

**POLICY BRIEF**

# Advancing Data Justice in Africa through Just Data Value Creation

## The Six Pillars of Data Justice



Source: Advancing Data Justice Project

- **The wealth created from data-driven technologies are concentrated within a few countries and multinationals, advancing data justice in Africa is essential to ensure that the benefits of data-driven technologies are equitably distributed to benefit the continent, do not perpetuate historical injustices, and exacerbate persistent structural intersectional inequities.**
- **However, many data governance frameworks in Africa tend to focus too narrowly on the collection and production side of data under the assumption that whatever data produced will be used and data has inherent value, but collecting data alone has no value if it does not promote demand, usability, and impact, at scale.**
- **Robust data governance is needed to empower individuals and communities, address data biases and inequalities, foster local data innovation ecosystems, establish synergistic partnerships, and promote just data value creation (JDVC). A JDVC approach can harness responsible data innovations through the development and deployment of interdependent frontier technologies such as artificial intelligence (AI) and machine learning (ML), to support the social contract for data, in Africa.**
- **This policy brief focuses on the six pillars of data justice and explores strategies for advancing data justice in Africa through the concept of JDVC.**

## What's the issue?

High-quality machine-readable data has become a valuable resource that forms the basis for public interest dialogue, analysis, and decision-making for socioeconomic progress, environmental stewardship, and democratic activity. A matter of concern is that the global wealth created from data-driven technologies is concentrated within a few countries and multinationals.<sup>1</sup>

Furthermore, despite being more susceptible to the negative impacts of datafication on socioeconomic and democratic activity, African countries often operate from weak positions in current multidimensional global governance initiatives on the data-driven digital economy. These initiatives do not involve meaningful participation of the different African stakeholders in the policy-knowledge ecosystem and hardly reflect Global South realities.<sup>2</sup> Data Justice<sup>1</sup> is essential to ensure that the benefits of data-driven technologies are equitably distributed and do not perpetuate persistent structural inequities. To advance data justice globally, a consortium of organisations led by the Alan Turing Institute and Global Partnership on AI (GPAI) developed guides for advancing data justice that consists of six pillars: Power, equity, access, identity, participation, and knowledge.<sup>3</sup>

However, many data governance frameworks in Africa tend to focus too narrowly on the collection and production side of data under the assumption that whatever data is produced or collected has inherent value, but collecting and producing data alone has no value if it does not promote demand, re-usability, and impact, at scale<sup>4</sup>—key factors that can support digital entrepreneurship. It is only when high-quality data are turned into valuable information that they can improve lives, transform economies, strengthen resilience, and help end poverty. Robust data governance<sup>5</sup> is needed to advance data justice in Africa, a robust data governance framework is also an essential component of enabling better quality and more granular data to achieve development goals, mitigate anti-trust issues in data markets, and ensure people's digital rights are protected through policy tools and frameworks that ensure just data value creation (JDVC).<sup>6</sup>

This policy brief focuses on the six pillars of data justice and explores strategies for advancing data justice in Africa through the concept of JDVC.

## Advancing Data Justice in Africa through Just Data Value Creation (JDVC)

Data justice is a critical aspect of the ongoing digital transformation in Africa. As the continent witnesses rapid advancements in innovations through interdependent data-driven technologies such as artificial intelligence (AI) and machine learning (ML), ensuring data justice becomes paramount to address growing concerns about ethical data use, privacy, and societal well-being. Several initiatives across Africa are already working towards advancing data justice. For example, organisations like Zindi, and Code for Africa are providing training and resources to enhance data literacy and skills among African youth, civil society organisations in addition to the Data Economy Policy Hub (DepHUB), such as the (Collaboration on International ICT Policy for East and Southern Africa (CIPESA), the South African AI Association (SAAIA), Gender and Responsible AI Network (GRAIN), African Economic Research Consortium (AERC) and AfroLeadership, to name a few, are actively involved in co-creating practitioner-based data governance interventions for better data ecosystems, that support more inclusive digital entrepreneurship, and responsible AI (RAI)<sup>7</sup> deployments. In this context, just data

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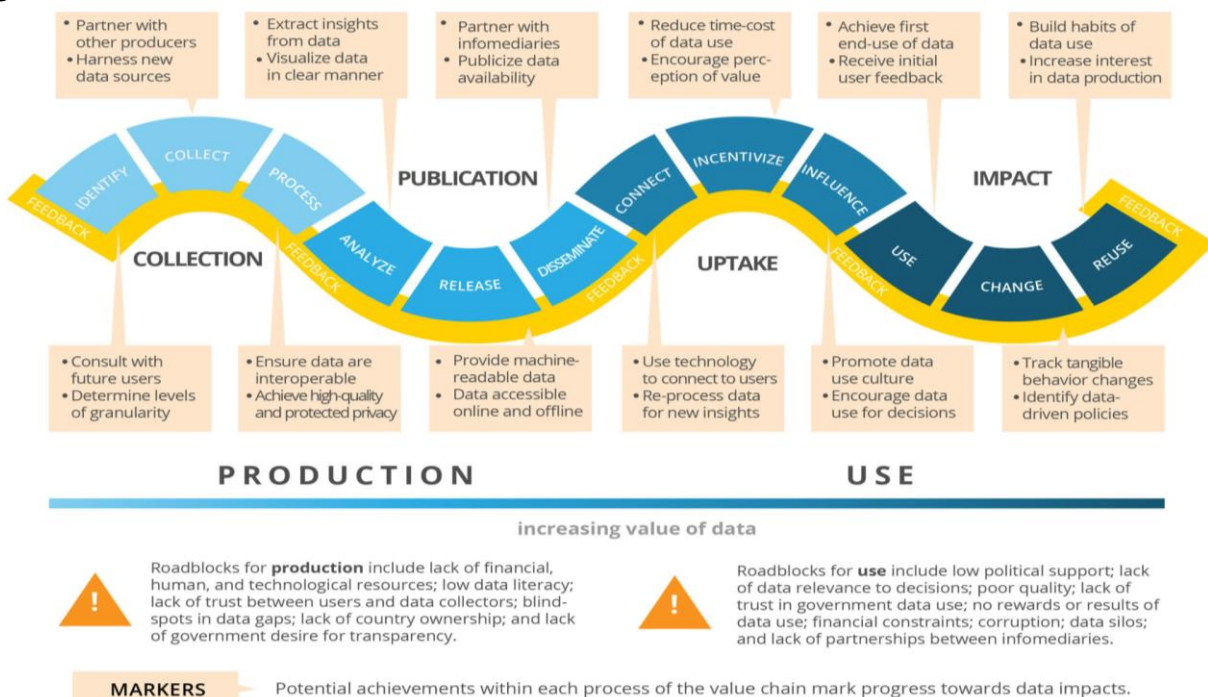
<sup>1</sup> Data justice refers to the fair and equitable distribution of the benefits and burdens of data-related activities. It emphasises the rights of individuals and communities to control their data, access relevant information, and involvement in decision-making processes that affect them. Data justice recognises that power imbalances exist in data ecosystems and seeks to challenge and redress these imbalances

value creation (JDVC) emerges as a more holistic approach to advance data justice for Africa— JDVC focuses not only on fair and equitable distribution of the benefits and burdens of data ecosystems and data innovation-related activities<sup>8</sup>, JDVC also considers factors beyond data production to focus on the quality, demand, use, and overall impact of data collected.

Advancing data justice through a JDVC approach goes beyond mitigating data privacy and protection issues, ensuring that the benefits of high-quality machine-readable data are accessible to all segments of society, and addressing persistent structural intersectional inequities and multidimensional systemic risks associated with societal, economic, and technological transitions— it includes ensuring the enablers and prerequisites are in place to create value from data (intelligence and products), that have potential to scale the positive and transformational benefits of data innovations that support the social contract for data.<sup>9</sup> Beyond only regulation of personal/sensitive data from the private sector, which has been the main focus of attention internationally and on the continent, a JDVC approach supports robust data governance, which includes governing data to facilitate interoperability and access within data ecosystems so that data practitioners and AI systems can combine privately held and administrative and statistical data to create valuable insights with potential to inform policy making, and ultimately advance public interest objectives.

A JDVC approach is a human-centred approach to leverage data as a factor of production<sup>10</sup> and includes key considerations of whether African countries have the enablers and prerequisites (quality data, human capital, computing power, critical infrastructure, laws and regulations, policies, technical standards, and institutions, etc.) to create value from data, including whether the data is useful (has demand) and fit for purpose to realise the full potential of data that captures the components of the data value chain.<sup>11</sup> As shown in Figure 1, the data value chain describes connections between each step required to create value from data, from start to finish, that changes low-value inputs into high-value products, where “value addition” is derived at different points of the value chain and there are considerations beyond the production of data to pertinent reviews of its impact and use.

**Figure 1: The Data Value Chain**



Source: Open Data Watch

Advancing data justice through a JDVC approach provides a framework for holistically leveraging the six pillars of data justice. A JDVC approach can mitigate data graveyards<sup>12</sup>, support the governance of data as digital public goods (DPGs)<sup>2</sup>, and facilitate RAI development and use.

Advancing data justice through a JDVC approach can improve policy coherence and systems thinking to strengthen prerequisites and facilitate enablers required for inclusive and interoperable data ecosystems; this requires empowering local researchers with funding to conduct empirical evidence needed to assess the maturity, gaps, and opportunities associated with various data ecosystems and RAI deployments in the public sector<sup>13</sup>. For example, in national statistical systems (NSS), the Statistical Performance Indicators (SPI) can be used as a framework to assess the maturity of NSS and ensure data governance aligns with the five pillars of an effective national data ecosystem<sup>14</sup>: Data use, data services, data products, data sources, and data infrastructure, as shown in Figure 2.

**Figure 2: Statistical Performance Indicators (SPI) Framework**

PILLARS	DIMENSIONS				
<b>Data Use (User Types)</b>	Legislature	Executive	Civil Society	Academia	International Bodies
<b>Data Services (Service Types)</b>	Quality of Data Releases	Richness & Openness of Online Access	Effectiveness of Advisory & Analytical Services Related to Statistics		Availability & Use of Data Services
<b>Data Products (Topics)</b>	Social (SDG 1-6)	Economic (SDG 7-12)	Environmental (SDG 13-15)		Institution (SDG 16-17)
<b>Data Sources</b>	Statistical Office (Censuses & Surveys)		Administrative Data	Geospatial Data	Private Sector Data/Citizen Generated Data
<b>Data Infrastructure</b>	Legislation & Governance	Standards & Methods	Skills	Partnership	Finance (Domestically & From Donors)

Source: World Bank

Advancing data justice through JDVC highlights the importance of creating empirical evidence to understand the maturity of data ecosystems. Understanding the "current state of affairs" is needed to implement interventions that are based on rigorous evidence; this has a higher likelihood of improving service delivery, facilitating efficient allocation of resources, empowering individuals and communities, addressing data biases and inequalities, fostering more inclusive local data ecosystems, promoting meaningful collaboration, and establishing robust data governance frameworks to benefit people and the planet.

### Policy Recommendations

Comprehensive data governance frameworks must encompass the six pillars of data justice through a JDVC approach, a JDVC approach ensures that public interest decisions are grounded in understanding

<sup>2</sup> <https://digitalpublicgoods.net/digital-public-goods/>

data as a factor of production, regional realities, and economic factor endowments, with considerations of local contexts and industry use cases. The following are recommended:

- **Address power asymmetries in data collection, knowledge production, and data use to ensure that marginalized groups are not further disadvantaged.** Measures that promote epistemic justice, such as ensuring indigenous local researchers and experts are involved not only in collecting and analysing data but are also acknowledged and involved as key contributors to public-policy knowledge outputs that are used to inform public-interest decisions. Ensuring diversity, equity, and inclusion (DEI) in data collection and knowledge production can reduce biases and reflect the realities of diverse populations. JDVC involves ensuring that everyone has access to opportunities, platforms, data, and tools needed to participate in data innovation ecosystems.  
By working together, diverse stakeholders can contribute their expertise and perspectives to create better practical solutions. There should be formal requirements to involve local communities in the data value creation process and ensure that the benefits of data innovations are shared more equitably; this can be done by providing training and support to marginalised groups, allowing them to improve their digital capabilities and actively participate at different points in the data value chain, as well as ensuring that the risks associated with data innovations are minimised and are communicated with the community. Furthermore, community-led initiatives are more likely to create useful innovations and address challenges experienced by marginalised communities that capture their lived experience, expertise, and perspectives..
- **Foster a decolonial informed approach to funding that encourages equal partnerships across transnational data ecosystems.** Governments, private sector entities, academia, and the international donor community should adopt a decolonial-informed approach (DIA) to funding and co-creating public interest initiatives and knowledge products. Organisations with power and means must make concerted efforts to co-create solutions with traditionally excluded groups, for example, by supporting the development of more diverse policy-knowledge ecosystems, data ecosystems, data innovations, and communities of practice beyond their few "preferred donor recipients". Better DEI in policy knowledge ecosystems and communities of practice can address different forms of injustice at various points in the data value chain and create better innovations in the broader data ecosystem. A DIA can enhance the data capabilities of traditionally marginalised groups, promote ethical data innovations, RAI deployment, improve digital entrepreneurship, and support incorporating indigenous knowledge that considers people and the environment to reflect the contextual realities of disenfranchised groups in policy making. Measures such as innovative funding mechanisms to enhance access to quality machine-readable data, ensuring that data is collected in a way that is inclusive of marginalised groups, and providing targeted training and support to ensure that everyone has an equal opportunity to participate in the data value creation process, including decisions on transnational technical standards, norms, regulation, and policies on measuring the maturity (readiness) of data ecosystems in the multidimensional global data economy.
- **Promote inclusive and interoperable African data ecosystems for sustainable digital development.** Data and AI are not separate industries but are increasingly embedded across key sectors that have the potential to boost economic growth in Africa. JDVC involves

mitigating existing structural intersectional inequities, ensuring that data innovations such as those created by AI systems are used in a transparent and accountable manner. Interventions such as investment decisions that encourage the development of local data enablers, including data infrastructure, data analytics skills, digital entrepreneurship, and data governance frameworks, to name a few, should involve formal mechanisms where practitioners provide input to public interest decisions on data, allowing for better consensus on trade-offs required to support data innovations that facilitate sustainable digital development. A transversal multidisciplinary approach can address persistent structural inequities and empowers African stakeholders to harness the value of their own data, thus reducing extractive practices and dependence on external actors. There should be formal mechanisms to facilitate responsible data and AI governance where, organisations are held accountable for unethical practices, abuse of dominance, and exclusionary systems while balancing locally-led innovations that have the potential to foster sustainable digitalisation and an innovation-enabling policy- and regulatory framework that leverages data.

- **Prioritise human capital investments to empower data subjects and enhance local data capabilities and technical skills.** Measures such as ensuring that local indigenous actors are involved to ensure data is collected in a way that respects individual privacy, providing training and support to local experts to ensure that data is used in a non-discriminatory manner, and ensuring that the use of data-driven systems such as AI are not used to reinforce stereotypes or create new forms of discrimination. As part of the data ecosystem, citizens should be empowered to recognise their privacy and digital rights over their data and ensure informed consent. More active citizen engagement can also foster trust between citizens as data subjects and data users. One way this can be done is through targeted training and knowledge co-creation initiatives with communities of practice and often under-resourced institutions that curate public data; these institutions already house existing analytical professions (statistics, quantitative economics, operational and social research etc.). These existing human resources can be upskilled and utilised to enhance JDVC in the public sector context, including collecting and creating value from sex-disaggregated data.

## Conclusion

As Africa surges ahead in creating data innovations that meet its contextual realities, it must prioritise data justice to create an inclusive and ethical digital future. Embracing just data value creation (JDVC) and adhering to the six pillars of data justice can advance efforts for Africa to ensure a human-centred approach to data as a factor of production. In collaboration with various stakeholders, policymakers, and institutions that fund the development of public-policy knowledge products and practical initiatives must take proactive measures to foster more inclusive approaches to building ecosystems that support responsible data governance and ensures data-driven innovations benefit all citizens while respecting their rights and values. By advancing data justice through JDVC, Africa can unlock its full potential to facilitate sustainable digital development.

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## Contact details

Email: [sahmed@africa-digital.org](mailto:sahmed@africa-digital.org)