Annex of tools, resources, and frameworks

This Annex contains a list of tools, frameworks, and guidance documents that reflect existing thinking and experience on how to implement many of the actions proposed in the white paper.

Authors and organizations	Resources	Description	Relevance for agency, accountability, and action
Ada Lovelace Institute	Exploring legal mechanisms for data stewardship	This paper discusses in detail three mechanisms for data stewardship: data trusts, data cooperatives and corporate and contractual models. It illustrates their functioning and their pros and cons.	Agency, Accountability
	Participatory data stewardship A framework for involving people in the use of data	This report explores a range of mechanisms for achieving participatory decision-making around the design, development and use of data-driven systems and data-governance frameworks. It provides evidence that involving people in the way data is used can support greater social and economic equity, and rebalance asymmetries of power.	Agency, Accountability
	Technical methods for regulatory inspection of algorithmic systems	This document explores six methods that regulators can use as part of a regulatory inspection – code audit, user survey, scraping audit, API audit, sock-puppet audit and crowd-sourced audit. It identifies how and where these methods may be applicable, details existing technical approaches for auditing online platforms, and makes suggestions for how these techniques could be used to audit content-recommendation and moderation systems.	Action
Amandeep S.	Conceptual and	This article suggests a conceptual and normative approach to AI	Accountability

Gill, Stefan Germann	normative approaches to AI governance for a global digital ecosystem supportive of the UN Sustainable Development Goals (SDGs)	governance in the context of a global digital public goods ecosystem to enable progress on the UN Sustainable Development Goals (SDGs). It pushes for rooting governance in six concepts: a. human rights first; b. multi-stakeholder smart regulation; c. privacy and protection of personal data; d. a holistic approach to data use captured by the 3Ms—misuse of data, missed use of data and missing data; e. global collaboration ('digital cooperation'); f. basing governance more in practice, in particular, thinking separately and together about data and algorithms.	
Asian Development Bank	Practical Guidebook on data disaggregation	This guidebook is designed as a knowledge resource that brings together statistical standards and tools that have been and can be utilized by countries to provide disaggregated data for compiling SDG indicators as defined by the IAEG-SDGs' work on data disaggregation. The guidebook also describes analyses that highlight disparities and inequities in key policy areas made possible by the availability of disaggregated data.	Agency
Athena Infonomics	Barriers to Data Use in Sustainable Development - Research, Methods and Good Practices	This paper provides a brief overview of the key barriers to optimal data use. It discusses the common challenges faced, the existing incentives for data use, and the downside to generating data that is never used.	Action
Athena Infonomics, Global Partnership for Sustainable Development Data	Embedding data use in development practices	This policy brief focuses on what it takes to embed data use in data for development initiatives and suggests a number of recommendations to donors, multilateral organizations and non-profit organizations.	Action
Centre for Humanitarian Data	Data Impact Assessment Guidance Note	This note includes guidance for humanitarian organizations on how to decide whether to do an assessment, as well as several examples of data impact assessment tools.	Accountability

Colombia National Administrative Department of Statistics	Differential and Intersectional Approaches to Statistical Production	The guide outlines why adopting a 'Differential and Intersectional Approach' across the statistical system is important to creating a more accurate picture of different population groups. The differential approach is a principle applied to reparations and transitional justice from Colombia's internal conflict - outlined in the 2011 Victim's Law - which recognizes that the legacy of the conflict disproportionately affected some groups.	Agency
Contracts for Data Collaboration	Contracts for Data Collaboration: Library and Publications	The Contracts for Data collaboration website contains a legal agreement library (which hosts clauses taken from numerous data sharing agreements) as well as several relevant publications analyzing and commenting on the data sharing agreements themselves, such as the report titled 'the Covid19 Data and Data Sharing Agreements: the potential of sunset clauses and sunset provisions' and the report on 'Laying the Foundation for Effective Partnerships: An Examination of Data Sharing Agreements'.	Accountability, Action
Data.org	Data Maturity Assessment	This tool offers organizations wishing to work with data a pulse check, helping them measure and understand where they stands today, and connecting them with the tools and resources they need to move forward	Action
Data 2X	Mapping Gender Data Gaps: An SDG Era Update	The report analyses the state of gender data, examining whether progress has been made on gender data gaps across six sectors: health, education, economic opportunities, political participation, human security and environment.	Agency
DataKind	DataKind Playbook	The DataKind Playbook is a global, user-centered knowledge base for implementing a data-for-good project. It helps non profit organizations get started and implement data strategies for their development projects.	Action
	Data Science for Good Project Scoping: Identifying Your	This guide provides clear recommendations for organizations learning how to scope data science for social good projects. This resource outlines the potential pitfalls of social impact and data	Action

	Data-Scienceable Problem	science collaborations and the critical first steps for setting up a project for success.	
DataPop Alliance	Council for the Orientation of Development and Ethics (CODE) for building participatory and ethical data projects	A CODE is a group of independent stakeholders who voluntarily share their expertise in areas of direct relevance to a project. As an advisory group, it provides oversight to ensure a project abides by key ethical principles including fair and safe use of data and local context-specific concerns. This blog provides a definition of this tool and explores a few examples of how it works concretely.	Accountability
Development Gateway	Designing Data Strategies: A Playbook for Action	This paper provides a structured overview of lessons learned on data governance that may be used by those seeking to develop and implement a data strategy within international development and humanitarian organizations. It identifies six components for the design and operationalization of institutional data strategies that are − or are increasingly − common considerations within institutions and provides insights on how to address them	Accountability, Action
	Delivering Data Where it Counts and Principles for Subnational Data Use	This document explores the drivers and challenges for subnational data use. It illustrates a few case studies and extracts from them an initial set of principles for embedding data use at the local level.	Action
Digital Impact Alliance	Principles for Digital Development	The Principles for Digital Development are nine living guidelines that are designed to help integrate best practices into technology-enabled programs and are intended to be updated and refined over time. They include guidance for every phase of the project life cycle, and they are part of an ongoing effort among development practitioners to share knowledge and support continuous learning.	Agency, Accountability, Action
DIAL, DataPop Alliance	Mobile Data For Development (MD4D) Handbook	This handbook offers practical and detailed guidance on how to responsibly and effectively design mobile data for development projects. It consists of six modules which follow the flow of a data project.	Action

Economic and Social Commission for Asia and the Pacific	EPiC Tool	EPiC (Every Policy is Connected) is a tool that facilitates policy-data dialogue aiming to identify policy priorities as well as data needs. The tool integrates the four dimensions of development (Economic, Environmental, Institutional and Social) in every policy plan and develops a comprehensive indicator framework for policy monitoring	Action
European Data Sharing Support Centre	API Friendliness Checker	This tool helps organizations and developers to check their API against essential quality and usability criteria (as seen from a developer perspective) and provides comprehensive feedback on what should be improved.	Action
	API Licensing Assistant	This tool represents a guide to help developers and organizations to assemble a tailored license for API-based data sharing. By using this tool, they can be provided with a full license text, specific to their case, which can be copied, downloaded and further customized.	Action
Flowminder	FlowKit: Unlocking the Power of Mobile Data for Humanitarian and Development Purposes	FlowKit is a suite of opensource software tools designed to enable access and analysis of mobile data (Call Detail Records) for humanitarian and development use cases.	Action
	Guiding principles to maintain public trust in the use of mobile operator data for policy purposes	This article describes five principles to guide and assist statistical agencies, mobile network operators and intermediary service providers, who are actively working on projects using mobile operator data to support governments in monitoring the effectiveness of its COVID-19 related interventions.	Accountability, Action
First Nations Information Governance Centre	First Nation Principles of OCAP	The First Nations principles of OCAP establish how First Nations' data and information will be collected, protected, used, or shared. Standing for ownership, control, access and possession, OCAP is a tool to support strong information governance on the path to First Nations data sovereignty.	Agency, Accountability
Global Indigenous Data	CARE Principles for Indigenous Data	The CARE Principles for Indigenous Data Governance are people and purpose-oriented, reflecting the crucial role of data in advancing	Agency, Accountability

Alliance	[Governance](#)	Indigenous innovation and self-determination. These principles complement the existing FAIR principles encouraging open and other data movements to consider both people and purpose in their advocacy and pursuits.	
G20	[G20 AI Principles - G20 Ministerial Statement on Trade and Digital Economy](#)	This document contains the Principles for responsible stewardship of Trustworthy AI supported by the G20, strongly inspired by the OECD AI Principles (see below).	Accountability, Action
Global Partnership for Sustainable Development Data	[Choosing and Engaging with Citizen generated Data](#)	This guide helps users to understand if CGD is suitable for their projects as well as what type of data is appropriate for their needs. It is designed for governments, international organizations, and others interested in developing, engaging with and supporting CGD initiatives. It presents a list of distinction criteria between CGD methods, highlights the benefits and pitfalls of CGD, and provides a basis for strategic engagement with CGD.	Agency
Global Partnership for Sustainable Development Data	[Inclusive Data Charter](#)	The IDC advances the availability and use of inclusive and disaggregated data so that governments and organizations better understand, address, and monitor the needs of marginalized people and ensure no one is left behind. Launched in 2018, the IDC has quickly built momentum for inclusive data, garnered commitments from 20 diverse Champions, and supported them in accelerating and deepening progress.	Agency
GSM Association	[GSMA Mobile Privacy Principles](#)	This is a set of universal Mobile Privacy Principles that describe the way in which mobile consumers' privacy should be respected and protected when consumers use mobile applications and services that access, collect and use personal information	Accountability, Action
GovLab	[Data Assembly: responsible Data Re-Use Framework](#)	This report summarizes the experience and learnings of the Data Assembly, which is an initiative from The GovLab to solicit diverse, actionable public input on data re-use for crisis response in the United States.	Agency, Accountability

	DataCollaboratives.org	DataCollaboratives.org, is a resource on creating public value by exchanging data, collecting examples of data collaboratives from around the world, and providing information on how to develop and implement a data collaborative. The site, and the GovLab's work on the topic in general, seeks to provide insight on how the responsible exchange of data can improve people's lives.	Accountability, Action
	Leveraging private data for public good: A Descriptive Analysis and Typology of Existing Practices	The paper analyzes the current practice of "data collaboratives," an emerging form of collaboration in which a private-sector entity's data is leveraged in partnership with other entities from the public sector, civil society or academia for public good. It describes what institutional arrangements and operational dynamics enable private-sector data holders to collaborate with external parties to create new public value.	Accountability, Action
	Open Data Demand Assessment and Segmentation Methodology	The Open Data Demand Assessment and Segmentation Methodology provides open data policymakers and practitioners with an approach for identifying, segmenting, and engaging with demand. It entails six key steps.	Action
	The Third Wave of Open Data toolkit: Operational Guidance on Capturing the Institutional and Societal Value of Data Re-Use	This toolkit is meant to be a resource to data stewards, responsible data leaders at public, private, and civil society organizations empowered to seek new ways to create public value through cross-sector data collaboration. It provides them with ways they can foster a third wave built around equitable, impactful data re-use.	Action
	Wanted Data Stewards: (re)defining the roles and responsibilities of data stewards for an age of data collaboration	This paper outlines the roles and responsibilities of the emergent data steward profession. It supports data-holding businesses and public institutions to create and promote data stewards in the public and private sectors; and to establish a network of these data stewards.	Action

Inclusive Data Charter	Unpacking Intersectional Approaches to Data	This series of knowledge products developed by the Inclusive Data Charter, Champions, and partners serves to introduce the topic and guide practitioners through the practical applications of intersectional approaches to data and support its integration into their organizations and institutions.	Agency
ILDA, IDRC, D4D.net, UNFPA	Global Data Barometer	The Global Data Barometer measures the state of data in relation to urgent societal issues. It is an open access tool which appraises data availability, governance, capability and use around the world.	Action
MIT Media Lab, Imperial College London, Orange, the World Economic Forum, Data-Pop Alliance and Imperial College London	OPAL Project	The OPAL concept aims to combine a state-of-the-art privacy-preserving technology and a participatory governance system as well as capacity strengthening activities. It has been envisioned as a framework that enables public-private data collaborations where data can be fostered to provide an accurate picture of human reality to official statisticians, policymakers, businesses, and citizens, with governance, ethics and privacy as the essence of the work.	Accountability, Action
Mozilla Foundation	A Practical Framework for Applying Ostrom's Principles to Data Commons Governance	This piece is an attempt to translate Ostrom's principles on Data Governance to the specific case of data commons, bringing them down to earth in tangling with questions of ownership, storage, use, privacy, and regulation. It includes not only a treatment of the principles themselves, but also a set of accompanying questions, to steer communities in productive directions as they negotiate the tradeoffs and nuances of dealing with data commons.	Accountability
Office of the High Commissioner for Human Rights	A Human Rights Based Approach to Data (HRBAD)	HRBAD helps bring together relevant data stakeholders and develop communities of practice that improve the quality, relevance and use of data and statistics consistently with international human rights norms and principles. The principles are drawn from internationally agreed principles for statistics and echoes the call for a data revolution for sustainable development, which upholds human rights.	Agency, Action

Organisation for Economic Co-operation and Development (OECD)	OECD AI Principles	The OECD AI Principles promote use of AI that is innovative and trustworthy and that respects human rights and democratic values. Adopted in May 2019, they set standards for AI that are practical and flexible enough to stand the test of time.	Accountability
Open Data Institute	Assessing risk when sharing data: a guide	This guide seeks to provide early steps – prior to seeking legal counsel (if that is required) – to consider real and perceived risks in sharing data to identify suitable mitigating actions. It includes typical risk categories, key questions to consider and suggestions on how to minimise harm.	Accountability
	Data Ecosystem Mapping: tool and guide	This is a practical tool to plan and visualise a data ecosystem, or show opportunities for increasing value to particular parts of a data ecosystem. It can be used to collaborate with other organizations, find new data sources, exploit existing data flows and inform projects' efforts.	Action
	Data Ethics Canvas	The Canvas helps identify and manage ethical issues – at the start of a project that uses data, and throughout. It does so by raising key questions for self assessment and providing guidance for data projects of any size.	Accountability
	Data Landscape Playbook	The Data Landscape Playbook supports organisations working on data access initiatives, helping them tackle common challenges by conducting a 'data landscape review'. This modular document also points to a variety of external tools and resources that offer guidance for deep dives or solving specific problems.	Action
	Sustainable Data Access Workbook	This document supports organisations that steward data to make better decisions about their revenue models. It contains six canvases which help organisations to reflect on and evaluate their current situation, imagine a new path forward and decide on the next steps needed to bring it to life	Action

	Trustworthy Data Stewardship Guidebook	This guide provides resources and outlines activities to help organisations assess their trustworthiness and the degree to which they are trusted, build trust and trustworthiness where necessary and demonstrate their trustworthiness to others.	Accountability
Open Data Charter (ODC)	Open Data Charter Open Up Guides	The Open Up Field Guides are practical tools developed by the ODC and thematic partners for supporting governments and other actors to use the publication of strategic datasets to address key policy challenges. Guides on opening up data for fighting corruption, climate change, improving agriculture and for land governance are already available.	Action
Open Data Charter, Open Knowledge International, World Wide Web Foundation	Open Data Charter Measurement Guide	The Measurement Guide helps governments, civil society, and researchers to understand how to assess open data activities based on the Open Data Charter principles. It provides an analysis of the indicators, which includes comprehensive tables of global indicators (e.g. indicator tables) per each Charter principle.	Action
Open Data Charter, Transparency and accountability initiative	Use and Impact Framework	This framework reflects the value chain of data — flowing from generation to use to action and reaction. Our aim is that a framework such as this can then be used to understand where gaps exist in funding and support, at both local and international levels.	Action
Open Data Watch	ODIN - Open Data Inventory	The Open Data Inventory (ODIN) assesses the coverage and openness of official statistics to identify gaps, promote open data policies, improve access, and encourage dialogue between national statistical offices and data users. ODIN 2020/21 covers 187 countries.	Action
	The Data Value Chain: Moving from production to impact	The data value chain describes the evolution of data from collection to analysis, dissemination, and the final impact of data on decision making.	Action

Open Data Watch, Paris21	[Data Dissemination in the Digital Age: A review of data portals for official statistics in IDA-eligible countries](#)	This report proposes a holistic method to evaluate data portals and proposes recommendations to improve their use and function.	Action
Praia City Group for Governance Statistics	[Handbook on Governance Statistics](#)	The Handbook provides key insights about the current state of play and a call for action on the way forward in the field of governance statistics, in particular with regard to: methodological development; data production and use; engaging new actors and exploring new data sources.	Agency, Action
Tom Orrell (DataReady), Luis González Morales (UNSD)	[Data interoperability: A practitioner's guide to joining up data in the development sector](#)	The Guide has been developed as a practical tool to help improve the integration and reusability of data and data systems. It is structured around five areas that have been identified as being integral to the development of more interoperable data systems at scale over time and, for each area, it sets out an assessment framework that can be used to assess the degree to which systems are interoperable.	Action
	[Joined Up Data Maturity Assessment](#)	The Joined Up Maturity Assessment builds on the foundations laid by the Guide and introduces three components: layers of interoperability, dimensions, and levels of maturity. It is designed to be used by official statisticians and professionals who regularly produce, collate, or use diverse data sets in the sustainable development sector when producing new management frameworks or as a part of a broader data governance maturity assessment.	Action
Paris21	[Advancing data literacy in the post-pandemic world A primer to catalyse policy dialogue and action](#)	This paper reflects on the main elements of data literacy (information literacy, statistical literacy and technical skills) and provides examples on how to develop and operationalize these skills. It also offers a number of takeaways for further reflection.	Action
	[Reusing Citizen-Generated Data](#)	This paper provides a practical framework for NSOs to engage with alternative data producers. It helps them identify, evaluate and use	Action

	for Official Reporting	citizen-generated data (CGD) for reporting on sustainable development and it offers examples of NSOs that are improving the availability of data for decision making by extending the use of citizen-generated data.	
SDSN TReNDS	Counting on the World to Act: A Roadmap for Governments to Achieve Modern Data Systems for Sustainable Development	This report contains a number of recommendations aimed to empower government actors – whether they be national statisticians, chief data scientists, chief data officers, ministers of planning, or others concerned with evidence in support of sustainable development – to advocate for, build, and lead a new data ecosystem. They draw inspiration from best practices and notable examples from several countries.	Action
Stiftung Neue Verantwortung	What regulation for data trusts should look like	This paper systematizes the risk posed by different forms of data trusts across sectors and fleshes out the different regulatory approaches that address risks while enabling innovation and lowering barriers to entry	Accountability
Transparency and Accountability Initiative	Finding, Building, and Retaining Data Expertise in Social Accountability Organizations	This paper is offering guidance to funders and NGOs on what to consider when seeking to build in-house data expertise. It shares insights drawn from social accountability organizations on what has worked well and not so well, and what could have been done better. It outlines the kinds of data expertise available, how to establish and meet internal data needs and once hired, how to set data experts up for success.	Action
United Nations Educational, Scientific and Cultural Organization (UNESCO)	UNESCO agreement on the Ethics of Artificial Intelligence	This text defines the common values and principles which should guide the construction of the necessary legal infrastructure to ensure the healthy development of AI.	Agency, Accountability
United Nations Children's Fund	Responsible Data for Children	Principles to guide responsible data handling toward saving children's lives, defending their rights, and helping them fulfill their	Accountability

		potential from early childhood through adolescence.	
UN Global Pulse	Data Innovation Risk, Harms and Benefits Assessment Tool	The Data Innovation Risk, Harms and Benefits Assessment Tool is an initial assessment of potential risks for data use that includes seven guiding checkpoints. The Assessment contains guiding comments for each checkpoint and its questions are grounded in the key international data privacy and data protection principles and concepts.	Accountability
	Guidance Note on Data Privacy & Data Protection Principles	The Guidance Note sets out general guidance on data privacy, data protection and data ethics for the United Nations Development Group (UNDG) concerning the use of big data, collected in real time by private sector entities as part of their business offerings, and shared with UNDG members for the purposes of strengthening operational implementation of their programmes to support the achievement of the 2030 Agenda.	Accountability
United Nations Statistics Division	Fundamental Principles of Official Statistics	The principles and values that govern statistical work of all United Nations member states.	Agency, Accountability and Action
	Report of the Working Group on Data Stewardship	The report provides a summary of the recent activities of the Working Group on Data Stewardship established by the UN Statistical Division and details the working definition for data stewardship established by the group.	Accountability
	Handbook on Management and Organization of National Statistical Systems	The handbook aims to guide chief statisticians, senior managers, and staff members of statistical organizations to develop and maintain national statistical capacity that is fit for purpose. It provides guidance and informs statistical organizations on critical issues and topics, including new and emerging ones while acknowledging the diversity and specificity of national contexts.	Accountability, Action
UN Women	Counted and Visible Toolkit	The Counted and Visible: Toolkit to Better Utilize Existing Data from Household Surveys to Generate Disaggregated Gender Statistics	Agency

		(Counted and Visible Toolkit) provides a compilation of tools and mechanisms used by several countries to produce evidence to inform gender-responsive policies and catalyze actions to leave no one behind.	
	Citizen Generated Data Toolkit	Toolkit provides basic guidelines for producers of non-traditional source data such as civil society organizations and private sector institutions implementing gender equality and women's empowerment (GEWE)-related programmes. Uganda developed these guidelines as a strategic step towards increasing gender data production and its use in reaching women and girls.	Action
Various Academic Institutions	The FAIR Guiding Principles for scientific data management and stewardship	These principles act as a guideline for those wishing to enhance the reusability of their data holdings. Distinct from peer initiatives that focus on the human scholar, the FAIR Principles put specific emphasis on enhancing the ability of machines to automatically find and use the data, in addition to supporting its reuse by individuals.	Agency and Accountability
Washington Group on Disability Statistics	Disability Measurement and Monitoring using the Washington Group Disability Questions	This guide provides a succinct set of disability questions on existing data collection instruments to allow for disaggregation by disability status for SDG indicators, and for other measures of participation.	Agency
World Bank	World Development Report 2021 (WDR)	The WDR 2021 focuses on Data Governance and calls for a new social contract around data to help address the tension between data related benefits and harms. It is divided in three main sections exploring a) how development objectives can be achieved through data, b) how to align data practices to the social contract and c) how to establish integrated national data systems.	Agency, Accountability, Action
	Principles of Identification for Sustainable Development	These Principles are intended to apply broadly to the creation and use of identification systems to advance development goals. Because of their central role in realizing individual rights and facilitating access to basic services and entitlements in the physical	Action

		and digital worlds, the focus of the Principles is on "official" identification systems provided by, on behalf of, or recognized by governments.	
World Health Organization	WHO Data Principles	The data principles of the World Health Organization (WHO) provide a foundation for continually reaffirming trust in WHO's information and evidence on public health. The five principles are designed to provide a framework for data governance for WHO. The principles are intended primarily for use by WHO staff across all parts of the Organization in order to help define the values and standards that govern how data that flows into, across and out of WHO is collected, processed, shared and used. These principles are made publicly available so that they may be used and referred to by Member States and non-state actors collaborating with WHO.	Accountability