Data Strategy of the Secretary-General for Action by Everyone, Everywhere:

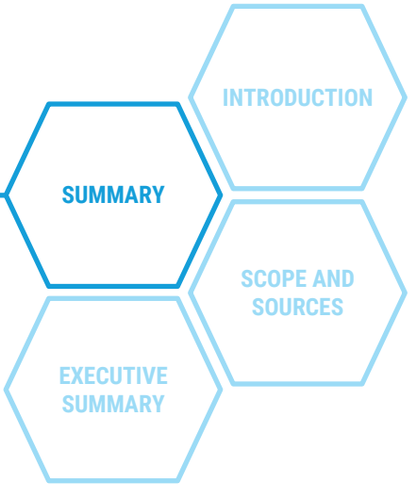
With Insight, Impact and Integrity

2020-22

United Nations

DECADE OF ACTION

Contents



Strategy:

Summary

With the help of a coalition of colleagues across the UN family and outside partners, this Strategy was assembled to help our leaders, managers and colleagues everywhere generate more value from the UN's wealth of data for the organization, people and planet – when it matters most.

Foreword: A data strategy for action by everyone, everywhere

Making better use of data – with approaches grounded in UN values and human rights – is integral to our future and service. Recognizing that we have not fully unlocked our data and analytics potential, this Strategy will guide us through a long-term transformation: So that everyone, everywhere nurtures **data as a strategic asset** for insight, impact and integrity – to better deliver on our mandates for people & planet.

In the past, some of us regarded data as an isolated concern for specialists in IT or statistics. Today, we all recognize the power of data. Purposes that involve data and analytics permeate virtually all aspects of our work in development, peace and security, humanitarian, and human rights.

Starkly and powerfully, the COVID-19 pandemic illustrates how critical data use, with a human face, is to protecting lives & livelihoods. The crisis is a wake-up call. We must accelerate a shift in our data and analytics abilities: To respond to COVID-19 and build back better, to drive the Decade of Action for the SDGs, to amplify climate action, to promote gender equality, to protect human rights, to advance peace and security, and to accelerate UN Reform – for greater impact on the ground.

SETTING STRATEGIC FOUNDATIONS FOR A DATA-DRIVEN TRANSFORMATION

Our vision is a world where people and planet get the support they need – in the moments that matter most. In building a whole-of-UN ecosystem – that maximizes the value of our data responsibly – we unlock greater potential: We make better decisions and deliver stronger support to those we serve.

As a global force for good, with nearly 200,000 colleagues across the UN family, we have unique opportunities to employ our data and analytics capabilities – not just internally, but in partnership with local, national, regional and global stakeholders across 8,500 locations worldwide.

Unleashing the full strength of data in our organization and for global good will not happen overnight. Based on strong strategic foundations, we need systematic action – in the UN Secretariat and across the UN family – to build the necessary capabilities and enablers, so that data – including open data – thrives. The engagement of everyone, everywhere will be required for this transformation.

Cultivating better approaches to using data will deliver better outcomes: Stronger decision-making and thought-leadership, greater data access and sharing, improved data governance and collaboration, robust data protection and privacy with respect for human rights, greater efficiency across our work, more transparency & accountability, and more relevant services for people and planet.

As we advance, this Strategy also proposes basic principles for data action that promote care, excellence, collaboration, responsibility and stewardship by everyone, everywhere in the UN family.

> "At the core of our Strategy is a simple idea:
> We start with data action that adds immediate value for our organization and the people we serve."

António Guterres, Secretary-General

NURTURING CAPABILITIES AND FOSTERING ENABLERS

At the core of our Strategy is a simple idea: We focus not on bureaucracy but start with data action that adds immediate value for our organization and the people we serve. By concentrating on portfolios of "data use cases" that address opportunities we face right now, we "learn by doing" and raise the chance of success in our work for the global community, the most vulnerable and the marginalized.

In agile iterations, we will master analytics capabilities that help us better understand "what happened", "why it happened", "what may happen next" and "how to respond" with insight, impact and integrity. We will improve data management practices so everyone can discover, access and share the data they need.

While better abilities will in part emerge through "learning by doing", we will need to support change with enablers: Empowered people and culture, cross-cutting data governance and strategy support, sustained partnerships, and user-focused technology. Critically, this will mean fostering a data-savvy culture that invests in the skills of all colleagues and attracts new talent. None of these shifts will happen overnight. Our roadmap is designed for the long term.

As a foundational guide to action, this Strategy is intended as a comprehensive framework to support change: In a first step, it introduces why using data matters to everyone in our organization; In a second step, it unfolds how our Strategy is grounded in UN values and a problem-driven approach; and the document then explains key concepts that can catalyze enablers and capabilities for data action.

While focused on the UN Secretariat, we also hope that this Strategy can serve all members of the UN family who seek to accelerate the data-driven transformation: For stronger data action by everyone, everywhere – with insight, impact and integrity that live up to the ambitions of the UN Charter.

António Guterres
United Nations Secretary-General

Scope

WHAT THIS IS

With the help of **colleagues** across the UN family and external **partners**, this Strategy was designed with a **coalition-based** and **overarching** approach to help everyone in the **UN family** deliver more value from data, in a responsible manner. In assembling **concepts** and **best practices** from leaders in the public and private sector, it is meant as a **comprehensive guide**:

- **Set out** the Secretary-General's **vision** for the data-driven **transformation** of our organization
- **Define outcomes** and **data principles**, grounded in UN values
- **Explain** how new **enablers** and **capabilities** will help us get closer to our vision
- Help everyone, everywhere deliver more value, based on a **6-step data action framework**
- **Identify** initial **priorities** for data action, based on the Secretary-General's priority themes for 2020-21

For the **complex organizational transformation** ahead, this Strategy will help **everyone**, **everywhere**:

- **Communicate** why **change** is important, and what the **goals** and the **risks** are
- **Understand** key **concepts** to drive change in each **context**
- **Provide** a set of prioritized **recommendations** and **next steps** to apply in each **context**
- **Understand** how to assemble **data action portfolios** in each context, so they add optimal value
- **Create accountability** for progress with a set of **indicators**

WHAT THIS IS NOT

As major UN Reforms solidify, this Strategy is **just one of the strategies we now need** to ensure changes in **structure** translate into **results**. With many initiatives underway, it is important to note:

- This is **not** a "**Digital Strategy**" to advance digitalization of our processes & services. We will need that.
- This is **not** an "**Innovation Strategy**" on implementing new ideas that create value for people & planet.
- This is **not** an "**ICT Strategy** ", but the **recognition** that generating value from data **involves everyone**.
- This is **not** the "**SG's New Technology Strategy**" on deepening our engagement, for example, on AI.
- This is **not** a strategy on "**Digital Cooperation**", but a guide to better data action within the organization.
- This is **not** the "**CEB Roadmap for Data & Statistics**", but a framework to support this priority initiative.

Executive summary: A strategy for data action by everyone, everywhere in the UN family – for insight, impact and integrity.

Set strategic **foundations**

Recognizing that better data use is integral to our future, our **journey** begins with a **vision** of the **data-driven organization**: In building a whole-of-UN data ecosystem that maximizes the value of our data, we will **unlock our full potential**. We make **better decisions** and **deliver stronger support** to **people** and **planet** – in the moments that matter most.

In pursuit of our vision, we will focus on **7 outcomes**: The meaningful **long-term changes** we seek for the organization and the people we serve:

- **Stronger** cross-pillar decision-making and thought-leadership
- **Greater** data accessibility and sharing internally and externally
- **Improved** governance and collaboration for impact & integrity
- **Robust** data protection & privacy, and respect for human rights
- **Greater** efficiency in programmes, operations & management
- **Improved** transparency within and across the UN Family
- **Enhanced** data-driven services for clients and stakeholders

All our data action and initiatives will be grounded in **12 core principles** on how to leverage data **collaboratively**, **responsibly**, with **transparency**, **stewardship** and **excellence**.

Our principles will form the **foundation of data governance**, so that data is recognized and managed as a **shared strategic asset**.

Create value with data and focus on **priorities**

Our strategy pursues **a simple idea**: We **focus not on process**, **but** on **learning**, iteratively, **to deliver** data **use cases** that **add value** for stakeholders, based on our vision, outcomes and principles.

Use cases – **purposes** for which data is used – already **permeate our organization**. We will systematically identify and deliver them through dedicated **data action portfolios**, that not only help us add more **value**, but also develop new **capabilities** in the process.

Our strategy provides a **simple framework** for assembling data action portfolios: individual and collective, local and global across the UN family.

At its highest level, our use cases and portfolios will be guided by the **Secretary-General's priorities for 2020/21**:

- **Decade of Action** to deliver the SDGs by 2030
- **Climate action**
- **Gender equality**
- **Human rights and the rule of law**
- **Peace and security**
- **Governance and ethics for the future**
- **Data protection and privacy**
- **UN reform**

Foster **enablers**, nurture **capabilities**, and iterate

As we strive to generate more value from data, we will need to build **new capabilities**, in an iterative and agile fashion:

- **Analytics**: Using data to **better understand** "what happened", "why it happened", "what may happen next" and "how to respond".
- **Data management**: Ensuring everyone can **discover**, **access**, **integrate** and **share** the data they need to fulfill our responsibilities to the organization, people and planet.

While better abilities will in part emerge through "**learning by doing**", we also need to foster **stronger enablers**:

- **People and culture,** so we can nurture the skills and talents we need, and spread a culture of collaboration, excellence, openness and sharing by default.
- **Data governance** and **strategy oversight** at the right levels and with the right approaches to ensure data is managed as a **shared strategic asset**.
- **Partnerships** to connect to ecosystems outside the UN family, so we can deliver more value at **scale**.
- **Technology environments** that empower all users in optimal ways, so that data can turn into insight & action.

Getting to a stage where our capabilities are truly **transformative** will not happen overnight. Our **roadmap** is long-term and will engage **everyone, everywhere.**

Executive summary: Key recommendations and next steps for a data-driven transformation.

1 CREATE VALUE WITH DATA ACTION AND PRIORITIES

- Support achievement of the **Secretary-General's priority themes for 2020-21** with the help of **Data Action Portfolios**
- Support priority programmes for the UN family, incl. a **Data Protection and Privacy Programme,** the **UN Data Cube**, and the **CEB Roadmap for Data and Statistics**
- Use the 6-step **Framework for Data Action** to curate an optimal portfolio of data use cases in your context that creates value for our beneficiaries, partners and the organization

2 FOSTER ENABLERS

PEOPLE AND CULTURE: **Build the skill, talent and culture for using data everywhere, so everyone can better support colleagues, people and planet**

- Make data competency, experience, training and stewardship part of all organizational roles – from junior to senior – and promote a data-driven culture
- Build roles for Data Engineers, Data Analysts and Data Scientists, consider designating a Chief Data Officer and Data Privacy Officer(s), and commit to **gender parity**
- Create centres of excellence and assemble cross-functional, gender-balanced teams to catalyze collaboration, progress and excellence

PARTNERSHIPS: **Build strong partnerships for insight, impact and integrity and connect better with global data ecosystems**

- Take a 5-step approach to building sustained partnerships for impact
- Integrate gradually with other data ecosystems outside the UN family to unlock more value
- Improve data sharing arrangements for stronger partnerships

GOVERNANCE: **Ensure data is governed at the right levels and with the right approaches everywhere, so that everyone is empowered to manage data as a strategic asset**

- Build a framework for data governance and strategy oversight to drive implementation and manage data as a strategic asset in each organization and the UN family
- Avoid "one size fits all" approaches: Learn to govern adaptively for agility, outcomes or control – so that work gets done in each context, in line with our data principles

TECHNOLOGY ENVIRONMENT: **Ensure that our technology tools and processes are aligned to empower everyone, everywhere in using data optimally**

- Deploy stronger tool sets for analytics, data management and governance – with a focus on self-service applications
- Empower different user types with diverse tool sets – consumers, explorers, experts and innovators

3 NURTURE CAPABILITIES

ANALYTICS: **Engage everyone in gaining deeper insights into "what happened", "why it happened", "what may happen next" and "how to respond" with impact and integrity**

- Master the value chain for analytics: Learn to identify use cases, acquire, transform and analyse data, visualise results, interpret insights, and take action
- Learn to apply the right mix of enablers to different types of analytics: From descriptive, to diagnostic, to predictive and prescriptive

DATA MANAGEMENT: **Empower everyone to discover, access, integrate and share the data they need to meet the needs of the organization, people and planet**

- Optimize the value chain for managing data: Describe, organize, govern, integrate and share data so everyone can discover and access the data they need
- Do not centralize data management, but adapt to context and governance requirements

See "All recommendations" for detailed guidance and next steps

References and acknowledgements

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Accenture

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Ernst & Young

HBR

KPMG

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McKinsey

OTHER REFERENCES

European Commission

International Monetary Fund

World Economic Forum

World Bank Group

Disclaimer: While we acknowledge the frequently publicly referenced sources listed above as helpful during the design of this Strategy, this does not endorse any content, promote or exclusively favor any of the above resources, but instead mentions them as a neutral, separate third-party. The selection of the main public and private references above does not imply the expression of any opinion whatsoever on the part of the UN Secretariat.

SOURCES CONSULTED

In developing this Strategy, the team reviewed and consulted strategy models developed by **governments**, **NGOs**, **international organizations**, **foundations**, as well as the **private sector**, incl. consultancies specializing in technical professional advice for data and analytics.

DATA STRATEGY TEAM

Over 100 colleagues from ~**50 members of the UN family** contributed:

Committee of the Chief Statisticians of the United Nations System (**CCS-UN**), Conference on Trade and Development (**UNCTAD**), Department for General Assembly and Conference Management (**DGACM**), Department of Economic and Social Affairs (**DESA**), Department of Global Communications (**DGC**), Department of Management Strategy Policy and Compliance (**DMSPC**), Department of Operational Support (**DOS**), Department of Peace Operations (**DPO**), Department of Political and Peacebuilding Affairs (**DPPA**), Department of Safety and Security (**DSS**), Development Coordination Office (**DCO**), Economic and Social Commission for Asia and the Pacific (**ESCAP**), Economic and Social Commission for Western Asia (**ESCWA**), Economic Commission for Africa (**ECA**), Economic Commission for Europe (**ECE**), Economic Commission for Latin America and the Caribbean (**ECLAC**), Executive Office of the Secretary-General (**EOSG**) Food and Agriculture Organization (**FAO**), **UN Global Pulse**, International Organization for Migration (**IOM**), Joint Programme on HIV/AIDS (**UNAIDS**), UN Logistics Base (**UNLB**), Office for Disarmament Affairs (**ODA**), Office for Disaster Risk Reduction (**UNDRR**), Office for Project Services (**UNOPS**), Office for the Coordination of Humanitarian Affairs (**OCHA**), Office of Counter-Terrorism (**OCT**), Office of Information and Communications Technology (**OICT**), Office of Internal Oversight Services (**OIOS**), Office of Legal Affairs (**OLA**), Office of the High Commissioner for Human Rights (**OHCHR**), Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (**OHRLLS**), Office of the Special Adviser on Africa (**OSAA**), Office of the Special Representative of the Secretary-General on Violence against Children (**OSRSG-VAC**), Office on Drugs and Crime (**UNODC**), Population Fund (**UNFPA**), UN Children's Fund (**UNICEF**), UN Development Programme (**UNDP**), UN Environment (**UNEP**), UN High Commissioner for Refugees (**UNHCR**), UN Innovation Network (**UNIN**), UN Office at Geneva (**UNOG**), UN Operations and Crisis Centre (**UNOCC**), UN University (**UNU**), **UN Women**, **UN-Habitat**, World Food Programme (**WFP**), World Health Organization (**WHO**)

PARTNER SUPPORT

The development of this Strategy was generously supported by the UN Reform Unit, Foreign and Commonwealth Office, **United Kingdom.**

Strategy:

Introduction

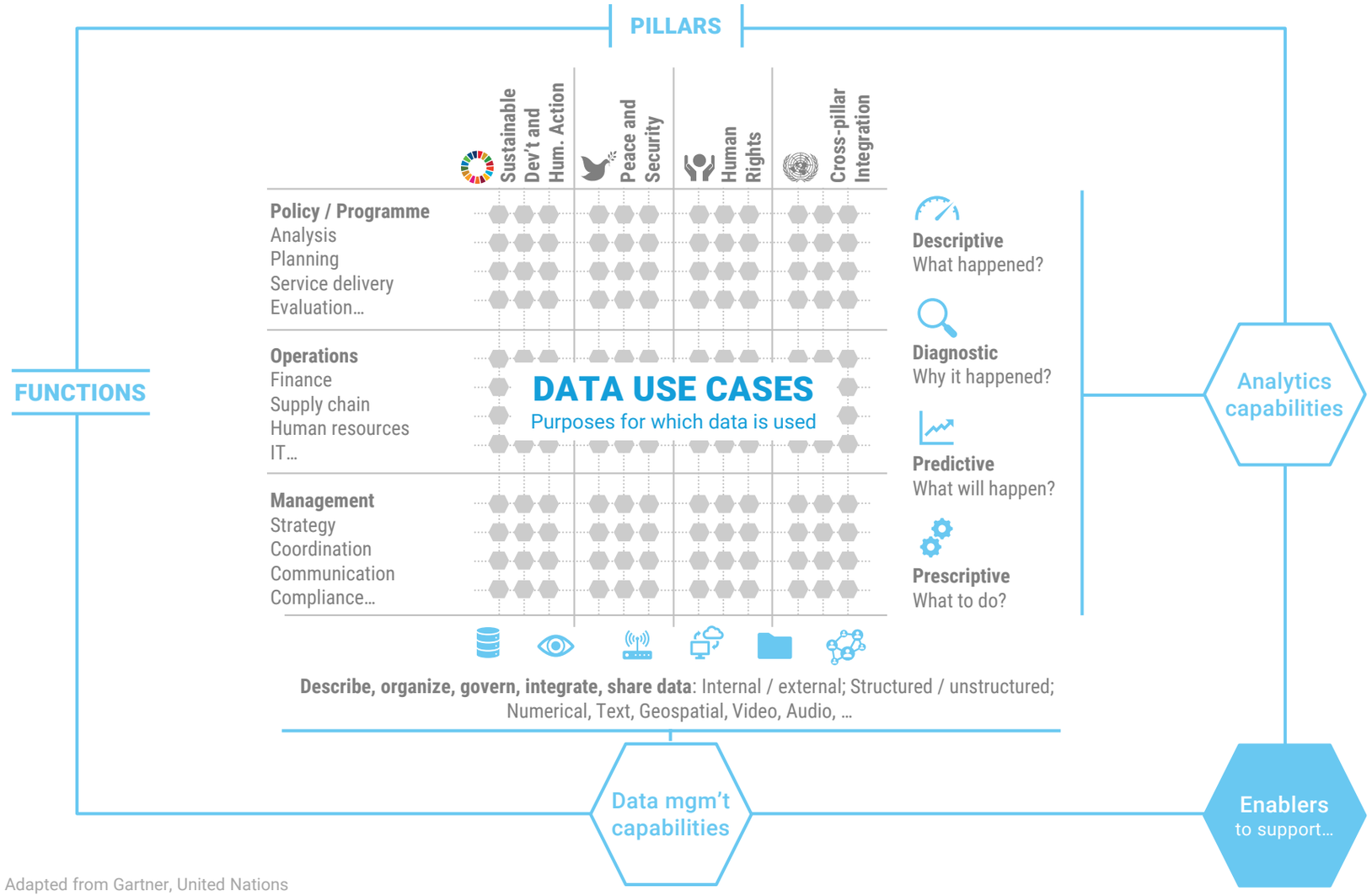
In the past, generating value from data was often seen as an isolated concern for experts. Today, data and analytics use cases permeate virtually everything we do, everywhere. Everyone will participate in a data-driven transformation, grounded in UN values and human rights.

Data is not an isolated concern, but permeates our organization and its use is integral to our success.

IN SUMMARY

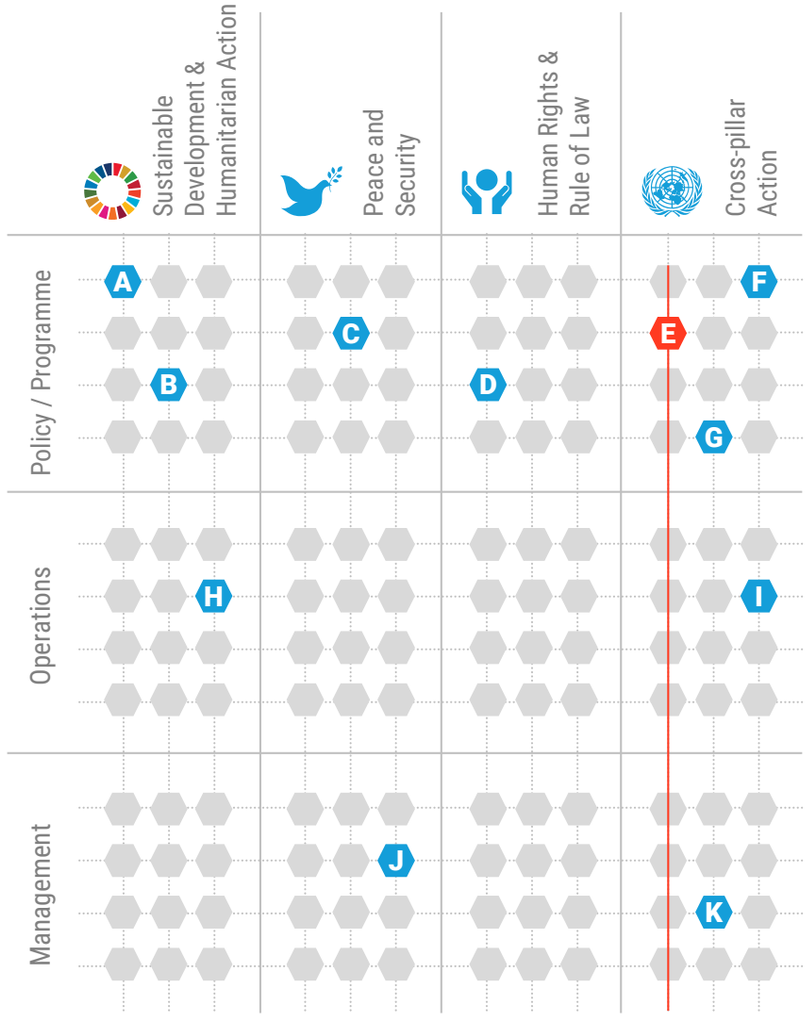
- **In the past**, generating value from data was often an **isolated** concern for IT, operations, geospatial or statistics experts. **Today**, data is pervasive and analytics tasks permeate the organization. They are **integral** to our success.
- Simultaneously, data use is increasingly **specific** to each pillar and function, requiring more **specialization, agility**, and **governance.**
- This requires a new set of analytics and data management **capabilities**, supported by **enablers,** including people and culture, governance, partnerships and technology.
- **Not just IT** teams, but the **entire organization** must get involved, as data is woven into **everything** we do. **This is not simple**.
- New **analytics** capabilities, such as deriving insights from predictive models, need to be nurtured across the organization.
- Better **data management** capabilities, for example to integrate data from many sources, must be fostered in every pillar and function.
- Over time, new data abilities will also shape **new innovative services** and **products**.
- Adjusting to this reality implies a complex **transformation**, driven by the realization that data is a **shared strategic asset**.
- It also requires **strategic discipline** in capturing opportunities, navigating challenges and accounting for the complex tasks ahead.

DATA USE CASES PERMEATE ALL PILLARS & FUNCTIONS OF OUR ORGANIZATION



Adapted from Gartner, United Nations

Today, we all already strive to deliver on challenging use cases in policy, programmes, operations and management.



SAMPLE USE CASES IN THE UNITED NATIONS

A — DECADE OF ACTION
How do we get more relevant, disaggregated and timely data to **track**, **predict** & **accelerate SDG progress**?

B — CLIMATE ACTION
How do we use big data to **model** the **impact** of climate change on the **most vulnerable populations**?

C — CONFLICT PREVENTION
How do we use sentiment data to **diagnose stability** and **identify** conflict **risks**?

D — HATE SPEECH
How do we use data to **monitor** global hate speech and help **design** the **prevention strategies** we seek?

E — COVID-19 RESPONSE
How do we use data, with a **human face**, to help **suppress** the virus, **save** lives and **build back** better?

F — GENDER EQUALITY
How do we use data to **fight** gender **bias**, **empower women** and **shape** targeted action for UN gender **parity**?

G — OPEN DATA
How do we better **share** the **wealth** of **data** & **statistics** and strengthen our role as a **global data hub**?

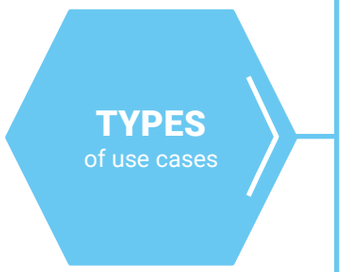
H — PREDICTIVE HUMANITARIAN FINANCE
How can complex, multi-dimensional datasets help us **predict where** to finance **action before disasters** hit?

I — SUPPLY CHAINS
How can we use data to **optimize** supply chains and make them **more resilient**?

J — PEACEKEEPING IMPACT
How can we use data to **accelerate deployments** to the right places at the right time & **account** for **impact**?

K — UN FUNDING COMPACT
How do we generate accurate and timely **data** on system-wide **financing** and **results** to meet the **Compact**?

Data is critical to serving the needs of our organization, people and planet across many other types of use cases.



Internal stakeholders
leaders, colleagues, internal clients, consultants

External stakeholders
policy-makers,, researchers, beneficiaries, partners, public

TYPES OF DATA USE CASES

- **Recognize, filter and extract value** from policy, programme, operations and management information to make better decisions.
- **Make sense** of a broad range of structured and unstructured data and apply that knowledge in analysis, planning, delivery and evaluation.
- **Provide real-time insights** into where an organization must take action to address risks and spot emerging opportunities.
- **Integrate data** within and across organizations to provide more effective responses to interrelated needs.
- **Make predictions** concerning potential risks – whether in crises or in procurement – based on complex data patterns.
- **Design dashboards** with tailored and timely information to measure success and drive strategy.
- **Simulate responses** to a wide range of events, from everyday developments to extraordinary 'black swan' events.
- **Forecast outcomes** far more effectively than conventional techniques based on static historical reports.
- **Identify opportunities** to better support stakeholders with more tailored, faster and value-adding services, products, projects or programmes.
- **Address need** for deeper transparency and timely accountability on resources and results, incl. for operations in remote settings.

Adapted from KPMG

Challenge: Using data well is a core competency for all organizations in the 21st century, but we are not yet prepared for it.

IN SUMMARY

- Managing, using & sharing data will be **integral** to our success in the years ahead, but we are **not yet equipped** to treat data as a **shared strategic asset** & create optimal value.
- With greater capacity to create, manage and use data, many colleagues already make better decisions and, ultimately, better serve people and planet. Yet, this happens in **siloes**.
- Currently, our data is often acquired, stored and used for a **single purpose** within pillars or functions. Access is often difficult, partly because of a **lack of awareness** the data could help others or **reticence** to share what we can.
- Compounding these challenges is a **lack of cross-cutting data governance** and senior **engagement** to provide strategic direction, set data priorities and drive cultural change.
- In addition, uneven practices in **data management**, combined with **data quality** gaps, also limit our ability to harness machine learning responsibly and create new **risks**.
- Many UN organizations have pursued greater availability of data by investing in open and shared data, but more can be done to raise the volume of what is **available by default**.
- In the future, an integrated **whole-of-UN approach** must enable more synergy through **sharing** and **interoperability**; encourage openness and learning; and foster the spread of common **standards** and **best practice**. With this strategy, we are at an inflection point.

SOME OF OUR CHALLENGES

UNEVEN **data cultures**, **skills** and **capabilities** lead to sub-optimal decisions, strategies, resourcing and impact

INADEQUATE **technology environments** frustrate colleagues & partners in collecting, discovering and accessing data they need

LACKING **horizontal governance** creates data siloes, hampers collaboration, and impedes data quality and use

PARTIAL implementation of the Personal **Data Protection** and **Privacy** Principles, coupled with new technologies, creates risks

LIMITED **systems integration** generates duplication, errors and extra work within and across organizations

MISALIGNED **standards** usage impedes not only system-wide data aggregation & interoperability, but also **gender** disaggregation

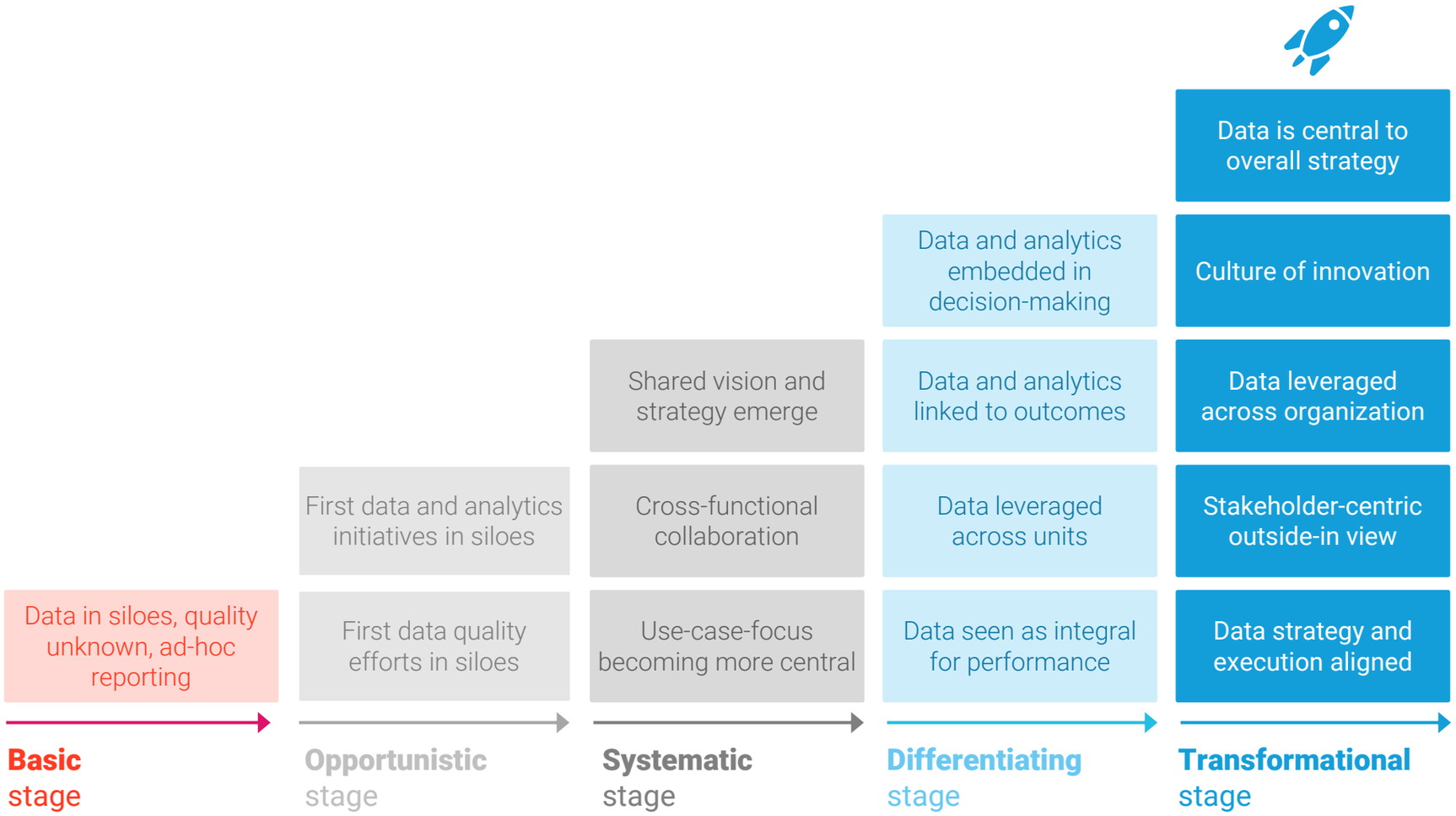
LIMITED data and analytics use in **products** and **services** degrades usability, relevance and impact

Maturity in data capabilities will not come overnight, but in stages – until it is has transformed everything we do, everywhere.

IN SUMMARY

- Getting to a stage where our data capabilities are truly transformational **will not happen overnight**. Our maturity will evolve in stages.
- Ultimately, we strive to be a **fully data-driven organization**, where data is central to all strategies, drives innovation, is integrated across our ecosystems and delivers optimal value for the organization, people and planet.
- Progress will depend on the evolution of our **capabilities** and **enablers**, not all at the same pace and with the same level of **maturity**.
- **Data governance & strategy**: Parts of the organization gradually begin to develop data governance and strategies. These efforts will then be aligned over time until strategy, data processes and metrics are firmly ingrained across the organization.
- **People, culture & organization**: From non-defined data roles and teams, we move to cross-functional centres of excellence and distributed practice across the organization.
- **Technology environment**: Having started with basic and central infrastructure, we mature towards diverse tool sets that support data management, analytics and governance, fully tailored to user needs and use cases.
- **Analytics and data management**: First focused on descriptive analytics, we will learn to master the full spectrum of analytics with advanced technologies, including AI.

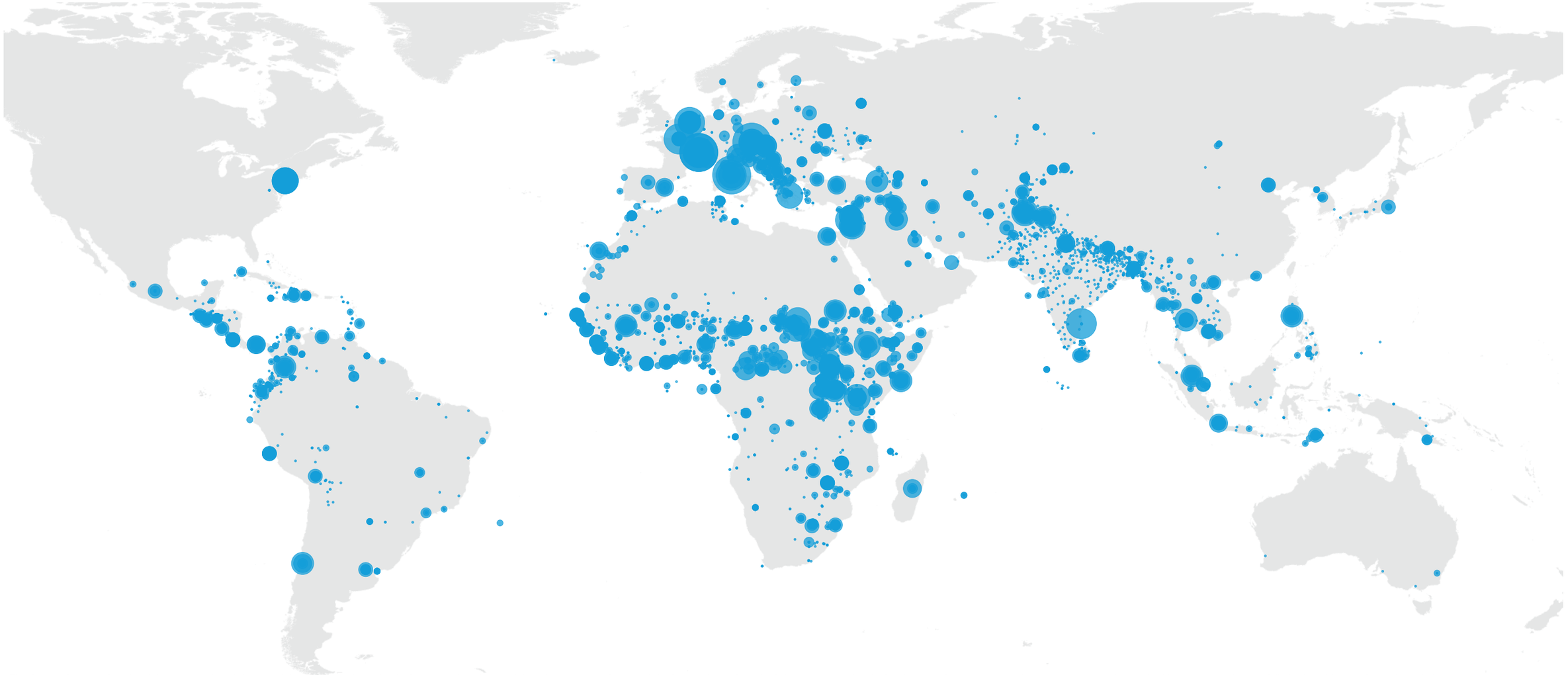
MATURITY MODEL: STAGES IN ORGANIZATIONAL DEVELOPMENT

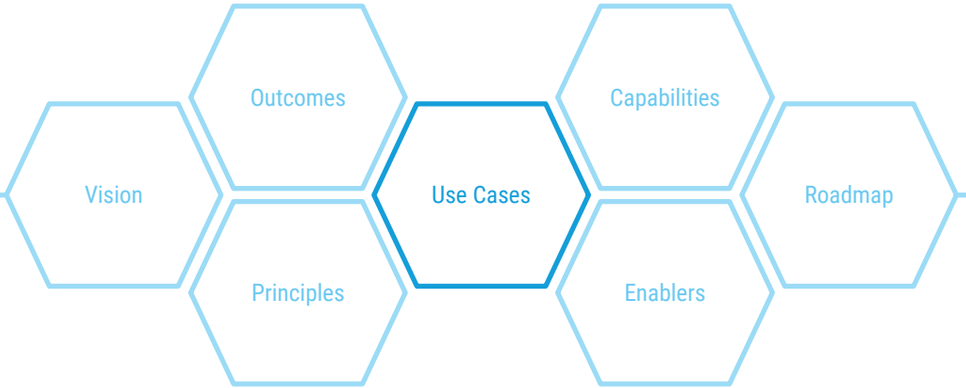


Adapted from Gartner, IBM, United Nations

Scale: We can leverage the UN family's global footprint for data action by everyone, everywhere.

195,000 COLLEAGUES ACROSS THE UN FAMILY WORK WITH LOCAL, NATIONAL AND REGIONAL STAKEHOLDERS IN OVER 8,500 LOCATIONS AROUND THE GLOBE





Strategy:

Designing our strategy

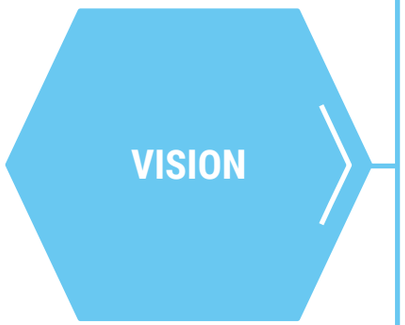
To build organizational capabilities and enablers for everyone’s data success, we will pursue a problem-driven approach that starts with concrete use cases that add value for organization, people and planet, grounded in strategic foundations that reflect our UN values and ambitions.

Strategy:

Set strategic foundations

Our strategy is inspired by a vision of a world where people and planet get the support they need in the moments that matter most. Grounded in a set of principles for all data action that embodies UN values, all of us will pursue tangible outcomes for better insight, impact and integrity.

Our vision: We seek a world where people and planet get the support they need – in the moments that matter most.



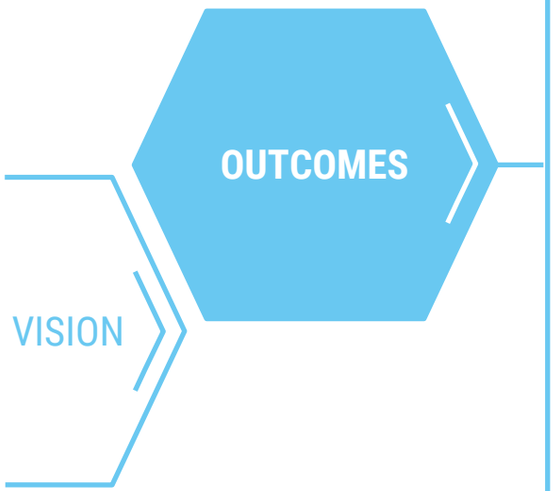
VISION STATEMENT

In building a **whole-of-UN data ecosystem** that maximizes the value of our data, we **unlock our full potential**: We make **better decisions** and deliver **stronger support** to **people** and **planet** – in the moments that matter most.

WHAT THIS MEANS

- Our vision statement defines our **ambition**: To engage everyone in building a **truly data-driven organization**, with an **ecosystem** that spans the entire **UN family** and helps unlock the **full potential** of our data.
- It is not about data for its own sake, but to help us decide and deliver with **insight**, **impact** and **integrity**, as we serve the **organization**, **people** and **planet**.
- Not just some time, but every time, **everywhere** – and especially **when it matters most** for human lives, livelihoods and rights.
- This Strategy outlines how we can move closer to this vision, **step-by-step**, by focusing on use cases that add **value** and help us **learn**.

Outcomes: We will engage everyone in long-term change everywhere as we build a data-driven organization.



CHANGES WE SEEK

SMART: Stronger cross-pillar **decision-making** and **thought-leadership** in a data-driven organization with **impact**

CONNECTED: Greater data **access** and **sharing** across **internal** and **external** ecosystems

ORGANIZED: Improved **governance** and organization to nurture data **quality** and **collaboration**

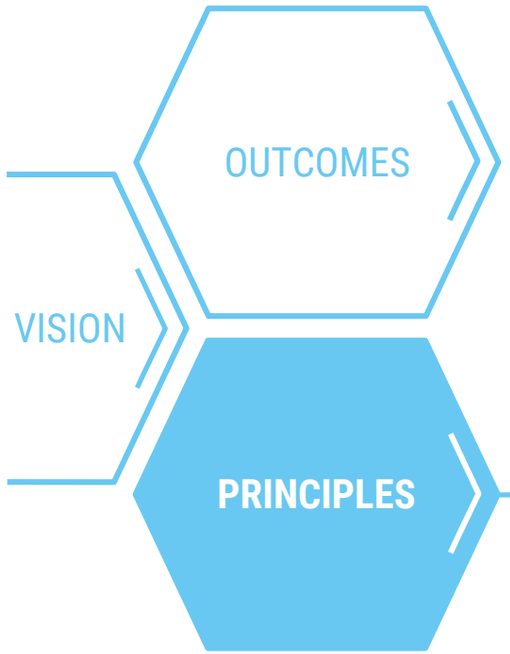
RESPONSIBLE: Robust **data protection and privacy**, protection of **human rights**, vulnerable & marginalized individuals and groups

EFFICIENT: Greater efficiency in **programmes**, **operations** and **management at country, regional and global level**

ACCOUNTABLE: Improved **transparency** on **resources** and **results** across the UN family, and for how we provide and use **data**

RELEVANT: New **data-driven services** for all stakeholders, with a responsible, human-rights-based approach to new technologies

Principles: 12 basic principles to guide data action by everyone, everywhere in the UN family – for insight, impact & integrity.



DATA PRINCIPLES

1. **ASSET**: We treat data and information as **shared strategic assets** and treat them with at least the same **discipline** as other recognized (tangible and intangible) assets are.
2. **EXCELLENCE**: We strive for excellence and **continuous improvement** in how we generate value from data for the **organization** and the **people we serve** – focused on the most **vulnerable** and **marginalized**.
3. **DATA PROTECTION & PRIVACY**: We ensure the protection and privacy of **personal data** in any form, processed in any manner, and exercise caution when processing data of vulnerable or marginalized individuals or groups.
4. **AGENCY**: We use data to augment human **decision-making**, not to fully replace it, and to positively contribute to peace and security, sustainable development, and human rights, with a focus on **gender** impact.
5. **FAIRNESS**: Our data usage is **responsible**, **impartial**, and **respects**, **protects and promotes human rights**. This includes eliminating **bias** and not discriminating based on gender, race, religion or any other factor.
6. **ACCOUNTABILITY**: We have **data governance** in place to clarify data roles, responsibilities, standards and policies and to ensure accountability for data assets, insights and actions.
7. **TRANSPARENCY**: We manage our data and analytical products in a transparent manner by ensuring our outputs are **comprehensible** and **traceable**.
8. **OWNERSHIP**: We do not tolerate data hoarding. Data belongs to the **organization** (or is held in trust), not to teams or individuals. By default, data is **openly available** to colleagues unless there is a **good reason** for it to remain confidential.
9. **STEWARDSHIP**: We assign **data stewards** at every level to nurture quality, access, use, protection and other responsibilities for our data assets.
10. **SECURITY**: We make sure our data is **secure** and that its usage is **safe.**
11. **INVENTORY**: We catalogue, describe and classify our data assets in **inventories**, using common **standards** where possible, so that their **characteristics**, **value** and **sensitivity** are **readily accessible** at any time.
12. **OPTIMIZATION**: **Everyone** optimizes the use and understanding of data, **data experts** optimize its availability and utility, and **technology managers** collaborate with everyone on data accessibility, protection & security.

Adapted from UN, Gartner, Development Gateway

Our strategy: We pursue a problem-driven approach to building enablers & capabilities for data action – in an iterative fashion

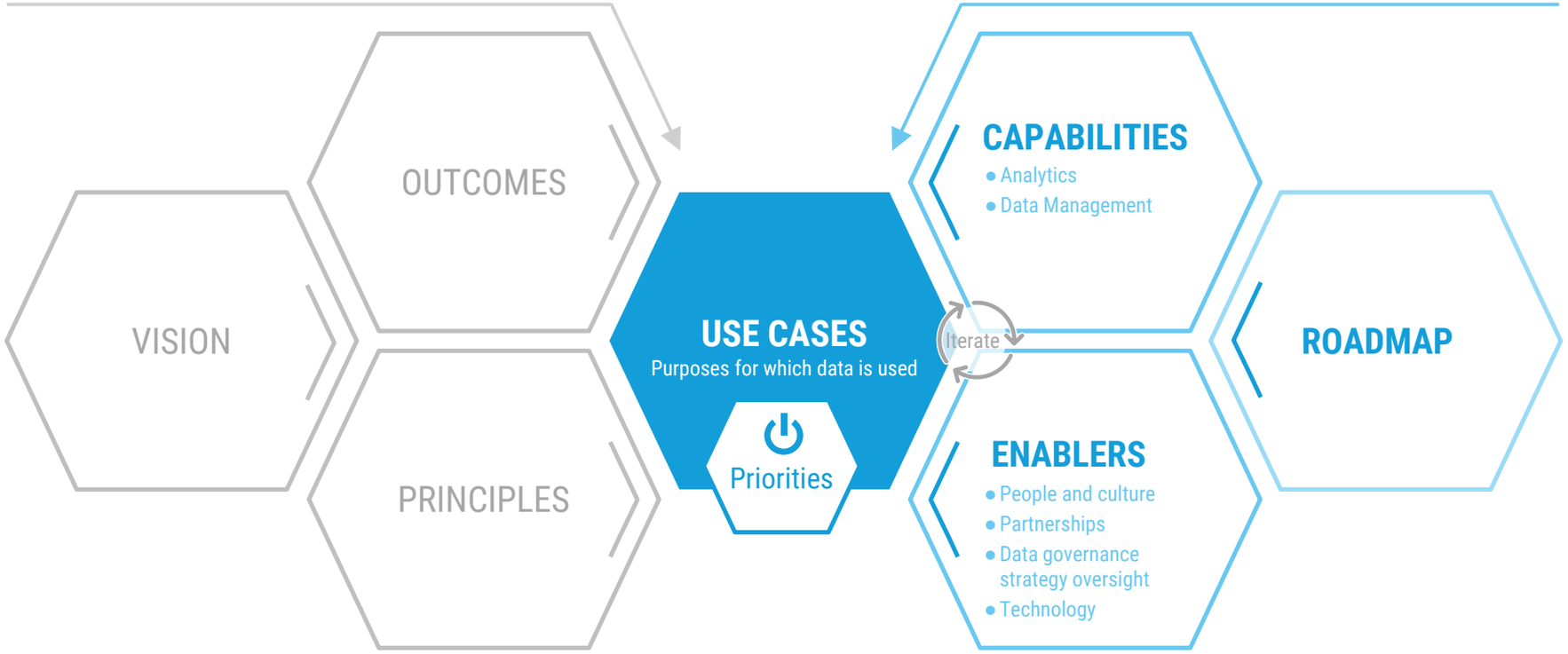
IN SUMMARY

- Our strategy pursues a simple idea: We **focus not on process, but on use cases that add value for stakeholders and people we serve**, based on our vision, outcomes and principles.
- **Data use cases** already permeate our organization and will help us drive change. We will **identify**, **evaluate** and **deliver** them collaboratively – **everywhere**, with discipline.
- Following a **use-case-centric approach** that engages **everyone** in the transformation will greatly improve the chances of success.
- IT-led approaches – when not tailored to user or stakeholder needs – are more prone to fail. A data-driven organization **involves everyone**.
- In many cases, we will need new "**capabilities**" in **managing & analyzing data** that will challenge us. Every case will be a chance not just to add value, but also **learn** and readjust.
- Yet, new capabilities will not emerge on their own. They will require "**enablers**" that we must deliberately foster: Support from **people and culture,** better **data governance** & **strategy oversight**, stronger **partnerships** and changes in **technology**.
- We must **assess**, **prioritize** and **catalyze** the necessary changes with care. **Iteration** and **continuous improvement** will be critical. Step-by-step, this will bring us closer to our vision.
- Building a data-driven organization, grounded in UN values, is **not a simple exercise**. We will follow a long term roadmap – not for its own sake, but for people and planet. **Let us begin**.

Set strategic **foundations**
Our vision, outcomes and principles for a data-driven organization, grounded in UN values and human rights

Create **value** & focus on **priorities**
Employing our new capabilities everywhere to deliver use cases systematically

Foster **enablers**, nurture **capabilities**, **iterate**
People and culture, governance, partnerships and technology for better data and analytics practice



USE CASES

Purposes for which data is used:
- **Identify** w/ stakeholders & clients
- **Evaluate** with a clear framework
- **Prioritize** based on net value
- **Deliver** as portfolios of **programmes, projects, or products**

CAPABILITIES & ENABLERS

Enablers to set agile foundations, and **capabilities** to deliver value:
- **Assess** with users and experts
- **Prioritize** based on use cases
- **Catalyze** & foster across org.
- **Feedback** for continued impro'vt

ROAD MAP

A set of **recommendations** / guidelines for action and **next steps**:
- Short, medium and long term
- High, medium and lower importance

Strategy:

Focus on priorities & action

In pursuing the Secretary-General's priority themes for 2020-21, we will use a simple "action framework" to help everyone, everywhere identify, evaluate and deliver use cases systematically and create value for the organization, people and planet.

Across the Secretary-General's priorities for 2020-21, we will pursue a broad range of data use cases.

DECADE OF ACTION TO DELIVER THE SDGs BY 2030

At the heart of the **2030 Agenda** are the 17 Sustainable Development Goals. During the **Decade of Action**, we will leverage the **UN family's data potential** everywhere: to **mobilize** governments, civil society and businesses; to **discover** and **scale** solutions; to **deliver** more relevant, timely, disaggregate SDG data, leveraging our Roadmap for Statistics, **data.un.org**, and **Data4Now**; to **collaborate** with **global investors** on directing more capital to where it is needed; to help communities **fight COVID-19**, and **prepare** better for the next pandemic; to **deploy** humanitarian **financing** when – and before – **disasters** unfold; to **protect** global **biodiversity** & **oceans**; and to **support** data **innovation** at scale through the UN family's **global network** of labs.

CLIMATE ACTION

Climate change is already affecting every country on every continent, affecting **lives** and disrupting **economies**, both **now** and in the **future**. We will employ **data** and **analytics** for urgent climate action to: **track** the climate change **response** of countries, regions, cities, businesses, and investors with meaningful **metrics**; **understand** and **mitigate** the **impact** of climate change on the **most vulnerable** places and populations; **identify** and **respond** to interrelated risks for global **peace** and security; **strengthen** the UN's role as an **authoritative source** on climate science; and to **partner** with academic institutions and the private sector on **solutions** at scale, via the UN family's global **innovation** and **accelerator network**.

GENDER EQUALITY

25 years after the historic Fourth World Conference on Women in Beijing, where the Beijing Platform for Action was agreed upon, full gender equality around the world is still not a reality. In collaboration with global partners we will build better **gender data** and **analytics** capabilities: to **bridge the gender data gap** through creating, sharing and using **gender-disaggregated** data; to **fight** gender **bias** and **drive** women's equal **participation** in decision-making in all spheres; to **identify** obstacles to women's **inclusion** in the economy; to **strengthen** our global **communication**; **accelerate** achievement of **gender parity** across all personnel levels in the UN family and to **provide** global **leadership** on **gender equality policy**.

HUMAN RIGHTS & THE RULE OF LAW

Powered by the SG's **Call to Action** on **Human Rights**, we will form **global coalitions** for human rights-based **approaches** to data, **fight hate speech** online while upholding **freedoms**, **strengthen** human rights **monitoring**, incl. of online attacks on human rights defenders and online censorship.

PEACE & SECURITY

We will leverage data and analytics for the **prevention**, **mediation** and **resolution** of conflicts: For **stronger analysis** & **recommendations** to the Security Council, to **deploy** peacekeepers **faster** to where they are needed most to **protect civilians**, and to **keep** our personnel **safer**.

GOVERNANCE & ETHICS FOR THE FUTURE

In support of stronger **global digital cooperation**, we will help foster the necessary **dialogue**, the collaborative design and the implementation of data **policies** that advance the **responsible human-rights-based use** of data, advance **cyber-security**, and drive **innovation** for people & planet.

DELIVERING UN REFORM

To drive **UN Reform**, our Strategy will foster **centres of excellence** that catalyze stronger data and analytics capabilities; help **account** for **benefits**; **foster transparency**; raise performance on **disability inclusion**; build **supply chains** that save cost, protect lives and environment.

DATA PROTECTION AND PRIVACY

Building on our **Call to Action** and Data Protection & Privacy **Principles**, our ambition is to **provide** more policy **leadership** within the UN family; **strengthen dialogue** with public & private stakeholders; and **support** those seeking to **build capacity** for stronger data protection & privacy.

Strategy:

Framework for Data Action

How every organization, department and team will identify & deliver data action portfolios

WHAT THIS IS ABOUT

Assembling and delivering “data action portfolios” with use cases that add value at global, regional, country or local level – for greater insight, impact and integrity.

WHY THIS IS IMPORTANT

- We believe that data adds value in **each function** and **pillar**
- We must deliver on **mandates** and the **needs** of people
- We want to pursue every use case that adds **net value**
- We need to be systematic with **limited resources**

WHAT OUR GOALS ARE

1. **Systematically** deliver “data action portfolios” in each org.
2. **Jointly** deliver priority project or programmes as a UN family

WHAT THE RISKS ARE

- We do not link data and analytics use case to **outcomes**
- We focus on **cost** and fail to evaluate **value** and **inhibitors**
- We do not manage with **metrics** for success

Key concepts: We expect every team, department and organization to identify and deliver “data action portfolios” in 6 steps.

KEY CONCEPTS EXPLAINED

- At heart of our Strategy is the simple idea that we must invest in **data and analytics** capabilities, **not for their own sake**, **but** to **deliver value** and **solve real problems** for our organization and stakeholders everywhere.
- To that end, we ask each team, department and office to assemble **“data action portfolios”**, using a simple **6-step framework** for identifying and delivering data-focused **products**, **projects** or **programmes**.
- Aligned with critical organizational **priorities** and outcomes at **global**, **regional**, **country** or **local** level, all **teams**, **offices**, **departments**, the **organization** and UN **family** should:
  - Work with stakeholders to **identify** potential data use cases in your context that respond to overall priorities and organizational outcomes you seek.
  - Compare the **potential value** of each use case against factors that can **inhibit** or **accelerate** success.
  - Map and **rank** use cases based on **net value** and **strategic priority** to assemble an optimal portfolio.
  - Implement the **portfolio** by prioritizing top use cases, **no matter how small**, based on **funding** available or to be mobilized.

See full set of next steps in “All Recommendations”

ENGAGE EVERYONE IN DATA USE CASES – NO MATTER HOW SMALL

IDENTIFY EVERYWHERE

Use case identification should become **part of our DNA** in every **pillar** and **function**, at global, regional, county or local level.

GLOBAL ⟷ REGIONAL ⟷ COUNTRY ⟷ LOCAL

DELIVER AT EVERY LEVEL TO DRIVE IMPACT ON THE GROUND

Portfolios must be delivered **at the appropriate level**, whether jointly by the UN family for system-wide prios, by UNCT’s as part of the UNSDCF, or at team-level.

UN FAMILY ⟷ ORG. ⟷ DEP’T. ⟷ OFFICE / MISSION ⟷ UNCT/RCO ⟷ TEAM

USE THIS FRAMEWORK TO EVALUE AND DELIVER DATA ACTION PORTFOLIOS

BUILD VALUE PROPOSTIONS → ASSESS NET VALUE → BUILD OPTIMAL USE CASE PORTFOLIO

1 CLARIFY PRIORITIES

Be clear about **critical priorities**, informed by **SG** priorities, internal & ext. **stakeholders**, e.g.:

- **Decade of Action**
- **Climate Action**
- **Gender Equality**
- **Human Rights**
- **Peace and Security**
- **Governance for the future**
- **UN Reform**
- **…**

2 DRILL DOWN TO OUTCOMES

Drill down on **outcome areas** within each priority using our **UN Reform benefits framework**, e.g.:

- Efficiency
- Effectiveness
- Accountability
- Transparency
- Capability
- Gender parity
- Cross-pillar coop.
- Delegation
- Simplification
- Coordination

3 IDENTIFY USE CASES

Collect **ideas** for use cases via **surveys**, use case **catalogues**, lessons learned, **brainstorms**, e.g.:

- Simulate pandemic recovery
- Improve SDG outcome forecasting
- Enhance open data sharing portals
- Accelerate personnel deployment
- Optimize supply chains for resilience
- Strengthen fraud detection
- …

4 EVALUATE USE CASES

Evaluate **net value** of each case, by **scoring** total potential **value** vs. success **inhibitors** (risks) :

POTENTIAL VALUE

- Decision-making quality
- Programme impact
- Financial impact
- Client satisfaction
- Risk compliance impact
- Urgency

INHIBITORS / RISKS

- Data savviness
- Data quality
- Governance challenges
- Change mgm’t. needs
- Technology gaps / disrupt.
- Data privacy, protect., ethics
- Funding requirements

5 EVALUATE CASE PORTFOLIO

Rank all use cases by **net value** mapped against strat. **priority** and total **funding**:

- Net value of use cases
- Strategic priority rank
- Funding available

6 DELIVER PORTFOLIO

Start **implementation** of use cases with **highest total net value**, control progress with **agile reviews** & **metrics**, as:

- **Products**
- **Projects**
- **Programmes**

Adapted from Gartner, United Nations

Highlighted priority:

Data Protection and Privacy Programme

WHAT THIS IS ABOUT

Implementing a coherent, comprehensive and cross-cutting framework that ensures data protection and privacy when we collect and use data for public good.

WHY THIS IS IMPORTANT

- To ensure data is processed for purposes consistent with **mandates**, in a manner that respects the rights, incl. the **human rights**, of individuals and of groups
- To facilitate further implementation of the UN Personal Data Protection and Privacy **Principles**
- To harmonize policies and guidelines across the UN system organizations so that **best practices** prevail
- To ensure transparency in how we process personal data and to foster **trust** in UN organizations as **reliable partners**
- To support the 2030 Agenda on Sustainable Development Goals and the **Decade of Action**

Data Protection and Privacy Programme: Engaging everyone in strengthening our data protection and privacy framework will not only reduce risk, but also create opportunities to strengthen human rights protection and lead by example.

WHAT THIS IS ABOUT

We seek to use and process data in a manner which respects human rights as well as appropriate international standards, incl. the UN **Personal Data Protection and Privacy Principles**. While we have data protection and privacy regulations, rules, policies and processes, we urgently need to **assess** our **frameworks comprehensively** and update them to address emerging challenges, incl. from new technologies.

HOW TO SUCCEED

FOSTER ENABLERS

- **Governance**: Map and update frameworks and practices, incl. from a human rights perspective; Establish oversight mechanisms; Establish UN System high-level coordination mechanism.
- **People and culture**: Assign programme leads; Designate Data Protection Officer; Consider structures, roles and responsibilities; Train and raise awareness, with a human rights approach.
- **Partnerships**: Ensure due diligence, clarify accountability and processes.
- **Technology environment**: Deploy tools to support mapping and cataloguing data assets; Enable functionality for seamless classification; Deploy privacy-enhancing technologies.

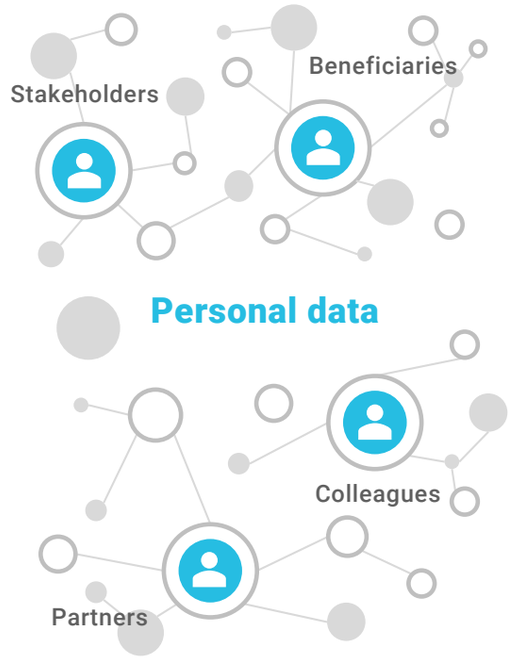
NURTURE CAPABILITIES

- **Data mgm't and analytics**: Assess and map sensitivity of data assets; Manage well-described data in data catalogues; Manage appropriate access & use of data at risk, with data stewards' help; Use diagnostic and prescriptive analytics to monitor risk.

See full set of next steps in "All Recommendations"

DATA PROTECTION & PRIVACY IS INTEGRAL TO OUR STRATEGY

WHEN WE PROCESS PERSONAL DATA…



WE ESTABLISH DATA PROTECTION AS A CROSS-CUTTING PRIORITY

RISK IF WE DO NOTHING

We fail to heed the **SG's Call to Action on Human Rights** and lose **trust** of beneficiaries, colleagues and partners. We risk fragmentation across the UN family and **miss opportunities** to enable the use of data for **public good**.

OPPORTUNITY IF WE IMPROVE

We **protect** peoples' **rights**, enable responsible data **access**, and become **global trusted leaders** on data protection and privacy. Ultimately, we could also consider sharing our knowledge in **capacity development** for in partner countries.

Highlighted priority:

UN Data Cube

WHAT THIS IS ABOUT

In line with our UN Funding Compact commitments, enabling timely, accurate and comparable disaggregated financial reporting across the entire UN family for transparency and accountability on system-wide financing by recipient country, donor, sector or SDG – aligned with OECD and IATI standards, and accessible at open.un.org

WHY THIS IS IMPORTANT

- We want to live up to the **UN Funding Compact**
- We are committed to system-wide **transparency**
- We need data that is compatible with international **standards**
- We achieve better **decision-making** in resource allocation

UN Data Cube: Tackling our challenges in reporting on UN family-wide finances will not only help us meet the UN Funding Compact commitments, but will also unlock savings and improve system-wide transparency – aligned with global standards.

WHAT THIS IS ABOUT

Over **7,000 colleagues** across the UN family invest regular effort to **re-enter data** from their entity's financial systems into tools for **system-wide aggregate reporting** that is critical for improving **resource** allocation, stakeholder **trust**, and **advocacy**. So far, **about 25%** of total UN family spending can be broken down by **SDG** & **location**. More progress is needed.

HOW TO SUCCEED

FOSTER ENABLERS

- **Governance**: Create data governance mechanism to oversee the implementation of the **Data Standards for UN System-Wide Reporting of Financial Data**; Designate data stewards to ensure data quality; Continue to align UN standards with OECD and IATI.
- **People and culture**: Strengthen cross-unit collaboration across CEB Secretariat, DESA, UNDP, DCO and EOSG; Foster knowledge sharing between entities; Train and raise mgm't awareness.
- **Partnerships**: Engage IATI, OECD and UN family.
- **Technology**: Improve tool sets so reporting standards can be applied directly in financial systems; Deploy tools for data exchange via API, and for data quality; Improve UN Info / CEB systems.

NURTURE CAPABILITIES

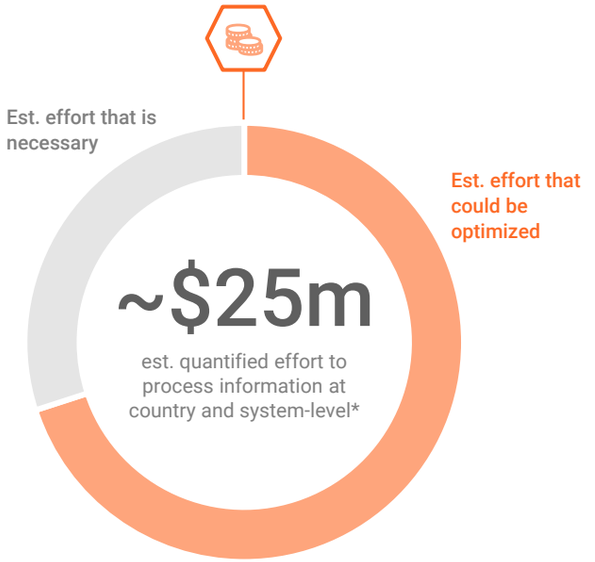
- **Data mgm't**: Learn to connect and integrate data across the organization; Integrate UN Standards in internal charts of accounts; Share financial master-data catalogues; Build **open.un.org** portal.
- **Analytics**: Improve analytics capabilities for better financial reporting and visualization.

See full set of next steps in "All Recommendations"

QUICKER DATA CUBE IMPLEMENTATION CAN REDUCE EFFORT AND IMPROVE QUALITY

COLLEAGUES REPORTING DATA (illustrative)

REPORTING EFFORT (illustrative)



COMPLETENESS OF AGGREG. GLOBAL REPORTS

RISK IF WE DO NOTHING

We spend **significant effort** on processing system-wide financial data for aggregation purposes. While we are making progress, we may struggle to meet the **UN Funding Compact** commitments on time, risking the **trust** of donors and the public.

OPPORTUNITY IF WE IMPROVE

We could **reduce redundant activities** such as double-entry of data. We become recognized **transparency leaders**. We create opportunities for better **cross-pillar resource allocation** and **free up time** to work on what matters most for people and planet.

* The illustration takes into account efforts across 130 UN Country Teams, 2-4 colleagues across 16 entities plus RCO per country, updating finance and resource data 4x per year for the purpose of ongoing country-level aggregation and reporting against the UNSDCF, plus annual aggregation and realignment via HQ multi-person teams across over 40 UN System entities for CEB reporting.

Highlighted priority:

Roadmap for Data and Statistics

WHAT THIS IS ABOUT

Strengthening our UN statistics brand with stronger data hubs, common standards, coordinated support to capacity building in member states, improved data literacy and new data sources for people and planet during the Decade of Action.

WHY THIS IS IMPORTANT

- We must provide **open**, **inclusive** and **impartial** UN statistics
- We want to better guide, **support** and advise **member states**
- We want to help **people** understand, use and trust our **data**
- We seek to fortify the UN **data brand** and **global data hubs**
- We must bridge the **gender data gap**

Data and Statistics Roadmap: Stronger data and analytics capabilities can not only help us strengthen partner country engagement, but also unlock the potential of the UN family as a “global data hub” for sustainable development and financing.

WHAT THIS IS ABOUT

Demand for **integrated policy advice** has increased, with ODA across sectors **growing** by 20% to $25bn from 2014-18. The UNSDG’s share is slowly rising again. With stronger data capabilities, the **UNSDG** can drive the **2030 Agenda**, leverage its **global footprint** and wealth of **global statistics** for stronger integrated policy advice at **scale** – and serve as a **global data hub**.

HOW TO CONTRIBUTE TO SUCCESS

FOSTER ENABLERS

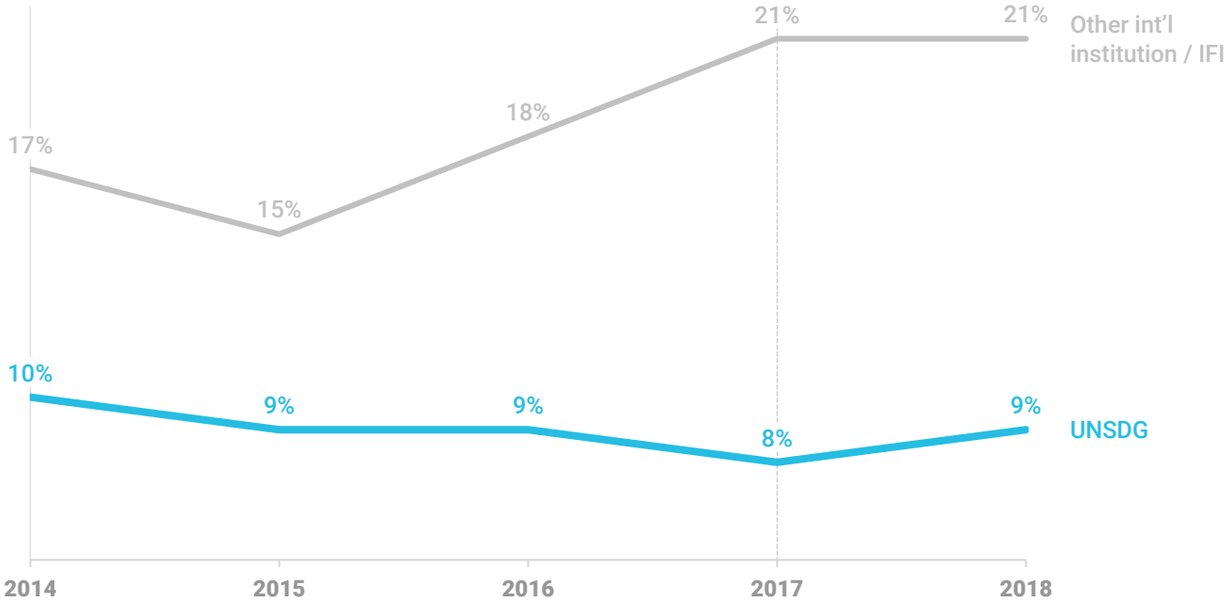
- **Governance**: Set up a **UN Data Council**; Designate lead stewards to foster data quality; Build a use case portfolio for evidence-based policy; Implement the **Roadmap for UN Data and Statistics**; Govern in adaptive fashion – for outcomes and agility.
- **People and culture**: Build data-focused roles (CDO, Data Analyst, Scientist, Engineer); Establish centres of excellence and cross-functional teams for policy design; Foster a data-driven culture.
- **Partnerships**: Partner with data services, academia, statistical offices, impact investors.
- **Technology environment**: Deploy tools to support self-service and advanced analytics; Strengthen data portals, starting with **data.un.org**; Establish API services; Enable UN-system collaboration via AD’s.

NURTURE CAPABILITIES

- **Data and analytics**: Identify core data assets; Integrate better; Publish more with new data-driven services; Apply predictive and prescriptive analytics for better insights, decisions and policy advice.

See full set of next steps in “All Recommendations”

THE UNSDG’s SHARE OF GLOBAL ODA FOR POLICY ADVICE IS RISING AGAIN



What is ODA for policy advice?

Tracked by the OECD, this funding purpose includes sector policy, planning and programmes; aid to ministries, administration and management systems; institution capacity building and advice; across agriculture, education, energy, health, government and civil society, industry, social infrastructure, trade, transport, tourism, water and sanitation, etc.

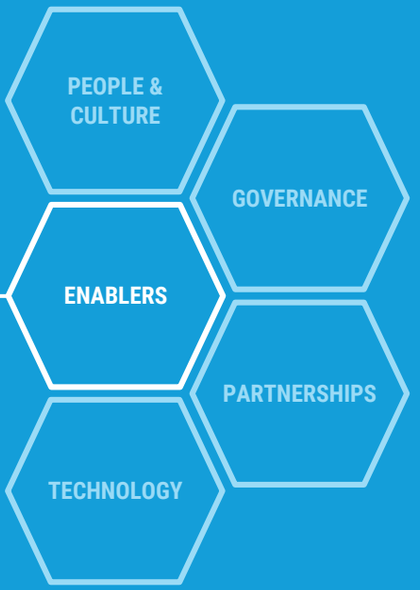
Total ODA for policy advice	$21.4bn	$22.5bn	$19.7bn	$25.3bn	$25.4bn
Other int’l institution / IFI (share)	17%	15%	18%	21%	21%
UN System (share)	10%	9%	9%	8%	9%

RISK IF WE DO NOTHING

We weaken the Agenda 2030, become **less relevant** in efforts to support national development planning and **institutional capacity building**. This would lead to a deterioration in our ability to deliver on’ **mandates** and support the **Decade of Action**.

OPPORTUNITY IF WE IMPROVE

We deliver on the ambitions of the **Decade of Action**. We improve our data analysis capabilities and not only offer **better advice**, but also develop **new data-driven services.** We become a **premier policy and capacity building partner** for Member States.



Strategy:

Foster enablers

As we engage everyone in creating more value with data, we will need strong organizational enablers to help us nurture data and analytics capabilities everywhere: Stronger support for people and culture, as well as new approaches to governance, technology and partnerships.

Enablers:

People and culture

WHAT THIS IS ABOUT

Building the skill, talent and culture for using data everywhere, so everyone can better support colleagues, people & planet with insight, impact & integrity.

WHY THIS IS IMPORTANT

- We seek a culture that values **openness & sharing by default**
- We must foster & retain **data talent**, with **gender parity**
- We need agile organizational models for better **collaboration**
- We want to foster the data **savviness of all colleagues**

WHAT OUR GOALS ARE

1. **Rapidly** build data talents where they are needed most
2. **Smartly** catalyze centres of excellence & distributed practice
3. **Actively** foster data savviness, cultures and partnerships

WHAT THE RISKS ARE

- We fail to foster the right talent and become **irrelevant**
- We miss opportunities to lead culture change by **example**
- We value **siloes** over cross-functional thinking & partnership

Key concepts: We will engage everyone, everywhere in transforming skills, competencies, organizational culture & design.

KEY CONCEPTS EXPLAINED

- **Engaging everyone, everywhere in the data-driven transformation** is at the heart of our Strategy. While trial and error are part of the journey, we can benefit from **lessons** learned.
- We will need **"people capacity"** for data savviness – from basic to advanced – across **all roles**: From junior to senior; in policy, programme, operations and management.
- As we recognize "**generating value from data**" as a **core function**, **separate** from technology mgm't, we will also build dedicated **roles**, with **gender-parity**: Data **Engineers** who prepare data so others can use it, Data **Analysts** who deliver more complex analytics products, and Data **Scientists** who extract deep insights.
- To support the realignment, we will also consider designating **Chief Data Officers**, as well as **Data Protection Officers**.
- We will ask everyone to support a **data-driven culture:** With **curiosity, openness, excellence** and a **desire** to **create value** for people & planet with insight, impact & integrity.
- **Cross-functional work** will become part of our DNA. Success is a **team sport**. We must learn to assemble the right sets of experience and skills – **gender-balanced** & based on the task.
- To catalyze progress, we will use hybrid organizational models – where **centres of excellence** collaborate with decentralized teams for optimal **results.**

See full set of next steps in "All Recommendations"

BUILD PEOPLE CAPACITY EVERYWHERE

ACROSS ALL ROLES

EVERYONE, EVERYWHERE

- **Everyone** in our organization will be **responsible** for **using data** better: For insight, impact & integrity
- **Data competency** and **experience** will be part of **all roles**, from junior to senior
- **Training** in data & analytics is needed **by & for all**
- **Stewardship** of data is expected **from all**

DATA FOCUSED

DATA ANALYST

- **Responsible** for collaborating with colleagues on data & analytics, incl. research, reports, visualization, presentation, dashboards, scorecards

DATA ENGINEER

- **Responsible** for supporting everyone with data preparation, speeding up the **creation** of curated trusted **data pipelines** and their **integration**

DATA SCIENTIST

- **Responsible** for extracting deep insight from data and using **complex models**, employing statistics, algorithms, AI & visualization methods

DATA PROTECTION OFFICER

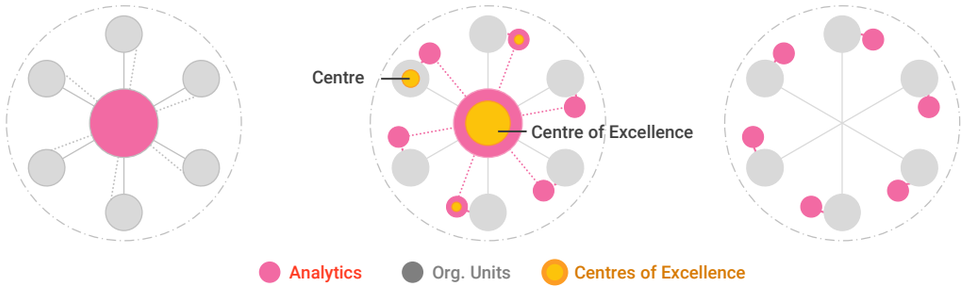
- **Responsible** for development & implementation of a data protection & privacy framework in close collaboration w/ legal and info sec. teams

CHIEF DATA OFFICER

- **Responsible** for joining up use cases, enablers and capabilities.
- **Supports** strategy, governance, data literacy, data architecture, use case curation

Adapted from Deloitte, Gartner, BCG, United Nations

NURTURE CENTRES OF EXCELLENCE WITH HYBRID MODELS



One centralized data and analytics team services all mgm't, policy, programme & operations needs.

Disconnected from subject-expertise

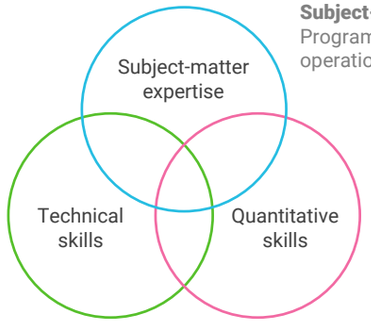
Hybrid of centralized and distributed collaboration; Centres of excellence promotes best practice.

Scoped & scaled for excellence

Decentralized activities within each unit, with uneven quality and ad-hoc governance.

Siloes of best or poor practice

FORM CROSS-FUNCTIONAL TEAMS



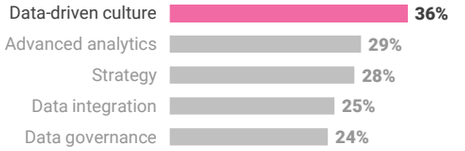
Subject-matter expertise
Programme, policy and operations know-how

Technical skills
Data engineering skills for managing data pipelines

Quantitative skills
Data analytics and science skills for insight and impact

FOSTER DATA-DRIVEN CULTURES

Data leads see culture as most critical driver*



How to embed a data-driven culture

Articulate the change we seek:
What does "good" look like?

Activate leadership and engage colleagues:
How do we make it real?

Realign to embed a new culture:
How can we reinforce desired change?

Gartner, Inc. (2018), Survey of 255 chief data officers on critical success factors

Enablers:

Partnerships

WHAT THIS IS ABOUT

Building strong and sustainable data partnerships so that we can jointly tackle the toughest challenges and deliver solutions for people and planet.

WHY THIS IS IMPORTANT

- We need **partners** to take on the great challenges
- We need to foster **collaboration** and build **trust**
- We need to link our data with others to unlock **more value**

WHAT OUR GOALS ARE

1. Build **sustainable** data partnerships with trust, impact & scale
2. Integrate the UN data ecosystem with **global platforms**

WHAT THE RISKS ARE

- We **fail to align** on a shared vision and incentives
- We **are inconsistent** in how we communicate
- We **fail to establish** adequate governance mechanisms
- We **fail to scale** sustainably for impact

Key concepts: We will build partnerships for insight, impact and integrity – and connect better with global data ecosystems.

KEY CONCEPTS EXPLAINED

- Addressing the challenges of people and planet goes **beyond** the capabilities of **any one organization**. We need partnerships to increase the chance of shared success.
- Learning from **best practices**, we need to pursue a **5-step approach** to partnership, focused on stakeholder alignment, responsible governance, shared insight generation, broad adoption, sustainability and scalability.
- Increasingly we will also need to learn to **integrate** our data and analytics **platforms** better with those of partners, people & others.
- To integrate well, we need to **be clear about problems** we are trying to solve and tackle the **data integration** challenges so we can: **Dynamically** interact with partners; **Connect** to a variety of different applications and sensors; and **leverage** internal data responsibly so everything links **smartly & sustainably**.
- We also need to become better in governing greater **exchange** of **data**, not just publishing more **Open Data** for **open access**, but also developing licenses and data sharing **agreements** that enable partners to integrate more deeply with us, in **responsible** ways.

See full set of next steps in "All Recommendations"

TAKE A 5-STEP APPROACH TO PARTNERSHIPS

1 ENSURE ALIGNMENT

- Perform **due diligence**
- Balance competing **incentives**
- Commit to **use cases**
- Establish **action plan**

2 BUILD GOVERNANCE

- Fit **governance** "for purpose"
- Implement data-sharing protocols
- Consider external review **board**
- Define operating **procedures**

3 GENERATE INSIGHT

- Verify data **inputs**
- Ensure explainability of **outputs**
- Build in **feedback** loops
- Exercise responsible **governance**

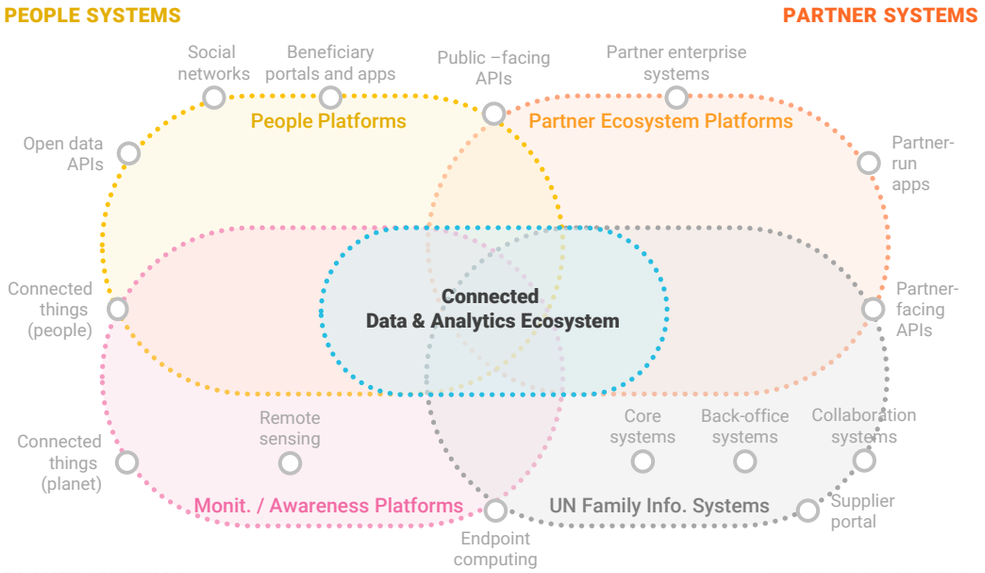
4 DELIVER IMPACT

- Nurture **bottom-up** and **top-down** champions
- Ensure **two-way** support and communications **channels**
- Deliver sustained **training**

5 ENSURE SUSTAINABILITY

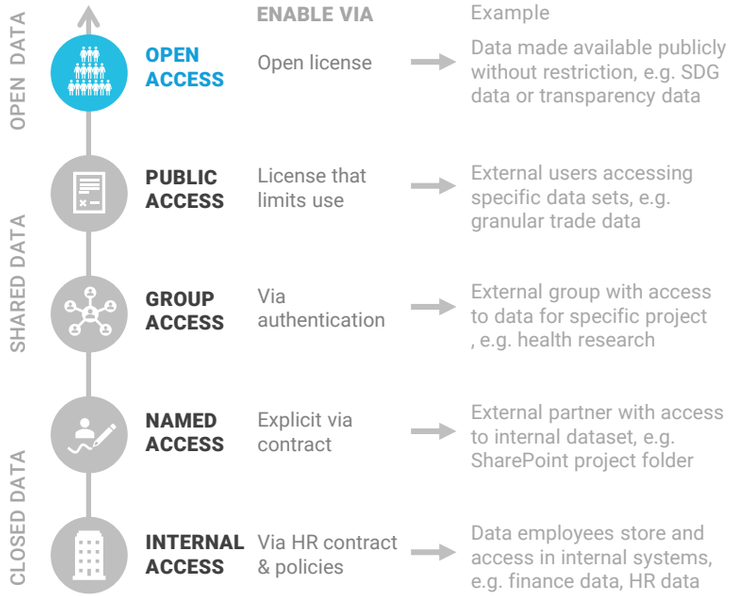
- Evaluate **funding mechanisms**
- Identify opportunities for **scaling**
- Explore further **opportunities** that draw on growing **data trust**

INTEGRATE GRADUALLY WITH OTHER ECOSYSTEMS



Adapted from McKinsey, World Economic Forum, Gartner, UK DfID, ODI

IMPROVE DATA SHARING ARRANGEMENTS



Enablers:

Data governance and strategy oversight

WHAT THIS IS ABOUT

Governing data at the right levels and with the right approaches everywhere, so that everyone can use data better as a strategic asset for insight, impact & integrity.

WHY THIS IS IMPORTANT

- We want to provide coherent **direction** & **support** on strategy
- We want to ensure governance **enables action** at every level
- We need to foster **accountability** and **responsibility**

WHAT OUR GOALS ARE

1. **Professionally** manage data as a strategic asset, so each team, department & organization can maximize its value
2. **Collaboratively** manage data as a shared strategic asset of the UN family so we unlock value across pillars & functions

WHAT THE RISKS ARE

- We fail to see data a strategic asset and become **irrelevant**
- We **centralize** all governance and **throttle** insight and impact
- We mismanage data **security**, **protection** and **privacy**

Key concepts: We need good data governance – not "one-size-fits all" approaches – to enable better data action by all.

KEY CONCEPTS EXPLAINED

- **Just like** we have built governance for other organizational functions, we will need **governance approaches** that help us treat data as a **strategic asset** – **focussed adding value with data** for **colleagues, partners** and **beneficiaries**, in a responsible manner.
- At a basic level, **data governance** and **strategy oversight** mean orchestrating people, processes & technology to ensure we use and manage data based on our principles – at **global**, **regional** or **country** level.
- We must **avoid "one-size-fits-all" approaches**, and govern for agility, outcomes or control – depending on functions, requirements and other factors.
- In general, our governance should focus on **creating value** for stakeholders, in ways that help everyone get work done, with respect for rights, security, accountability & data quality.
- We will discard notions of individual "data ownership" and embrace a "**data stewardship**" culture, where we all facilitate optimal data use – not hoarding.
- To that end, and using existing mechanisms, we will establish a **gender-balanced Data Governance Council** with senior executives who help set policy, prioritize resources, curate major use cases, and resolve issues. A **gender-balanced** top-level **Data Strategy Group** will oversee priorities and strategy.

See full set of next steps in "All Recommendations"

AVOID "ONE SIZE FITS ALL" GOVERNANCE APPROACHES

AGILITY-FOCUS

- Often used in mgm't, programme, strategy, inno. functions
- Focus is **value add**, **delegated authority, risk mitigation**
- Decide with **principles**, **competencies**, policies, standards
- e.g. initiatives in self-service analytics, inform. products

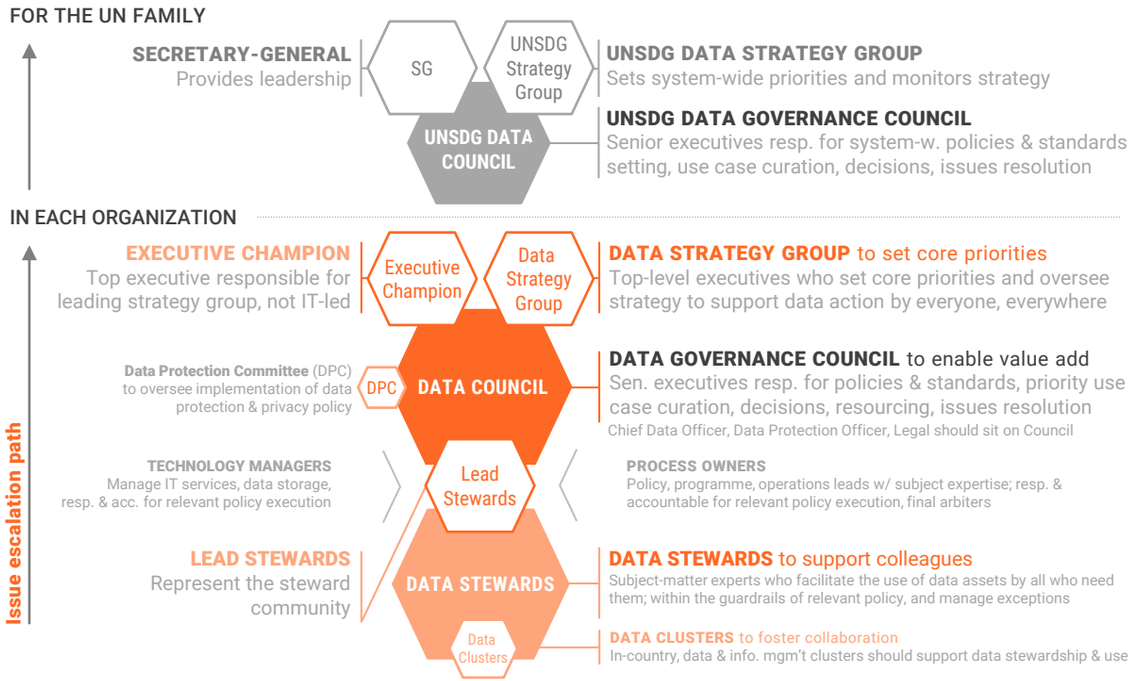
OUTCOME-FOCUS

- Main gov. focus in mgm't, operations & programme functions
- Focus should be on **outcomes**, **balanced** for **risk**
- Decide w/ rules, policies, standards, **principles**
- e.g. initiatives in supply chain, predictive financing

CONTROL-FOCUS

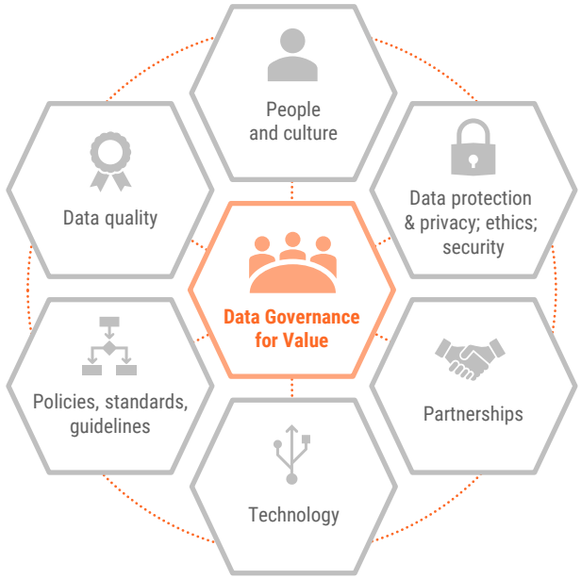
- Often used for defensive operations & legal functions
- Focus is **command-control**, **compliance** for risk mgm't
- Decide w/ **rules**, **policies**, standards
- e.g. initiatives in masterdata, accounting, data protection

BUILD FRAMEWORK FOR DATA GOVERNANCE & STRATEGY OVERSIGHT



USE DATA GOVERNANCE TO ENABLE VALUE

CORE AREAS



Adapted from Gartner, Harvard Business Review, United Nations

Enablers:

Technology environment

WHAT THIS IS ABOUT

Making sure that our technology tools and processes are aligned to empower everyone, everywhere in using data optimally for insight, impact and integrity.

WHY THIS IS IMPORTANT

- We need tool sets to support **diverse users** and **needs**
- We want to make sure data is **safe** and **secure**
- We seek to harness the best of **emerging technologies**
- We want **environmentally friendly** technology infrastructure

WHAT OUR GOALS ARE

1. **Massively** improve tools to organize, analyse and share data
2. **Smartly** design user-centric solutions for collaboration
3. **Systematically** manage data security, privacy and risks

WHAT THE RISKS ARE

- We fail users with solutions that do not meet their **needs**
- We lose trust by mismanaging **cybersecurity** and **privacy**
- We lock ourselves in inflexible "**one-size-fits-all**" systems

Key concepts: We will deploy tools that help all users with data and analytics, taking a "cloud-first" approach where possible.

KEY CONCEPTS EXPLAINED

- **The demand for better tools** to acquire, manage, share, analyze and govern data is increasing across the organization. To support diverse needs, our technology must evolve.
- Stronger **tool sets** for **analytics, data management** and **governance** must enable central orchestration and distributed practice by all. They must also enable more **innovation,** incl. to help us bridge the **gender data gap**.
- Our data and analytics **tool sets** need to be **diverse** enough to help everyone work well, tailored to their **needs** and **savviness**.
- Traditionally run by IT experts, our applications must increasingly enable **self-service analytics** as the demand for data querying, analysis and visualization rises throughout the organization.
- Users – **internal and external** – must be empowered with **data mgm't tools** that help them discover, **connect** to, **integrate** & **share** the data they need, in optimal **quality** and in line with our **policies**.
- Yet, as we enable a broader set of tools, we must also be vigilant in **streamlining** where possible to manage overlaps, complexity, security and cost in a smart way.
- Where possible, we will migrate to **"cloud first"** approaches, where software, computing and technology are consumed "as needed", as we already do for core office apps.

See full set of next steps in "All Recommendations"

BUILD STRONGER TOOL SETS

CAPABILITIES we want to enable ▶ **TOOL SETS** we must improve ▶ **COMPONENTS** we need to assemble

ANALYTICS
Descriptive, diagnostic, predictive, and prescriptive

DATA MGM'T
Describe, organize, integrate, share, and govern

ANALYTICS TOOL SET

Analytics tools enable a **broad range of use cases**:
- Traditional enterprise reporting, dashboards and mobile
- Self-service data sourcing, querying, preparation, reporting, visualization, story-telling
- Advanced data modeling, forecasting, optimization, simulation
- Geospatial analysis, natural language processing, big data / AI

DATA MGM'T TOOL SET

Data management tools so **data flows to each use case**; more IT-driven but user-focused:
- Data sharing and publishing apps, incl. portals and API services
- Data integration and quality tools
- Metadata management and data cataloguing solutions
- Database, data warehouse and data lake systems

GOVERNANCE TOOL SET

Data governance for **appropriate use and behaviour**; more IT-driven:
- Master / reference data management tools
- Access policy, access control, authentication, auditing tools
- Data stewardship solutions
- Data encryption, security, privacy-enhancing and retention mgm't tools

EMPOWER DIFFERENT USER TYPES

CONSUMERS	EXPLORERS	EXPERTS	INNOVATORS
IT-managed tools	basic self-service	advanced self-service	complex self-service
Front-line workers, senior executives, external users	**Junior** analysts and savvy users, incl. external	**Experienced** analysts, engineers, ext. developers	**Power** users, senior analysts, engineers, scientists
"**Conversational**" data literacy	"**Competent**" data literacy	"**Fluent**" data literacy	"**Multilingual**" data literacy
Consume & interact w/ data	Produce & **modify** content	Produce & **validate** content	Use new **complex** data & validate

TAKE "CLOUD-FIRST" APPROACH

Software as a service (SaaS), incl. analytics & office applications

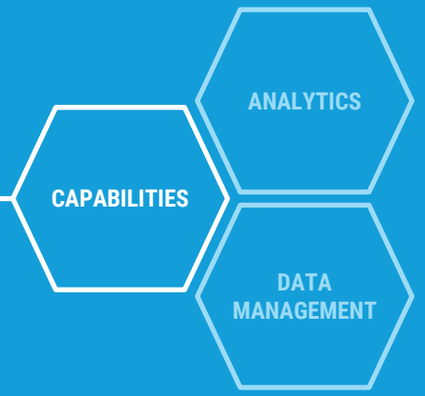
Infrastructure as a service (IaaS), incl. storage and servers

Platform as a service (PaaS) for app development

CLOUD APPROACH
Software, computing and technology resources are consumed on "as-needed" from a specialized provider with state-of-the-art encryption

ON-PREMISE APPROACH
Software and technology are located within the physical confines of the organization, incl. internal data centres

Adapted from Gartner, BCG, IBM



Strategy:

Nurture capabilities

Using growing amounts of data for insight, impact and integrity is everyone's challenge. To succeed, we not only need to master analytics methods, but also manage our data better. Nurturing these capabilities everywhere will depend on continuous and iterative improvement in the underlying enablers in governance, technology, people and culture.

Capabilities:

Analytics

WHAT THIS IS ABOUT

Asking everyone to use data to better understand “what happened”, “why it happened”, “what may happen next” and respond with insight, impact and integrity.

WHY THIS IS IMPORTANT

- We make **decisions** based on best available **evidence**
- We must provide sound integrated **policy advice**
- We need to design **strategies** and **programmes** that deliver
- We seek to innovate services for **people** and **planet**

WHAT OUR GOALS ARE

1. Consequently apply analytics to **decisions**, **strategies**, etc.
2. Increasingly provide **new services** to clients and partners

WHAT THE RISKS ARE

- We fail to respect principles we set, incl. on **rights** and **ethics**
- We fail to separate analytics from **technology management**
- We pursue analytics and visualizations that do not add **value**

Key concepts: We need everyone's analytical strength to support evidence-based decisions with insight, impact and integrity.

KEY CONCEPTS EXPLAINED

- **Analytics work varies** in terms of time, effort and level of complexity. It can range from **simple** static reporting of historical data to predictive or prescriptive analytics with **complex** interactive **visualizations**.
- Analytical capabilities are not needed in only one part of the UN, but must be developed **across the organization** for diverse use cases.
- The **main capabilities** we need to develop are:
  - **Descriptive** analytics that help us answer "What happened?" by evaluating historical data, for example to measure results or costs against targets.
  - **Diagnostic** analytics to help us understand "Why did it happen?" through data discovery, data mining or correlation analysis.
  - **Predictive** analytics that tries to give an answer to the question "What will happen?" based on historical data, statistical modelling and machine learning.
  - **Prescriptive** analytics: analyses the best course of action given a certain scenario, incl. through machine learning.
- For each method, learning to master the "**value chain**" – from data acquisition to evidence-based action – is our core challenge.
- To succeed, we not only need new skills, but must also create the **right blends** of **people**, **tool sets** and **governance** approaches, with a constant focus on **gender equality**.

See full set of next steps in "All Recommendations"

MASTER THE VALUE CHAIN IN ANALYZE

IDENTIFY	ACQUIRE	TRANSFORM	ANALYZE	VISUALIZE	INTERPRET	ACTG
Identify and understand **use cases**, challenges, and questions you seek to answer	Access or collect **relevant data**, in line with data protection and privacy principles	Transform data into **models** and **structures** that make it possible for data to be optimally analyzed	Apply analytics **methods**: • **Diagnostic** • **Descriptive** • **Predictive** • **Prescriptive**	Present the results as visualizations, using static or interactive **charts**, **reports**, **maps** or **dashboards**	Review **output** by verifying data **quality**, **analysis**, **visualization**. Interpret insights and **implications** for use case	Deliver outputs and help **decision-makers** take necessary **action** based on analytical **insights**.

FOR DIFFERENT ANALYTICS USE CASES, APPLY THE RIGHT MIX OF DATA, PEOPLE, TOOLS AND GOVERNANCE

DESCRIPTIVE ANALYTICS

- Capabilities typically include, **static enterprise reporting**, management **dashboards**, enterprise **scorecards**
- Creators are more likely **specialists**, less self-service users
- Data management tends to be more **centrally** orchestrated
- Data is likely **transactional** & sourced from central systems
- Governance more likely focused on **"outcome"** / "**control**"

DIAGNOSTIC ANALYTICS

- Capabilities typically include **user-driven interactive visualizations**, analytical **dashboards**, **reports** and data **story-telling**, as well as data **preparation**
- Creators are more likely **self-service** analysts, less central
- Data mgm't tends to **blend** central and decentral capability
- Data is **blended** from diverse central, local, external sources
- Governance more likely focused on "**outcome**" / "**agility**"

PREDICTIVE AND PRESCRIPTIVE ANALYTICS

- Capabilities typically include **simulation**, **optimization** and **forecasting**, increasingly with **artificial intelligence use**
- Creators are more likely **specialists** and Data **Scientists**
- Data management tends to be more **decentral**
- Data more likely sourced from central, local and **complex** internal and external sources.
- Governance more likely focused on "**agility**" / "**autonomy**"

DATA SOURCES ACROSS METHODS

Big Data **Sensor / IoT** **Audio** **Image** — **COMPLEX**

Local Data Marts **Ad-hoc Files** **Social** **Open Data** **Ext. Providers** **Text** — **LOCAL & AD-HOC**

Enterprise Data Warehouse — **ENTERPRISE**

Adapted from OpenDataWatch, Gartner, United Nations

Capabilities:

Data management

WHAT THIS IS ABOUT

Ensuring everyone can discover, access, integrate and share data they need across the full spectrum data subject areas and data types, so we can meet the data needs of the organization, people and planet everywhere.

WHY THIS IS IMPORTANT

- We need the **data** to analyze with **insight**, **impact** & **integrity**
- We must share the wealth of **open data** entrusted to us
- We seek to improve and innovate **services** for our **clients**

WHAT OUR GOALS ARE

1. Optimally manage data for **every use case**
2. Massively improve how we **organize**, **integrate** & **share data**
3. Actively foster UN family data **standards** & **interoperability**

WHAT THE RISKS ARE

- We **focus too much** on **central** data **lakes** or data **marts**
- We **fail** to empower **users** with the data they **need**
- **We do not nurture standards and interoperability**
- We **frustrate** users with **complex tools** and **processes**

Key concepts: We will manage data better to ensure everyone can discover, access, integrate and share the data they need.

KEY CONCEPTS EXPLAINED

- We will not strive for total data command and control, but adopt a **flexible, adaptive approach** to data management: We must stay nimble to effectively deal with the varying complexity, diversity and pace of data.
- Our main goal is that everyone can **discover**, **access**, **integrate** and **share** the data they need, whether **internal** or **external** users, based on good and **adaptive governance**, with better **data catalogues** and **APIs**, and with common **standards** wherever possible.
- To succeed, we need to learn how to manage and govern our data based on **context**, from organization-wide to specific goals. We must foster standards across all levels, with better **masterdata management** (e.g. for key reference identifiers such as codes for locations, organizations, etc.) as our **top priority**.
- Strengthening our data management "**value chain**" will be a critical priority in the coming years. Managing data better and more responsibly, will no longer be a task for IT experts, but a **competency** of everyone.
- While **primary data collection** remains important, we will increasingly need to strengthen our ability to "**connect**" with growing amounts of data around us, rather than "collecting" and centrally warehousing data that already exists elsewhere.

See full set of next steps in "All Recommendations"

OPTIMZE THE DATA MANAGEMENT VALUE CHAIN

STEPS TO TAKE IN EVERY CONTEXT

SHARE: Easily

Empower users everywhere to **discover**, **access** and **connect** to the data they need for insight, impact and integrity – inside or outside the organization.

INTEGRATE: Smartly

Ingest, **transform** and **combine** different data from different sources, leveraging APIs, using **common standards** where possible.

GOVERN: Adaptively

Ensure risk assessment, policy and standard control, incl. for **data protection & privacy, security**, **quality, retention**, w/ adaptive approaches (see 'governance')

ORGANIZE: User-friendly

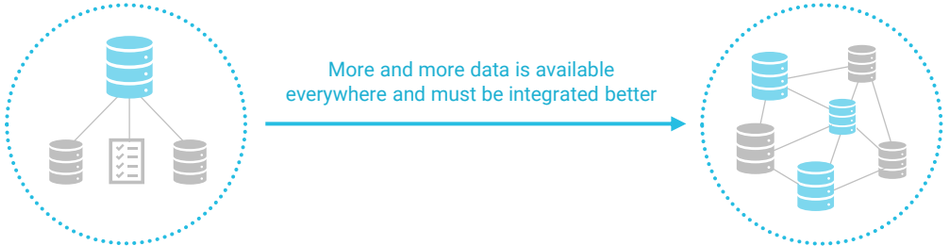
Structure data assets, incl. inventorying, describing and classifying them in **data catalogues** so we can discover, understand and consume what we need.

DESCRIBE: Adequately

Collect knowledge about data **assets**, incl. **where** they are, what **format** they are in, their level of **quality**, **value** and **sensitivity**, using **standards** where possible.

Adapted from Gartner, Others

FOCUS INCREASINGLY ON "CONNECTING" TO DATA



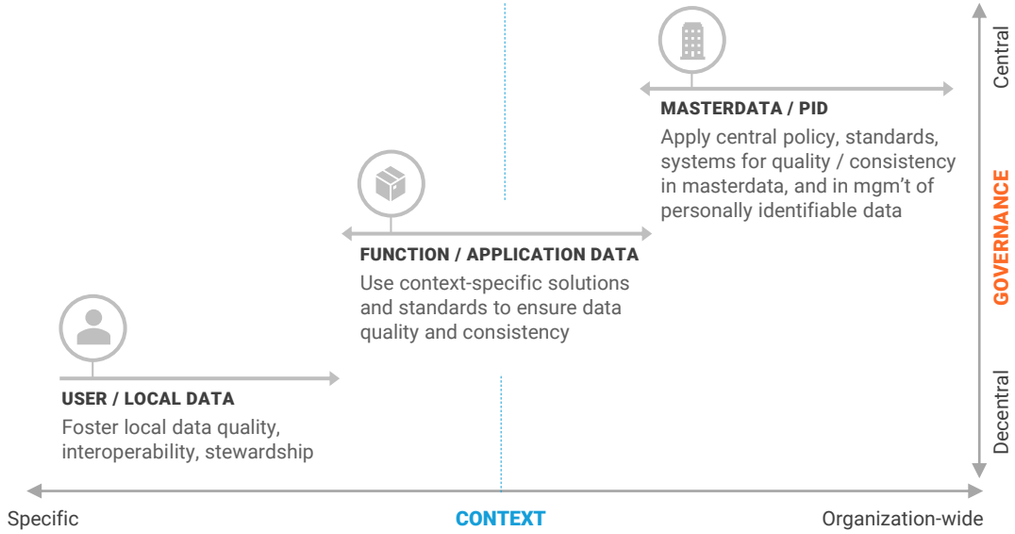
COLLECTING DATA

In the past, we focused mainly on data collection and centralized storage. While that remains relevant…

CONNECTING DATA

…We must increasingly learn to connect the growing amount of existing data.

TAKE STEPPING STONES TO DATA MANAGEMENT, BASED ON CONTEXT



Strategy:

Pursue a roadmap

Pursuing a complex transformation so that everyone delivers better for the organization, people and planet is a marathon, not a sprint. On this journey, we intend to work with partners who champion the cause of data for insight, impact and integrity. Our recommendations, with prioritized next steps, can guide the way.

Our roadmap to 2030: From design to implementation, continuous realignment and transformational impact at scale.

PURSUE THE DATA-DRIVEN TRANSFORMATION TO MATURITY

Next 6-8 months

DESIGN AND FOUNDATIONS

- Establish Strategy Support Team
- Pursue quick action on priorities, incl.
  - Data protection and privacy
  - Data cube
  - Statistics roadmap
- Set up enabling governance framew'k
- Assess gaps across enablers
- Assess gaps across capabilities

2020 TO 2022

STRATEGY V1.0 IMPLEMENTATION

- Assemble and deliver priority data action portfolios
  - Focus on SG priority themes, incl. Decade of Action, climate action, gender equality, human rights, peace and security, UN reform
  - Leverage pooled funding for scale
- Implement priority recommendations / steps
  - Focus on people, training and culture
  - Foster centres of excellence and collaboration
  - Focus on partnerships
  - Focus on technology environment
  - Improve data governance and stewardship
- Use scorecards to track strategy implementation

2022 TO 2025

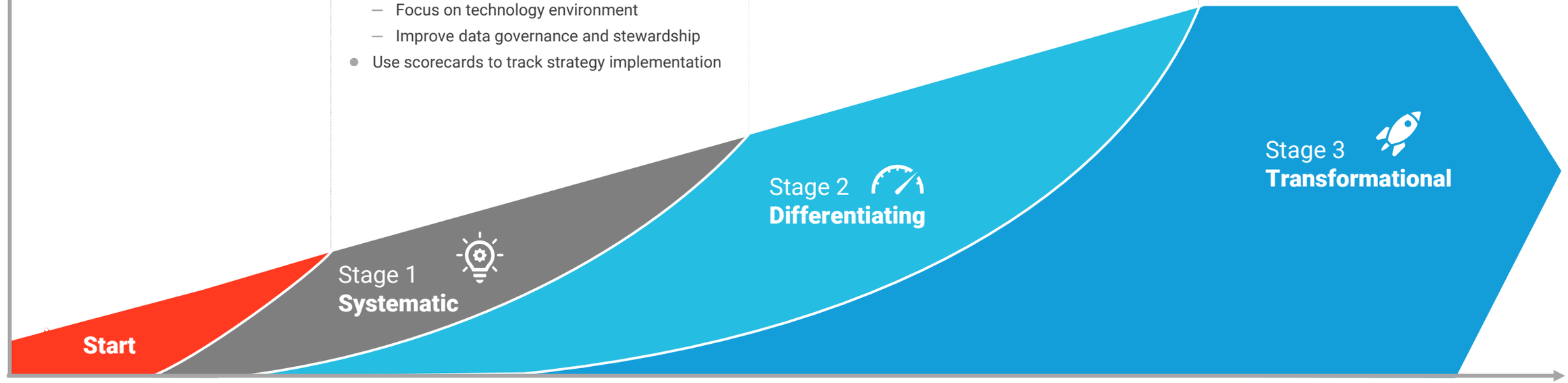
STRATEGY V2.0 ITERATION

- Implement long-term recommendations in the Strategy
- Prioritize SDG data action portfolios
- Assess and review Strategy V1.0 progress

2025 TO 2030

STRATEGY V3.0 ITERATION

- Fully focus use cases on SDG achievement
- Assess and review Strategy V2.0 progress



How partners can help champion impact for people and planet through the Data Strategy of the Secretary-General

SUPPORTING THIS STRATEGY

Inspired by the **Decade of Action** and **UN Reform**, this Strategy grounded in our vision of a more **data-driven organization** that can lead, deliver and serve the world better.

In building a **whole-of-UN data ecosystem** that maximizes the value of our data, we strive to unlock our full potential: Better decisions and stronger support to people and planet – in the moments that matter most.

Under the leadership of the Secretary-General, we are committed to advance this Strategy across the organization and the UN family – with drive, discipline and determination.

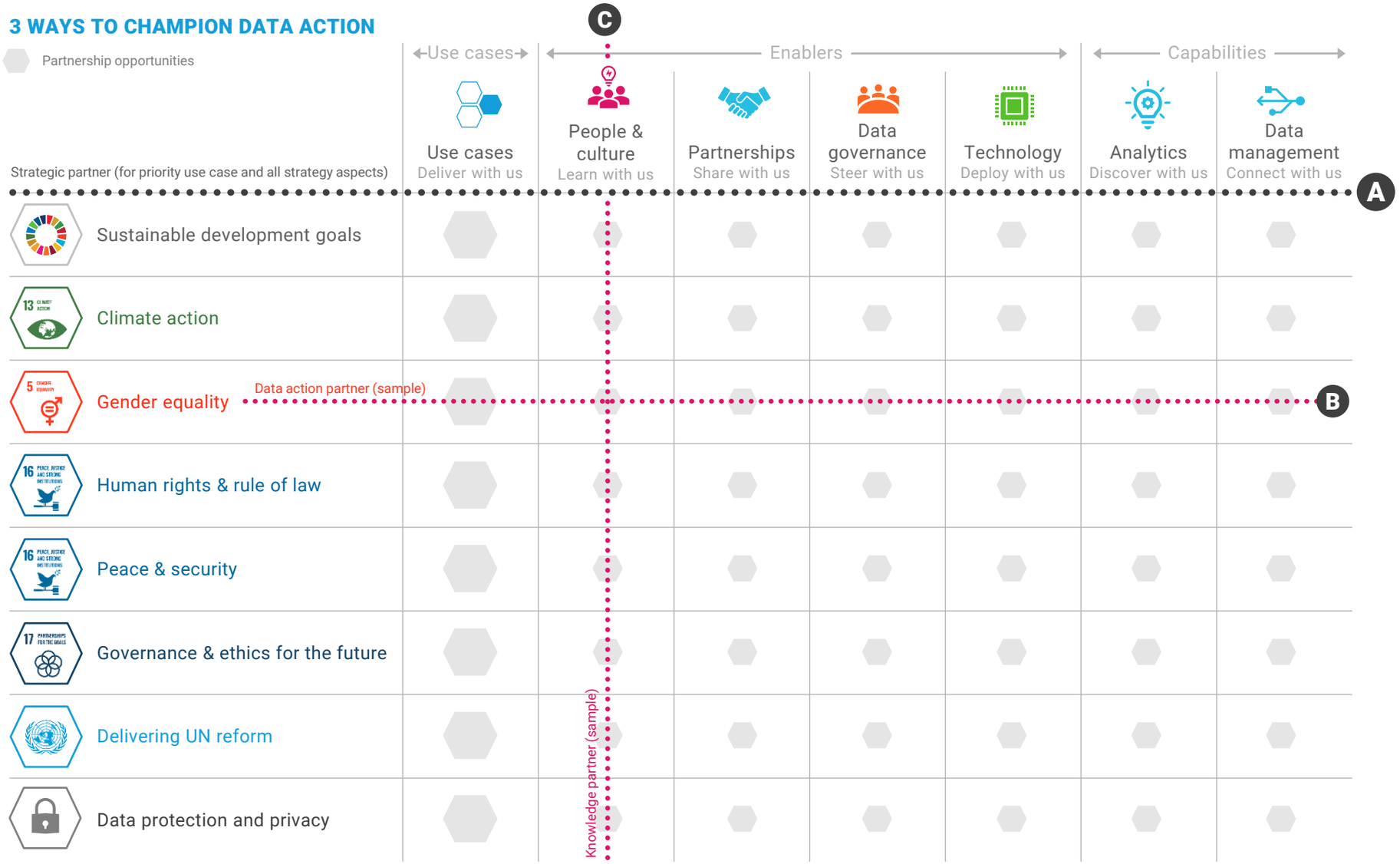
On this journey, we will need partners who share our passion for stronger data action, grounded in UN values:

- **A** **Strategic partners**, who champion the cause of data action long-term and help us unlock the full potential of this Strategy, across priority use cases, enablers and capabilities.
- **B** **Data action partners**, who work with us on delivering use cases across our mandates, and any of the SG's priorities for 2020/21.
- **C** **Knowledge partners**, who can assist us with sustained advice on how to strengthen any of the enablers and capabilities we will need for stronger data insight, impact and integrity.

To facilitate **coordinated impact at scale**, we have set up a highly flexible **multi-partner facility for "UN Data, Innovation and Impact".**

For more info on how to partner with us, see "Contact".

3 WAYS TO CHAMPION DATA ACTION



Next steps: Catalyze progress for everyone, everywhere, now: All short-term high priority next steps on 1 page.

Strategy	Recommendation	#	Next step
Data action	We will deliver priority use cases that add value	1	In your organizational context, and using the Framework for Data Action, **identify** potential **use cases** aligned w/ **priorities** & **outcomes**
		2	In your organizational context, and using the Framework, evaluate and start delivering "**data action portfolios**" for insight, impact and integrity
	As a UN family, we will jointly deliver key priorities	3	As a UN family, ensure delivery of the UN **Data Protection and Privacy Programme**
People and culture	We will build data & analytics roles across all levels	4	Design **generic job profiles** for junior, mid and senior level **data analyst**, **engineer**, **scientist** and other **data-focused positions**
		5	As a UN family, share a set of **reference competency**, **education** and **experience requirements** for data and analytics-focused job profiles
	We will onboard young talent in flexible ways	6	Use **fellowship programmes**, as well as data and analytics-focused **P-1**, **JPO**, **UNV** and other **junior positions** (incl. at HQ) to onboard talent
	We will nurture data skills & competencies for all	7	Establish a data **peer learning group** and **knowledge exchange** platform in your organization
	We will shift culture and knowledge sharing	8	As **managers**, **communicate** to **everyone**, **everywhere** that we seek a **data-driven transformation** to use data better **for insight**, **impact** & **integrity**
	We will foster excellence & cross-functional work	9	Assemble **gender-balanced cross-functional teams** that unite subject-matter, data management & analytics expertise to deliver your **use cases**
Partnerships	We will build sustainable data partnerships	10	Wherever possible, expand **existing data partnerships** so they can be leveraged across the UN family
	We will better integrate our ecosystems w/ others	11	As a UN family, design **model data sharing agreements** to facilitate named or group to organizational data assets, based on avail. best practice
Data governance and strategy oversight	We will build data governance & strategy oversight adapted to context across the UN family	12	Design a **Data Strategy**, incl. vision, outcome & use-case-centric approach to nurture analytics & data mgm't capabilities, supported by enablers
		13	Develop **framework for strategy oversight and data governance**, incl. Data Strategy Group, Data Governance Council, data stewardship model
		14	Designate colleagues to a small, time-bound, gender-balanced & cross-functional **Data Strategy Support Team** to support implement., incl. Legal
	We will collaborate for data governance and impact	15	As a UN family, form a small, time-bound, gender-balanced & cross-functional **UNSDG** Data Strategy Support Team to support the UN family
	As a UN family, we will join up to unlock data value	16	Activate the **pooled fund on "UN Data, Innovation and Impact"** to mobilize resources for system-wide use cases that add most stakeholder value
Technology	We will empower all users with the tools they need	17	Mainstream **self-service analytics tool sets** and policy to empower users everywhere, incl. w/ data exploration, prep., analysis, visualization, etc.
	We will enable better data management	18	Improve **tool sets and IT policies** for managing **masterdata** to ensure uniformity, accuracy & accountability for key org.-wide reference identifiers
	We will support distributed collaboration	19	As a UN family, **establish 'trust'** between **identity mgm't** systems of UN orgs. to catalyze collaboration on shared data (start w/ **Office 365 users**)
		20	Support development of **external portals for core data** (**data.yourdomain.org**) & **micro dataset exchanges** (modeled on hdx.humdata.org)
	We will provide solutions for data security, protection and privacy	21	Conduct **rapid assessments** of existing tool sets to support data **security**, **protection** and **privacy**, and **risk** management
		22	Switch on **multi-factor authentication (MFA)** in identity management systems for all users **immediately** to quickly improve baseline security
Analytics	We will apply analytics to decisions and strategies	23	Improve decision-making and deliver use case with **descriptive analytics**, incl. via centralized enterprise reporting and business intelligence
		24	Improve decision-making and deliver use case with **self-service diagnostic analytics** incl. data exploration, preparation, analysis, collaboration
		25	Support mission-critical priorities by investing in **visualization** and **storytelling** capabilities, complementing descriptive and diagnostic capabilities
Data mgm't	We will assess data needs	26	Assess **data requirements** for your use case portfolio, as established through the action framework, map against available data and **address gaps**
	We will adequately describe & organize data	27	Based on use case & governance needs, ensure **masterdata** (i.e. key reference identifiers) is available and consistent for your use case
	We will optimally describe & organize our core data	28	Based on your organizational context, ensure adequate **masterdata mgm't** for **org.-wide key reference identifiers**, using global / UN standards
	We will foster UN data standards & interoperability	39	As a UN family, set **core data standards** (incl. ISO code application, costing codes, etc.) for better system-wide insights, impact, integrity

Contact

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Roadmap:

All recommendations and next steps

WHAT THIS IS ABOUT

Our full set of recommendations and next steps to help unlock change across all pillars, functions and levels of the organization.

Use cases: Data action framework recommendations and next steps

Goals and recommendations	#	Next Steps	When	Prio.	Indicators (initial)
1 In every organization, we will systematically deliver use cases across the organization, based on the SG's priorities for 2020-21, our mandates and stakeholder needs	1	In your organizational **context**, and using the **Framework for Action**, **identify** potential use cases aligned w/ **priorities** & **outcomes**	ST	Hi	# use cases identified # use case portfolios % net value delivered
	2	In your organizational **context**, and using the Framework, **assess** potential use cases for **net value** by scoring value against inhibitors / risks	ST	Hi	
	3	In your organizational **context**, and using the Framework, **curate** a **data action portfolio** with optimal net value	MT	Hi	
	4	In your organizational **context**, **deliver** your **data action portfolio**, leveraging available / mobilizing new **funding**, applying adequate **governance**	MT	Hi	
2 As a UN family, we will jointly deliver use cases to advance global agendas, mandates and the SG's priorities that depend on collaboration for success	5	As a UN **family**, **identify** potential system-wide / joint **use cases** that are of critical importance for **global agendas**, **mandates** and the **SG's priorities**	MT	Hi	# use cases identified # use case portfolios % net value delivered
	6	As a UN **family**, **assess** potential use cases for **net value** by scoring value against inhibitors / risks	MT	Hi	
	7	As a UN **family**, **curate** a use case portfolio with optimal net value	MT	Hi	
	8	As a UN **family**, **deliver** a joint use case **portfolio**, leveraging pooled / shared funding, with support of the UNSDG Data Governance Council	MT	Hi	
As a UN family, we will jointly deliver the system-wide use cases highlighted in this Strategy	9	As a UN **family**, ensure delivery of the **UN Data Protection and Privacy Programme**	ST	Hi	% next steps taken # of system-wide priority use cases implemented
	10	As a UN **family**, ensure delivery of the **UN Data Cube** Programme for System-Wide Financial Reporting, with support of the UNSDG Data Gov. Council	MT	Hi	
	11	As a UN **family**, ensure delivery of the **Roadmap** for UN Data and Statistics, with support of the UNSDG Data Governance Council	MT	Hi	

Enablers: People and culture recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators (initial)
1 We will assess gaps in skills and competencies	1	Conduct **surveys** of existing data and analytics skills, competencies, roles, approaches and cultures to prioritize gaps based on your use cases	ST	Md	% staff surveyed # strategies revised
	2	Update **human resource strategies** (incl. recruitment, training, career development, performance mgm't.) to foster data and analytics capabilities	LT	Lo	
We will build data and analytics roles across all organizational levels	3	Design **generic job profiles** for junior, mid and senior level data analyst, engineer, scientist and other data-focused positions	ST	Hi	# new job profiles # modified job profiles # new hires % women hired
	4	As a UN family, share a set of **reference** competency, education and experience requirements for data and analytics-focused **job profiles**	ST	Hi	
	7	Reclassify **existing positions** that already perform data and analytics-focused functions as data analyst, engineer, scientist positions	ST	Md	
	6	Introduce data and analytics-focused **positions** in staffing **rosters**, **staffing tables** and **budgets**, incl. in support of **gender advisors**	MT	Hi	
	8	Consider establishing a **Chief Data Officer** position to foster ecosystem effectiveness, efficiency, impact and compliance	MT	Hi	
	9	Consider designating a **Data Protection Officer**, incl. to oversee & support data protection & privacy framework, incl. close collab. with Legal	MT	Hi	
We will develop flexible ways to onboard young talent	10	Use **fellowship** programmes, as well as data and analytics-focused **P-1**, **JPO**, **UNV** and other **junior positions** (incl. at HQ) to onboard talent	ST	Hi	# new hires % women hired
	11	As a UN family, consider changes to length-of-service-based **remuneration** models to ensure it remains competitive in its hiring practices	LT	Md	
2 We will nurture data skills and competencies across all pillars, functions and levels	12	Establish a data **peer learning group** and **knowledge exchange** platform in your organization	ST	Hi	% performance docs # peer groups # training portfolios # colleagues trained % women trained
	13	Curate data and analytics **training portfolios**, from existing material, for specialists / non-specialists in programme, operations and management	ST	Md	
	14	Introduce a **data literacy competency** in junior, mid and senior level **performance management** tools	MT	Md	
	15	Modify **job profiles** for all **existing** positions that should include some data and analytics competency, education and experience **requirements**	MT	Md	
	16	Invest in internal and external data analytics **training courses**, including for senior leaders, where self-paced training is not sufficient	MT	Md	
We will support a shift in culture and knowledge sharing for a modern, data-driven organization	17	As a UN family, establish a **UN Data Network** (UNDN) based on, and in collaboration with, the UN Innovation Network (UNIN) supported by 1 post	ST	Hi	# UNDN members # senior discussions # hackathons (…) # events % gender-focused events
	18	As **managers**, **communicate** to everyone, everywhere that we seek a **data-driven transformation** to use data better **for insight**, **impact** & **integrity**	ST	Hi	
	19	Organize **dialogue series** with outside practitioners on data strategies, use cases, capabilities and enablers	ST	Md	
	20	Start a branded 'data insight, impact and integrity' **campaign** for better awareness, literacy and stewardship	ST	Md	
3 We will build centres of excellence and cross functional teams to foster collaboration, best practice & decentralization	21	Assemble gender-balanced **cross-functional teams** that unite subject-matter, data management & analytics expertise to deliver your use cases	ST	Hi	# centres of excellence # cross-functional teams
	22	As a UN family, transform the UNOCC into an analytics **Centre of Excellence**, as a collaborative capacity to support cross-pillar decisions	MT	Hi	
	23	Implement a **hybrid organizational approaches** with a cross-functional analytics **centre of excellence** that collaborates with decentralized teams	MT	Hi	
	24	Ensure data and analytics-focused **positions** are built into any programmatic, operations and management teams by design	MT	Hi	
	25	Foster collaboration between analytics centres of excellence and **innovation units** on the most complex data science challenges & opportunities	MT	Hi	

Enablers: Partnerships

Goals and recommendations	#	Next steps	When	Prio.	Indicators (initial)
1 We will build ongoing challenges for dialogue with external data specialists and stakeholders	1	Engage **bilateral** and **multilateral partners** to communicate vision and mobilize support for the **SG's Data Action Strategy** and priorities	ST	Hi	# partners engaged
	2	Consider establishing **advisory** or **dialogue mechanisms** to gain client, stakeholder & expert insight on how to optimize data value responsibly	MT	Hi	
We will build sustainable data partnership and philanthropy programmes for insight, impact and integrity	3	Wherever possible, expand **existing data partnerships** so they can be leveraged across the **UN family**	ST	Hi	# sustain. partnerships # sustain. Philanthropy programmes # active portals
	4	Establish **new** use-case-centric **data partnerships** with public and private sector organizations, following a **5-step process**	MT	Hi	
	5	Institutionalize **data philanthropy** programmes through which private and public organizations can share data (leveraging data4sdgs.org model)	MT	Md	
	6	Consider deploying **data philanthropy portal** to facilitate the sharing of data assets with public, private and non-government partners	MT	Md	
2 We will gradually strengthen the integration of our ecosystem with external platforms	7	As a UN family, design **model data sharing agreements** to facilitate named or group access to organizational data, based on avail. best practice	ST	Hi	# models available # models used
	8	As a UN family, share recommendations on **open source licensing** of data assets	MT	Hi	

Enablers: Data governance and strategy oversight recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators (initial)
1 We will advance the data-driven transformation and data governance and strategy oversight within each organization	1	Design a **Data Strategy**, incl. vision, outcome & use-case-centric approach to nurture analytics & data mgm't capabilities, supported by enablers	ST	Hi	DS Support Team set up DS Group set up DG Council established # strategies
	2	Develop **framework for strategy oversight and data governance**, incl. Data Strategy Group, Data Governance Council, data stewardship model	ST	Hi	
	8	Designate colleagues to a small, time-bound, gender-balanced & cross-functional **Data Strategy Support Team** to support implement., incl. Legal	ST	Hi	
	3	Establish a top-level **Data Strategy Group** with the most senior executives for policy, programme, operations, and legal (or use exist. mechanism)	ST	Md	
	4	Focus the **Terms of Reference** (ToR) of the **Data Strategy Group** on priority-setting and strategy oversight (incl. statistics input via DESA)	ST	Md	
	5	Establish a **Data Governance Council** with leads of policy, programme & operations, legal, technology, statistics / DESA, via sen. mgm't mechan.	ST	Md	
	6	Focus the **ToR** of **Council** on decisions & oversight for priority use cases; policies & standards for data quality, data protection, issue resolution	ST	Md	
	7	Designate **Data Stewards** at different levels to ensure responsibility for data assets & support users in appropriate use, incl. policy enforcement	MT	Hi	
	9	**Replicate** data strategy, use case and governance arrangements within major organizational functions, based on priorities	MT	Hi	
We will generate value for clients and stakeholders with portfolios of use cases	10	Use the Data Council to curate a **portfolio of use cases** that deliver the greatest net value to the organization and its stakeholders, for approval	ST	Md	# of use cases curated # of board meetings
	12	Establish an organization-wide **scorecard** to monitor performance in data strategy implementation, use case delivery, and data governance	MT	Hi	
	11	Consider establishing **advisory board or dialogue mechanisms** to gain external client, stakeholder & expert insight on better data use	MT	Md	
2 As a UN family, we will collaborate, align and share knowledge for better data governance and impact	13	Implement a **governance framework**, incl. a Data Strategy Group and executive-level UN Data Governance Council, using existing mechanisms	ST	Md	# entities implementing # of strategy replications
	14	Consider a **UNSDG Data Strategy Group**, led by the UNSDG Chair, to foster alignment & collaboration on system-wide priorities & use cases	ST	Md	
	15	Consider a **UNSDG Data Governance Council**, using the existing UNSDG Core Group, and including CCS-UN, DESA and Digital & Technology leads	ST	Md	
	16	Focus **ToR** of **Council** on decisions & monitoring for system-wide priorities; policies & standards for data quality, privacy, mgm't; issue resolution	ST	Md	
	17	Ensure the **UNSDG Vice-Chair** participates in data strategy discussions in the UN Executive Committee, for alignment with the UN Secretariat	ST	Md	
	18	Consider a small, time-bound, gender-balanced & cross-functional **UNSDG Data Strategy Support Team**, w/ support from EOSG, DCO, Legal, etc.	ST	Hi	
	20	Establish a **UN Data Network** (UNDN) based on, and in collaboration with, the UN Innovation Network (UNIN) supported by 1 seconded post	ST	Hi	
	19	Foster a **network** of expert groups on data ecosystem aspects to advise the Council, building on a existing mechanisms in the UNSDG, IASC, CEB	MT	Hi	
	21	Consider **replicating** data strategy, use case and governance framework for **UN Country Teams**, based on priority or RC request	MT	Md	
As a UN family, we will join up in generating value from data where it is systematically important for our organizations people and planet	22	Use the UNSDG Data Gov. Council to curate & support a **portfolio of use cases** that deliver the greatest net value to the system and stakeholders	ST	Md	# of use cases curated # engaged coordinators # of activated funding
	23	Engage **UN Resident Coordinators** in the identification and curation of use cases	ST	Md	
	24	Activate the **pooled fund** on "**UN Data, Innovation and Impact**" to mobilize resources for system-wide use cases that add most stakeholder value	ST	Hi	
	25	Engage bilateral and multilateral partners to **communicate** vision and **mobilize** support for the SG's Data Action Strategy and use case priorities	ST	Hi	
	26	Establish a high-level system-wide **scorecard** to support progress in strategy implementation, use case delivery, and data quality improvements	MT	Hi	
	27	Consider establishing **advisory** or dialogue mechanisms to gain client, stakeholder & expert insight on how to optimize value from data respons.	MT	Md	

Enablers: Technology environment recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators (initial)
1 We assess gaps in tools that support analytics, data management tools and governance	1	Conduct **rapid assessments** of existing tool sets for analytics, data management and governance, and prioritize gaps based on use cases	ST	Md	# rapid assessments % use cases covered # environment. ass'ts % gender aspects cov'd # new technology ass'ts
	2	Integrate **environmental aspects** (incl. energy use and recyclability) into assessments of your technology portfolio based on UN guidelines	ST	Md	
	3	Integrate **gender aspects** (incl. disaggregation, equality and bias) into assessments of your technology portfolio based on UN guidelines	ST	Md	
	4	Conduct regular assessments of alignment between existing tools and **new technologies** for data mgm't & analytics, incl. to boost automation	MT	Hi	
We empower all user groups with analytics tools they need for better insight and impact	5	Streamline **traditional tool sets** for centralized enterprise reporting and business intelligence	ST	Md	% tool sets streamlined % users w/ self-service % adv. use cases cov'd % user satisfaction
	6	Mainstream **self-service analytics tool sets** and policy to empower users everywhere, incl. w/ data exploration, prep., analysis, visualization, etc.	ST	Hi	
	7	Make available **advanced analytics tool sets** to support expert users in simulating, optimizing, and predicting, incl. AI-powered solutions	ST	Md	
We enable better data management so that all users can discover, access, integrate and share data they need to get work done	8	Improve **tool sets** and IT policies for managing **master data** to ensure uniformity, accuracy & accountability for key org.-wide reference identifiers	ST	Hi	% of tools w/ self-service % of metadata policies updated % user satisfaction
	9	Improve **tool sets** and IT policies for managing **data catalogues** to help users discover, understand, and connect to data in a user-friendly way	MT	Hi	
	10	Improve **tool sets** for managing **metadata** that describe characteristics of data assets & help users know value, risks, structure, rel. policies, etc.	MT	Hi	
	11	Improve **tool sets** for **data integration** to help Data Engineers and users create, manage and automate data pipelines	MT	Hi	
We provide smarter tools to support data quality and governance	12	Improve **tool sets** and IT policies on managing **data quality** that help users standardize, cleanse and enrich data sets to facilitate their use	MT	Hi	% tool sets effective % of tools w/ self-service % user satisfaction
	13	Deploy **tool sets** and IT policies for supporting **data stewardship** to help data stewards everywhere define, interpret & enforce appropriate policy	MT	Hi	
	14	Improve **tool sets** for managing the **data life cycle** so data is stored, retained & archived according to its value over time, and ultimately removed	MT	Md	
2 We support distributed internal and external collaboration with smart user-centric solutions	15	As a UN family, establish '**trust**' between identity mgm't systems of UN orgs. to catalyze collaboration on shared data (start w/ Office 365 users)	ST	Hi	# UN Sys. users w/ 'trust' # data portals support'd # exchanges support'd # APIs available # API catalogue sites % user satisfaction
	16	Support development of **external portals** for core data (data.yourdomain.org) & micro dataset **exchanges** (modeled on **hdx.humdata.org**)	ST	Hi	
	17	Empower internal/external users & developers with easy-to-use **API services** & API catalogues (api.yourdomain.org) to support data integration	MT	Hi	
	18	Support development of tailored **internal portals** for core data and micro dataset **exchanges** for microdata sets, based on user group needs	MT	Hi	
	19	As a UN family, share **reference information** on tool sets, practices and approaches for analytics, data management and governance	MT	Md	
	20	Pursue a **cloud-first approach** for data storage, management and analytics wherever possible short-term and pursue a long-term migration plan	LT	Hi	
3 We provide solutions to help systematically manage data security, privacy and risks	21	Conduct **rapid assessments** of existing tool sets to support data security, protection and privacy, and risk management	ST	Hi	# rapid assessments % tool sets effective % users with MFA # seamless class. funct. % tools privacy-ready % user satisfaction
	22	Improve **tool sets** for data **access management** to support central'd authentication, single sign-on, contextual access & authorization enforcem't	MT	Hi	
	23	Switch on **multi-factor authentication (MFA)** in identity management systems for **all users immediately** to quickly improve baseline security	ST	Hi	
	24	Improve **tool sets** for data **security, privacy and risk** management to support threat detection, compliance and incident management	MT	Hi	
	25	Enable **functionality for seamless classification** of data & information in business applications (starting with Office 365), incl. using automation	ST	Md	
	26	Deploy **tool sets** for Privacy-Enhancing Technologies to protect personal data	MT	Hi	

Capabilities: Analytics recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators (initial)
1 Consequently apply analytics to decisions, strategies, etc.	1	Improve decision-making and deliver use cases with **descriptive analytics**, incl. via centralized enterprise reporting and business intelligence	ST	Hi	% self-service users % self-service creators # platforms improved
	2	Improve decision-making and deliver use cases with **self-service diagnostic analytics** incl. data exploration, preparation, analysis, collaboration	ST	Hi	
	3	Support mission-critical priorities by investing in **visualization** and **storytelling** capabilities, complementing descriptive and diagnostic capabilities	ST	Hi	
	4	Improve **platforms** for the **distribution** of analytics products to support internal & external stakeholders	MT	Hi	
	5	Leverage **cloud solutions** to converge analytics platforms to streamline integration and administration requirements	MT	Hi	
2 Increasingly provide new services to clients and partners	6	Support specialized capabilities for **predictive and prescriptive analytics**, incl. AI-powered solutions, making use of advanced analytics tools	MT	Hi	% use cases employing predictive analytics % use cases employing prescriptive analytics
	7	Ensure availability of **data science competencies** for complex organizational challenges, incl. modeling, simulation, optimization abilities	MT	Md	
	8	Consider developing an **advanced analytics strategy** / approach that leverages AI and **machine learning** across organizational functions and pillars	LT	Md	

Capabilities: Data management recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators (initial)
1 We will assess data needs and policy gaps	1	**Assess** data **requirements** for your use case portfolio, as established through the action framework, map against available data and **address gaps**	ST	Hi	% policies updated
	2	**Assess appropriateness** of existing policies for data / information **handling**, **classification** & **sensitivity** and **update** in line with best practice	ST	Md	
We will adequately describe and organize data for every use case	3	Based on use case & governance needs, ensure **data** assets are **adequately described** (incl. location, format, quality, value, sensitivity)	ST	Md	% data described % masters available % data catalogued
	4	Based on use case & governance needs, **apply standards** to data assets – using UN family standards wherever possible to facilitate	ST	Md	
	5	Based on use case & governance needs, **ensure masterdata** (i.e. key reference identifiers) is available and consistent for your case	ST	Hi	
	6	Based on use case & governance needs, ensure **data** assets are **organized** in **catalogue apps** to help users discover, understand, & connect to data	ST	Md	
	7	Based on use case & governance needs, ensure **data** assets are **governed** appropriately so everyone can access the data they need & should have	ST	Md	
We will adequately share data for specific use cases	8	Based on use case, governance and organizational needs, consider making data assets available via **API services** to facilitate third-party integration	ST	Md	# data sets available % core data av. via API % core data in portals
	9	Based on use case, governance and organizational needs, ensure **data** assets are available via **data portals** or **micro-dataset exchanges**	ST	Md	
2 We will optimally describe and organize core data assets in every organization ,	10	Based on your organizational context, designate **org.-wide core data assets** (L1,L2,L3 priority) that are of value to large int. / ext. user groups	MT	Hi	# MDM solutions # standards in place % standard compliant # data catalogues # data sets in catalogue
	11	Based on your organizational context, adopt and apply organization-wide **data quality frameworks** and **standards** for **core data** assets	MT	Hi	
	12	Based on your organizational context, ensure adequate **masterdata mgm't** for **org**.-**wide** key reference identifiers, using global / UN **standards**	ST	Hi	
	13	Based on your organizational context, develop **org**.-**wide data catalogues** to help users discover, understand and connect to data they need	MT	Hi	
We will optimally share core data in every organization	14	Based on your organizational context, develop **internal** / **external data portals**, **micro-dataset exchanges** (using **data.yourdomain.org** for ext. use)	MT	Hi	# data sets available % core data av. via API % core data in portals
	15	Based on your organizational context, deploy **API services** and **catalogues** (**api**.**yourdomain**.**org**) for core data assets to facilitate data integration	MT	Hi	
3 We will foster basic data standards and interoperability across the UN family	16	As a UN family, consider designating **system-wide core data assets** (L1,L2,L3 priority) that are of value to large int. / ext. user groups	MT	Md	% data grouped # standards in place % standard compliant # masterdata catalogue
	17	As a UN family, set **core data standards** (incl. ISO code application, costing codes, etc.) for better **system-wide** insights, impact, integrity	ST	Hi	
	18	As a UN family, define **core masterdata** sets and deploy a **catalogue** to ensuring uniformity, accuracy & accountability for key **UN family** references	MT	Hi	

Priority Programmes:

Next steps for initial priority programmes

WHAT THIS IS ABOUT

Our full set of recommendations and next steps on the Data Protection and Privacy Programme, the UN Data Cube, and the Roadmap on Data and Statistics.

Data Protection and Privacy Programme: Full set of recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators
1 We will assess the data protection & privacy land-scape, with due regard for new technologies & full con-sideration for human rights	1	Map and assess gaps in **regulations**, **rules**, **policies**, as well as **oversight** mechanisms and processes, with due regard to the HLCM Principles*	ST	Hi	% frameworks updated % data sensitivity ass'd % tool sets assessed % training complete # mechanisms in place
	2	Map personal data sets, assess their **sensitivity** against a sensitivity classification **framework**, coordinated with other mappings where possible	ST	Hi	
	3	Map & assess gaps in **technology** tool **sets** that support & affect governance, data management and analytics for data protection and privacy	ST	Hi	
Within each organization, we will strengthen data protection and privacy, with full consideration for human rights & new technologies, through better policy, governance, organization and culture, technology, data management and practice	4	Update data protection and privacy **regulations**, **rules**, **policies** and **processes**, with due regard to relevant instruments, incl. the HLCM Principles	ST	Hi	
	5	Strengthen **oversight**, **compliance** & **accountability** mechanisms, incl. by establishing a **Data Governance Council**, and a **Data Protection Comm.**	ST	Hi	
	6	Define **Data Governance Council functions** related to data protection & privacy, for inclusion in its **ToR**, and adopt via senior mgm't. mechanism	ST	Hi	
	7	Define **Terms of Reference** (ToR) for a **Data Protection Committee,** adopt through Data Governance Council or via senior mgm't mechanisms	ST	Hi	
	8	Explore **redress mechanisms** to address the rights of data subjects on data protection and privacy	MT	Hi	
	9	Develop or strengthen **functions**, **structures**, **roles** & **responsibilities** for data protection & privacy, incl. Data Protection Officers & Focal Points	ST	Hi	
	10	Ensure the **integration** of data protection and privacy throughout the **data life-cycle**, incl. as part of **data management** and **analytics practice**	MT	Hi	
	11	Deploy stronger **technology tool sets** to support governance, data management and analytics in support of data protection and privacy	ST	Hi	
	12	Establish a **due diligence** process for responsible data use & new tech., incl. risk, harm & benefits ass'ts, with full consideration of human rights	ST	Hi	
	13	Review & update privacy breach **response plans**, incl. protocols, readiness tests, after-action reviews, as well as engagement of data subjects	ST	Hi	
	14	Develop and implement **mandatory training** plans	MT	Hi	
	15	Conduct data protection and privacy **awareness campaigns**	ST	Hi	
2 We will collaborate and coordinate to foster best practices, with full regard to human rights and new tech.	16	As a UN family, strengthen technical-level **networks**, building on the Privacy Policy Group, for cross-cutting collaboration & knowledge sharing	ST	Hi	% entities w/ frameworks % entities in compliance % entities w/ oversight
	17	As a UN family, **harmonize** data protection & privacy regulations, rules, policies and practices to ensure optimal compliance and accountability	ST	Hi	
	18	As a UN family, establish an overarching and **high-level monitoring and coordination mechanism** for compliance, transparency & accountability	MT	Hi	

* UN Principles on the Protection of Personal Data and Privacy (HLCM Principles)

UN Data Cube Programme: Key recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators
1 We will strengthen implementation of the 2018 data standards for UN system-wide financial reporting, with special focus on the SDG standard	1	Provide **guidance** and **support** to UN entities in implementing the UN Data Standard for System-Wide Financial Reporting through **workshops**	ST	Hi	% UN entities reporting to CEB on expenditures against SDGs & targets
	2	Oversee compliance and support implementation through the **UNSDG Data Governance Council** for the UN family, and through the senior-level **Data Governance** mechanism within **each organization**	ST	Hi	
	3	Establish a **working-level forum** for UN family colleagues to exchange experiences and approaches to implementing and refining the standards, particularly for reporting against the SDG standard, mandatory as of 1 January 2022	ST	Hi	
	4	Support ongoing standard implementation and refinement through a **cross-functional team**, incl. DESA, DCO, UNDP MPTF-O, EOSG and HLCM Secretariat	ST	Hi	
	5	Assess how the new financial data needs, in terms of **categorization** and **granularity**, can be made compatible with the data collected previously to ensure that historical comparisons can be made	MT	Hi	
We will refine the data cube standards and work towards establishing a broader minimum data set	6	Establish guidance on the elimination of **double-counting** of revenues and expenses across the UN system	ST	Hi	% UN entities reporting to CEB on expenditures at country level
	7	Establish a **common contributor code** list for the UN system	ST	Hi	
	8	Develop a **common methodology** for allocating **headquarters** and **service center costs** to location of the beneficiary	ST	Hi	
	9	Develop a **common methodology** for allocating **operating costs** across the four functions in the “UN System Function” data standard	MT	Md	
2 We will foster collaboration and coordination inside and outside of the UN system to enhance alignment of UN financial data with internationally used reporting	10	Coordinate with the **OECD Secretariat** to enhance the alignment between the UN data standards and the **OECD-DAC Creditor Reporting System**	ST	Hi	% relevant UN entities reporting to IATI
	11	Coordinate with the **IATI Secretariat** (International Aid Transparency Initiative) to work towards more harmonized UN reporting to **IATI**	MT	Hi	% relevant UN entities report OECD DAC
	12	Assess how, from reporting over 2020 data onwards, the **UN Pooled Funds database** could be better connected to the CEB’s data collection	MT	Md	

CEB Roadmap on Data and Statistics*: Key recommendations and next steps

Goals and recommendations	#	Next steps	When	Prio.	Indicators
1 Support people and planet during the Decade of Action for the SDGs, with more timely, relevant and disaggregated data, published openly on revamped data portals that leverage the full strength of UN data and statistics for global good, in one place	1	Manage **UN-level agreements** with **external providers of secondary data**, and define responsible, quality standards for their use	ST	Hi	Pending HLCP finalization
	2	Strengthen links between UN statistical system and global **geospatial** and **data communities**	ST	Hi	
	3	Develop online and face-to-face technical statistical **training** programmes for **UN staff** in **statistical programmes**	MT	Hi	
	4	Develop online and face-to-face **training** for non-technical **UN staff** on using UN data/statistics for policies and programmes	ST	Hi	
	5	Establish **UN nowcasting** and **forecasting** network to build experience, define common UN approaches, and train UN staff	MT	Hi	
	6	Leverage the **new job profiles** for Data Scientists, Data Analysts, Data Engineers, as well as Data / Statistics Communicators	MT	Hi	
	7	Ensure all UN system entities provide full responsible **Open Data** by 2021	ST	Hi	
	8	Transform **data.un.org** into a **global data hub** of UN family data, overseen by the UNSDG, with a common **open data license**	ST	Hi	
	9	Develop interactive **data exploration** and **visualization** tools	ST	Hi	
	10	As part of the **Data Governance** Framework, establish a **forum** where policy-makers & statisticians ensure UN data & statistics meet user needs	ST	Hi	
	11	Develop and maintain **regional lists** and **calendars** of data and statistical capacity development activities	ST	Md	
2 We will strengthen our support to national statistical capacity in pursuit of the 2030 Agenda	12	Develop **guidelines** on how to provide UN support to strengthen national statistical systems	MT	Hi	Pending HLCP finalization
	13	Design and deliver a ONE UN National Statistical Capacity Development Programme	ST	Md	
	14	Consider designating a **Special Rapporteur** report on statistical capacity building by the UN and suggest priority areas for such assistance	ST	Md	
	15	Establish a **management** and **leadership programme** for managers of national statistical offices	MT	Hi	

* The system-wide roadmap is currently being finalized under guidance of the UN System's High-Level Committee on Programmes (HLCP) and submitted to the Chief Executives Board (CEB) for endorsement in May 2020

Strategy:

Annex

Good practices, contributors, glossary and additional information

Annex:

Good Practice

Examples for good practice in data use, enablers and capabilities across the UN family.

Good practice: How the UN family uses data to support the global and local fight against COVID-19 (samples)

WHO: COVID-19 Situation Dashboards

WHO partnered up with ESRI to provide overviews of COVID cases across countries. The dashboards include the latest numbers on the novel coronavirus outbreak, including the numbers of infected individuals, deaths, and affected countries. Given that WHO receives its data directly from member states, the data portrayed has been widely used globally.

Learn more

UN DESA: UN COVID-19 Data Hub

The Statistics Division of the Department of Economic and Social Affairs is partnering with ESRI to provide countries access to software and tools that will enable them to be part of a Federated Network of COVID-19 data hubs. The availability of ready-to-use templates helps national statistical offices build their own open data sites, so they can respond to the urgent demand for insights from their constituencies.

Learn more

UN OCHA: COVID-19 Pandemic in Locations with a Humanitarian Response

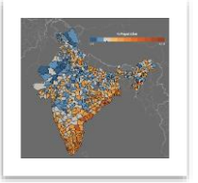
The dashboard shows the number of confirmed cases and deaths from the coronavirus disease (COVID-19) in locations with Humanitarian Response Plans, Regional Refugee Response Plans or other types of plans. The COVID-19 data is sourced from the World Health Organization (WHO). The full list of countries can be found in the Global Humanitarian Response Plan for COVID-19.

Learn more

UNDP India: COVID-19 Risk Factor Mapping

UNDP India has mapped data on populations with co-morbidity conditions at district level to support national risk management. While the Individuals with medical conditions such as hypertension and diabetes face risk up to six times higher than average. Leveraging India's national data, UNDP mapped these factors at district-level to inform gov't allocations of scare resources such as ICU beds and ventilators.

Learn more



WFP: COVID-19 – Global Monitoring of School Meals during COVID-19 School Closures

A new WFP dashboard shows how the COVID-19 pandemic is disrupting children's school meals. The "Global Monitor of School Meals during COVID-19 School Closures" provides daily on-screen updates on school closures and the number of children no longer receiving school meals as a result. As of 27 March 2020, more than 364 million schoolchildren were missing the meals on which they depend.

Learn more

DOS: COVID-19 Internal Operational Readiness

As part of the UN Secretariat's business continuity efforts in response to COVID-19, the Department of Operational Support has published internal dashboards covering cases of COVID-19 among UN personnel, UN medical facilities, PPE / ventilator stocks, aviation assets, evacuation pathways and critical supply chains impacted, enabling the Organization to fill key gaps and sustain its peacekeeping and other operations globally in the face of the spreading virus.

Good practice: How the UN family uses and shares data to deliver value for people and planet (open access samples)

WFP: Hunger MapLive

HungerMapLIVE tracks and predicts key aspects of food insecurity on an every day basis. Key indicators include the number of people with insufficient food intake and those employing crisis-level or above coping strategies.

Learn more

FAO: FAOSTAT

FAOSTAT provides free access to food and agri-culture data for over 245 countries and territories since 1961 in a user-friendly interface that sets UN family standards.

Learn more

UNESCAP: Asia-Pacific SDG Gateway

The Asia-Pacific SDG Gateway is a window to data and analysis at regional, subregional and country levels on SDG statistics for Asia and the Pacific.

Learn more

UNEP: MapX for sustainable natural resources

MapX maps and monitors the sustainable use of natural resources. It is an open source cloud solution developed by UNEP, in partnership with the World Bank and the Global Resource Information Database (GRID-Geneva).

Learn more

UN OCHA: Humanitarian Data Exchange

The Humanitarian Data Exchange (HDX) is an open platform for sharing data across crises and organisations. Its goal is to make humanitarian data easy to find and use for analysis.

Learn more

UN WOMEN: Women Count Data Hub

The Women Count Data Hub provides public access to gender data that can be used to monitor progress on the Sustainable Development Goals (SDGs). Features on the Data Hub include: data dashboards on all available gender-related indicators; country factsheets; gender data stories; and updates from UN Women's global gender data programme 'Women Count' is designed to support a radical shift in how gender data is produced and used.

Learn more

UNDP: Transparency Portal open.undp.org

Open.undp.org presents detailed information on UNDP's 5,000+ development projects in some 170 countries and territories worldwide. The portal help users to find project information by location, funding source, and focus areas, and drill down for comprehensive project data, including budget, expenditure, completion status, implementing organization, contribution to gender equality, project documents, and more. It features current project site images and is integrated with UNDP country office web sites.

Learn more

UNICEF, WHO, World Bank, UN DESA: IGME data portal

The United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) share data on child mortality, improve methods for child mortality estimation, report on progress towards child survival goals, and enhance country capacity to produce timely and properly assessed estimates of child mortality. The web portal contains the latest UN IGME estimates of child mortality at the country, regional and global levels.

Learn more

WHO: Epidemic Intelligence from Open Sources

Accelerated by COVID-19, the EIOS system applies natural language processing and machine learning to large volumes of complex, publicly available information, to support public health intelligence (PHI) communities and response activities through descriptive and diagnostic analytics. WHO is performing real-time analyses of surveillance data to better understand disease transmission dynamics and risk factors, as well as the impact of mitigation strategies, to generate an evidence base to inform the global community on public health measures aimed at preventing and controlling the spread of epidemics.

Learn more

Good practice: How the UN family uses and shares data to deliver value for people and planet (open access samples)

UNICEF: Data Warehouse

UNICEF's Data Warehouse has been designed to allow easy access to databases of hundreds of internationally valid and comparable indicators on children across many countries, with some datasets spanning back decades.
Learn more

UNHCR: Refugee Situations Operational Portal

The Refugee Situations Operational Portal is a Partners coordination tool for Refugee situations provided by UNHCR. It covers a large number of countries, and provides insights on active situations.
Learn more

UNOPS: data.unops.org

Data.unops.org is a platform that provides users with dynamic and linked information about over 1,000 ongoing projects around the world in an open and easy-to-view format.

Learn more

DMSPC: Management Dashboards

Unite Dashboards are easy-to-use giving senior managers access to reliable data for faster, better informed decision-making, which is essential to gleaning bey insights that enhance both individual performance and the global mission of the UN.

UNCTAD: UNCTADStat

UNCTADStat offers statistical data and offers clear metadata, bulk download facilities in multiple formats, data exploration tools, and clear licensing – creative commons 3.0 IGO, making it fully open data compliant.

Learn more

UNODC: Drugs Monitoring Platform

The UNODC Drug Monitoring Platform is a tool for collecting, monitoring and sharing a wide range of drug and law enforcement related data and features an interactive online mapping resource allowing for multi-level analysis. It provides real-time information and analysis on illicit drugs, including details on trafficking as well as the cultivation and production of illicit opiates. The Platform also contains details on a variety of other indicators such as a directory of law enforcement actors linked to drug seizure cases, and a mapping of law enforcement training institutions.

Learn more

UN OICT, DPO: Unite Aware

Unite Aware is a platform designed to provide a coherent and comprehensive approach to situational awareness and information analysis for UN Peace Operations. It standardizes the technologies used to collect and manage a broad range of data and information sources in a secure manner and then presents that information to non-uniformed and uniformed decision-makers via visualization, reporting and analysis instruments. In many cases, solutions and systems already existed but needed refinement and integration. The Unite Aware platform can readily plug in new data sources and technologies to address emerging requirements, and conversely retire those that become obsolete.

WFP: DataViz Hunger Analytics Hub

The WFP DataViz Hunger Analytics Hub offers comprehensive real-time data streams in a single window. By clicking on a tab, e.g. as rainfall, food security, markets or global and national COVID-19 trends, the desired layer then appears on the map. It's a one-stop tool where one can do data 'deep dives' for a large variety of topics.

Learn more

DCO: UN INFO

DCO has deployed an online development coordination portal, UN INFO, which will track the programming, results and financial partnerships that fall under the UN Sustainable Development Coordination Framework. This application will harmonize the data collection for processes that pertain to the Cooperation Framework, the Information Management System, the Common Country Analysis and Business Operations. This UNCT-specific tool will empower Resident Coordinators and other senior leaders to make more informed, data-driven decisions.

Learn more

Good practice: How the UN family helps enable the transformation in people and culture (samples)

UNDP: Chief Digital Officer

The Chief Digital Officer works at the intersection of IT and management to support business priority-based digital transformation. A digital governance mechanism equips supports tools and transparent decision-making processes to support investments.

UNHCR / World Bank: Joint Data Center

The Joint Data Center on Forced Displacement aims to enhance the ability of stakeholders to make timely and evidence-informed decisions by collecting, analysing and disseminating primary microdata.

WFP: Data Protection Officer

The Data Protection Officer is responsible for overseeing effective and harmonized compliance with data protection principles. She/he identifies effective responses to data breaches, and coordinates with other UN agencies on data protection-related matters.

UN DPO / DOS: Analytics Support Team

The integration of an analytical support team into the peacekeeping review process yields a better understanding of the context of operation and leads to the development of more targeted outputs. Operational data gaps can be better understood and then resolved.

UN PBIx Community

First introduced by OICT in late 2018, the PBIx community consists of 6,500 self-service analytics users across the UN, with 1,200 power users. More than 1,300 colleagues received hands-on training in Microsoft PowerBI. The team also organizes awards, hackathons, and newsletter.

WHO: Assistant Director-General for Data, Analytics and Delivery

The Assistant Director-General for Data, Analytics and Delivery for WHO's Impact Division is responsible for leading the Organization's efforts to establish an impact framework of accountability to deliver the 'triple billion' targets, to track health-related Sustainable Development Goals (SDGs), through building enhanced country capacity, and to generate reliable data to forecast and inform public health policy.

UN DOS: Using data in partnership with HR professionals for better performance

The UN Department of Operational Support has provided recruitment timeline dashboards in a new global virtual community of UN recruiters. By engaging HR practitioners in better understanding the problem and helping them prioritise their caseloads, this approach has cultivated discussions and approaches that helped double the percent of cases completing on time by 2019.

UN OCHA: Centre For Humanitarian Data

The Centre for Humanitarian Data is focused on increasing the use and impact of data in the humanitarian sector. It is managed by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). The Centre's services are available to humanitarian partners and OCHA staff free of charge, with a focus on data services, data literacy, data policy, and predictive analytics.

DPPA: e-analytics training for political affairs colleagues

The Department of Political and Peacebuilding Affairs (DPPA) has been running "e-analytics" training sessions to foster data literacy, analytical skills and data science applications in peacemaking and peace operations. Colleagues also established a Data Peer Group for regular exchange and reflection on data and analytics applications. This created an ecosystem of collaboration within the UN family and connects the organization to outside expertise to inspire and equip the peace and security field with data-driven solutions.

IOM, UN DESA and OECD: International Forum on Migration

IOM, UN DESA and the OECD jointly set up the International Forum on Migration Statistics, a regular event that contributes to the exchange of information, promotes mutual learning and facilitates cooperation. It brings together all producers, analysts and users of migration statistics in a community of interest. It also mobilises expertise from many disciplines, incl. political science, economics, demography, development, geospatial science, sociology, statistics, & technology for a better understanding of the migration phenomenon.

Good practice: How the UN System support better data governance and strategy oversight

World Bank: Data Council

The World Bank Group Data Council (+associated working groups) has been the bank's top-level mechanism for data governance and coordination. It formulates goals and priorities for work in data, sets policy and curates the portfolio of high-value data initiatives.

UNHCR: Data Strategy (2019)

The Strategy provides UNHCR's vision, priorities, and key actions that will be undertaken to enhance the use of timely, quality data and information with the aim of further strengthening UNHCR's role as a data-driven organization and a center of excellence for data.

UN Data Cube: Financial Reporting Standards

The UN Financial Data Standards helps harmonize UN system-wide financial reporting, e.g. definitions for functions carried or geographic areas, so that partners and decision-makers get transparency on system-wide resources, as promised in the UN Funding Compact.

UNDP: Digital Strategy (2019)

UNDP's Digital Strategy supports achieving the SDGs by fostering new collaboration models, introducing supporting systems, structures and mechanisms to drive innovation, and building capabilities that will enhance the quality, efficiency and effectiveness of UNDP's work.

UN Semantic Interoperability Framework

The UN Semantic Interoperability Framework (UNSIFF) fosters collaboration and reduces costs in information management by transforming the web of information enclosed in traditional word processing documents into a web of machine-readable data.

WHO: GATHER Principles

The Guidelines for Accurate and Transparent Health Estimates Reporting, short GATHER, is a checklist of 18 best practices that sets the standard for disclosing how health estimates are developed. The GATHER checklist was developed by WHO and researchers from around the world and includes requirements for disclosing which data are used to calculate estimates, and for making them available to others. It also includes a requirement to disclose how the computer code used to crunch numbers can be accessed, so that others are able to reproduce estimates, thus making them more robust.

UN Principles On Personal Data Protection And Privacy

The Personal Data Protection and Privacy Principles set out a basic framework for the processing of personal data by, or on behalf of, the UN Organizations in carrying out their mandated activities. These Principles aim to: (i) harmonize standards for the protection of personal data across the United Nations System Organizations; (ii) facilitate the accountable processing of personal data for the purposes of implementing the mandates of the United Nations System Organizations; and (iii) ensure respect for the human rights and fundamental freedoms of individuals, in particular the right to privacy.

UNICEF: Data For Children Strategic Framework

The framework lays out the necessity of a demand-driven data model that maintains an appropriate balance between demand for, supply and use of data at UNICEF. Based on that approach, it also provides an outline of the changes that UNICEF needs to make in the coming years –shifting the emphasis of some of the organization's data work to improving its capacity to carry that work out and to deepen a number of key organizational partnerships. The document also elaborates on key issues that UNICEF country offices should consider in plotting their own data investments in the coming years.

Committee of the Chief Statisticians of the United Nations System, UNCTAD

The statistical services of the UN family, forming the **CCS-UN**, have a long tradition of partnership, cooperation and coordination. Fuelled by a shared sense of professional community and ethics, the CCS-UN has produced the "Principles Governing International Statistical Activities" and the "UN Statistics Quality Assurance Framework", which guide the production of international statistics. The Committee also developed the Roadmap on UN Data and Statistics, for more timely, trusted data and statistics. Similar governance mechanisms exist across the UN family. For example, **UNCTAD's** Statistical Coordination Committee manages coordination on statistical production and dissemination. This cross divisional group meets quarterly and resolves issues, from classifications to user feedback.

Annex:

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Colleagues in the family and outside partners who helped assemble this Strategy.

More than 100 colleagues from almost 50 different UN teams contributed and followed the development of this Strategy.

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Annex:

Glossary and add-ons

Glossary 1

Access Control
Access control is a security technique that regulates who or what can view or use resources in a computing environment

Analytics
Analytics is the process of discovering and communicating meaningful patterns that can be found in raw data. It is concerned with turning this data into insights.

Advanced Analytics
Advanced analytics is the (semi-)autonomous examination of data or content using sophisticated techniques, typically beyond those of traditional business intelligence, to discover deeper insights, make predictions, or generate options. Techniques include data/text mining, machine learning, pattern matching, forecasting, visualization, semantic analysis, and sentiment analysis.

API
An application programming interface, short API, is a set of commands, functions, protocols, and objects programmers can use to create software or to interact with external systems. It provides standard commands for performing common operations so that code does not have to be written from scratch every time.

Big Data
Big data are high-volume, high-velocity and/or high-variety information assets that demand cost-effective, innovative forms of information processing that enable enhanced insight, decision making, and process automation (e.g., ACLED database on political violence and protests).

Business Intelligence
Business intelligence, short BI, is an umbrella term for applications, infrastructure, tools, and best practices that enable access to, and analysis of, information to optimize decisions and performance.

Capability
A capability is the power or ability to do something.

Centre of Excellence
A centre of excellence is a cross-functional team of skilled knowledge workers whose mission is to provide their organization with best practices around a particular area of interest.

Chief Data Officer
The chief data officer is a senior colleague responsible for joining up all data initiatives so they add optimal value. Among other things, s/he supports strategy, governance, data literacy, data architecture, and use case curation.

Cloud Computing
Cloud computing is the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer.

Closed Data
Data designated for personal use only, or alternatively for a set of designated people with custom, per-use licenses (e.g. employees of a company may access company data as specified in their employment contracts)

Dashboard
A dashboard is a reporting mechanism that aggregates and displays metrics and key performance indicators (KPIs), enabling them to be examined at a glance.

Data
Reinterpretable representation of information in a formalized manner suitable for communication, interpretation, or processing.

Data Analyst
Data analysts examine large data sets to identify trends, develop charts, and create visual presentations to help colleagues in programme, policy and operations make evidence-based and data-driven decisions.

Data Catalogue
A data catalogue is used to discover, organize, and describe an organization's heterogeneous and distributed data assets in an inventory management like manner. It provides context, to help data consumers locate relevant datasets and understand how to extract optimal value from them.

Data Classification
Data classification is broadly defined as the process of organizing data by relevant categories so that it may be used and protected more efficiently.

Data Governance Council
A Data Governance Council is a dedicated meeting or body of senior executives responsible for setting policies and standards, curating priority use cases, decision-making, resourcing, and issue resolution.

Data Dictionary
A data dictionary is used to catalog and communicate the structure and content of data, and provides meaningful descriptions for individually named data objects.

Data Discovery
Data discovery is the collection and analysis of data from various sources to gain insight from hidden patterns and trends.

Data Engineer
A data engineer is a colleague whose primary job responsibilities involve preparing data for analytical or operational uses. The specific tasks can vary, but typically include building data pipelines to pull together information from different source systems; integrating, consolidating and cleansing data; and structuring it for use in analytics applications.

Data Governance
Data governance is the specification of decision rights and an accountability framework to ensure the appropriate behavior in the valuation, creation, consumption and control of data and analytics.

Data Integration
Data integration involves combining data residing in different sources and providing users with a unified view of them.

Data Lake
A data lake describes a collection of storage instances of various data assets. These assets are stored in a near-exact, or even exact, copy of the source format and are in addition to the originating data stores.

Data Literacy
Data literacy refers to the ability to read, write and communicate data in context and with an understanding of underlying data sources and constructs, analytical methods and techniques used for data analysis, and also refers to the ability to describe use cases and resulting value.

Data Management
Data management describes the practices, architectural techniques, and tools for achieving consistent access to and delivery of data across the spectrum of data subject areas and data structure types in an enterprise.

Source: Gartner and various sources

Glossary 2

Data Mapping
Data mapping is the process of matching elements between different data models.

Data Mining
Data mining is the process of discovering meaningful correlations, patterns and trends by sifting through large amounts of data. Data mining employs pattern recognition technologies, as well as statistical and mathematical techniques.

Data Model
A data model organizes data elements and standardizes how those elements relate to one another. Since data elements document real life people, places, things, and the events between them, a data model represents reality.

Data Owner
A data owner is a person or organization with the legal right and ability to create, alter, share, or restrict any piece or set of data. Data owners can assign these functions and responsibilities to other parties (e.g., a provider) to act on their behalf.

Data Protection and Privacy
Framework for processing of “personal data”, defined as information relating to an identified or identifiable natural person by, or on behalf of, the United Nations System Organizations in carrying out their mandated activities.

Data Retention
Data retention, also called records retention, is the continued storage of an organization's data for compliance or other organizational reasons.

Data Scientist
Data scientists solve emerging and complex organizational problems in a data-driven way. To do so, they design and construct data modeling and data production processes using prototypes, algorithms, predictive models, and custom analysis.

Data Steward
Data stewards are subject-matter experts who facilitate the use of data assets by all who need them, within the guardrails of relevant policy, and manage exceptions. Data assets do not belong to data stewards themselves, but they are responsible for taking care of them.

Data Storytelling
Data storytelling is an extension of self-service analytics, combining explorative data visualization with narrative techniques to deliver insights in a way that engages decision makers in a compelling and easily assimilated form. .

Data Subject
A data subject is any person whose personal data is being collected, held or processed.

Data Warehouse
A data warehouse is a storage architecture designed to hold data extracted from transaction systems, operational data stores and external sources. It combines that data in an aggregate, summary form suitable for org.-wide data analysis and reporting for predefined organizational needs.

De-identification
De-identification describes a process that is aimed at preventing the revelation of someone's identity.

Descriptive Analytics
Describes the examination of data or content to answer the question “What happened?”, using traditional business intelligence and visualizations such as pie charts, bar charts, line graphs, tables, or auto narratives.

Diagnostic Analytics
Describes a form of advanced analytics that examines data or content to answer the question “Why did it happen?”. It is characterized by techniques such as drill-down, data discovery, data mining and correlations.

Embedded Analytics
Embedded analytics describes a capability where data analysis occurs within a user's natural workflow, and without the need to toggle to another application.

Enabler
An enabler is a person or a thing that makes something possible.

Executive Champion
Advocate in senior management who actively supports initiatives.

Forecast
A forecast uses historical data to make informed estimates or predictions about future events or trends.

Geospatial Analysis
Geospatial analysis describes the process of gathering, manipulating and displaying geospatial data.

Geospatial Data
Geospatial data is data about objects, events, or phenomena that have a location on the surface of the earth

Interoperability
Interoperability describes the ability that two different things can work with one another.

IT Infrastructure
IT infrastructure is the system of hard- & software, facilities and service components that support the delivery of organizational & IT-enabled processes.

Infrastructure as a Service (IaaS)
Infrastructure as a service (IaaS) is a standardized, highly automated offering in which computing resources owned by a service provider, complemented by storage and networking capabilities, are offered to customers on demand.

Machine Learning
Advanced machine learning algorithms are composed of many technologies such as deep learning, neural networks and natural-language processing. They are used in unsupervised and supervised learning, guided by lessons from existing information.

Mapping
Mapping refers to the process of creating an overview of something by identifying and describing the parts one already has.

Master Data
Master data is the consistent and uniform set of key identifiers and extended attributes that describes the core entities of the organization.

Master Data Management
Master data management is a technology-enabled discipline in which management and IT work together to ensure the uniformity, accuracy, stewardship, semantic consistency and accountabil ity of the official shared master data assets.

Metadata
Metadata is information that describes various facets of an information asset to improve its usability throughout its life cycle. It is metadata that turns information into an asset. Generally speaking, the more valuable the information asset, the more critical it is to manage the metadata about it, because it is the metadata definition that provides understanding that unlocks the value of data.

Source: Gartner and various sources

Glossary 3

Mission-Critical Priority
A mission-critical priority is one whose failure to accomplish would cause an operation or organization to grind to a halt. It is indispensable to continuing operations.

Natural-Language Processing
Natural-language processing technology involves the ability to turn text or audio speech into encoded, structured information, based on an appropriate ontology.

On-Premise Computing
The practice of using a network of local servers or a personal computer to store, manage, and process data, rather than a network of remote servers hosted on the internet.

Open Data
Open data is information or content made freely available to use and redistribute, subject only to the requirement to attribute it to the source. The term is also used more casually to describe any data that is shared outside the organization and beyond its original intended use.

Open Data Portal
Open data portals are web-based interfaces designed to make it easier to find re-usable information. Like data catalogues, they contain metadata records of datasets published for re-use, i.e. mostly relating to information in the form of raw, numerical data and not to textual documents.

Optimization
Optimization refers to the act of making the best or most effective use of a situation or resource.

Outcome
In results-management, an outcome refers to the long-term change we seek, as a consequence of our actions.

Platform as a Service (PaaS)
Platform as a service (PaaS) is a type of cloud offering that delivers application infrastructure (middleware) capabilities as a service.

Predictive Analytics
Describes a form of advanced analytics that examines data or content to answer the question "What is likely to happen?" It is characterized by techniques such as regression analysis, forecasting, multivariate statistics, pattern matching, predictive modeling, and forecasting.

Prescriptive Analytics
Describes a form of advanced analytics that examines data or content to answer the question "What should be done?" or "What can we do to make ___ happen?". It is characterized by techniques such as graph analysis, simulation, complex event processing, neural networks, recommendation engines, heuristics, and machine learning.

Proportionality
Proportionality means striking a balance between means used and intended aim. For example, we only collect data in proportion to deliver on certain use cases for positive impact, and not for the sake of simply collecting more data.

Self-service Analytics
Self-service analytics is a set of tools and practices that empower colleagues in policy, programmes and operations to access relevant data, perform queries and generate insights themselves with the help of easy-to-use self-service applications.

Self-service Application
A self-service application is a software application that allows a user to obtain information or complete a task on the computer that traditionally required the help of a specialist.

Shared Data
Data that can be accessed by anyone with a license or with authorization to do so. It is usually shared for specific purposes and the focus lies on specific use cases.

Simulation
A simulation is the imitation of a situation or process.

Software as a Service (SaaS)
Software as a service (SaaS) is software that is owned, delivered and managed remotely by one or more providers.

Statistics
The science of using information discovered from collecting, organizing, and studying numbers.

Structured Data
The opposite of unstructured data. It usually describes content that is sorted by attributes (columns) and associated values (rows). This type of data is often stored in relational database tables, which makes it easier to use for tasks such as querying and aggregating.

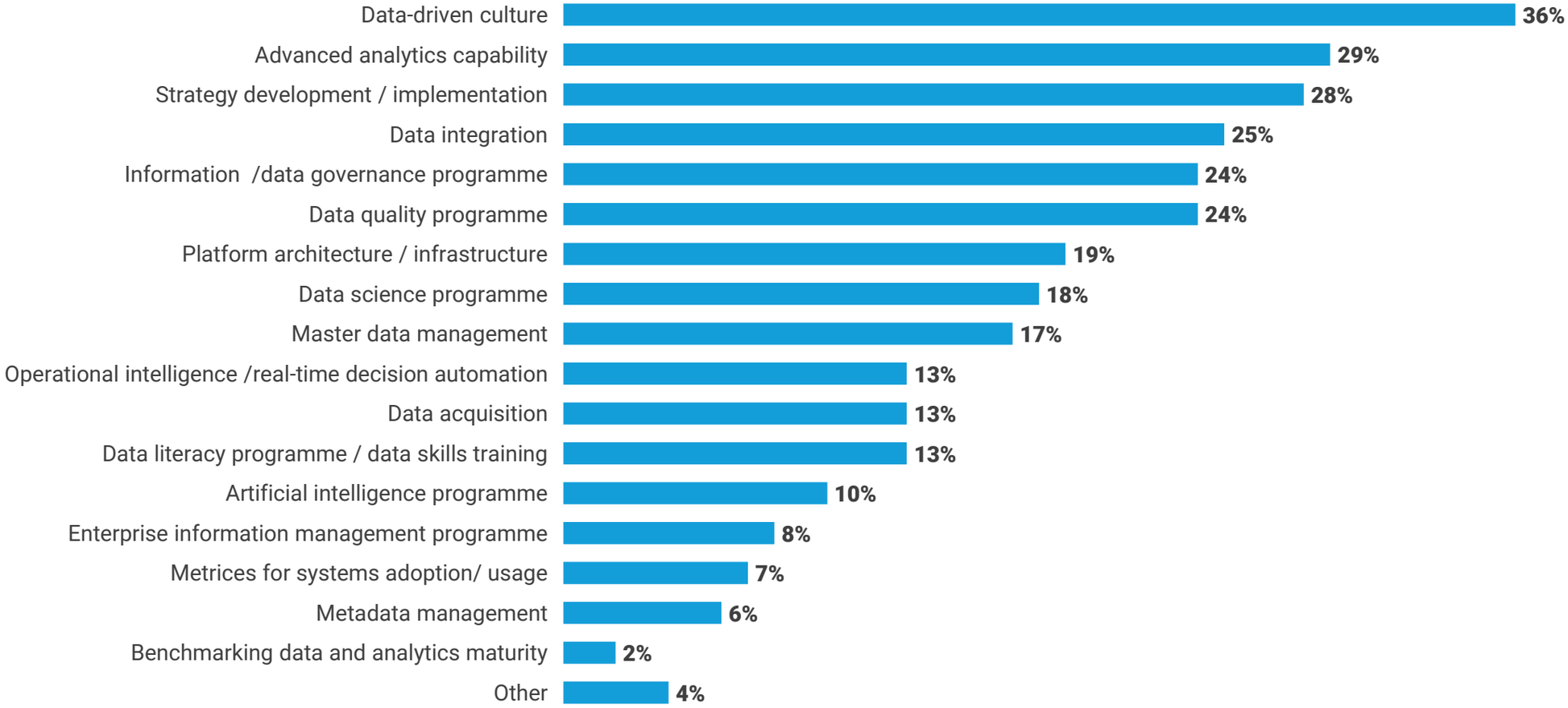
Unstructured Data
Content that does not conform to a specific, pre-defined data model. It tends to be human-generated and people-oriented content that does not fit neatly into database tables. Examples are presentations or text files.

Use Case
A purpose, or specific situation, in which a data could potentially be used.

Source: Gartner and various sources

What chief data officers are saying: Factors that are identified as critical to data and analytics success

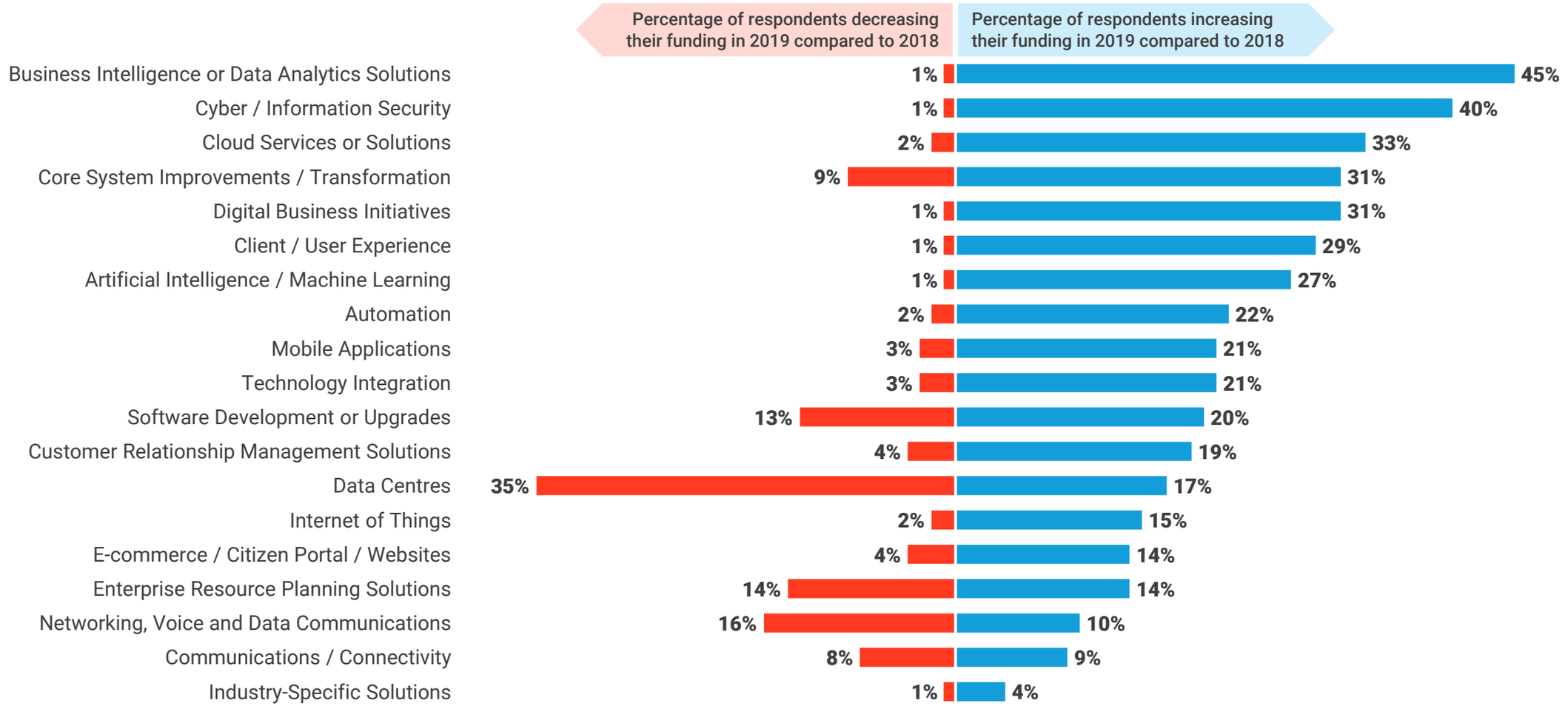
RESULTS OF A SURVEY AMONG 255 CHIEF DATA OFFICERS (DEC 2018)



Source: Gartner

What chief information officers are saying: Where to increase or decrease technology investments

RESULTS OF A SURVEY AMONG 2,800 CHIEF INFORMATION OFFICERS (DEC 2018)



Source: Gartner