

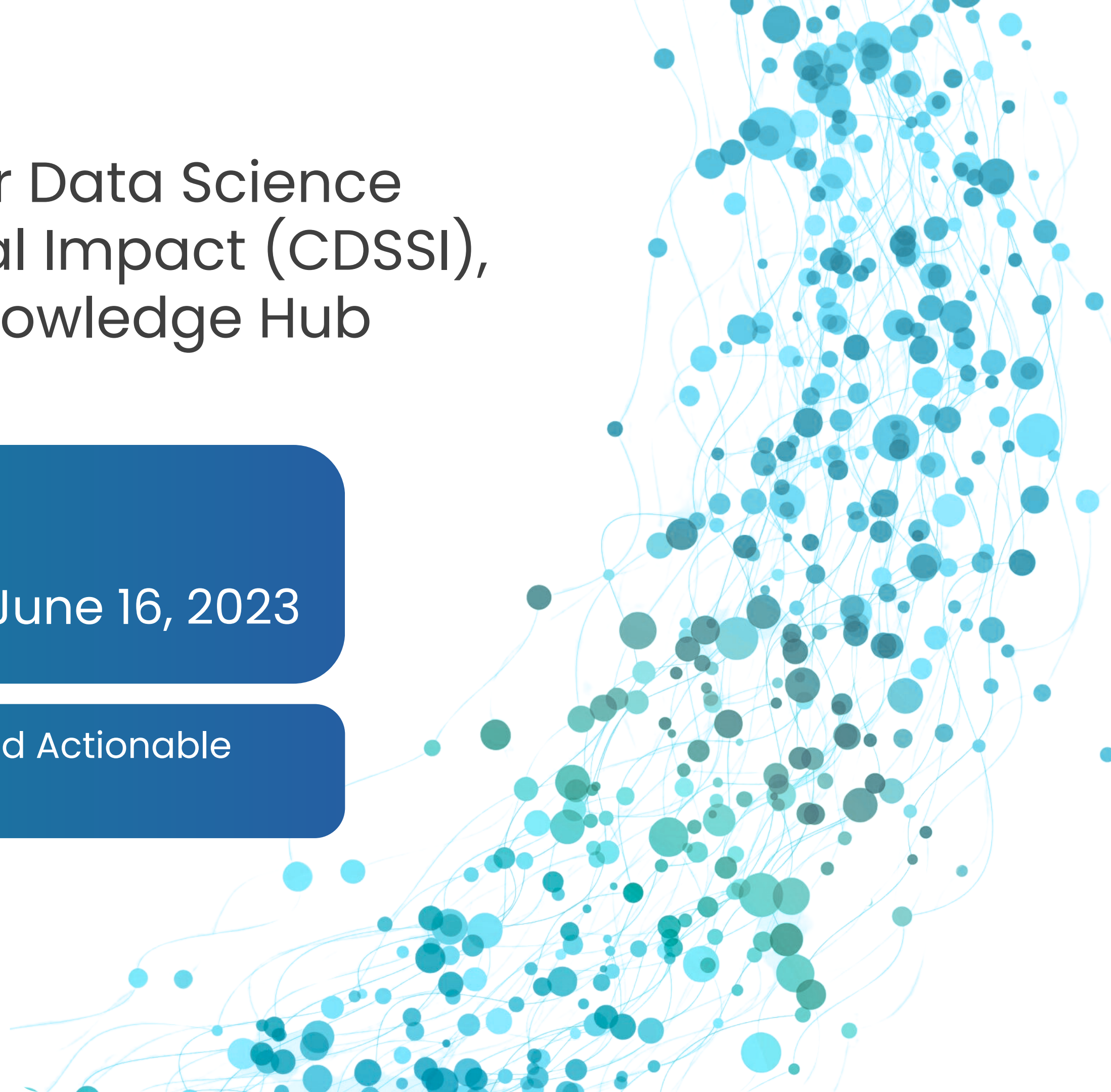


Centre for Data Science  
and Social Impact (CDSSI),  
Global Knowledge Hub

## Centre Launch:

Bangalore International Centre, June 16, 2023

**Event Recap:** Highlights, Key Takeaways, and Actionable  
Insights





## **ROUNDTABLE DISCUSSION**

*Driving Change: Data  
Science for Social  
Impact at Scale*

The Centre for Data Science and Social Impact (CDSSI) at the Indian School of Development Management (ISDM) organised a launch event on June 16, 2023. It was a convening of stakeholders and experts in the field of data science, primarily focused on socio-economic development endeavours. The event, conducted in a fishbowl format, fostered interactive dialogue. It allowed participants to shed light on the inherent opportunities and challenges associated with harnessing the power of data science to create meaningful social impact.

Participants ranged from nonprofit leaders to social data scientists, social entrepreneurs, academicians, private sector professionals, and stakeholders from the public policy sphere. They contributed their insights, experiences, and recommendations on the intersection of data science and social impact, and the possibilities, good practices, challenges, successes, failures, and emerging trends in utilising data science for driving positive change.

This document summarises the centre launch event. It encapsulates the key themes, takeaways, questions, and actionable recommendations that emerged. This summary aims to inform and inspire CDSSI's ongoing efforts in facilitating the use of data science to drive social impact.





Welcome and Introduction by  
Sreenivasa Madenahally,  
Lead for CDSSI



Video message from  
Dr. Anand Rao,  
Chair for CDSSI



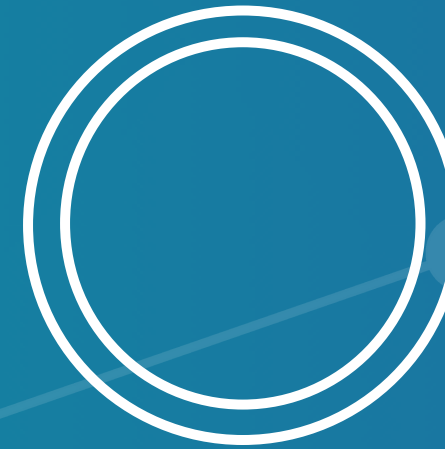
Opening Plenary  
by Ravi Sreedharan,  
President and co-founder of ISDM



Overview and Kickoff  
of Fishbowl Discussion,  
Trisha Varma,  
Director, GKH



# The roundtable discussions were conducted in **fishbowl format**



- Two circles
- Inner circle participated in discussion and outer circle observed

## Round 1

How can data science support Social Purpose Organisations (SPOs) to achieve their mission?

Participants were primarily implementation Social Purpose Organisations (SPOs) who work directly with beneficiaries and communities

**Swap inner and outer circle**

## Round 2

Possibilities, good practices & trends in using advanced data science for social impact

Participants were primarily tech and ecosystem enablers, technical experts, policy experts, and academicians







# Highlights of the discussion

Owing to the diverse areas of technical, functional, and sectoral expertise of the participants, a wide variety of thoughts and opinions were shared during the roundtable discussions. These valuable insights offer significant takeaways for the field of data science for social impact and, by extension, for the current and future endeavours of CDSSI



## **Practical applications of data science in the social sector**

Participants shared successful experiences of implementing data science-powered solutions that yielded positive outcomes



## **Approaches to enhance the utility of data and data science**

Participants highlighted some of the key measures that can be adopted by SPOs to derive optimal value from data science



## **Good practices for deploying data science solutions**

Participants discussed practices that could help SPOs achieve substantive outcomes and drive progress towards their missions



## **Considerations for ethical use of data science**

Participants discussed how using data science in the social sector poses unique ethical questions, especially when working with vulnerable communities



## **Challenges associated with utilising data science**

Participants talked about some of the significant challenges hindering SPOs from fully harnessing the potential of data science



## **Exploratory ideas on enhancing the use of data by SPOs**

Participants shed light on measures that haven't yet been implemented, but have the potential to enhance the utilisation of data science in the sector





### **Practical applications of data science in the social sector**

Participants shared successful experiences of implementing data science-powered solutions that yielded positive outcomes

The participants shared some applications of data science that have yielded promising results, based on their experience of deploying data-driven solutions. For instance, in several SPOs, data plays a crucial role in “need discovery” and identifying the “most deserving” beneficiaries for channelling resources effectively towards them. The following are some specific instances where data science was applied in the social purpose context:

- For an expert from the health sector, AI-based diagnostics and data analytics have proven to be critical in resource-constrained areas.
- An SPO operating in the field of childhood nutrition utilises program data to showcase to government entities the effective utilisation of government funding in achieving desirable outcomes.
- An expert from a major philanthropic foundation highlighted his experience of working on a project in the field of maternal health. Employing data science, they learned that there is a strong negative correlation between “families engaged in growing black wheat” and “incidence of miscarriages”. This insight provided them with the impetus to delve deeper into exploring the connection between variables in the seemingly distinct domains of *healthcare* and *livelihoods*.



**Approaches to enhance the utility of data and data science**  
Participants highlighted some of the key measures that can be adopted by SPOs to derive optimal value from data science

- **Standardisation of metrics:** It is crucial for SPOs to adhere to consistent metrics, norms, and protocols to enhance the usability of disparate datasets from various sources in the sector. We can foster a more cohesive and consistent approach to data analysis by ensuring widespread adoption of standardised measures, guidelines, and procedures for data collection and presentation. This, in turn, sets the stage for eventual data harmonisation, enabling seamless integration and comparison of diverse datasets. Further, the standardisation of metrics holds the potential to unlock increased funding for the sector by showcasing impact through harmonised measurements.
- **Data collaboration:** Many development challenges are too extensive for any single organisation to tackle alone. Solving complex social problems requires intra-sector and cross-sectoral collaboration, especially the sharing of data between organisations. Participants highlighted the potential for insights and solutions to emerge from integrating and analysing data from different organisations across sectors.
- **Multimodal data:** Participants recognised the value of multimodal data, which encompasses a combination of text, numbers, audio, and pictures. They highlighted that leveraging multimodal data has the potential to unlock richer insights and facilitate a more comprehensive understanding of the subject matter at hand.





### Good practices for deploying data science solutions

Participants underlined data-related practices that could help SPOs achieve substantive outcomes and drive progress towards their missions

- **Understanding the community context:** When working in a community, it is crucial to have a deep understanding of its specific context, including livelihood practices such as agricultural practices and land ownership structures. Data cannot stand alone. It needs to be informed by a comprehensive understanding of the community and its unique needs.
- **Data democratisation:** There is a need to make data accessible to ground-level workers who interact directly with beneficiaries, instead of prioritising the centralisation of data through dashboards. Empowering these workers with basic data science skills and literacy can help them better serve and support beneficiaries.
- **Focus on outcomes and qualitative aspects:** Emphasising the importance of qualitative research alongside quantitative data can provide a more comprehensive understanding of the impact and effectiveness of interventions.
- **Participatory approach to data:** Participants emphasised the importance of involving beneficiaries in the data analysis process. Instead of program teams solely analysing the data, beneficiaries should have access to the data and be empowered to assess the impact of interventions on their lives.



### Considerations for ethical and responsible use of data science

Participants discussed how data science in the social sector poses unique ethical questions, especially when working with vulnerable communities

- **Ethical considerations:** There is a need for a consensus on the ethics of handling beneficiary data in the sector. Questions surrounding data privacy and protection remain unanswered, and it is important to establish ethical guidelines for responsible data practices.
- **Consent framework for beneficiary data:** Establishing a consent framework for collecting and using beneficiary data is essential to protect privacy and empower individuals. Tools such as e-Sahamathi can help manage and ensure consent from data principals whose information will be shared.





### Challenges associated with deploying data science

Participants shed light on some of the significant challenges hindering SPOs from fully harnessing the potential of data science

### Internal Challenges

- **Data collection challenges:** While there is an abundance of data being collected in the social purpose sector, the lack of accessibility and quality of the data poses a significant challenge. Many SPOs struggle with knowing the next steps after collecting data. There is also a pressing need to focus on collecting data that reflects the contextual nuances of the community in which the program operates.
- **Capacity building and skills:** There is a lack of capacity and skills to effectively work with data in the social purpose sector. Understanding the challenges faced by frontline data collectors and investing in their training and support is crucial for improving data utilisation and analysis.
- **Data sharing and collaboration challenges:** SPOs keeping their data to themselves hinders collaborative efforts. Lack of confidence in data quality and insufficient training on data citation and attribution were identified as reasons for limited data sharing and collaboration.





### Challenges associated with deploying data science

Participants shed light on some of the significant challenges hindering SPOs from fully harnessing the potential of data science

## External Challenges

- **Funding for data science:** The five percent ceiling on budgetary allocation towards expenses categorised as "overheads" serves as a hindrance for SPOs to embrace data science. This financial constraint not only prevents them from nurturing in-house capabilities but also makes it challenging for many SPOs to hire a data consultant to guide them in adopting data-driven solutions.
- **Limitations and interoperability of government datasets:** Government datasets face limitations, but efforts are being made to improve their quality. However, there is still a lack of interoperability between datasets, hindering their ability to provide a comprehensive picture of social issues.
- **Absence of business case for data science adoption:** Data science is not a priority for many SPOs. This may be attributed to the lack of a compelling business case for investing time and effort into data. Grantmakers often allocate a small percentage to data/tech which may not provide sufficient motivation for SPOs to invest in data science initiatives.





### Exploratory ideas on enhancing the use of data by SPOs

Participants discussed measures that haven't yet been implemented but have the potential to enhance the utilisation of data science in the sector

- **Firsthand data:** Given the tools and technologies available today, acquiring firsthand data – i.e. data collected directly from beneficiaries – is a possibility. Instead of learning about communities from reports prepared by intermediaries, we can “hear” directly from target beneficiaries. This data is likely to capture many of the nuances that a report from intermediaries might miss.
- **Data standards:** Adopting consistent metrics, norms, and protocols regarding data management in the social sector (and possibly other sectors) in India will enable data integration across systems and interoperability across different datasets. It will also allow for aggregating data and reporting it at the state/country level.
- **Federated data platform:** A platform on which various SPOs can publish their data (and access others' data), while maintaining a certain level of autonomy and control over their own data would be valuable. This “federation” can be looked at in two ways:
  - Federate the data: Strive to bring data from all SPOs on one platform
  - Federate the framework: Create multiple platforms that share common data standards, formats, and protocols to enable interoperability between platforms and their constituent datasets



# Questions to consider

The roundtable discussions called for a deeper exploration of the domain of data science for social impact. These inquiries delved into diverse facets of data science implementation, ethical considerations, technological advancements, and collaborative endeavours. For CDSSI, answering these questions will shape the way SPOs harness data science, and influence the future trajectory of the field. Alongside are some of the noteworthy questions that warrant contemplation:

- ① How can we ensure that data collection methods and metrics effectively capture the nuanced nature of social impact, considering the complexity of social challenges?
- ② What strategies can organisations employ to enhance data literacy and technical capacity among their staff members, considering varying levels of needs and expertise?
- ③ How can social purpose organisations overcome barriers such as limited resources or resistance to change, in cultivating a data-driven culture within their teams?
- ④ What measures can be implemented to establish safeguards and accountability mechanisms for the responsible and ethical use of data science in the social sector?
- ⑤ What are the most effective approaches for SPOs to make their data public, and what key factors should be considered in fostering collaboration and partnerships in the field of data science for social impact?
- ⑥ How can data collection (and formatting, organisation, and representation) in the social sector be standardised to ensure consistency, comparability, and interoperability across datasets?
- ⑦ How can the challenge of data silos across multiple social purpose organisations (and governments) be addressed to enable effective data sharing and collaboration?



# Actionable recommendations for CDSSI

A range of recommendations surfaced from the discussion among social impact and data science experts. These hold great relevance for organisations seeking to drive the advancement of data science within the social sector. For CDSSI, these recommendations provide a roadmap for future endeavours, enabling progress in the field and the cultivation of a more inclusive and impactful data science ecosystem. Presented below are a selection of these recommendations:

1. **A data science support program for SPOs:** Pilot a data science support program specifically designed for approximately 20 SPOs (primarily implementation-focused organisations) that are committed to collaborating on a shared objective. CDSSI can play a pivotal role in supporting these organisations by providing guidance on data management strategies, standardising data collection formats, facilitating data sharing protocols, assisting in obtaining data-driven insights to address their queries, and offering comprehensive support services across the entire data life cycle.
2. **Data Maturity Assessment:** Leverage a tool that assesses the level of "data readiness" for SPOs, assisting them in gaining insights into their current data capabilities and identifying areas of improvement. The tool should comprehensively evaluate an organisation's data maturity based on relevant parameters and indicators. By providing a holistic view of the organisation's data maturity, the tool shall enable the provision of customised solutions and advice to address specific needs and enhance data-related capabilities.
3. **A platform for sharing success stories:** Recognising that many data-driven solutions with positive outcomes often go unnoticed, it is crucial to create a platform where SPOs, businesses, and government entities can share their approaches, outcomes, and learnings from the solutions they have deployed. This platform would serve as a valuable resource for the wider sector, enabling organisations to learn from each other's experiences and successes. By showcasing and disseminating these success stories, the platform will foster knowledge exchange, inspire innovation, and facilitate the adoption of effective data-driven approaches across the social sector.

# Actionable recommendations for CDSSI

1. **Anchor a data taxonomy exercise for the social sector:** The discussion highlighted the need to establish common categories, hierarchies, terminologies, and semantics related to data within the social sector. In response, CDSSI can take the lead in undertaking a data taxonomy exercise, which would involve defining and organising standardised data classifications, ensuring consistency and clarity across the sector. By establishing a shared data taxonomy, organisations can enhance data interoperability, facilitate data integration and analysis, and enable more effective collaboration and knowledge sharing.
2. **Tap into talent from other sectors:** It is fairly well-established that the social sector faces challenges in hiring and retaining top data science talent, and therefore many SPOs lack in-house data science expertise. Additionally, because of limited funding allocation for data science-related activities, hiring external consultants is also not viable for many organisations. To overcome this challenge, consider organising hackathons and engaging data scientists to address specific social problems. Also create a platform for data scientists to contribute as part-time or full-time volunteers, enabling them to support social impact projects. These measures will enhance the scale and sophistication of data science in the sector.
3. **Develop a knowledge repository for the sector:** Create a centralised repository of knowledge resources (including good practices, use cases, explainers, tips, and tools) to support SPOs in enhancing their data science capabilities and understanding the potential benefits. This repository will provide valuable insights into successful approaches and lessons learned, helping SPOs navigate the adoption of data science for social impact.
4. **Discussion forums for data scientists in the social sector:** Forums such as conferences, summits, and symposiums provide a platform for data science experts to stay informed about the latest advancements in their field, exchange ideas with fellow professionals, and explore opportunities for collaboration. Given CDSSI's role as an enabler in this domain, the centre can take the lead in organising periodic conferences tailored specifically for data scientists in the social sector. These will serve as valuable forums for knowledge sharing, networking, and fostering collaborations among experts in the field.



# Snapshot of participants – Round 1



**Dr. Rehana Begum**

**Dr. Atreyee Sinha**

**Ramachandran Narayanaswami**

**Vinod Sudhakar**

**Rajiv Kucchal**

**Gayathri Shanmugam**

**Uthara Narayanan**

**Thulasiraj Ravilla**

**Ashok Kamath**

**Katie Pyle**

**Sanya Sareen**

**KHPT (Karnataka Health Promotion Trust)**

**KHPT (Karnataka Health Promotion Trust)**

**Centre for Effective Governance of Indian States (CEGIS)**

**Akshaya Patra**

**Dhwani Foundation**

**Haqdarshak**

**Buzz Woman**

**Aravind Eye Care**

**Akshara Foundation**

**Janaagraha**

**J-PAL**

Dr. Rehana Begum is a health professional, with two decades of experience, with expertise in Tuberculosis, RMNCH+A, HIV, STI, Quality assurance of public health facilities, and research

Monitoring And Evaluation Specialist. Skilled in research, handling large scale data and scientific writing, with a strong inclination towards Gender Issues and Mental Health

IT veteran and Tech forecaster who has a record of incubating state of the art technologies for enterprise class products

Technology Director

Rajiv has over 30 years of management experience in IT, BPO and ITes industries, with a long stint at Infosys. He was the COO of OnMobile Global Limited and a co-founder of Progeon Limited

Chief Program Officer at Haqdarshak

Chief Change Maker, and Co-Founder Buzz India

A founding member of Aravind Eye Care System, Thulasiraj is the Executive Director of Lions Aravind Institute of Community Ophthalmology (LAICO) as well as the Director – Operations for Aravind Eye Care System

Ashok Kamath has been the Managing Trustee since 2003 and Chairman of Akshara Foundation since 2008. He is actively involved in the strategic planning, analysis and expansion of programmes at Akshara

Katie has more than two decades of experience in project management, social research, and research implementation. She previously worked with the National Foundation for Educational Research in the UK

Sanya Sareen is a Research Manager at J-PAL South Asia where she leads the execution of J-PAL's role in the Capacity Accelerator Network (CAN) – a global initiative to strengthen the data capacity of the social sector



**Aparna  
Krishnan**

**Srinivas  
Ramanujan**

**Nitish Kumar  
V.**

**Shruti Goel**

**Puja  
Marwaha**

**Sneha  
Bhardwaj**

**Shruti Nair**

**Manu  
Srivastava**

**Murugan  
Vasudevan**

**Kartik Kittu**

**Falguni Vora**

**J-PAL**

**Villgro**

**Catalyst Mgmt  
Services**

**Upaya Social  
Ventures**

**CRY**

**Upaya Social  
Ventures**

**Ashoka  
Changemakers**

**Arghyam**

**Veddis  
Foundation**

**Karnataka  
Startup Vision  
Board**

**Social Venture  
Partners (SVP)**

Aparna Krishnan leads J-PAL South Asia's Innovations in Data and Experiments for Action (IDEA) Lab, a dedicated team within J-PAL SA, with a focus on encouraging use of administrative data in research and policy

Srinivas Ramanujan is passionate about scaling up SGBs that have the potential to create impact at scale. He brings two decades of experience and the networks to solve ecosystem level issues in the sectors of healthcare, climate, agriculture

At CMS, his role includes leading data science initiatives, managing research and evaluation projects and working on newer technologies applicable in the social impact space

Shruti Goel has over 15 years of experience in international development, designing and implementing high impact programmes across public health, livelihoods, water and sanitation in Asia

Puja Marwaha entered the social sector driven by a passion for the well-being of children. A post-graduate in HR from XISS Ranchi, she joined CRY to set up the HR function. She went on to become the Chief Executive in 2010

Sneha is a data analyst on Upaya's Impact Measurement & Management team. She graduated from Mount Carmel College, Bangalore with a triple major in Economics, Mathematics and Statistics after which she pursued her Master's in Applied Statistics & Analytics from NMIMS, Mumbai

Shruti leads Ashoka's Youth Years program in South Asia. In her role, she leads the efforts to build a community of teen changemakers & institutional partners to help society re-imagine a world where every young person can grow practicing to be a changemaker

Manu Srivastava has 18+ years of experience with emphasis on delivering technology solutions that have a social impact. He has been part of the founding team and has run the operations of the organisation

Murugan Vasudevan is the Chief Executive Officer at the Veddis Foundation

His current focus is on Startups & Innovation, Climate Change, and Public Policy. He works closely with the Chairman of the Startup Vision Group, Government of Karnataka and is helping build #Innovate Karnataka

High-performing, impact-oriented manager with over 13 years of social sector consulting, project management and research experience with corporates (for corporate social responsibility), philanthropic foundations and NGOs in India and the USA



# Snapshot of participants – Round 2



**Kanishka Agiwal**

**AWS**

With over two decades of experience, Kanishka Agiwal heads AWS Service lines, which include Digital Innovation, deep technologies such as AI/ML, and core services such as databases, storage, edge, hybrid cloud and security

**Yashwin Iddya**

**Fields of view**

Yashwin Iddya works towards social equity and sustainability by designing simulations using qualitative and quantitative data

**Bharath Palavalli**

**---**

Bharath Palavalli is creating tools and methods to allow different stakeholders to discuss, collaborate, disagree and function together on creating relevant and usable policy

**Neha Raykar**

**IDInsight**

Neha Raykar is a Director at IDInsight, based in New Delhi, India. She leads IDInsight's work in the areas of maternal and child health and nutrition, adolescent health and wellbeing, and health systems governance in India

**Divya Dua**

**IDInsight**

Divya Dua is the India Chief of Staff at IDInsight. She works directly with IDInsight's India Lead to develop relationships across the country and implement IDInsight's regional strategy

**Manohar Sreekanth**

**Sattva**

Manohar Sreekanth is a partner and CTO at Sattva Consulting, responsible for Sattva's technology and data related products and services, and for Sattva's digital transformation

**Vrunda Bansode**

**Sattva**

Vrunda Bansode is currently working on the internal data systems at Sattva. Previously, she set up and led their marketing function. She also led the development and launch of the 'India Data Insights' platform

**Priyank Hirani**

**data.org**

He is leading the Data Accelerator Network program for data.org. He is responsible for distilling a network-of-networks model through the design and delivery of capacity accelerators

**Debasmit Mohanty**

**Stratlytics**

Debasmit Mohanty is an analytics professional with 20+ years of experience in the US, India and Africa. He has managed credit risk of retail assets (mortgages, credit cards, student loans and instalment loans)

**Vyjayanthi Mala**

**Societal Thinking**

Vyjayanthi Mala is the Chief Orchestrator at Societal Thinking, EkStep Foundation. She is excited about contributing to the work the societal change leaders do to create impact at scale.

**Avik Sarkar**

**ISB**

Dr. Avik Sarkar is Faculty at Indian School of Business, working in the areas of Data, Emerging Technology and Public Policy. At ISB, Dr Sarkar is heading the development of India Data Portal ([www.indiadataportal.com](http://www.indiadataportal.com))

**Deepika Mogilishetty**

**EkStep Foundation**

Deepika Mogilishetty is Chief of Policy and Partnerships at EkStep Foundation. Deepika has for the past 10 years been working on issues at the intersection of technology and access – particularly on large scale social solutions



**Soma S  
Dhavala**

**Wadhvani AI**

His interests are at the convergence of technology, science and applications. He is passionate about building an ecosystem to democratise AI, make it inclusive, accessible, equitable, and normalising technology

**Ravi Trivedi**

**The Nudge  
Institute**

Ravi Trivedi is a Senior Director, Digital Agriculture at The/Nudge Institute. He works on projects related to AI/technology innovation to increase the income of farmers, and on sustainable agriculture

**Tanvi Negi**

**Quest Alliance**

Tanvi Negi is the Associate Director-Knowledge and Impact at the Quest Alliance

**Gautam  
Lahiri**

**TIDE**

Gautam Lahiri has been a compassionate leader in the Service industry for more than two decades, driving Operations, Change, Transformation and People development. He is adept in working across business verticals

**Steven  
Suting**

**Quest Alliance**

Steven Suting is a Technology Solution Architect

**Sharad  
Heda**

**ISDM**

With over 35 years of experience, Sharad Heda was an early influencer who envisioned the importance of digital technologies in the IT Infra services space. He is also a Business Advisor to multiple companies

**Monica  
Datta**

**Capgemini**

She leads the *Tech for Positive Future* vertical in CSR Capgemini. An MCA by qualification and experienced in Application Production Support in IT, she recently moved to CSR to pursue her interest in the development sector

**Surbhi  
Rattan**

**Capgemini**

She is Head, Digital Academy (Corporate Social Responsibility), Capgemini India. She leads employability and focused skilling initiatives in the digital and technology space

**Divyanand  
Raj**

**Nasscom  
Foundation**

Divyanand Raj is Head - Impact and Measurement at NASSCOM Foundation

**Vijayashree  
Urs**

**ShikshaLoka  
m**

Chief Technology Officer at ShikshaLokam

**Archisman  
Majumdar**

**Mphasis**

He is the AVP & Lead - Applied AI at Mphasis Next Labs. He conceptualises, develops, and leads multiple products in the analytics R&D space. He completed his PhD from IIMB in Quantitative Methods and Information Systems

**Bala  
Natarajan**

**Capgemini**

He has 27 years experience in data analytics, data science, business process management, financial services and business advisory services, of which the last 18 years have been in enterprise analytics services



