysing. And I think that was the real success of the challenge for me. If, in two weeks, the challengers went out of the event learning about how the NPOs in India were impacted by COVID-19; what sectors were the worst hit and which ones adapted the first, I think the small event definitely helped a number of participants across challenges learn about varied issues in a very short time.

Neha Nimble,
Manager- Research,
Centre for Social Impact & Philanthropy, Ashoka University, India.

7. Using financial innovation to realign incentives toward public good medicine: According to Crowd Funded Cures, potentially life-saving treatments are being ignored due to misaligned financial incentives under the current patent system. Today, it takes an average of 10-12 years and ~$2 billion for pharmaceutical companies to develop a new drug. Drug repurposing has become a mainstream strategy for faster drug development. COVID has accelerated this trend with ~1000 repurposed drugs being explored as therapeutics. But the pharmaceutical industry will never fund large Phase II/III Randomized Controlled Trials for such unmonopolisable therapies without being able to enforce a monopoly price using patents. Public or philanthropic funding is rarely available for large RCTs due to the expense and risk of clinical trial failure. As a result, safe, affordable, and effective treatments for diseases are being ignored at the expense of patients and healthcare payers. In this context, this group asked: Are impact bonds a good mechanism to incentivise drug repurposing?

Figure 15. Image of the 'Realigning incentives toward public good medicine' challenge pitch during the kick off session



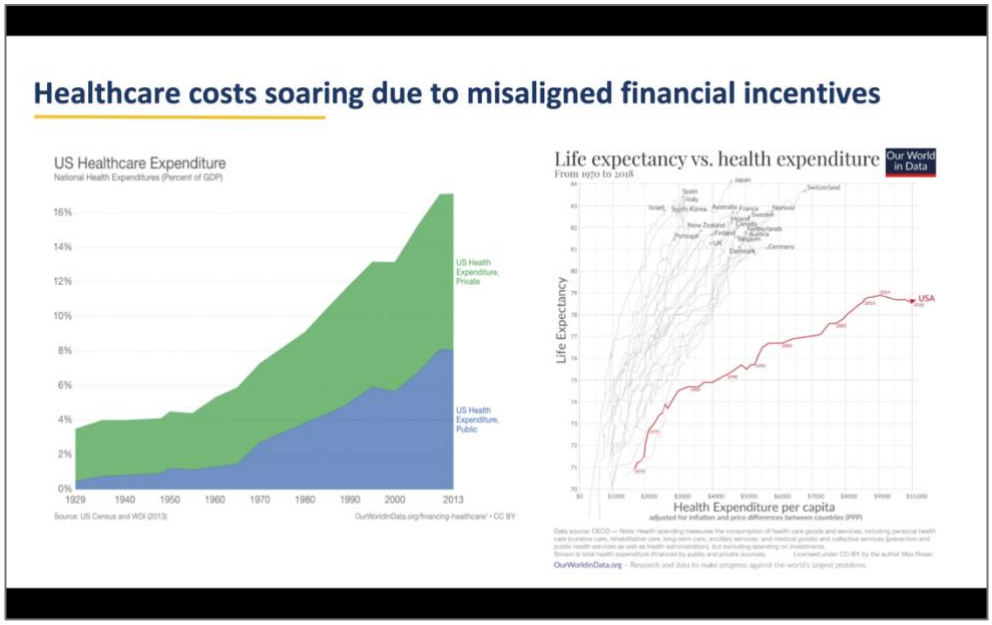
This group examined the financial feasibility of using a social impact bond to repurpose generic drugs including (a) cost of repurposing versus cost of developing new drugs, and (b) potential cost savings for payers due to repurposing generic drugs. They also used the INDIGO Database and Insper Metricis Research Group (Brazil) Database to gather information on health-related SIBs using RCTs for verification.

According to these two databases, they found that $74m were raised in 30 health-related SIBs from the INDIGO database and 57 health-related outcome-based contracts (including SIBs) in Insper Metricis Research Group (Brazil) Database.

However, from this review, no health-related SIBs relate to improving pharmaceutical innovation or incentivising RCTs for repurposing generic drugs.

As for financial feasibility, this group concluded that creating new private incentives to repurpose generic drugs via SIBs is also a significant opportunity for private industry compared to the estimated USD $1-2 billion over 10-15 years to develop a new drug, as it can cost less than $10 million to obtain regulatory approval for repurposing a generic drug or nutraceutical, because it has already been proven safe in animals and humans.

Figure 16. Image of the 'Realigning incentives toward public good medicine' presentation at the Show and Tell session



A SIB for repurposing generic drugs to treat new diseases has the potential to create $1.67 trillion in cost savings for payers in the US alone. If we can convince payers to transfer only 1% percent of these cost savings into a SIB, there is an untapped arbitrage opportunity to capture potential revenue of over USD$16.7 billion to drive generic drug repurposing innovation.

They also identified challenges to this idea. Healthcare payers such as NHS do not pay for health savings. Health insurers (particularly in US) often own hospitals and are not incentivised to reduce healthcare costs. Need to find a forward-thinking payer willing to purchase successful RCT data for repurposed drugs that can reduce their healthcare costs.

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. After three inspiring Hack and Learn events (September 2020, March 2021 and September 2021), the INDIGO team integrated some of the hack teams' products into our website. For instance, both the SDG Sankey diagrams, and the Social Investment/Fund Manager prototypes originated as part of our first Hack and Learn, and we tested and improved the Impact Wayfinder thanks to a team at our second Hack and Learn. We would like to take the same approach this time and analyse which data visualisations and/or other ideas can be incorporated into our website.

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 2022. 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.