

# Building the Field of Data for Social Impact

*Workforce Wanted Study Insights*

ABW DS Practitioner Fellowship

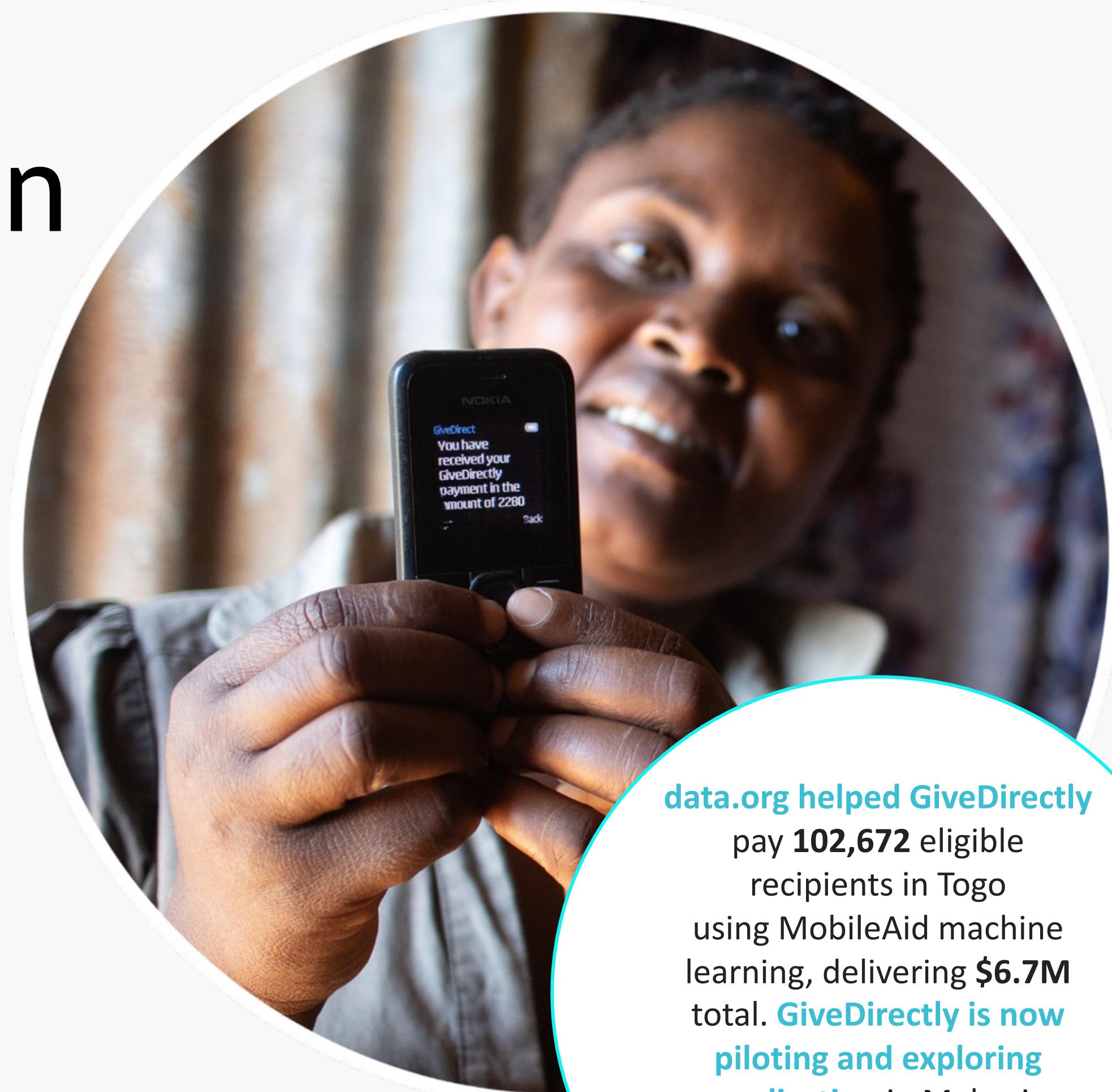
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Oct 2022



# Uniting Vision with Action

data.org envisions a world in which people everywhere can use data science to solve society's greatest challenges and improve lives around the globe.



data.org helped GiveDirectly pay 102,672 eligible recipients in Togo using MobileAid machine learning, delivering \$6.7M total. GiveDirectly is now piloting and exploring replication in Malawi, Democratic Republic of Congo, and South Asia.

# Global Scan and Data Talent Report

To unleash the power of data in the social sector, we need to create a global, coordinated ecosystem supporting people and social impact organizations.



- Momentous opportunity to strengthen both individual talent capacity and organizational effectiveness by unlocking new skills
- Need for coordination and increased financing to drive shared growth
- Four potential pathways to increase data talent globally
- Recommendations to build the field

<https://data.org/reports/workforce-wanted/>

# Taxonomy of Data Skills (non-exhaustive)

	Examples of technical skills	Examples of translational skills	Examples of Roles
<b>Basic data skills</b>	<ul style="list-style-type: none"> <li>» Basic use of statistical software (e.g., Excel)</li> <li>» Data collection and entry</li> <li>» Basic data analysis and manipulation</li> <li>» Basic data visualization</li> </ul>	<ul style="list-style-type: none"> <li>» Communication (verbal/written)</li> <li>» Ability to interpret and understand key takeaways from data</li> <li>» Collaboration and teamwork</li> <li>» Critical thinking, problem-solving</li> <li>» Data-driven decision-making</li> </ul>	<ul style="list-style-type: none"> <li>» All non-data specialist professionals who use data in decision-making</li> <li>» Data entry roles</li> <li>» Data collection officer</li> </ul>
<b>Intermediate data skills</b>	<ul style="list-style-type: none"> <li>» Ability to perform complex functions (e.g., create and maintain complex spreadsheets on Excel; using Stata)</li> <li>» Some programming languages (R, SQL, Python)</li> <li>» Data quality management (DQM)</li> <li>» More complex data visualization</li> <li>» Some knowledge of machine learning</li> <li>» Statistical knowledge (e.g., sampling techniques, ability to design research tools)</li> </ul>	<ul style="list-style-type: none"> <li>» Ability to understand the nuances and takeaways of data analysis</li> <li>» Ability to communicate results in the organization and to the public</li> <li>» Data presentation skills</li> <li>» Critical and structured thinking</li> <li>» Continuous learning</li> <li>» Ability to work in teams</li> </ul>	<ul style="list-style-type: none"> <li>» Research analyst</li> <li>» Data analyst</li> <li>» Data associate</li> <li>» M&amp;E associate/officer</li> <li>» Database administrator</li> <li>» Data coordinator</li> <li>» Cloud operations associate</li> </ul>
<b>Advanced data skills</b>	<ul style="list-style-type: none"> <li>» AI and machine learning</li> <li>» Deep learning</li> <li>» Advanced data analytics and modeling</li> <li>» Predictive analytics</li> <li>» Advanced data visualization</li> <li>» Advanced cloud computing and engineering skills</li> <li>» Deep theoretical knowledge of statistics</li> <li>» Ability to plan and/or manage the entire data lifecycle</li> </ul>	<ul style="list-style-type: none"> <li>» Data strategy (developing and leading the implementation of strategies)</li> <li>» Ability to work with and lead data teams</li> <li>» Data stewardship</li> <li>» Data ethics</li> <li>» Storytelling skills</li> <li>» Critical and structured thinking</li> </ul>	<ul style="list-style-type: none"> <li>» Data scientist</li> <li>» Machine learning engineer</li> <li>» AI engineer</li> <li>» Cloud computing engineer</li> <li>» Data engineer</li> <li>» Data architect</li> <li>» Head of research/analytics</li> </ul>

# Labor Market Dynamics for DSI Talent

## Supply challenges

Inadequate/insufficient supply of talent

### Quantity

- » Insufficient number of data professionals overall, even less so when it comes to those seeking social impact pathways

### Quality

- » Gaps between skills developed and the lived experience of applying those skills in the workplace

### Relevance

- » Mismatch between the types of skills developed and those demanded by employers

### Representation

- » Inadequate levels of diversity, inclusion, access, and equity when it comes to opportunities

## Demand challenges

Mostly latent demand for data professionals

### Awareness

- » Limited understanding of the potential of hiring diverse data talent and/or lack of willingness to invest in talent

### Absorptive capacity

- » Limited ability to hire data professionals (human resources, financing, infrastructure)

### Utilization and retention

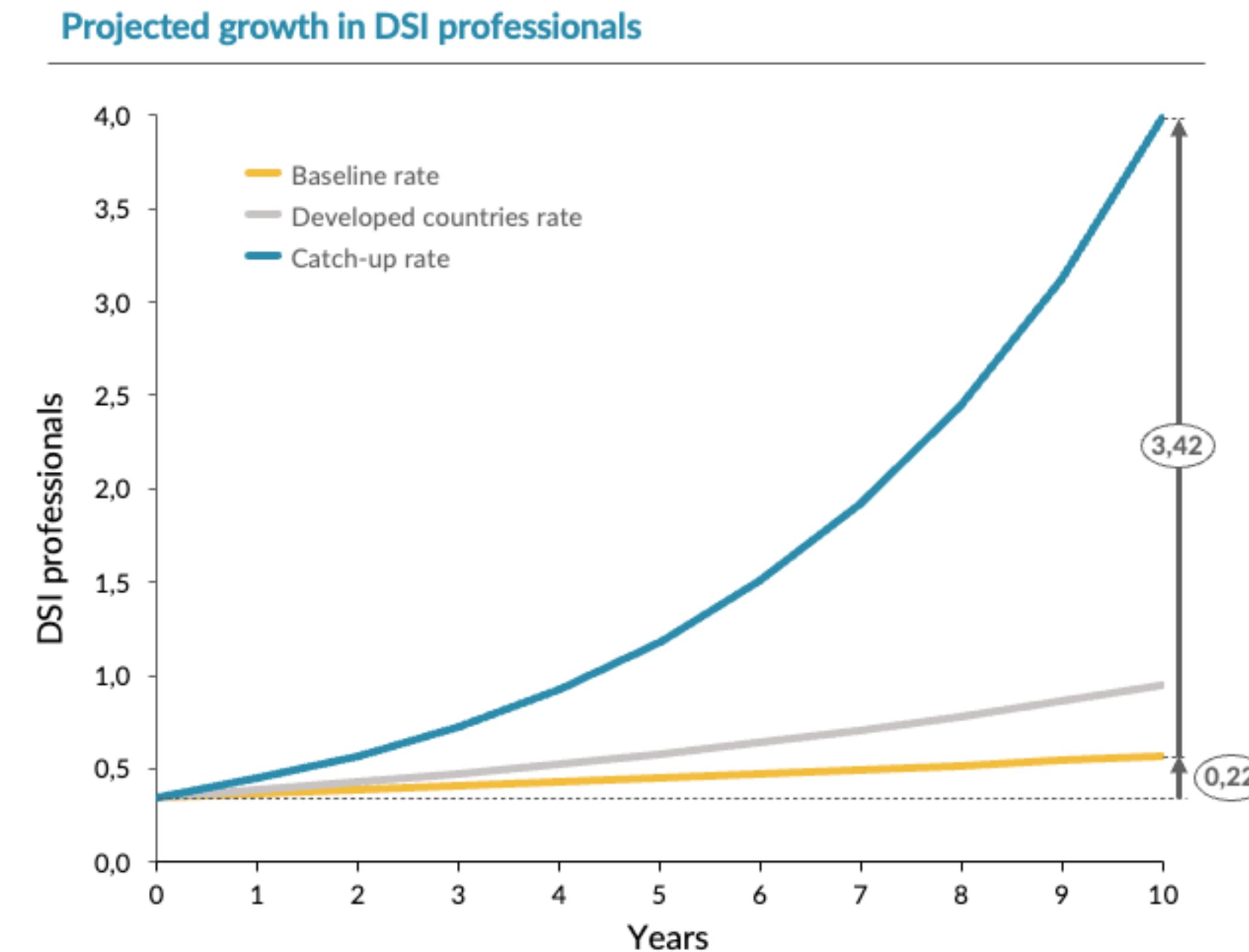
- » Limited ability of SIOs to utilize and retain data professionals when they are hired

Limited number of DSI professionals in developing contexts

## Ecosystem challenges

Nascent nature of the DSI field (i.e., limited use cases), nascent labor market systems (i.e., limited visibility over supply and demand, limited job linkages), and limited maturity of data ecosystems (i.e., data governance, overall data culture, etc.)

# Potential for 3.5 M Data for Social Impact jobs over the next decade



If the DSI field keeps growing at the same rate as all jobs in the formal sector, there will be ~220,000 DSI jobs to fill in developing countries over the next 10 years.

However, if the sector is stimulated, this number could reach 3.5 million DSI jobs.

Source: Dalberg analysis, LinkedIn, [US Bureau of Labor Statistics](#), UN World Population Prospects, 2019, Kenya Economic Survey, 2021, India Economic Survey, 2021, EU Commission, The European Data Market Monitoring Tool, 2020.

# Pathways for Advancing DSI Talent

Expanding supply of DSI professionals through existing and new talent

## New talent

- » Potential DSI talent entering the workforce for the first time with no prior data work experience

## Existing social sector talent

- » Current professionals in the social sector who could be upskilled in data

## Transitional talent

- » Existing data professionals outside the social sector who could be upskilled or attracted to work in SIOs

Expanding the availability, retention, and utilization of DSI talent within SIOs

Increasing awareness and absorptive capacity of SIOs

## Leadership

- » SIO leaders and senior executives who could acquire new capabilities and support to make their organizations more data-driven and to attract, retain, and utilize DSI professionals

# Recommendations

- 1. EXPERIMENT EARLY AND EVALUATE OFTEN**
- 2. PRIORITIZE INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY (IDEA)**
- 3. RECOGNIZE THE INTERDISCIPLINARY NATURE OF DATA FOR SOCIAL IMPACT**
- 4. MOVE FROM INDIVIDUALS TO ECOSYSTEMS**
- 5. INVEST IN APPLIED LEARNING AND STRONGER LINKS TO PROFESSIONAL PLACEMENT AND ADVANCEMENT**
- 6. COORDINATE COMPLEMENTARY EFFORTS**
- 7. CONTINUOUSLY INVEST IN MORE AND BETTER VISIBILITY THROUGH DATA**

# What Next?

data.org Is Committed to Training  
1 Million Purpose-Driven Data Professionals



# Building the Network: Initial 3 Accelerators

**GOAL:** To establish a strategic network of accelerators that increases human talent development and strengthens organizational capacity of SIOs to use data effectively to drive positive change

## Financial Inclusion Data Accelerator



## University of Chicago

- Co-create an inclusive, open, modular Data Science Experiential Learning curriculum with 7 HBCUs/HSIs/MSIs and community colleges in the US and develop a Deployment Playbook
- Engage local SIOs and pair with students for experiential learning through Summer Social Impact Labs

## Climate and Health Data Accelerators



## J-PAL South Asia

- Develop & deploy a DSSI curriculum, including undergraduate / masters level courses and mid-career /executive leadership trainings, with partners in India
- Launch experiential learning program, by linking DSSI students to internships/apprenticeships at SIOs
- Launch a Fellowship program for on-the-job learning, leveraging JPAL's research and administrative data projects



## GPSDD

- Scale up a DS training program in 5 African countries with AIMS, placing data science practitioners with subject matter expertise in SIOs
- Increase data maturity among public sector and SIOs through online training and work with data fellows
- Build a community of data professionals in sub-Saharan Africa, through mentorship and networking

## Digital Platform Underpins Network

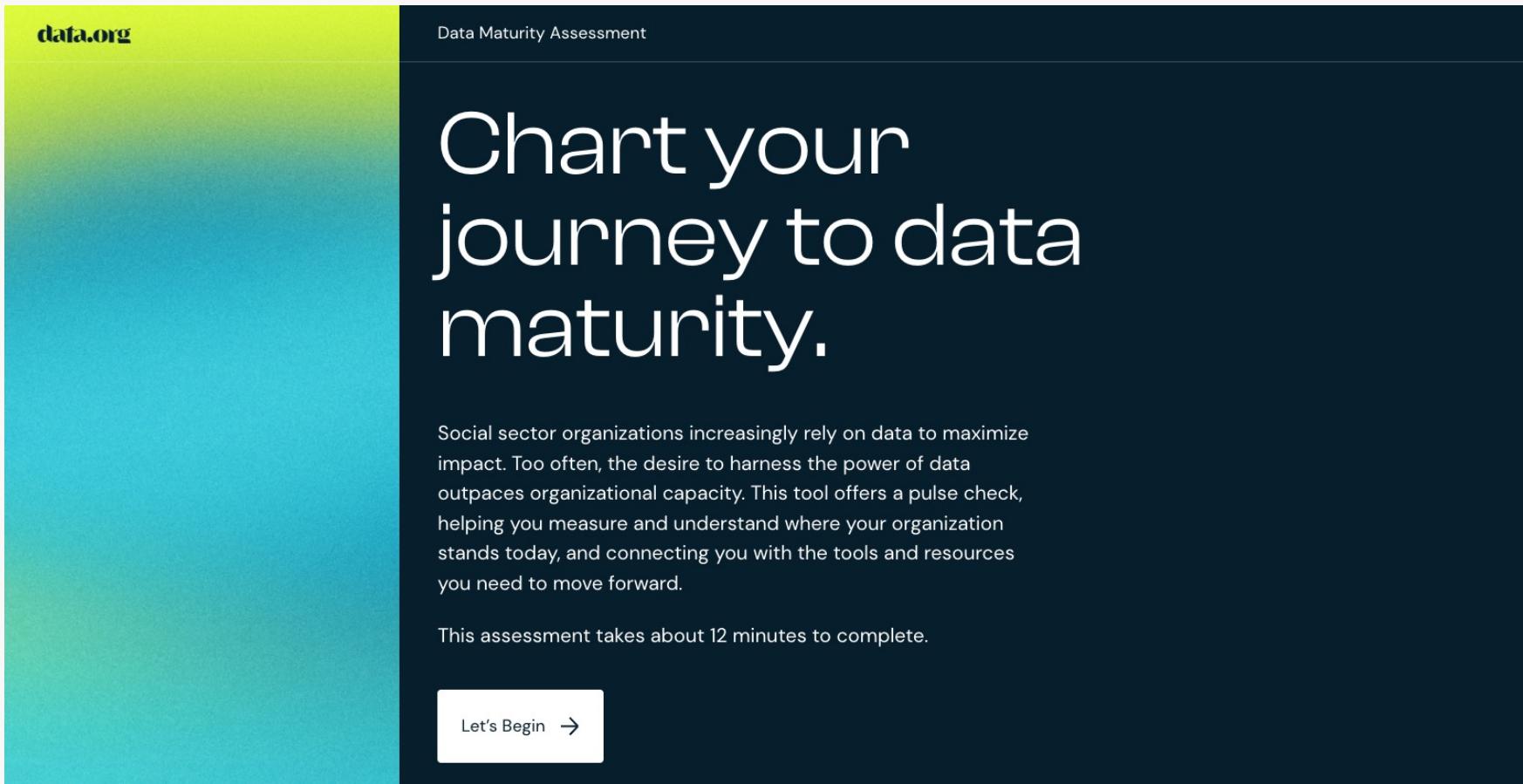
Build Community | Share Learnings, Resources and Products | Amplify Opportunities

# Supporting SIO Data Journey: Data Maturity Assessment

Our Data Maturity Assessment provides SIOs with an actionable snapshot of their data maturity. Social impact professionals can use this information to gauge their current state and identify opportunities to improve their practice.

In aggregate, the findings will inform how philanthropy can invest to ensure data is enabling efficient and effective operations and programmatic work. Organized around 3 categories - Purpose, Practice, People - and 10 sub-categories, for a holistic snapshot of data maturity.

<https://data.org/dma/>



Suggestions from our [resource library](#) based on your results.

- Analysis • Guide**  
**Getting Started with Data Visualization**  
Visualizing data is one of the most effective ways of communicating data. This can take many forms from live digital data dashboards to static charts shared in social media channels.  

- Application • Resource**  
**AI for Social Good Guide**  
This guide introduces organizations to AI for social impact, sharing examples of work to illustrate the potential.
- Strategy • Resource**  
**Building the AI-Powered Organization**  
This resource identifies how organizations can find opportunities to work with AI.

2/17/22, 11:08 AM      Results - Data Maturity Assessment | data.org      **data.org**

## Data Maturity Assessment Results

Your organization is:

# Data Guided

Your organization uses data effectively to deliver impact and achieve your mission. You're ready to sharpen your practice so your growth can continue.

Overall score	4.8
Out of 10	

Purpose	5.1
Practice	4.7
People	4.5

**Purpose**  
How your organization maximizes people power, skills, and mindset to apply data in service of your mission.  
Application 5.0 / 10  
Analysis 3.8 / 10  
Strategy 7.1 / 10  
Ethics 6.6 / 10  
Infrastructure 3.0 / 10

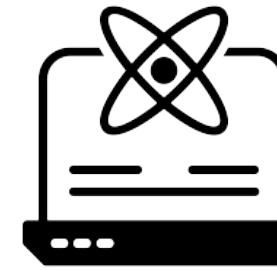
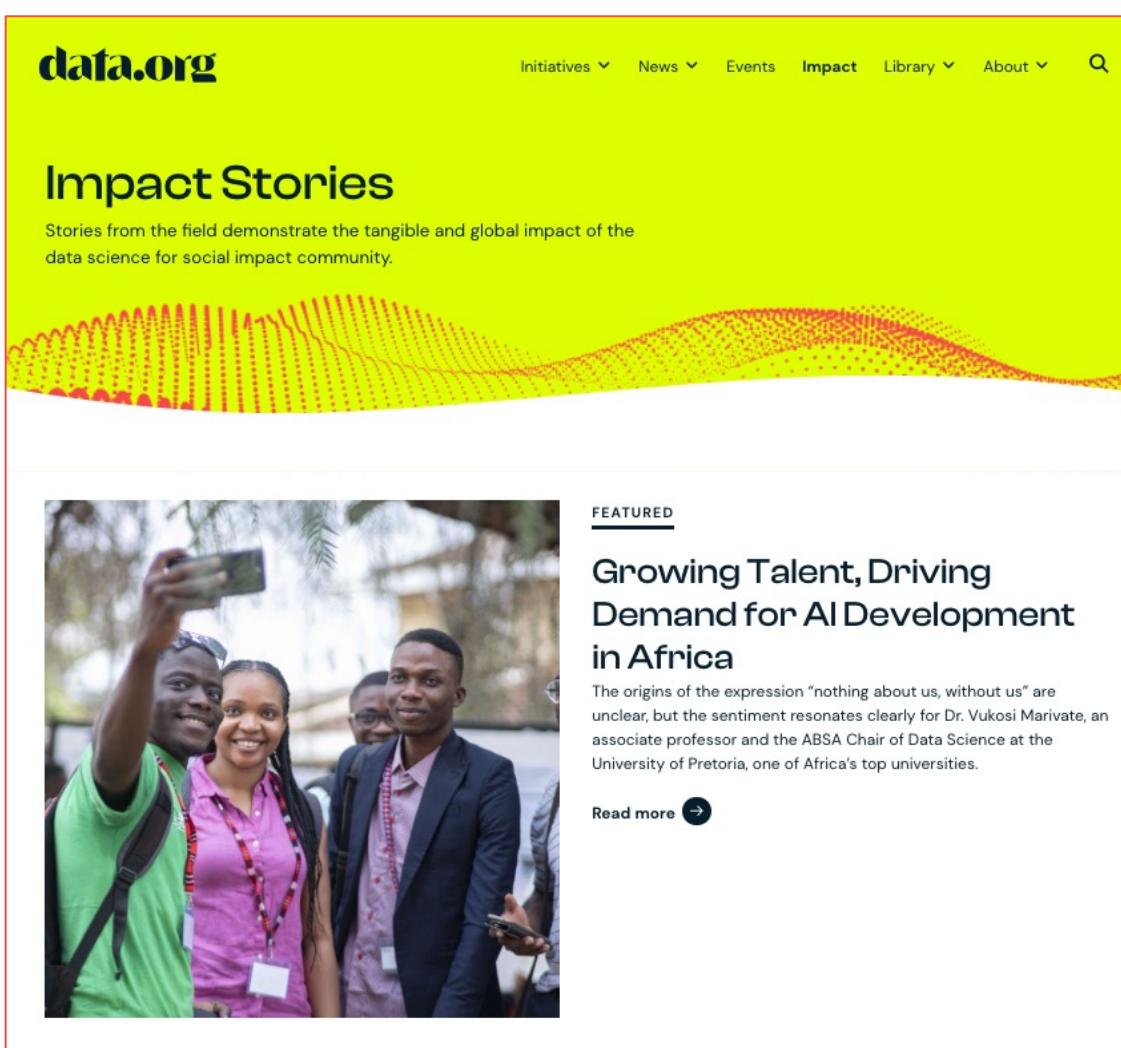
**Practice**  
Where the data hits the road — the support, tools, and processes your organization needs to responsibly collect and manage data.  
Quality 5.4 / 10  
Security 4.5 / 10

**People**  
Talent, culture and leadership. This section looks at organizational skills as well as culture and buy-in.  
Leadership 5.0 / 10  
Talent 2.5 / 10  
Culture 7.5 / 10

**Thank you!**  
We're excited that you're taking the time to evaluate your organization's data maturity. Data.org is committed to empowering the social impact sector to use data to achieve its goals. We'd love it if you shared this tool with others in your network.

# Digital Platform: In service to the DSI Community

**We use our neutral platform to support the global community of DSI practitioners.** As well as highlighting our own initiatives, our platform lifts up the work of DSI practitioners beyond our grantees through free and open resources, events, and match making opportunities.



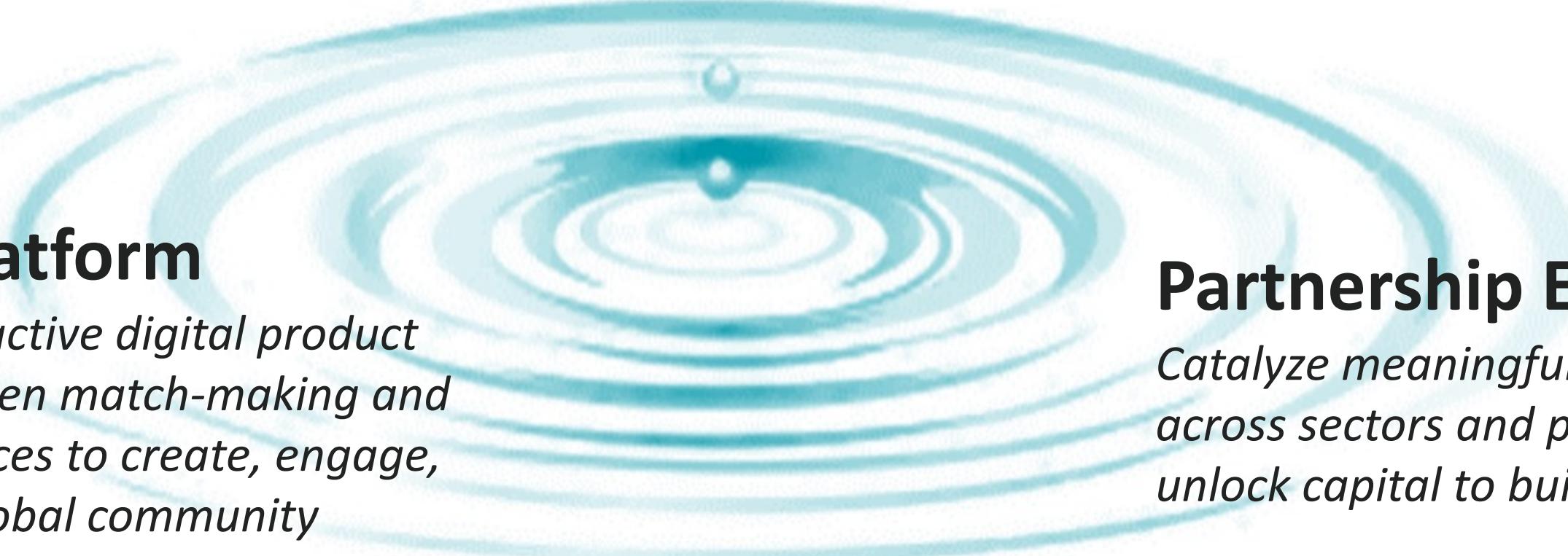
## Digital Platform

*Build an interactive digital product with data-driven match-making and shared resources to create, engage, and build a global community*



## Thought Leadership

*Curate groundbreaking ideas, engage big thinkers, and highlight social impact leaders to build shared learnings and drive complex conversations*



## Partnership Engagement

*Catalyze meaningful partnerships across sectors and perspectives to unlock capital to build the field*



# Our Approach

data.org enables collaboration across sectors to drive action and results. Since our founding in 2020 we have launched successful data science initiatives in our three focus areas.

**Shape the narrative | Strengthen the sector | Transform the commons**

## Cases

Show what great looks like

Invest in projects that exemplify best practices: scalable and replicable

## Capacity

Empower people and organizations

Centered in diversity and equity, build talent and organization readiness

## Commons

Create shared public resources

Democratize public goods like data sets, tools, resources, and knowledge



# data.org convenes partners across sectors

data.org is evolving the data science ecosystem by enabling collaboration across organizations and sectors, bringing together those directly engaged in social impact work, as well as entities seeking to invest effectively to transform SIOs.

## FOUNDING



Center for  
Inclusive Growth



## FUNDING



Canada

## BUILDING





# Thank you

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