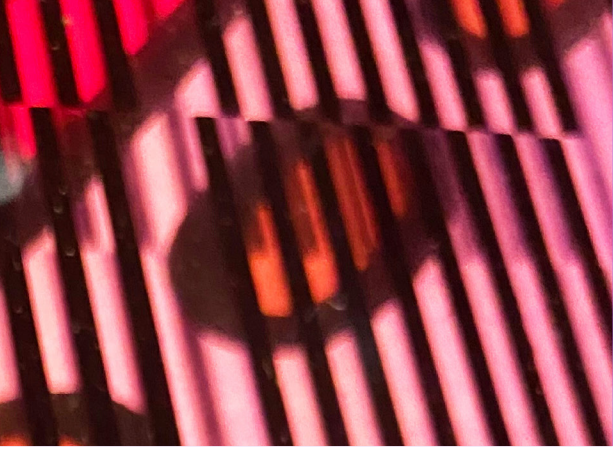

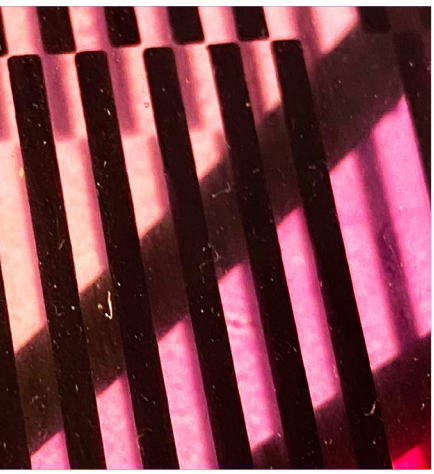

Photo by Kevin Peschke
Kearney, Chicago

Accelerating achievement of the SDGs in the UAE: A blueprint for public-private data-sharing partnerships

2021

المركز الاتحادي للتنافسية والإحصاء
FEDERAL COMPETITIVENESS AND STATISTICS CENTRE

KEARNEY
National Transformations Institute

in association with

اللجنة الوطنية لأهداف التنمية المستدامة
National Committee on Sustainable Development Goals

Better public-private sector data sharing and collaboration can greatly accelerate SDG progress and achievement globally

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His Excellency
Abdulla Nasser Lootah
Chair of the UAE Private Sector Advisory Council on SDGs

It gives me great pleasure to present this report on data-driven public-private partnerships to accelerate the progress on the implementation of the United Nations 2030 Agenda for Sustainable Development in the UAE.

This report outlines the main data-related barriers to tracking progress on the SDGs and highlights how the private sector can rise to the challenge by increasing sustainability disclosure and collaborating with government. We also reached out to UAE private sector companies to understand their perspectives across three important dimensions: where they stand in terms of SDG awareness and reporting, how and why are companies sharing data with the Government, and finally, how can we pave the way for stronger data-driven partnerships in the UAE.

The past year has been unprecedented due to the pandemic and the world continues to experience turbulence as climate change worsens. As we celebrate the UAE's Golden Jubilee, we must renew our commitment to progressing on sustainable development especially as we have entered the decade of action.

According to Forbes, humans produce roughly 2.5 quintillion bytes of data each day and the pace is accelerating with our dependency on technology. Collaboration on data sharing with the private sector can enable governments to blend insights and set policy directions beyond traditional GDP and economic topics. Innovation in policymaking is critical to accelerate the transition to sustainable development. This requires increased and renewed funding, in addition to a strong commitment to improve data collection.

In everything we do, we recognize that success is founded on partnerships. Our experience in COVID-19 has strengthened our resilience, accelerated our digital transformation and most importantly, facilitated an unprecedented level of collaboration with the private sector. Whilst the challenges ahead of us are immense, there is reason to be hopeful.

I hope the knowledge shared in this report will inspire more targeted collaboration between the UAE Government and the private sector to drive the sustainable development of the UAE.

Huda Buhumaid
Chief Marketing Officer, Dubai Holding

Sustainability has been a critical focus of policymaking for the UAE, and commitment to the 2030 Sustainable Development Agenda remains a priority as the country pursues economic development and diversification.

As such, the UAE has been an early champion and advocate of the United Nation's Sustainable Development Goals (SDGs).

For its part, the private sector has a critical role to play in supporting the government in achieving the SDGs. In recognition of this, the UAE's Private Sector Advisory Council (PSAC) was established with a clear mandate to convene top public and private sector leaders to identify the ways in which the private sector can play a greater role in UAE SDG progress.

In order to measure progress and make informed decisions, any institution or entity – be it governmental, public, or private – needs data. The insights that are derived from the data then allow the development of sound strategies tied to achievable targets and goals. Similarly, data is instrumental to achieving and monitoring progress toward the SDGs. As this paper highlights, at the moment, more than half of required data is missing. And while generating high quality and reliable data is key, it is simply not enough. Solving issues relating to data interoperability and privacy concerns are also very much part of the process.

As with most critical issues facing the world today, no single stakeholder can solve major challenges on their own. For their part, governments are increasingly recognizing the need to collaborate with the private sector in order to derive value from data – with the ultimate goal of solving the most pressing societal challenges. Given that most data is owned by the private sector, collaboration between the public and private sector on data sharing is evidently crucial to the way forward.

What this paper seeks to demonstrate is that achieving greater public-private data sharing requires a framework that addresses obstacles and establishes enablers to successful data-sharing. It suggests four key pillars to this framework: (i) Building effective data-sharing governance; (ii) Establishing a unified public-private vision for sustainability (iii) Constructing data partnerships that are grounded in trust and transparency, ensuring clear understanding of the benefits of data sharing; and (iv) Promoting partnerships with strong mutual benefits that outweigh burdens. The paper concludes with several recommendations for the UAE to enable greater private sector participation in data-sharing partnerships with the ultimate objective of edging closer towards SDG achievements.

Executive summary

On September 25, 2015, the United Nations (UN) General Assembly adopted the 2030 Agenda for Sustainable Development – a voluntary model of goal-based global governance with 17 Sustainable Development Goals (SDGs) to 'transform our world' and 'leave no one behind'. Data is instrumental to monitor progress on the SDGs, and currently, more than half of the required data is missing globally. According to Forbes, humans produce roughly 2.5 quintillion bytes of data each day, and the pace is only accelerating with the growth of Internet of Things (IoT) and our dependency on technology. Since most of this data is owned by the private sector, collaboration between the public and private sectors on data sharing enables governments to blend insights and set policy directions beyond traditional GDP and economic topics. Most importantly, data-sharing partnerships enable evidence-based policymaking. These insights can be leveraged to improve overall national performance against the SDGs. This paper explores how private sector data can complement official statistics to support the UAE Government's reporting and monitoring efforts to achieve the 2030 Agenda.

The UAE has a long tradition of alignment with the UN Sustainable Development Agenda. Efforts have included a whole-of-government approach, with a National Committee on SDGs, a Voluntary National Review of implementation of the UN SDGs, and hosting the second UN World Data Forum (WDF). However, the generation of high quality, reliable data is not always sufficient to make progress on the 2030 Agenda. Policymakers need to consider the issue of data interoperability as well as privacy to reap the full benefits of using non-official data sources for official statistics.

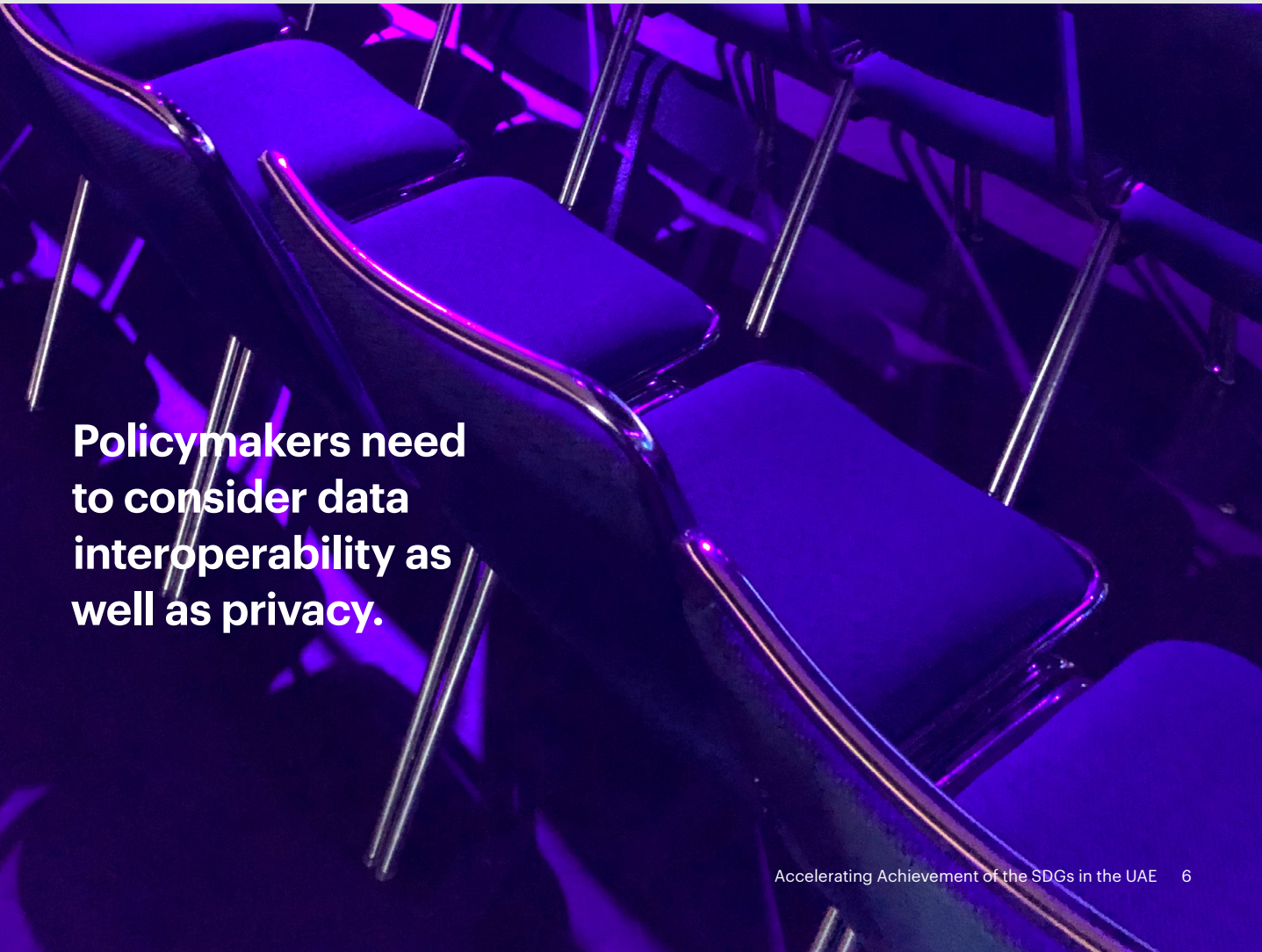
At the WDF, the UAE launched the Private Sector Advisory Council on SDGs (PSAC), established to build deep collaboration between the private sector and government, and strengthen public-private partnerships to achieve the SDGs. Through regular dialogue between the National Committee and the private sector, the PSAC seeks to convene top public and private sector leaders to determine how the private sector can play a greater role in UAE SDG progress.

This white paper includes case studies by members of the UAE's PSAC on SDGs to illustrate public-private data sharing in action, and demonstrates how effective, data-driven public-private collaboration can be initiated and further expanded in the UAE. Surveys and interviews with private sector companies reveal pathways to greater public-private data sharing. Perspectives include where companies stand on SDG awareness and reporting, and how companies are sharing data with the government.

Based on analyses of interviews and case studies, the paper highlights key learnings from existing partnerships between the private sector and UAE government, identifies roadblocks to public-private data transparency and engagement, and offers enablers needed to facilitate greater public-private collaboration.

Achieving greater public-private data sharing requires a **framework that addresses the challenges and obstacles and establishes enablers for successful data sharing.** This requires building effective data-sharing governance, establishing a unified public-private vision for sustainability, constructing data partnerships that are grounded in trust and transparency, and promoting partnerships with strong mutual benefits that outweigh burdens.

The paper concludes with recommendations for the UAE to consider to strengthen and expand public-private data-sharing partnerships in service of greater SDG progress and achievements.



Acronym list

ADGM	Abu Dhabi Global Market
ECOSOC	United Nations Economic and Social Council
EMR	Electronic Medical Record(s)
ESG	Environment, Social, and Governance
FAB	First Abu Dhabi Bank
FCA	Financial Conduct Authority
FCSC	Federal Competitiveness and Statistics Centre
GRI	Global Reporting Initiative
IEAG	Independent Expert Advisory Group
ICV	In-Country Value
HIE	Health Information Exchange
HLPF	United Nations High-Level Political Forum
IO	International Organization
IoT	Internet of Things
MAF	Majid Al Futtaim
MDG	Millennium Development Goals
MNC	Multinational Corporations
NSS	National Statistical System
NSO	National Statistical Office
OECD	Organization for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
OWG	Open Working Group
PSAC	Private Sector Advisory Council
PPP	Public-Private Partnership
SDG	Sustainable Development Goal
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNGA	UN General Assembly
UNSC	United Nations Security Council
UN OWG	United Nations Open Working Group (on Sustainable Development Goals)
VNR	Voluntary National Review
WDF	World Data Forum
PRI	Principles for Responsible Investment
WEF	World Economic Forum
WHO	World Health Organization

Introduction
The vital role of data in achieving the SDGs

The United Nations 2030 Agenda for Sustainable Development, adopted in 2015 by all UN member states, established a blueprint for eradicating poverty and achieving sustainability through 17 Sustainable Development Goals (SDGs)[2] based on 169 specific targets and 231 indicators. Data is instrumental to monitor progress of the SDGs, however, lack of data globally remains a critical obstacle to SDG achievement. Currently, 53% of data necessary for SDG progress monitoring is missing across the goals according to the UN Global Sustainability Development Report.

Tracking SDG progress is a global challenge for many reasons but most importantly, because the complexity of many SDG targets makes the effort required by National Statistical Offices (NSOs) to measure them extremely costly. Although the UN has acknowledged the importance of cross-sectoral partnerships to support the monitoring and reporting efforts of governments, the bulk of the data collection responsibility falls disproportionately on NSOs. This burden is amplified by the increasing pressure on NSOs to amass and analyze ever more granular levels of data.

The COVID-19 pandemic has further disrupted data collection and analysis for NSOs. As governments undertook efforts to curb the spread of COVID-19, many field data collection operations were postponed, or halted completely. According to a UN and World Bank survey with responses from 122 countries, the pandemic affected operations of the majority of NSOs, with 65% of headquarters partially or fully closed and 90% of staff working from home. More critically, 96% of countries partially or fully stopped face-to-face data collection.

Globally, NSOs require a more effective and efficient way to collect and produce data beyond traditional socioeconomic statistics to measure progress against the SDGs – and the private sector must be a key partner in this agenda. As a result, governments are accelerating collaboration with the private sector across the world. However, in their efforts to work together, the private sector and government face a myriad of challenges, including significant data interoperability challenges, stalling further collaboration. Furthermore, data-sharing partnerships are thwarted by privacy and security concerns, unclear governance for data-sharing engagements, and fragmented or repeated data requests. In order to reach the full potential of data for SDG achievement, the public and private sector must work towards overcoming barriers to data sharing, and government must activate key enablers to facilitate more widespread data-sharing partnerships.

[2] The 17 goals are: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reducing Inequality, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life On Land, (16) Peace, Justice, and Strong Institutions, (17) Partnerships for the Goals.

Sustainable Development in the UAE

A long tradition of alignment with the UN Sustainable Development Agenda

From its early foundations, sustainability has been a critical focus of policymaking for the UAE, and commitment to the 2030 Agenda is an utmost priority as the country pursues economic development. The UAE was an early champion of the SDGs in the run-up to the United Nations Conference on Sustainable Development in 2012.[3] Initial negotiations for the creation of the SDGs took place during an Open Working Group (OWG) of the UN General Assembly (UNGA) from 2013-2014 where the UAE held a seat. Upon adoption of the UN SDGs in 2015, the UAE committed to being a leader in shifting the world "onto a sustainable and resilient path."

In response to the UN Sustainable Development Agenda and the SDGs, the UAE instituted a whole-of-government approach, establishing a National Committee on SDGs in January 2017 comprised of 16 different ministries and authorities. Chaired by Her Excellency Reem bint Ebrahim Al Hashimy, Minister of State for International Cooperation, the National Committee is responsible for ensuring integrated implementation of the SDGs the UAE's development plans, collaborating with both local and international stakeholders to monitor and report on SDG progress.

The UAE has openly stressed the importance of data collection as a means to developing agile policies since the country presented its first Voluntary National Review (VNR) on Implementation of the 2030 Agenda at the High-Level Political Forum (HLPF) in 2018. Subsequently, as part of its commitment to broadening data collection and using evidence-based policy making for SDG progress and achievement, the Federal Competitiveness and Statistics Centre (FCSC),[4,5] hosted the 2nd UN World Data Forum (WDF) in Dubai in October 2018. The forum resulted in the launch of the Dubai Declaration—a commitment to establishing an "innovative funding mechanism open to all stakeholders, that will aim to mobilize both domestic and international funds, and to activate partnerships and funding opportunities to strengthen the capacity of national data and statistical systems."

Another outcome of the WDF was the launch of the UAE Private Sector Advisory Council (PSAC), established to build deep collaboration between the private sector and government, and strengthen public-private partnerships to achieve the SDGs. Through regular dialogue between the National Committee and the private sector, the PSAC seeks to convene top public and private sector leaders to determine how the private sector can play a greater role in UAE SDG progress.

[3] Also known as the Rio+20
[4] FCSC was formerly named the Federal Competitiveness and Statistics Authority (FCSA)
[5] FCSC is the vice chair and secretariat of the UAE National Committee on SDGs

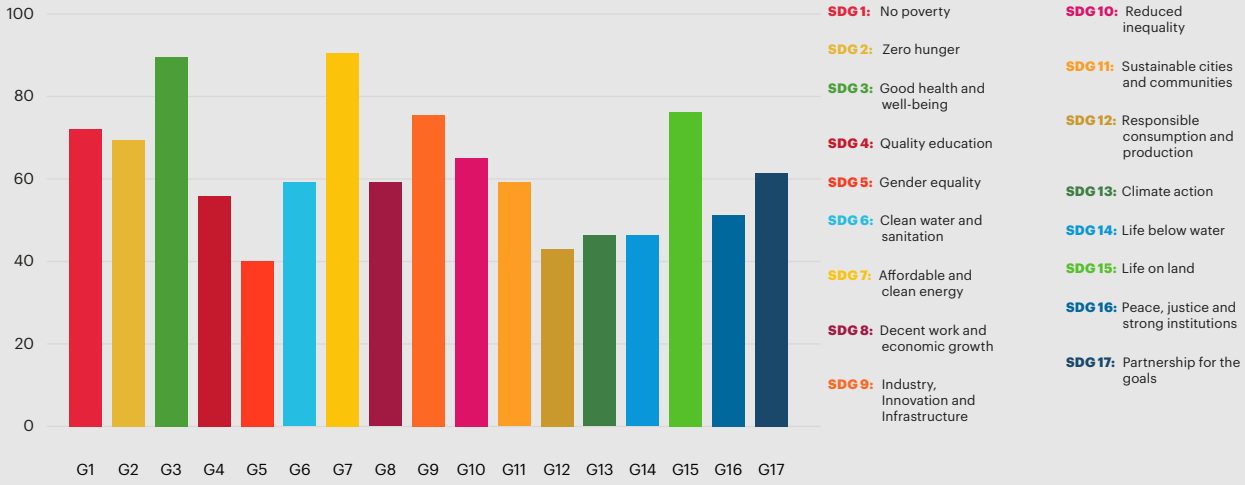
Accelerating SDG progress globally
The urgent need for a data revolution

The need for a 'data revolution' was first announced by the High-Level Panel appointed by former UN Secretary General Ban Ki-moon to advise on the global development agenda after the 2015 Millennium Development Goals (MDGs). There is global recognition that the world faces an exponential increase in the volume and types of data available, which should allow governments to track progress and ensure decisions are evidence-based to advance their societies and protect the environment.

While tools have been developed to increase and enable monitoring of SDG implementation (i.e. the UN Global SDG Indicators Database[6] and the Our World in Data SDG Tracker[7]), according to the 2019 UN Global Sustainable Development Report,[8] sufficient country-level data is collected for less than 45% of the 231 indicators.[9] Data is sorely lacking globally across specific SDGs and targets: 68% of the indicators for environment-related SDGs, 80% of indicators for gender equality, and 90% of indicators for climate action lack data.

Figure 1

Data coverage: proportion of countries or areas with available data
(weighted avarage across indicators), by Goal (percentage)



[6] The UN Global SDG Indicators Database is a dissemination platform that provides access to compiled UN data reflecting progress on the SDGs.
[7] The Our World in Data SDG Tracker uses official statistics from the UN and other international organizations to compile data across all available indicators. It is a free, open-access publication that tracks global SDG progress and allows people to hold their governments accountable to achieving the SDGs.
[8] 2019 Global Sustainable Development Report – The Future is Now – Science for Achieving Sustainable Development https://sustainabledevelopment.un.org/globalsdreport/
[9] The 231 unique progress indicators are classified into three tiers based on their data availability and methodological development:
– Tier I : well-defined with sufficient data collected at country level;
– Tier II: well defined, but data is not regularly collected at country level;
– Tier III: No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested. (As of the 51st session of the UN Statistical Commission, the global indicator framework does not contain any Tier III indicators)

Sufficient country-level data is collected for less than 45% of the 231 SDG indicators globally[14]

A key reason for the lack of data is the conceptually complex SDG targets, making it difficult for NSOs alone to translate data into measurable indicators. As big data, Artificial Intelligence (AI), and IoT transform society, attention turns to how these technologies can be applied towards the SDGs, and how insights gathered from real-time private sector data can complement official statistics and survey data.

As part of this objective, the UN Global Working Group on Big Data created a Task Team on Using Big Data for the Sustainable Development Goals.In addition, the UN Secretary General named an Independent Expert Advisory Group (IEAG) on the Data Revolution for Sustainable Development in 2014, to mobilize a successful data revolution, calling for consensus on data principles, sharing of technology and innovation for the common good, expanding data capacity development, and expanding leadership on data use for sustainable development. One of the recommendations included creating a World Data Forum for sustainable development—the first of which was hosted in South Africa in 2017, and the second in Dubai in 2018 — convening data leaders from the private sector, government, statistics systems, academia and more. Amongst the many outcomes identified from the forum was the need to address data interoperability of national statistical systems.

Data governance, standards, and solving the interoperability challenge

Despite great strides on the global stage to determine innovative data approaches for monitoring SDG progress, in practice, there is much work still to be done. NSOs have not kept up with the rapid pace of the data revolution, in particular the proliferation of big data and its applications in AI and machine learning, IoT, advanced mobile technology, and more.

Efforts to standardize official statistics date back to 1992, when the United Nations Economic Commission for Europe (UNECE) adopted the fundamental principles of official statistics in the UNECE region. These principles were later adopted by the United Nations Statistical Commission at the global level in 1994. The Economic and Social Council (ECOSOC) endorsed the Fundamental Principles of Official Statistics in 2013, and in January 2014 they were adopted by the General Assembly, nearly two decades after their initial inception.

This recognition at the highest level emphasizes that official statistics are crucial for evidence-based decision making, and that statistics require an internationally agreed upon standard of a scientific approach to data governance and analysis. However, today's data production widely differs from one country to another, and even varies greatly within countries. NSOs strive to turn data into information that can be leveraged for international comparison purposes, however, there is no standardized method that can be applied to big data.

In looking to expand both data sources and capacities, NSOs face an equally, if not more, pressing challenge: navigating data interoperability,[10] or the ability to integrate data systems to work and communicate seamlessly with one another.[11]

Addressing interoperability will help unleash greater potential from existing data, as well as unleash new sources of data. There are significant untapped opportunities to work with the private sector to standardize and create interoperable data systems, which can potentially be used to monitor and achieve progress towards the SDGs. As such, public-private partnerships in data can foster new ways to address data interoperability challenges, relieve overburdened NSOs, and fill gaps in national statistics with real-time data to fulfill sustainable development commitments.

[10] According to the UN Data Interoperability Practitioner's Guide, Interoperability is the ability to join-up and merge data without losing meaning (JUDS 2016). In practice, data is said to be interoperable when it can be easily re-used and processed in different applications, allowing different information systems to work together. Interoperability is a characteristic of good quality data, and it relates to broader concepts of value, knowledge creation, collaboration, and fitness-for-purpose.

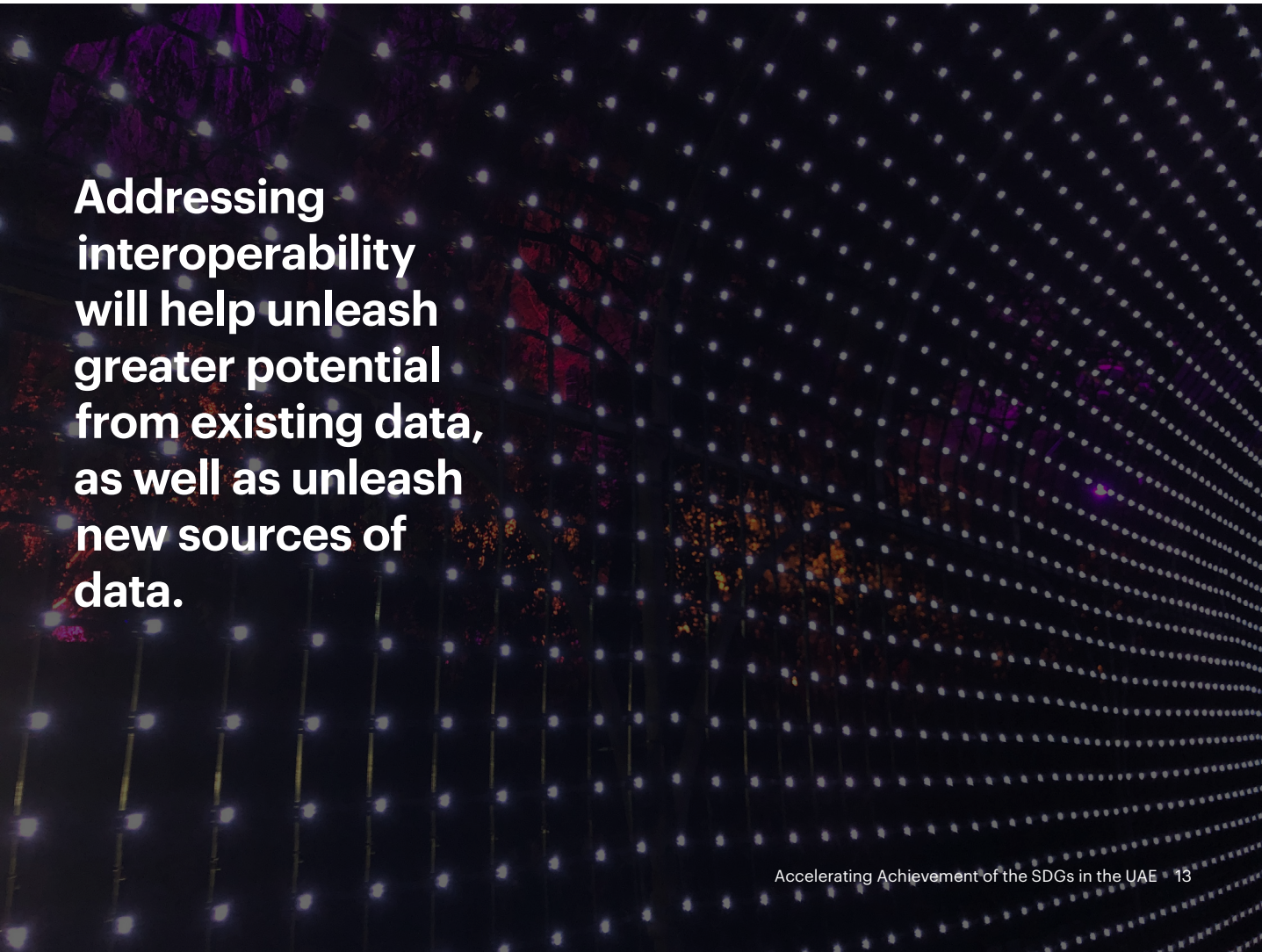
[11] Data Interoperability was a key topic of concern at the 2017 UN World Data Forum and resulted in its inclusion in the Cape Town Global Action Plan for Sustainable Development Data. Beyond the forum, the momentum to address data interoperability continued with the UN collaborative comprised of the Global Partnership for Sustainable Development Data and the UN Statistics Division. The collaborative launched a comprehensive guide, "Data interoperability: A practitioner's guide to joining-up data in the development sector" during the 2018 UN World Data Forum in Dubai. The guide is intended to be a living document, with a 5-prong approach to interoperability focused on data management, governance, and interoperability; canonical data and metadata models; classification and vocabularies; standardized interfaces, and implementation of linked-data approaches.

Private sector data

The transformative source of inexhaustible value

Data is more important than ever to businesses: used to assess demand, predict consumer trends and behaviors, and highlight market trends. For an increasing number of businesses, data is at the heart of their business models, driving all major decision-making. However, despite the rising emphasis on data collection across the private sector, companies are not taking full advantage of the data they collect: according to Harvard Business Review, cross-industry studies show that less than 1% of data collected by businesses is used in decision-making.

Evidence shows that much of this data can be used for economic development and sustainability – the Word Bank Development Report posits that data is a public good that should be safeguarded and utilized as a resource to achieve sustainable development. Furthermore, the private sector is often moved to disclose data and information because of demand from consumers, shareholders, activists, or pressure from other industry actors or competitors who already disclose data and information, creating a cyclical loop of accountability.



The (investor) pressure is on

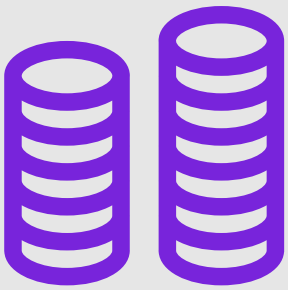
Globally, companies face increasing demand for sustainability disclosure

Worldwide, investors and key business stakeholders are increasingly pushing private sector businesses to address sustainability and report on progress. Large companies are especially under pressure to disclose sustainability information, especially CO_2 emissions data. Investor pressure helped to boost climate disclosures in 2020, and according to Bloomberg, companies are twice as likely to report climate risk data when actively pressured. Shareholder activism is also driving governments and regulators to act. In the UK, the main financial regulator – the Financial Conduct Authority (FCA) – is extending climate reporting requirements to most UK listed companies and domestic asset managers as a result of growing investor pressure for disclosure. The requirements, which call for companies to disclose environmental impact and risks they face from climate change, will be mandatory throughout the UK for listed companies, private companies, pension schemes, insurance companies, and banks by 2025.

Abu Dhabi Global Market (ADGM) Sustainable Finance Platform – a new model for sustainable finance

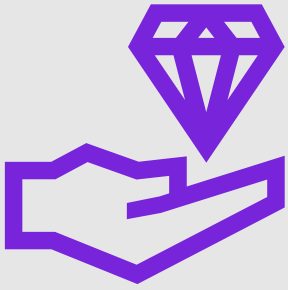
Recognizing a need to unify and standardize sustainable finance data, ADGM created the Sustainable Finance Platform. The objective of the platform is to act as an accelerator to promote the adoption of sustainable finance at the regional and international level. The Platform will provide real-time access to market data and information, reflecting international standards, with customisable indicators under five metrics: investments, finance, sustainable banking, responsible investment, and disclosure.

The platform will allow companies to compare their metrics side-by-side to other participating companies, with the goal of increasing transparency and reporting, reinforcing the UAE's role as a regional hub for sustainable finance. The Platform will cover GCC listed entities plus financial services entities active in the market that have signed the Abu Dhabi Declaration on Sustainable Finance.



Value Balancing Alliance - translating impact into data

The Value Balancing Alliance (founded by BASF and supported by the OECD and World Bank) is an example of efforts to standardize reporting of companies' societal and environmental impacts. The partnership is led by multinational companies working to develop and promote a standardized methodology to assess company's impacts on nature, society, and the economy in monetary terms along the value chain. The goal is to develop standards that will measure and translate social and environmental impacts into comparable financial data. The Alliance is also working to create a disclosure frame for comparability, to pilot the methodology in business steering, and to make its outcomes publicly available. Greater efforts to standardize reporting across companies are necessary to provide a more complete picture of country-wide progress.



Investor appetite for sustainable assets is also growing. A 2020 Blackrock survey[12] shows that investors plan to double their sustainable assets in the next five years. The same study also identified poor quality or availability of Environmental, Social, and Governance (ESG) data and analytics as the largest barrier to sustainable investing.[13]

While many businesses have developed sustainability strategies as well as reporting mechanisms to measure progress and impact, these mechanisms are often viewed by stakeholders as not robust enough, too fragmented, or not clearly communicated. Additionally, companies often face challenges in determining how best to disclose their sustainability progress. Despite a massive rise in commitment to sustainability reporting over the last two decades, there has simultaneously been an explosion in the number of reporting standards. Companies often choose which reporting standards they wish to follow and what data or topics to include in their sustainability reports based on their individual business priorities. While finance companies often adhere to the UN Principles for Responsible Investment (PRI), other companies may follow Global Standards for Sustainability Reporting (GRI), Equator Principles, UN Global Compact, a variety of others, or a combination of several different standards.

With a multitude of standards to choose from, companies find themselves confused – therefore, choosing reporting standards may be driven by industry, ease of requirements, or a desire to be ranked along an index rather than broader sustainability objectives. The confusion over which standards to follow may even dissuade companies from reporting at all. Greater efforts to standardize reporting across companies are necessary to provide a more complete picture of country-wide progress.

[12] Blackrock surveyed 425 investors in 27 countries representing USD25 trillion in assets under their management
[13] Identified as the largest barrier across all regions surveyed

Global best practices

An overview of successful public-private data sharing

Across the world, governments are increasingly realizing the power of collaborating with the private sector, both to collect and extract value from data to address societal challenges. Data increasingly features in national strategies, and countries are leveraging both voluntary and involuntary models of data sharing to improve healthcare, reduce emissions, and improve the lives of citizens. Some governments have developed data-sharing strategies, focused on increasing business-to-business and business-to-government data sharing as essential means to solve societal and sustainability challenges. Other countries have focused on building data-sharing layers and platforms to facilitate seamless exchange of data. Most recently, countries have used public-private data sharing to address urgent COVID-19 problems.

Across global efforts to improve and expand public-private data sharing, several best practices have emerged, detailing clear pathways to success. The four key lessons from public-private data-sharing engagements include incorporating a data-sharing vision and priorities into the national strategy; developing a secure and interoperable platform for data exchange; allowing governments to focus on critical functions; and leveraging real-time public-private data integration.

1 **Incorporate a data-sharing vision and priorities into the national strategy** to ensure a top-down focus on data sharing on a country-wide basis

2 **Develop a secure, adaptable, interoperable platform for data exchange** that can be adopted on a wide scale, and is flexible in response to advancing technology

3 **Collaborate to reduce burden**: partnerships with private sector can reduce government's burden and allow government greater time to focus on critical priorities

4 **Leverage real-time public-private data integration** for both everyday challenges and stronger crisis response

1. **Incorporate data-sharing vision and priorities into the national strategy:** Data sharing in the Dutch Digital Strategy

As part of its broader national digitalization strategy, the Dutch government released a report in 2019 detailing its vision and strategy to be a leader in data sharing between businesses. The strategy's vision is to make data sharing a standard for potential applications to solve societal challenges such as those in healthcare (applicable to SDG 3 Good Health and Well-being), or reducing CO2 emissions (applicable to SDG 13 Climate Action). While the strategy expresses that voluntary data sharing is the ideal outcome, it also articulates that data sharing can and may likely be made compulsory in order to achieve societal benefits.[14] The strategy also stresses the importance of ensuring that data owners retain a high degree of control over who can use and access the data as a means to build trust and transparency.

2. **Develop a secure, adaptable, interoperable platform for data exchange:** Pioneering a transformative pathway between Estonia and Finland

X-Road—first developed in 2001 and considered the backbone of Estonia's digital society— is an open source data exchange layer. The system proved to be a widespread and global success, allowing for seamless exchange of both private and public sector information systems and data, and is used across fields such as healthcare (applicable to SDG 3 Good Health and Well-being); education (applicable to SDG 4 Quality Education); e-identity, e-governance, security, and safety (applicable to SDG 16 Peace, Justice, and Strong Institutions); and more. In 2013, the Prime Ministers of Estonia and Finland signed a Memorandum of Understanding (MoU) to further develop X-Road to allow for cross-governmental and private databases data transfers and searches. In 2015-2016, X-Road published its source codes and was made publicly available to anyone, and is now implemented in 15 countries and in consultation in 23 countries. Dozens of countries around the world have implemented X-Road as their national data exchange or as the backbone of their digital infrastructure such as Iceland,[15] Kyrgyzstan,[16] Mexico,[17] and the Faroe Islands,[18] while companies in Japan[19] and Germany[20] are using X-Road technology to advance digital and sustainability objectives in the energy and healthcare sectors.

Overall, X-Road is a system that allows for interoperable exchange of data while remaining highly secure and protected. With no central or master databases, data is stored with each agency where it is encrypted and cannot be exchanged or shared without the knowledge of the data owner, enabling trust and transparency.

[14] Examples of compulsory data sharing could be modeled after existing EU regulations, such as the Payment Services Directive (PSD2) regulations for the financial sector in the EU.
[15] In Iceland, Straumurinn is the country's X-Road data exchange layer that allows the government to deliver services for both public and private actors.
[16] In Kyrgyztan, Tunduk is an information system based on X-Road that allows state and municipal agencies as well as legal entities to exchange data.
[17] In Mexico, Quintana Roo state launched an X-Road project, Xacbé, connecting all police-related systems in the state. Eventually, it is expected to become the backbone for the entire digital government for Quntana Roo.
[18] The Faroe Islands use Heldin, an X-Road data exchange layer as part of their national digitalization program that seeks to digitalize services for citizens, industries, and the public sector. The digitalization program is a public-private partnership, with 60% funded by government, 17% by municipalities, and 23% by private companies.
[19] In Japan, X-Road is used in the energy sector: the national energy provider (Nippon Gas Co. LTD) is partnering with a tech startup (Planetway) using an X-Road data exchange layer for its data sharing.
[20] In Germany, X-Road technology is being used to build a platform for medical video consultation and digital prescriptions that connects all medical stakeholders and allows for a secure exchange of data between all parties.

3. Allow government to focus on critical functions : Choosing partnerships over competition in France to offload burden

In France, labor market services are provided by both the national government agency for employment service, Pôle emploi, and private companies also known as job boards (i.e. Indeed, HelloJob, Monster). For years, Pôle emploi tried to compete with private job boards by collecting and advertising as many jobs as possible. However, in 2013, it started engaging with job boards rather than competing through through the "transparence du marché du travail" (labor market transparency) initiative. That year, Pôle emploi transitioned to an open data model, publishing job offers, market statistics, and more on "Emploi Store Developpeurs" – a virtual platform designed to attract private job boards to build innovative employment apps and solutions. This labor-market transparency initiative led to collaboration between the public and private entities, sharing data (free of charge) regarding jobs, job descriptions, qualifications, and contacts for the company. The private job boards began sharing their advertisements with Pôle emploi, and before publishing, Pôle emploi would ensure all jobs complied with labor regulations (i.e. discrimination).

By 2016, Pôle emploi had 65 partners, and more than half a million job advertisements, 5 times the number it collected independently. Overall, the initiative (in line with SDG 8 Decent Work and Economic Growth), allowed for an effective and efficient division of labor for reducing unemployment, allowing Pôle emploi's bureaucratic burdens to become an opportunity for the private sector. As a result, Pôle emploi could focus on critical functions, assisting jobseekers and providing job services rather than job advertisements collection. Private job boards could continue to excel, working on innovative solutions to unemployment, and directing jobseekers to a centralized website.

4. Leverage real-time public-private data integration: Achieving greater COVID crisis response in the UAE through an integrated medical records platform

When COVID-19 struck, healthcare systems faced enormous pressure and strain to consolidate and manage data from disparate, often complex sources. According to the UN's official website on the SDGs, 90% of countries are still experiencing one or more disruptions to essential health services when reporting data under SDG 3 Health and Well-being. However, Abu Dhabi's Malaffi system proved to be a tremendous advantage. Malaffi, Abu Dhabi's Health Information Exchange platform, was implemented in 2019 as part of the Department of Health – Abu Dhabi (DOH) digital transformation strategy for the health care system (See Malaffi case study, page 19). The platform connects public and private healthcare providers and medical records in one centralized system. As of August 2021, 100% of Abu Dhabi's hospitals are connected through the system.

At the start of the pandemic, the DOH took immediate measures to leverage Malaffi for COVID-19 response. First, the DOH opened Malaffi access to all health facilities across Abu Dhabi who were providing pandemic response, despite facilities' onboarding statuses with the system. Secondly, Malaffi created the COVID-19 Module, a real-time database of every COVID-19 test result performed in the Emirate. The Module dashboard also included key sources of clinical data. The real-time data allowed DOH to monitor the spread of the disease and provided foresight for the implementation of effective preventive measures and better resource allocation. Furthermore, the combination of COVID-19 patient data and access to patients' full medical histories (for all systems integrated with Malaffi) informed decision-making for patient care, allowing frontline workers to provide better coordination of care and more individualized treatments to patients.

Malaffi case study

Revolutionizing healthcare through data

In 2017, the Department of Health – Abu Dhabi (DOH) recognized the need to digitally transform the healthcare sector. Patient information remained siloed in separate Electronic Medical Records (EMR) systems for each individual healthcare provider. Furthermore, the rise of chronic diseases imposed an additional strain on the healthcare system, causing duplication of services across providers. Healthcare expenditure per capita kept rising, most steeply in the UAE out of all GCC countries. The DOH realized real-time insights were required to enable better planning and quality of care. The solution: an innovative public-private partnership that would allow for health information exchange.

Malaffi (Arabic for 'my file') is the region's first Health Information Exchange (HIE) platform, that safely and securely connects public and private healthcare providers in Abu Dhabi. Malaffi's patient-centric approach enables meaningful, real-time exchange of important patient health information between providers, creating a centralised database of patient records to improve healthcare quality and patient outcomes. Malaffi was established as a Public-Private Partnership (PPP) between the Department of Health – Abu Dhabi (DOH) and Injazat, a regional leader in digital transformation, cloud, and cyber security. Malaffi provides instant access to patients' longitudinal medical file, allowing healthcare providers to make better-informed and more efficient clinical decisions.

The key success factor in Malaffi's success was a 2018 DOH policy that mandated participation by all private and public healthcare facilities in Abu Dhabi. To ensure alignment with healthcare providers on development and implementation decisions, Malaffi worked closely with Healthcare Advisory Committees comprised of representatives from healthcare providers, including a Clinical, Technical, and Security Committee. The DOH leadership and its team worked in close collaboration with the healthcare providers to ensure their support, which helped to accelerate implementation—connecting 93% of patient episodes in less than two years since the first providers connected.

Connection results

100% of hospitals

97% of patient episodes

1,430 Facilities across Abu Dhabi

are connected to Malaffi

More than

31,500

End users (private and public) with access to Malaffi

7 million

Unique patients registered

482 million

Unique clinical records

The partnership provides mutual benefits to the public and private sectors. Malaffi users have expressed great satisfaction with the system and believe it has improved quality of care and patient outcomes. Benefits include reduction of duplication of laboratory testing and procedures, reduced medical error and prevention of drug-to-drug interaction, better-informed clinical decisions, improved coordination and transition of care, reduced consultation time searching for past medical information, and improved patient experience, safety, and satisfaction.

Applications across the SDGs

Data sharing for SDG achievement in practice in the UAE

Interviews with PSAC members reveal how private sector companies are engaging in data sharing for SDG achievement in the UAE. These examples illustrate how the private sector is collaborating with government and other entities to leverage their data in innovative ways to solve societal challenges.

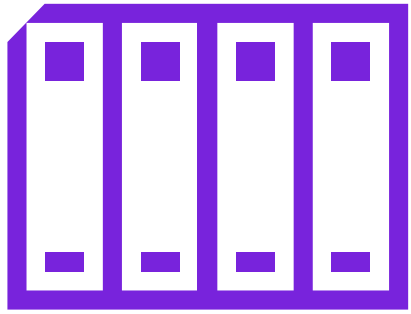
Throughout the pandemic, Majid Al Futtaim shared data to ensure continued food supply, avoid supply chain disruptions, and support operations of local farmers. Majid Al Futtaim utilized blockchain technology to monitor and flag low supply of fresh items. The data was used amongst their operations in 17 countries, as well as shared with the government to ensure food availability.

Malaffi's HIE system shows how the government and private sector can share data and collaborate to standardize medical record systems, allowing providers to access patient's entire medical history for a more streamlined patient experience. This helped the Abu Dhabi government plan for better coordinated responses to the COVID-19 pandemic.

Sharjah Investment and Development Authority (Shurooq) and BESIX developed a public-private partnership, Qatra, Sharjah's waste treatment plant. The venture was floated in 2018, and resulted in BESIX taking over operations of the Saja'a wastewater treatment plant in Sharjah for a period of 25 years. This arrangement will not only double the capacity of the plant, but also accomplishes a core objective – sustainable water supply.

Masdar is collaborating with the Abu Dhabi Department of Energy, Etihad Airways, Lufthansa Group, Khalifa University of Science and Technology, Siemens Energy and Marubeni Corporation to develop green hydrogen fuel solutions. As part of this initiative, Masdar is developing a demonstration plant at Masdar City, their world-class technology and innovation hub, and pioneering sustainable urban community in Abu Dhabi. This collaborative initiative is designed to support the development of Abu Dhabi's green hydrogen economy.

Framework Pillars



1 Centralized governance – Build effective data-sharing governance

Designate a single governing body: long-term successful partnerships can be facilitated by ensuring a single authority is responsible for public-private data sharing with a specific mandate for SDG achievement. This body should have a **clear mission, value, and purpose:** serving as a collective entity responsible for identifying varying data needs across different government entities, including how data can contribute to SDG progress. This body can also ensure **coordination between government and private entities** to mitigate confusion from companies regarding which government agency is responsible for sustainability agendas. This will centralize avenues and channels for sustainability through a single entity

Develop data-sharing bylaws: create bylaws for public-private data sharing that establish clear regulations and norms for data sharing. This should include clear objectives and parameters, as well as institute data-sharing requirements where necessary to achieve critical goals.

Identify data gaps: by identifying gaps in data, specifically SDG data, the government can ensure where to target clear sustainability messaging as well as pathways for private sector participation in data. Once the government self-assesses where data is missing, this will indicate where and how the private sector can be most supportive. Furthermore, this will help government identify how to ensure that national sustainability goals and initiatives are clear, as well as enable pathways and topics for private sector participation in data contribution within those goals.

2 Unified sustainability vision – Reach a consensus on what "sustainability" means

Define sustainability: although the public sector may have a clear vision of sustainability, it may not align with definitions of sustainability across private sector industries. Data-sharing partnerships for sustainability progress must be grounded in a common vision of what "sustainability" means. The public and private sectors need to collaborate to find common ground for a clear sustainability taxonomy[22] for the UAE.

Standardize reporting: with clear definitions for what constitutes as "sustainable," the next step is to reach an agreement on the most effective reporting standards. Private sector companies often choose reporting standards based on individual company priorities. Instead, public-private partnerships can be leveraged to identify which standards are most practical metrics for measuring progress towards wider national sustainability objectives.

Leverage incentives over requirements: to encourage private sector companies to electively align with a national vision of sustainability, governments can create incentives (tax credits, funding opportunities, etc.) to motivate companies to partner to share data rather than requiring companies to report through regulations.

3 Trust & transparency – Ground partnerships in transparency to build greater trust

Reinforce public-private trust through transparent, mission-oriented data sharing: data sharing should be driven by a clear purpose; delineating clear applications and uses of private sector data. This will allow the private sector to build trust around government intentions. The government can do so by providing clear case studies for how data will be used to achieve desired outcome for SDGs.

Develop privacy and security protections: once data purposes are agreed upon, public-private entities can agree on the confines of the data, including third-party use context, and how data will be attributed. Partnerships should ensure clear limitations for third-party use, with clear assurance from both sides on the confines for data applications. Partnerships should also include development of secure data-sharing infrastructure, with mutually developed APIs and platforms for data exchange.

Develop compliance structure and repercussions for data misuse: all partnerships should feature methods for both compliance of established data protections, as well as discipline for data misuse. This could include sanctions or fines for data misuse.

[22] For example, the EU's Green Deal consists of the EU Taxonomy and the Sustainable Finance Disclosure Regulation – creating a common language and clear definition for what is "sustainable."

4 Benefits offset burden – promote partnership benefits to outweigh burdens

Increase awareness of data sharing benefits: while companies may view greater data sharing as a burden, it is critical to increase awareness of the benefits. Many companies already have varying sustainability commitments. However, greater data sharing can lead to improved ESG ratings or performance across sustainability rankings for private sector companies. This can also lead to greater investments (given increased pressure for sustainability assets), positive public perception, and improved consumer satisfaction. Furthermore, partnerships will allow the private sector to have greater access to public sector data and insights, resulting in mutual benefits for both sides.

Communicate positive impact of data sharing: the private sector often does not realize that by sharing data, especially nontraditional sustainability data, it could significantly accelerate positive transformation of SDG achievements and contribute to the public good. Communicating the direct links to positive public impact will increase private sector propensity to share data.

Showcase private sector capabilities: sharing data will allow the private sector to highlight its capabilities. As more companies share data, the private sector will increasingly display its capabilities, strengths, and advantages that can spur a domino effect for data sharing.

Minimize burdens: while many companies see data sharing as an additional layer of difficulty, ensuring a streamlined and seamless reporting process with clear timelines, benefits, and mutually aligned priorities will not require additional resources, burden, or sacrifice core business activities.

Conclusion
Recommendations for the UAE

In light of this analysis, the following recommendations provide potential opportunities for the UAE to consider to work towards greater private sector participation in data-sharing partnerships in service of greater SDG achievements.

1. **Collaborate to create a voluntary policy for data sharing that reflects both parties' sustainable development priorities.**

   To streamline data requests, sharing, and engagement, the public and private sectors can collaborate to craft a voluntary data-sharing policy that will clarify the roles and responsibilities of the government and private sector. In addition, the policy can address the aforementioned challenges earlier in the paper as well as the need for greater efficiency in data-sharing requests. One example could be building a centralized repository for all government data requests, partnerships, and engagements with the private sector.

   This would serve to balance how often requests are made of the private sector, and reduce repetition, as government agencies would be able to first determine whether any partnerships exist(ed). This reduces the burden on the private sector, while creating an enabling environment that encourages rather than requires data sharing.

2. **Leverage collective perspectives on sustainability taxonomy to build a standardized model for data sharing**

   With an overabundance of global reporting standards, no clear definition of "sustainability", and no standardized reporting requirements, the public and private sector will continue to face challenges in collaboration. First, the public and private sector in the UAE can collectively determine how to define "sustainability," and what this means in the context of data. Additionally, these efforts can include developing a standard for types of data required, as well as a reporting template for effective data collection. By establishing a clear taxonomy for sustainability, the UAE can lead the way towards a stronger, more cohesive framework for sustainability for the region, and as a result, demonstrate a pathway for the private sector to report more standardized information with clear understanding of what is expected.

3. Identify entities for partnership to implement the data-sharing model

One of the most critical barriers to stronger public-private partnerships is determining which industries or specific private sector entities to partner with. The UAE Chambers of Commerce (Abu Dhabi, Dubai, Sharjah, etc.) can become key facilitators, working collectively to link government and private sector data needs for SDG objectives since they are responsible for representing and supporting business interests. The Chambers also ensure private sector interests are protected and supported, helping to build trust.

The Dubai Chamber for example has over 150,000 members from the private sector from all economic sectors, collected in a large database. Therefore, as data needs arise, the relevant Chamber can be the medium to find the right industry experts, utilizing each of the chambers' strong and established relationships with companies. This will also allow for a more centralized and targeted approach to implement the data-sharing model.

The UAE can lead the way toward a stronger, more cohesive framework for sustainability for the region.

4. Implement a secure, data exchange layer and a digital statistics system

Statistics offices face great challenges in navigating the future of data. With increased strain on NSOs both from the UN 2030 Agenda pressures and more critically from the COVID-19 pandemic, NSOs must find a more efficient solution to data collection. The UAE can build a secure, data exchange layer as well as a digital application for statistical data, that will together address interoperability challenges as well as the need for greater volume of statistical input. Examples could be modeled off X-Road, a secure data exchange solution available free of charge via MIT's open source license.[23] X-Road is what allows Estonia's statistics office to extract vast amounts of data from various inputs securely.

Furthermore, digital channels can be used for statistical submissions, similar to Estonia's eSTAT system. eSTAT is an online channel that allows completion of statistical questionnaires in one consolidated location. Together, these two tools will equip the UAE with the necessary technological toolkit to support stronger partnerships with the private sector.

5. Increase the publicity of SDG developments in English media outlets

Given the critical role of the private sector in the success of these data-sharing endeavors, it is important that the media consistently provides coverage in English media outlets on the topic and relevant developments. Greater publicity can instigate a domino effect, building momentum that encourages other private companies to participate in data sharing. By reaching and engaging all relevant stakeholders, the UAE can be a leader in accelerating greater achievement of the SDGs.

[23] Released as a digital public good, verified by the Digital Public Goods Alliance

Authors

Elena Siegel
Partner, Government and Economic Development
elena.siegel@kearney.com

Elizabeth Conway
Consultant, National Transformations Institute
elizabeth.conway@kearney.com

Co-brand authors

HE Hanan Ahli
Acting Director, Federal Competitiveness and Statistics Centre

Nour El Chedrawi
Lead Researcher Competitiveness Culture Department, Federal Competitiveness and Statistics Centre

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About PSAC

The UAE Private Sector Advisory Council on the SDGs, comprised of 14 private companies, provides a platform for regular dialogue between the private sector and the UAE National Committee on SDGs to foster collaboration in the implementation of the 2030 Agenda. Council members meet regularly to discuss and engage on different UAE thematic priorities to support the government's goal of partnering with the private sector to shape policy making in the UAE.

About FCSC

The Federal Competitiveness and Statistics Centre (FCSC) is a government center affiliated with the Ministry of Cabinet Affairs in the United Arab Emirates. FCSC was established according to federal decree number 2/2020, with the aim to develop and enhance the UAE's performance in the areas of global competitiveness, statistics and data, and to support the country's journey in achieving UAE's Centennial Plan 2071. FCSC is actively engaged in building an integrated national statistical system, raising the UAE's competitiveness across various sectors, enhancing the country's position within global competitiveness reports and indicators, and achieving the Sustainable Development Goals (SDGs) in its capacity as the General Secretariat of the National Committee for the Sustainable Development Goals. FCSC ideates and recommends policies, strategies, legislations to different stakeholders and decision makers in the UAE.

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