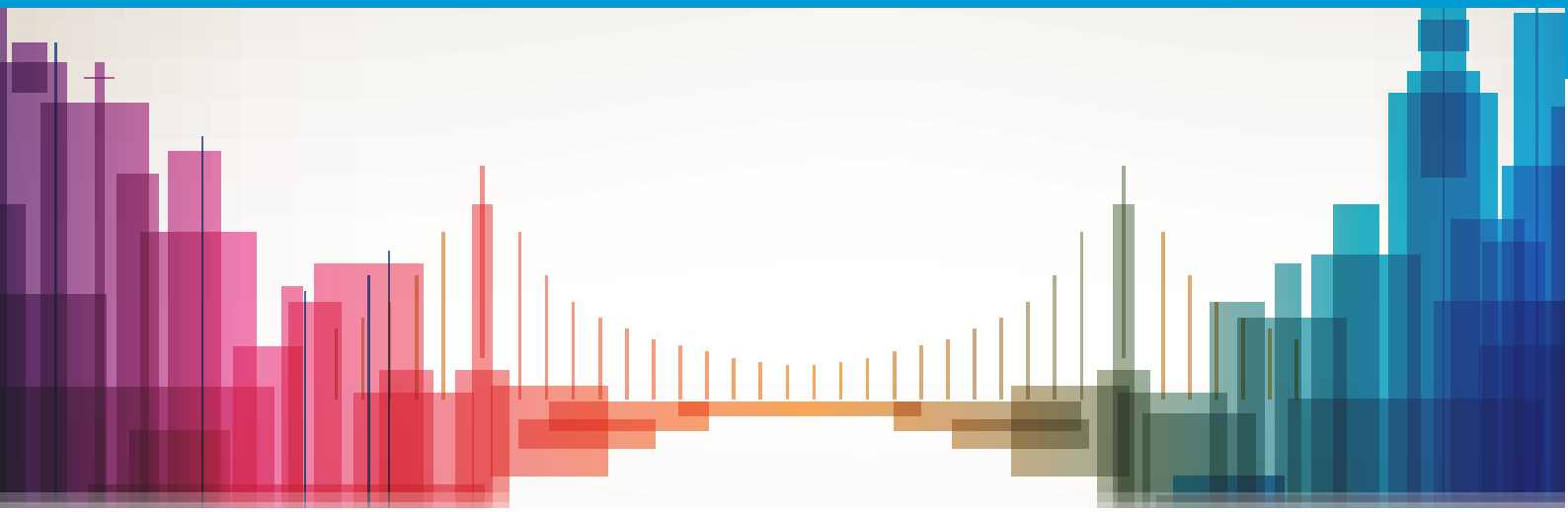
United 4 Smart Sustainable Cities

# Procurement guidelines for smart sustainable cities

## A U4SSC deliverable



Convention on Biological Diversity

United Nations ECLAC

Food and Agriculture Organization of the United Nations

UNIDO

ITU

UNDP

United Nations Economic Commission for Africa

UNECE

UNESCO United Nations Educational, Scientific and Cultural Organization

UNEP

UNEP FINANCE INITIATIVE

United Nations Framework Convention on Climate Change

UN-HABITAT FOR A BETTER URBAN FUTURE

United Nations Department of Economic and Social Affairs

UN OFFICE 4 PARTNERSHIPS

UNITED NATIONS UNIVERSITY UNU-EGOV

UNWTO World Tourism Organization

UN WOMEN

WORLD METEOROLOGICAL ORGANIZATION

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# Disclaimer

The opinions expressed in this publication are those of the authors and do not necessarily represent the views of their respective organizations or U4SSC members. In line with the U4SSC principles, this report does not promote the adoption and use of smart city technology. Rather, it advocates for policies encouraging responsible use of information and communications technologies (ICTs) that contribute to the economic, environmental and social sustainability of cities, as well as the advancement of the 2030 Agenda for Sustainable Development.

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# Executive summary

Cities, societies and communities are increasingly influenced by the evolution of technology. The term "smart" is frequently used to reflect technological progress. Additionally, the smart way to build our digital world is to ensure that it is sustainable and inclusive, and enables everyone, regardless of gender, age or ability to benefit equally and equitably from, and be empowered by, new technologies.

The potential of technology, in particular the way it is purchased, has a significant impact on improving public services and benefitting society directly. However, this potential cannot be realized if governments and stakeholders at all levels invest in outdated technology, fail to work effectively with suppliers or prioritize bureaucracy over the needs of the people and organizations.

The Procurement Guidelines for Smart Sustainable Cities aim to present new ways of buying digital and technology products, services and capabilities that are fair, open, transparent, effective and multidisciplinary. The Guidelines also focus on meeting users' needs in a way that is accessible, so that anyone can benefit from them regardless of their age, gender, capacities or the context of their use, and that they are fit for supporting Internet-era digital public service delivery.

**How can the Guidelines help?**

The Guidelines are for anyone who engages in procurement activities for their country's public sector, whether for local, regional or national government organizations. The Guidelines focus on digital, data and technology products, services and capabilities, as these topics are most needed to support public sector transformation. Information is intended to be relevant internationally and not specific to any particular regulatory environment.

The Guidelines will help provide a:

- better digital and technology services for communities;
- higher integrity levels in technology purchasing;
- more inclusive technology purchasing that benefits society; and
- more effective purchasing that delivers social value for money.

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## List of abbreviations

| Abbreviation | Full form |
|---|---|
| AI | Artificial Intelligence |
| API | Application Programming Interface |
| CCE | Colombia Compra Eficiente |
| CDS | Canadian Digital Service |
| COVID-19 | Coronavirus disease |
| DDaT | Digital, data and technology |
| DGCP | Dirección General de Contrataciones Públicas |
| DIAL | Digital Impact Alliance |
| DLUHC | UK Department for Levelling Up, Housing and Communities |
| DGS&D | Directorate General of Supplies & Goods |
| DTO | Digital Transformation Office |
| DVSA | Driver and Vehicle Standards Agency |
| FCD | Fundación Ciudadanía y Desarrollo |
| GeM | Government e-Marketplace |
| GESI | Gender Equality and Social Inclusion |
| GFR | General Financial Rules |
| GIZ | Gesellschaft fur Internationale Zusammenarbeit |
| ICT | Information Communication Technology |
| IESS | Ecuadorian Institute of Social Security |
| ITT | Invitation to tender |
| KPIs | Key Performance Indicators |
| MEAL | Monitoring, Evaluation, Assessment and Learning |
| NACS | National Anti-Corruption System |
| NGOs | Non-Governmental Organizations |
| OECD | Organisation for Economic Co-operation and Development |
| OCDS | Open Contracting Data Standard |
| OCP | Open Contracting Partnership |
| OGP | Open Government Partnership |
| PC | Personal Computer |
| PPE | Personal protective equipment |
| ROI | Return on Investment |
| SDGs | Sustainable Development Goals |
| SMEs | Small and medium-sized enterprises |
| SSC | Smart Sustainable City |
| UCD | User-centred design |
| UK GDS | United Kingdom Government Digital Services |
| UNDESA | UN Department of Economic and Social Affairs |

| Abbreviation | Full form |
|---|---|
| VCSE | Voluntary, community and social enterprise |
| WCAG | Web Content Accessibility Guidelines |
| WEF | World Economic Forum |

# 1 Introduction: Developments over the years

Over the past decade, procurement has evolved significantly; however, further advancements are needed in order to align with the 2030 Agenda and the Sustainable Development Goals. In addition, the COVID-19 pandemic has catalysed the process of public procurement to respond rapidly to public emergencies. Governments worldwide have made considerable advances in reforming digital public service delivery, including governance and decision-making around the use and public procurement of ICTs.

The following are a few examples presented in chronological order. Note that this list is not exhaustive.

- **United Kingdom**: Conceived in 2010, following the Digital Champion Martha Lane Fox's independent review *(Directgov, 2010)* of the main government website at the time, the United Kingdom Government Digital Services (UK GDS) led a digital government transformation and the implementation of standards-based assurance of ICT spending, including public procurement and service delivery. This opened up a highly concentrated government market in 2010, dominated by a small number of primarily large suppliers to thousands of small and medium-sized enterprises (SMEs) available through the Digital Marketplace.
- **United States**: Founded during the Obama Administration in March 2014, 18F was formed by a group of Presidential Innovation Fellows to extend their efforts to improve and modernize government technology. 18F develops partnerships with agencies to help them deliver exceptional digital experiences that address their strategic initiatives. Through their work together, 18F also aims to strengthen government technology practices in ways that last beyond their formal partnerships. 18F effects change by practicing user-centred development, testing to validate hypotheses, shipping often, and deploying products in the open. Later the same year, in August, the United States Digital Service (USDS) was launched to bring together the best engineering, design and government talent to change the US Government's approach to technology.
- **Australia**: Founded in July 2015, the Digital Transformation Office (DTO) was an executive agency comprising a small team of developers, designers, researchers and content specialists working across government to develop and coordinate the delivery of digital services. The DTO operated more like a start-up than a traditional government agency, focussing on end-user needs in developing digital services. In November 2016, the DTO was replaced by the Digital Transformation Agency to provide strategic and policy leadership across the Government on ICT and digital service delivery. This includes: ICT procurement policy; setting standards for government ICT and digital service delivery projects; coordinated funding of ICT projects; leading an ICT programme management office for the government; and providing expertise and advice across government on ICT and digital topics.

- **Singapore**: Announced in October 2016, the Government Technology Agency (GovTech) was launched in Singapore to spearhead the government's digital and data strategy, partnering with public agencies, industry and citizens to transform public service delivery through the use of technologies such as data science and analytics, Artificial Intelligence and machine learning.
- **Canada**: Announced in July 2017, the Canadian Digital Service (CDS) was launched to modernize how the Government of Canada designs and delivers digital services. The CDS would partner with departments in providing measurably improved services, rethinking the service design and delivery process from the user's perspective, and engaging users every step.

Many governments have followed consistent principles, approaches and methodologies when setting up their central digital agencies. In several cases, they have re-used open-source public goods (e.g., platforms, products, standards, codes of practice) from other governments. The Amazon Web Services (AWS) curated collection of "Open Government Solutions" contains references to many of these re-use cases, including the online accessible version of these Guidelines, the Digital Buying Guide, under the "Digital Delivery" category.

These Guidelines aim to support city technology by facilitating the adoption of disruptive technologies and formulating a core procurement policy framework to shape a smart city model that provides accessible digital services, including access for persons with disabilities. *(SmartCities4All)* Furthermore, the Guidelines facilitate accessibility and lay down the criteria for deciding how goods and services are purchased and ensuring equitable development and participation.

## 1.1 From Procurement to Commissioning

Government ICT spending reform is integral to, and often indistinguishable from, digital government transformation. However, to achieve the ambitions and opportunities that digital transformation represents, a much-needed cultural and capability paradigm shift is required that fits the Internet era, and steers away from narrow perspectives and 20th century approaches to ICT and public procurement.

In 2016, following the annual meeting of the Organisation for Economic Co-operation and Development (OECD) Working Party of Senior Digital Government Officials hosted in Tallinn, Estonia, several new country-led groups were established to pool the collective experiences of what has and has not worked in OECD countries across various digital government themes.

This initiative explored how commissioning is much broader than traditional procurement approaches, which are very relevant for transforming public service delivery, and include:

- defining and measuring outcome-based commissioning, highlighting the long-term changes that services and related activities can achieve;
- developing the market to work with a broader range of more diverse service providers, including those from the voluntary, community and social enterprise (VCSE) sectors;

- joint commissioning across organizational boundaries;
- behavioural insight and change; and
- new service delivery models, which adopt a whole systems approach.

Furthermore, the OECD developed 11 principles that define the more holistic approach to public procurement that commissioning represents:

1) **Set the context**: Specifying too much detail at the outset of procurement will limit the possible outcomes – the "new solution" is often just a technological replacement of the older, more traditional method. In this context, it is important to define the problem to be solved before designing the solution.
2) **Start by understanding user needs**: Procurement-led approaches often lose sight of user needs in favour of highly functional specifications – embed a user-centred, design-led, data-driven approach, universal and inclusive design approaches.
3) **Design procurements and contracts that meet users' needs**: Establishing routes to market can be costly – successful market engagement requires a two-way open dialogue, starting from users' needs. In this situation, it is important to work with the relevant research team and acquire additional user information; this will enhance the procurement mechanisms.
4) **Be agile, iterative and incremental**: Traditional procurement methods are rigid. Agile procurement provides a way of thinking differently. Therefore, it is important to anticipate challenges and embrace change.
5) **Work as a multidisciplinary team**: A narrow perspective limits innovation, efficiency and effectiveness. It also brings together diverse skills and experiences right from the beginning of the commissioning process.
6) **Make things open**: Openness reduces friction, enhances transparency and prevents duplication of effort. It also encourages a better understanding of the outcome required.
7) **Build trusting and collaborative relationships, internally and externally**: Reduce duplicated effort and increase innovation by working collaboratively within and outside of government – keep talking with suppliers and industry groups.
8) **Share what you have with others and re-use what others have**: There are many opportunities for governments worldwide (who do not compete on service delivery) to collaborate with other governments and departments. This also encourages collaboration within the country, as well as with others.
9) **Move from specifying solutions to defining outcomes**: Technology is now delivered differently. Governments should move away from specifying the type of ICT solutions and aim to determine the outcomes that would best fit users.
10) **Public procurement for the public good**: Government agencies should adapt or change their procurement process to increase accessibility and create opportunities for disadvantaged groups – meet functional needs while supporting the public good.

11) **Operate and deliver**: Procurement does not end when the contract is awarded, and terms and conditions alone will not ensure that outcomes are met. Buyers should create a shared understanding with suppliers such that expected outcomes drive the real work of everyone involved.

Shortly after the development of the 11 guiding principles, ITU in 2019 published its "SDG Digital Investment Framework". This provides a "whole-of-government" approach to investing in digital technologies to achieving the Sustainable Development Goals (SDGs). A "whole-of-government" approach refers to the joint activities performed by diverse public administrations and public agencies in order to provide a standard solution to a particular issue. This framework is intended to start a new dialogue with the digital investment community. It sets out to help governments choose effective, scalable technology-based solutions that achieve economies of scale and maximum return on investment (RoI).

## 1.2 Normative instruments and international benchmarks

A number of normative instruments, benchmarks and associated guidance have been produced and updated regularly by multilateral and international organizations. These are highly relevant, and reinforce the GovTech Commissioning principles and approaches that are covered in these Guidelines.

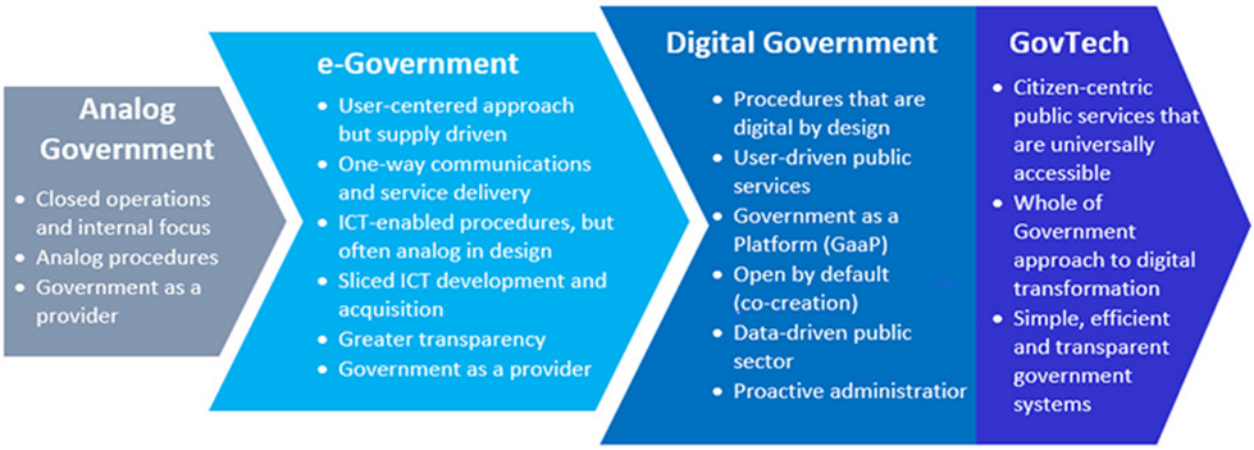
The OECD's Digital Government Index 2019 provides the overall rankings, key policy messages and a detailed analysis of the results, underpinned by the OECD's Digital Government Policy Framework[1]. This is a policy instrument to help governments identify key determinants for the effective design and implementation of strategic approaches to transition towards higher levels of digital maturity of their public sectors.

The "Six dimensions of a Digital Government" from the OECD's Digital Government Policy Framework defines a mature digital government as:

- **Digital by design**: When governing and leveraging digital technologies to rethink and re-engineer public processes, simplify procedures, and create new channels of communication and engagement with stakeholders.
- **Data-driven**: When valuing data as a strategic asset and establishing the governance, access, sharing and re-use mechanisms for improved decision-making and service delivery.
- **Acting as a platform**: When deploying platforms, standards and services to help teams focus on user needs in public service design and delivery.
- **Open by default**: When making government data and policy-making processes available to the public, within the limits of existing legislation and in balance with national and public interest.
- **User-driven**: When according to a central role to people's needs and convenience in the shaping of processes, services and policies; and by adopting inclusive mechanisms that enable this to happen.

- **Proactive**: When anticipating people's needs and responding to them rapidly, avoiding the need for cumbersome data and service delivery processes. It is important to note that people's needs should also be addressed from the start of the design process.

Figure 1: Extending the OECD's presentation of digital transformation in Digital Government Studies (2019)




*Source*: World Bank; extending the OECD's presentation of digital transformation in Digital Government Studies (2019)

Taking the OECD's Digital Government Policy Framework a step further, the World Bank defines GovTech:

> "as a whole-of-government approach to public sector modernization and promotes simple, efficient and transparent government with the citizen at the centre of reforms. The World Bank states that the GovTech approach represents the current frontier of transformation. It is distinct from previous phases as it emphasizes three aspects of public sector modernization:
>
> - Citizen-centric public services that are universally accessible
> - A whole-of-government approach to digital government transformation
> - Simple, efficient and transparent government systems"

To reflect the maturation of the procurement process, a new paradigm of *GovTech Commissioning* emerges that is focused on:

- holistic, transparent, innovative, efficient and effective, whole-of-government approaches to digital, data and technology;
- co-designing and co-delivering simple, accessible, sustainable, inclusive and equitable policy, solutions and services;
- deliberative, participatory, multistakeholder and multisector collaboration; and
- social purpose, social value for money, and positive impacts on communities, societies and economies.

In June 2020, the Development Bank of Latin America (CAF) published its "GovTech Index 2020: Unlocking the Potential of GovTech Ecosystems in Latin America, Spain and Portugal"[2]. This index analyses 28 indicators and primary sources to understand the potential for countries to act in seven policy dimensions: innovation environment; digital environment; industry environment; policy environment; digital government; procurement frameworks; and procurement culture.

The CAF index states:

> "The procurement system functions as the nexus element between startups and government. A robust and transparent procurement environment enables startups to sell to government, and government to buy from those startups providing the best solutions to their challenges. The degree to which governments put in place startups-friendly procurement regulations varies in the region.
>
> The main challenge seems to be in the procurement culture, in that frequently, in place, these are not enforced. In addition to this, corruption in procurement processes remains a fundamental challenge. Solving these issues will be key for governments, as it will help build trust with startups signalling that doing good business with government is possible and taken seriously."

The e-Government Survey 2020 from the UN Department of Economic and Social Affairs (UNDESA) is a comprehensive survey of the online presence of all 193 United Nations Member States. It assesses national websites and how e-government policies and strategies are applied in general and in specific sectors for the delivery of essential services, including procurement. According to the 2020 Survey, 161 of the 193 countries surveyed released online announcements related to government procurement processes. A majority of Member States provide the results of procurement/bidding processes online (138 countries) and have functional e-procurement platforms (125 countries), and about a third (67 countries) provide digital invoice services.

According to the Survey's Local Online Service Index (LOSI), where the city portals are assessed, procurement announcements and information on the organization, operations, management and budget of the city/municipality are available on the portals of more than 60 per cent of the cities assessed (the 2020 Survey covered 100 cities). Only around a third of the city portals (37.2 per cent) make procurement results and related information available The Survey also includes recommendations on making procurement processes and contracting arrangements digital by design and compatible with modern and agile ways of developing and deploying digital technology.

Some aspects relate to effectiveness, efficiency, transparency, accountability and public trust, and digitally publishing government expenditures. Additionally, there are references to changing procurement rules and practices and strengthening the relevant implementation capacities of public institutions, as these are also central to digital government transformation. Indeed, it states that archaic laws, old regulatory regimes, and overlapping and conflicting authorities, can significantly complicate or even halt digital government implementation.

Some relevant standards relating to urban operations and procurement include:

1) Recommendation ITU-T Y.4904 – Smart sustainable cities maturity model: This Recommendation underscores a maturity model to identify the goals, levels and key measures that are recommended for cities to examine their current situation effectively and determine critical capabilities needed to progress towards the long-term goal of becoming SSCs.
2) Recommendation ITU-T Y.4906 – Assessment framework for the digital transformation of sectors in smart cities. This Recommendation identifies the priority sectors in smart cities, in order to optimize economic, environmental and social benefits. Based on this, cities will be able to decide on their digital transformation priorities.
3) ISO 37106: This provides guidance on establishing smart city operating models for sustainable communities. This includes a comparison of the characteristics of traditional city procurement with smart city procurement such as collaborative commissioning focussed on outcomes, co-design of requirements, helping to stimulate the supply market by being open about future plans and requirements, and innovative delivery models that are multisectoral.
4) ISO/IEC 30182: This describes and gives guidance on a smart city concept model, which can provide the basis of interoperability between component systems of a smart city, by aligning the ontologies in use across different sectors. It includes concepts (e.g., ORGANIZATION, PLACE, COMMUNITY, ITEM, METRIC, SERVICE, RESOURCE) and relationships between concepts (e.g., ORGANIZATION has RESOURCEs, EVENT at a PLACE).

The recently approved "U4SCC New Architecture for sustainable, digital development" provides a framework of proto-standards called the MIMs (Minimal Interoperability Mechanism, currently on its version 5), which can assist cities to procure interoperable digital platforms and tools, to avoid vendor lock-in and to ensure that, regardless of the source, the platform or the application, data can flow between the different layers and parties involved.

**GovStack – Sustainable Digital Infrastructure**

The vision of GovStack is to "Accelerate the digital transformation of government services, empowering governments to take ownership of their digital futures by building more effective and cost-efficient digital government services". The GovStack initiative was launched in 2021, under the leadership of four partner organizations – the International Telecommunications Union (ITU), the Republic of Estonia, Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ), and the Digital Impact Alliance (DIAL). For more information, please access the website.

This initiative is an extension of the earlier effort established by the Digital Impact Alliance (DIAL) and the International Telecommunication Union (ITU) on the development of a normative logical framework called the SDG Digital Investment Framework. The SDG Digital Investment Framework was published by the International Telecommunication Union (ITU) and the Digital Impact Alliance in February 2019. The Framework seeks to address core issues that prevent actors from effectively deploying technology platforms to address the Sustainable Development Goals (SDGs). The framework is an empirical abstraction that demonstrates the common approach used by countries that are recognized as leading examples in transforming government services through digitalization, by considering the core, shared, and re-usable elements within a platform-based architecture. These leading country examples include (but are not limited to):

- India (IndiaStack)
- Estonia (e-Estonia)
- Singapore (Singapore Government Tech Stack or SGTS)
- Australia (Digital Services Platform)

# 2 Why is smart sustainable procurement important?

Efficient supply chains in the urban context are essential to support smart, accessible and sustainable city transformations while helping to stimulate the circular economy in the urban realm. It is essential to understand the landscape of key cross-sectoral stakeholders, along with the key digital, data and technology service providers, who can collectively and collaboratively contribute to the transition process.

These Guidelines define smart sustainable cities in line with Recommendation ITU-T Y.4900:

> "...an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, the efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations concerning economic, social, environmental as well as cultural aspects."

Smart sustainable procurement in this context therefore means:

- Mainstreaming accessible, human-centred design, data-driven and open approaches in public procurement.
- Investing in multidisciplinary and cross-functional teams founded on honesty, transparency, collaboration and integrity.
- Using public procurement approaches that are fit for the 21st century as a lever to achieve inclusive, equitable and sustainable policy outcomes that have positive economic, social and cultural and environmental impacts.
- Seizing the opportunities provided by the digital government, open data and new technologies throughout the full public spending life cycle – from planning and informing the market, to evaluating and awarding and managing delivery to help prevent corruption and to meet the needs of communities sustainably.

## 2.1 The 2030 Agenda

The international challenges facing societies, cultures and economies – e.g., climate, health, food, education and equality – are interrelated and increasingly complex. The 2030 Sustainable Development Agenda provides the pathway for the current decade, and the foundations for the decades to follow, where these foundations have been laid.

Improving procurement globally has benefits for citizens, civil servants and governments around the world. It helps tackle corruption and improves services for users. With the global cost of corruption being more than an estimated USD 2.6 trillion every year,*(United Nations, 2018)* and with businesses and individuals paying more than USD 1 trillion in bribes every year, it also has the potential to save vast sums of money.

Public sectors globally are increasingly exploring the opportunities provided by digital, data and technology; for example:

- buying digitally with social purpose is critical to support this, as it helps;
- addressing people's raised expectations for simpler, clearer and digital public services;
- building trust between governments and their communities;
- increasing transparency and access to information;
- reducing inequalities in society and stimulating local economies by increasing participation of under-represented groups such as women-owned SMEs; and
- contributing to successfully achieving the SDGs.

Following a survey conducted in 2020 of 812 cities (in 84 countries across Africa, Asia, Europe, Latin America, North America and Oceania, representing a total population of 810 million people), a report "Cities on the Route to 2030: Building zero emissions, resilient planet for all" of research findings and insights published by the Carbon Disclosure Project in May 2021, states:

- 93 per cent of cities are facing significant climate risks
- 76 per cent of cities are collaborating with businesses on sustainability projects, or are intending to do so in the next two years
- 74 per cent of cities state that climate change is increasing risks to already vulnerable populations
- 43 per cent of cities did not have a plan to adapt to the climate crisis
- 25 per cent of cities cite budgetary capacity issues as a barrier to adaptation

## 2.2 Public procurement in the context of global commitments towards ensuring the inclusion of all people in the digital world

### 2.2.1 Global Commitments towards ensuring equal and equitable digital inclusion for all people

The Sustainable Development Goals (SDGs) highlight the impact of ICTs on the economic and social development of people with disabilities. They emphasise that ICTs influence all aspects of peoples' lives. The use of ICTs allows the removal of many of the remaining barriers faced by persons with disabilities. Sustainable Development Goal no. 10 is to "Reduce Inequality within and among Countries". This requires the Member States to: "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status".

Figure 2: UN Sustainable Development Goals (SDGs)


The UN Convention on the Rights of Persons with Disabilities (CRPD) was passed by the UN General Assembly on 13 December 2006, and entered into force on 3 May 2008. It enshrines the principle that persons with disabilities must be able to enjoy human rights and fundamental freedoms on an equal basis with others. It is the first international human rights treaty requiring that information and communications technologies and systems be accessible as a necessary condition for persons with disabilities to live independently and with dignity on an equal basis with others. As of May 2022, 185 countries have ratified the CRPD, which represents more than 95 per cent of the countries in the world. A total of 164 countries have signed the CRPD, which means they are willing to be bound by its commitments.

Article 9 of the CRPD relates specifically to accessibility. It refers to transportation, the built environment and ICT accessibility. Therefore, this article is also relevant in building smart cities. The article states: "T*o enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others to the physical environment, to transportation, to information and communications, including information and communications technologies (ICTs) and systems and to other facilities and services open or provided to the public, in urban and in rural areas*."

Furthermore, to achieve this, Article 9 requires, "*the identification and elimination of obstacles and barriers to accessibility…" and that this elimination of barriers shall apply to "Information, communications and other services, including electronic services and emergency services*".

Article 9 also requires that accessibility be included as a consideration at the earliest stages during the design and development of ICTs (Art 9.2(h)). One practical way in which this can happen is that governments include accessibility as mandatory requirements when procuring ICTs.

In line with the above global commitments and human rights, governments and policymakers should consider the formulation and development of laws and policies, including those related to procurement, that ensure equality in access to information and communication technologies for all, including by promoting the creation of a market for accessible ICTs through well-planned procurement policies.

### 2.2.2 Procurement of accessible ICT products and services

Accessibility requirements and standards supported by public procurement policies are the key drivers for an inclusive society. Additionally, accessible ICTs are a powerful enabler of people's ability to participate in every aspect of modern life.

Accessibility is defined within EN ISO 9241-112:2017 as the *"extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in identified contexts of use"*. An accessible ICT product or service is one that can be used by all its intended users, taking into account their differing capabilities. A person's ability to use technology may be impaired due to various physical, sensory, emotional or cognitive disabilities. This difficulty may be due to a temporary or permanent disability. However, it may also be due to the situation in which they are using the ICT such as while driving, or in a noisy environment.

Therefore, in many countries, there are laws, policies and regulations that require sectors such as government and education to ensure that the services they provide through ICT are fully accessible. Governments are the number-one technology buyers. A procurement policy for accessible ICT products and services will have an enormous impact on inclusion. In addition, if governments ensure accessible ICTs, they will offer more labour opportunities for persons with disabilities.

A national procurement standard should include technical standards to define the functionalities expected from ICTs. These technical standards should be harmonized with the international standards to create economies of scale and to increase the competitiveness of the national technology.

If government and public authorities purchase accessible ICTs, they:

- create an accessible employment and inclusive environment in the public sector;
- deliver better value for money to citizens; and
- make them (accessible ICTs) affordable by reducing the cost.

Often, governments fund and buy a huge array of ICT goods and services. Considering that public procurement represents between 10 and 17 per cent of the GDP of an average country, through an accessible ICT public procurement policy, governments can develop a prosperous digital market.

There are many harmonized standards that define hardware accessibility. The systematic adoption and use of commonly accepted technical standards is critical to a successful accessible ICT market. Significant economies of scale can be achieved by industry and by government. There is a growing global trend towards the acceptance and adoption of the same core set of accessible ICT standards worldwide.

ITU-T Study Group 16 on "Multimedia and related digital technologies" is the lead study group on human factors and ICT accessibility for digital inclusion. In this context, it develops standards relating to the acquisition and use of accessible equipment and services including, but not limited to:

- Recommendation ITU-T H.870 (V2) – Guidelines for safe listening devices/systems
- Recommendation ITU-T H.871 – Safe listening guidelines for personal sound amplifiers
- Recommendation ITU-T H.702 (V2) – Accessibility profiles for IPTV systems
- Recommendation ITU-T F.780.2 – Accessibility of telehealth services
- Recommendation ITU-T F.930 – Multimedia telecommunication relay services
- Technical Paper ITU-T HSTP.ACC-UC – Use cases for inclusive media access services
- Technical Paper ITU-T FSTP-ACC-RCS – Overview of remote captioning services

Public procurement as a process can be leveraged as one of the most flexible and far-reaching legislative instruments available to any government. Increasingly, the "power of the purse" is being used to promote policy objectives such as sustainable development and social considerations.

One of the most important aspects of a procurement exercise is using clear, unambiguous descriptions of what the required product or service must be able to do. These mandatory requirements are best specified in terms that are unambiguous and have the same meaning to the buyer and to the supplier. For ICT, mandatory requirements are often best expressed in terms of the types of standards to be considered within the procurement process.

ITU has also published the Model ICT Accessibility Toolkit – Policy Report, which provides much-needed guidance for public procurement of accessible ICT equipment to enable the provision of an accessible work environment and public services along with the creation of a market for accessible ICTs.

### 2.2.3 Guidelines, knowledge resources and best practices to support formulation and implementation of digitally inclusive public policy implementation

There are a range of resources and guidance available to assist in the use of accessibility standards in the procurement of accessible ICTs. These resources provide guidance that is applicable to private and public organizations seeking to "buy accessible", as well as to those suppliers wishing to "sell accessible".

In an increasingly connected world, we are all responsible for creating inclusive digital environments, cities and societies where the needs of every person, including persons with disabilities, women, individuals with low literacy levels, indigenous peoples, migrants, and other persons from vulnerable groups are considered. Only by expressly including ICT accessibility in our digital policies and strategies can we ensure that devices, products and services are usable by all intended users, regardless of gender, age, ability or location. The lack of prioritizing ICT digital accessibility risk increasing the existing digital divide and jeopardizing our pledge *"to leave no one behind"*.

Therefore, work in digital inclusion must focus to support the efforts of governments and stakeholders in implementing digital transformation strategies to adapt and reshape their business models, not just to the new markets and consumer trends, but also to build communities, and environments that are digitally inclusive for all people regardless of their gender, age, ability or location. However, not all stakeholders are considering one of the most important elements essential for a successful and inclusive transformation, which is that digital information, services and products must be accessible to all its potential users.

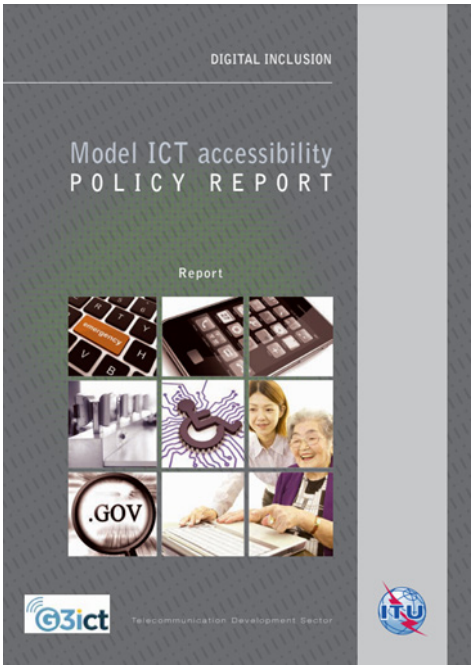
Several guidelines and resources to support the development of knowledge and capacity in the topic of digital inclusion including on formulation and implementation of policies are made available freely in multiple languages, with localized content where relevant and in digitally accessible formats, so that they can also be used by deaf or blind persons. Among the key resources is the ITU toolkit and self-assessment for ICT accessibility implementation.

The toolkit provides tailored guidelines to support all stakeholders in the process of building inclusive digital communities and environments through the development of appropriate policies and strategies. The resource also presents good practices to advance the implementation of ICT accessibility in line with the global commitments to achieve digital inclusion such as the Convention on the Rights of Persons with Disabilities (CRPD). Relevant guidelines, standards and good practices related to public procurement best practices and accessibility requirements and definitions are indicated in ITU toolkit and self-assessment for ICT accessibility implementation (section 5.4) such as:

> *United States of America: The United States of America has developed technical standards on accessible ICTs and has enacted legislation that requires their use by all Federal agencies in the procurement of ICTs. Section 508 of the 1973 Rehabilitation Act is a set of enforceable ICT accessibility standards that Federal agencies must incorporate as a mandatory set of requirements (or technical specifications) that suppliers must meet in the procurement of ICTs. Developed by the United States Access Board, they were embedded into federal procurement regulations in 2001.*
>
> *European Union: The first European standard on accessible ICTs, EN 301 549 "Accessibility requirements suitable for public procurement of ICT products and services in Europe", was published in March 2014. This standard was developed by the European Standards Bodies following a request of the European Commission. The accessibility requirements contained in EN 301 549 have been harmonized to match as closely as possible with those contained in US Section 508.*

*Australia: The procurement standard guidance is a governmental guideline not applicable to the general public and not limited to web content. It aims to make ICT goods and services purchased by the Australian Government more accessible to all employees. Specifically, the policy covers all video-based, two-way audio-based, hardware, software, and web-based ICT products, along with any support services. Any procurement process must ensure that ICT products can be utilized by all employees, regardless of any physical, emotional or cognitive disabilities they may have. The Standard echoes the European Standard – EN 301 549. In terms of practicality, the Standard does not require all prior ICT goods and services to be replaced, as the majority are already compliant with several accessibility guidelines. The main application of the standard is when ICT goods and services require renewal or replacement, or when any coordinated procurements must be renewed. This standard is not a definitive procurement guideline and should be applied in tandem with Australia's existing procurement guidelines. As with the European Standard, the Australian Standard includes conformance Level AA of WCAG Version 2.0.*

Figure 3: Model ICT accessibility policy report




The ITU-G3ict "Model ICT Accessibility Policy Report" provides policy guidelines and suggestions for accessible ICTs. It is designed to help countries develop their own ICT accessibility policies and regulations. The report provides "model" policies for specific categories of ICTs for countries that have not already developed their own. It also provides more general guidance for countries on how to develop, promote, monitor and report on these policies.

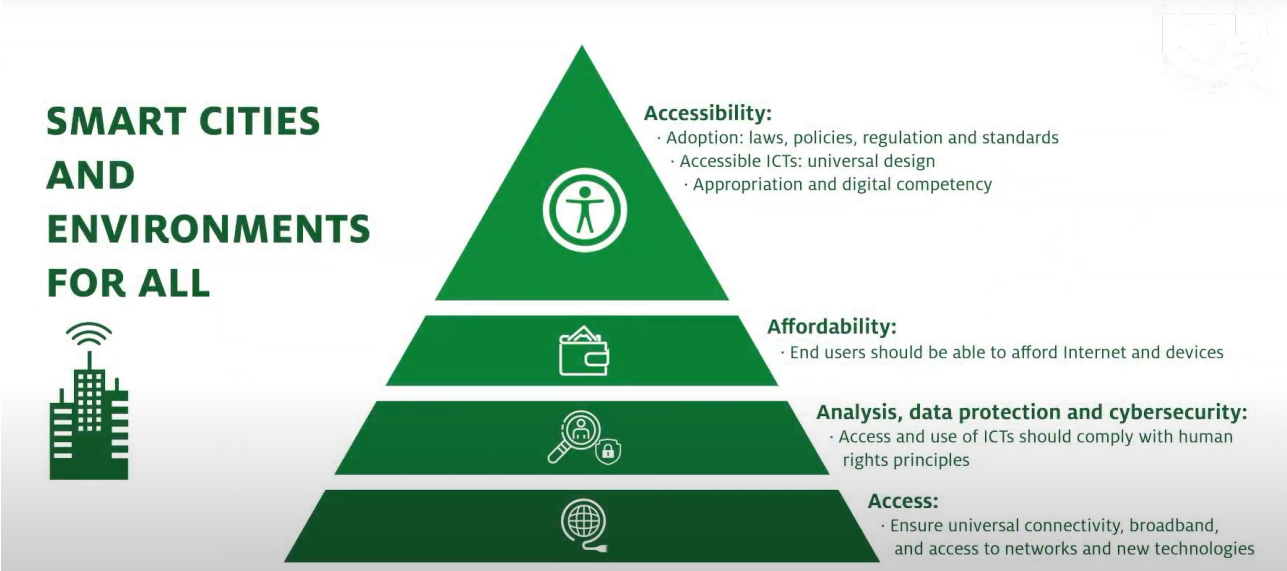
This resource provides an overall understanding of available standards and tools to enable policy development related to the procurement of accessible products and services. The resource was developed in the context of Accessible Europe: ICT 4 All 2019. This resource has been prepared within the context of two European Regional Initiatives on "A citizen-centric approach to building services for national administrations" (aiming at facilitating the development of transformative and

paperless citizen-centric services that could be accessible and available to all members of society) and on "Accessibility, affordability and skills development for all to ensure digital inclusion and sustainable development" (aiming at bridging the digital divide and equip all groups of society, including persons with disabilities and specific needs, to take advantage of ICT, by enabling capacity building in digital skills). Free-of-charge and digitally accessible tutorials and online self-paced training that complements the knowledge related to development and implementation of policies, strategies related to ICT accessibility and to building inclusive smart cities and communities are also available, including:

- ITU-D Video tutorials: "Towards building inclusive digital communities": ITU toolkit and self-assessment for ICT accessibility implementation video available in Arabic, Chinese, English, French, Russian and Spanish
- ITU-D Video Tutorial "How to ensure inclusive digital communication during crises and emergency situations" in English, French and Spanish
- ITU-D How to ensure inclusive digital communication during crises and emergency situations (self-paced online course) available in English, French and Spanish
- ITU-D ICT Accessibility: the Key to Inclusive Communication (self-paced online course) available in Arabic, English, French, Russian and Spanish Buying digitally, with social purpose
- ITU-D Beyond smart cities = "Smart for all": Towards building inclusive and digitally accessible environments and communities to meet the needs of present and future generations. (self-paced online course) available in English, French and Spanish[3]

A key element within a smart sustainable environment is to ensure that it meets the needs of every individual in the present and future generations, regardless of their gender, age or ability to access, use and interact with ICTs. To reach this goal, it should be ensured that all technology used within a smart city and community is designed and accessible universally so that no one is left behind in the data analysis, and that the solutions offered will enable everyone's participation in economic, social, environmental, as well as cultural life and other areas. Therefore, to build smart cities and environments for ALL it requires four Building Blocks:

Figure 4: Smart city and environments for all




**A. Access/Connectivity/Digital Infrastructure**: High-speed communications networks, devices and technologies are required to ensure that connectivity of smart cities is in place.

**B. Analysis, data protection and cybersecurity**: Governments, industries or businesses use technology and data to take action to provide products or services according to the needs of all potential users.

**C. Affordability: To ensure that** end users are able to afford an Internet connection, as well as to buy the necessary technological devices in order to benefit from a digital environment or community.

**D. Accessibility: Design and develop** digital environments human-centred and inclusive so that equal and equitable solutions to use technology are in place to ensure that no citizen/end-user is left behind. To achieve this target the implementation of universal design and ICT/accessibility requirements and standards in all ICT products, services, applications and solutions are critical. Procurement policies and requirements issued within the smart cities context can help to achieve this.

## 2.3 Building institutional capability and capacity

As stated in the Organisation for Economic Co-operation and Development (OECD) Public Governance Review "Skills for a High Performing Civil Service":

> "Today's civil servants are addressing problems of unprecedented complexity in societies that are more pluralistic and demanding than ever. At the same time, the systems and tools of governance are increasingly digital, open and networked. Civil servants need the right skills to keep pace. This presents a double challenge: the first is to identify which skills will be needed for a civil service, which is fit-for-purpose today and into the future; the second is to figure out

how civil services can invest in these skills – through attraction, recruitment and development – to improve policies and services."

This OECD Review goes on to conclude that the capability and capacity of the civil service workforce is fundamental to the success of all public policy and reform; a known but often overlooked fact.

*Case study – Digital maturity analysis of English local authorities*

**National, International & Research Group | UK Government Digital Service (GDS)**

Figure 5: UK local authorities

Analysing the current state of digital maturity was across all UK local authorities.

**Summary**

- Having the right people in the right roles has the biggest impact on digital maturity.
- Strong evidence of collaboration and partnerships are an enabler to improving digital maturity.
- Budgets and deprivation do not affect digital transformation directly.

**The problem**

GDS supports digital transformation across the public sector. With 343 separate local authorities, this would mean that considerable resources would be needed and would lead to a delay in being able to support these organizations on their digital journey. We needed to establish the current state of digital maturity across all these local authorities, and what the most mature authorities had in common, so that we could target our resources and efforts to be as effective as possible.

### The approach

To carry out the maturity analysis GDS used the five principles of the UK Department for Levelling Up, Housing and Communities (DLUHC) Local Digital Declaration, namely:

- Evidence of being user centred
- Evidence of using digital standards
- Evidence of best practice for data sharing
- Evidence of strong digital leadership
- Evidence of working in the open

GDS only used publicly available data that could be obtained for the local authorities. This was then leveraged to score the organizations on a set of metrics based on the principles.

The metrics that GDS used looked at their user research practices, adoption of agile and cloud-first approaches, use of open-source code and prioritising SMEs in their procurement. It also covered published information and evidence of data sharing, digital strategies and demonstrating leadership, either politically with dedicated portfolios or corporately with a specific directorate. To look at the working collaboration across local authorities and the communication about the work they are doing between local governments and their stakeholders.

As GDS conducted this with usually publicly available information, rather than a deep dive into practices, this analysis did not take into account the quality of any work taking place but instead just that these principles were being used or considered.

### The results

Once GDS had completed the analysis they observed that the strengths across local government were:

- Working together, including nationwide collaboration.
- Having an up-to-date digital strategy setting out the digital aims of the authority.

Where organizations were the weakest included:

- Being able to demonstrate good visible leadership for digital transformation.
- Communicating the work, they are doing and how they achieve it.
- Having digital, data and technology (DDaT) roles embedded within the organization to allow digital transformation.

The absence of DDaT roles, generally recognized as being due to not having the financial resources, has been mitigated by regions where user research and insights work is carried out across multiple authorities. This enables them to adopt a user-centred design (UCD) approach to services even when they do not directly have user researchers employed. Collaboration is key within the Local Digital Declaration and our analysis found that signatories to the declaration had a higher maturity score than those that did not.

The majority of the top-scoring authorities had a dedicated Director for Digital or an elected member with responsibility. However, it is rare to see this and it does separate the high maturity authorities from the low maturity ones. While visible leadership could be either elected members or officers the presence of a dedicated accountable elected member is unusual. However, the top five local authorities all had an elected member portfolio for digital. Authorities that could demonstrate visible leadership scored 50 per cent higher than those that did not.

There are various factors that can affect an authority's digital maturity; however, the theme running through this work was how important the right people are. The right people are those who are able to see the benefits of wider collaboration work and have sufficient and visible leadership to be accountable for the transformation journey. When this happens, there is a real possibility of seeing a jump in digital maturity.

Having carried out this analysis, we could start to see the limitations to local authorities on being able to build out their own new services and why they have become reliant on their large suppliers and legacy systems.

**Next steps**

GDS is now able to direct its resources in a more efficient way having carried out the analysis. To do this they will:

- Share their findings with local authorities so that they can reflect on their individual circumstances and work out how they can incorporate the findings to support their transformation.
- Look to see how they can work with suppliers to start using digital standards and common components, to allow lower maturity authorities access to services that they can quickly bring onboard when they do not have the skills required internally to build their own.

If you would like to view the full results of the digital maturity analysis, including a video, please be informed that this has been published on the GDS GitHub[4].

## 2.4 Building trust in public procurement through civic participation builds trust in government

There are exciting opportunities for civic participation at every stage of the public procurement and contracting process. Thanks to the Open Contracting Data Standard (OCDS) and the Open Government Partnership (OGP) Participation & Co-creation Standards – which recognizes principles of good engagement – this enables governments to engage with civil society and obtain their input on how public funds should be spent.

This transparent, civic participation is important because it helps:

- those in civil society who are affected by government's decisions to have a right to be involved in the decision-making process;
- to build public trust that their contributions will genuinely and transparently influence sustainable decisions, which recognize the needs and interests of all participants;
- to design and deliver better public services; and
- to tackle corruption.

*Case study – Reducing the e-waste mountain: how to buy IT sustainably*

**Scottish Government**

Figure 6: Reducing the e-waste mountain

E-waste is growing at an alarming rate globally. The Scottish Government has designed new frameworks to encourage more sustainable buying.

## The problem

Electronic waste or "e-waste" creates a particular dilemma for governments with regard to regulating e-waste streams and challenges associated with how it is disposed of. Governments also need to keep in mind that while they aim to tackle the existing e-waste streams, thousands of tonnes of the same are being generated at the same time. In Scotland, the public sector buys 170 000 electronic devices, including laptops, PCs and mobile phones each year, equivalent to more than 400 a day. Although instances of re-use and recycling have increased, this level of consumption does create environmental and reputational risks. *(TCO, 2015)*

In 2015, the Scottish Government launched a Green ICT strategy to manage the risks and ensure compliance with EU requirements on sustainable buying. The task for procurement officers was to implement the policy across a vast IT estate, while continuing to deliver value for money for taxpayers.

> "Manufacturing a sustainable product is not just about which product uses the most recycled content or is the easiest to recycle. It is the whole life cycle of the product that tells us if it is truly sustainable."
>
> Stephen Fuller, Expert on Social Responsibility, TCO Certified

## The approach

Firstly, the Scottish authorities used early market engagement to inform suppliers of the policy and work together on how to deliver it. This included the establishment of a "User Intelligence Group" of stakeholders. Regular conference calls and face-to-face meetings were held with industry experts, major manufacturers, resellers and other organizations within the supply chain.

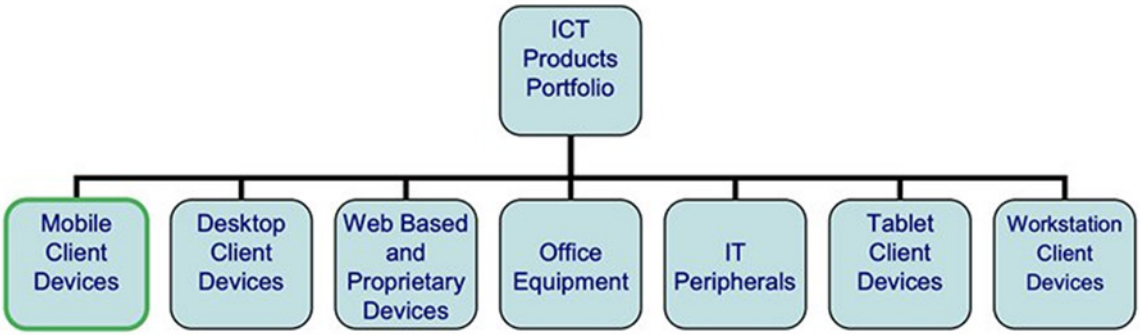
Suppliers were asked how they would:

- reduce toxicity levels in products;
- minimize packaging;
- ensure carbon neutral transport of goods; and
- trace supply chains, in order to help rule out human rights abuses.

Discussions revealed that of the seven categories of device that the government bought, each required a different approach to managing e-waste.

For example, a mobile phone, which contains potentially hazardous lithium-ion batteries, needs to be disposed of differently from a desktop computer, containing lead, PVC and other toxins. Furthermore, it is important also to consider the durability and the frequency with which the phone's software needs to be updated/upgraded. Too many updates/upgrades will make the phone slower or too slow and, consequently, the need to buy a new one will arise.

Figure 7: The Scottish Government's ICT Product portfolio, split into 7 categories © Scottish Government




To prevent cupboards overflowing with unused keyboards and cables, flexible buying plans were proposed, including the option to buy a PC without peripherals. For devices that could not be upgraded such as tablets, suppliers looked into how they could recycle components.

As well as investigating the devices themselves, research was also carried out into how to make government offices smarter – for example, allowing remote access to servers for home-workers and switching to lightweight, scaled-down versions of traditional PCs, known as "thin clients".

Shifting the risks and responsibilities around disposal, carbon reduction and supply chain monitoring to suppliers would mean a considerable investment.

To compensate for this, the government offered providers the chance to compete for multiyear contracts, worth up to GBP 250 million (USD 310 million). Each device would have its own framework, awarded to a single supplier through open competition.

> "There's no point devising requirements without knowing the market can meet them. We have to ask 'is this viable?' from a supplier point of view."
>
> Lee Rutherford, Scottish Procurement and Property Directorate

**The results**

In 2016, the new frameworks were published through the Scottish Government's e-Procurement platform. Contracts were offered on an initial two-year basis, with the option to extend a further two years. The number of bidders varied by device, ranging from four to seven. Bids were evaluated using a scoring system, with social, ethical and environmental factors making up 20 per cent of the total.

Given the scale and length of the contracts, suppliers were able to offer devices significantly below market rates, representing total savings of GBP 100 million (USD 124 million).

Aside from lower cost, the single-supplier route offered environmental benefits including:

- energy efficiency and environmental accreditation were built in as a minimum requirement;
- supply chain data could be published openly, meeting human rights requirements;
- a commitment to extend the useful life of devices through upgrading components;
- a buy-back scheme for devices that cannot be upgraded such as tablets; and
- a reduction in packaging, with devices supplied unboxed and set up by suppliers.

Figure 8: More IT hardware will be needed to enable homeworking in response to the COVID-19 pandemic

**Next Steps**

The COVID-19 pandemic has meant that more PCs and laptops urgently need to be bought to support working from home and remote learning. The Scottish Government recently spent GBP 9 million on 25 000 laptops for schools under emergency buying legislation.

At the same time, iPads, Chromebooks and broadband routers were being sent to 9 000 people on low incomes through the Connecting Scotland initiative. The challenge for governments across the world will be to ensure that sustainable IT buying is prioritized during the pandemic to avoid more e-waste blighting the environment.

**Three things we learnt**

- E-waste needs to be regulated and reduced to meet sustainability targets.
- Early consultation allows government to tackle e-waste together with suppliers.
- Regulatory frameworks need to be tailored to the particular technology being bought.

*Case study – Empowering women-owned businesses in the Dominican Republic*

**Dominican Republic Government**

Figure 9: Including women in public procurement

The Dominican Republic has shown a pioneering approach to including women in public procurement.

**Summary**

- Encouraging women-owned businesses requires a targeted approach.
- Success can be achieved by combining quotas with events and workshops.
- Good-quality data are essential to monitor gender inclusion.

### The problem

Once known mainly for its beaches and bananas, the Dominican Republic now has the largest economy in the Caribbean and Central America. And yet, until recently, women were not sharing the fruits of its success. In the early 2000s, government spending on procurement, an important tool in promoting gender equality, went almost exclusively to men.

For female entrepreneurs, often running small family businesses, public procurement was seen as a closed shop – out of reach and not worth the effort needed to win a contract.

> "No economy can develop its full potential, unless women and men participate fully."
>
> Kristina Georgieva, Director of the International Monetary Fund

### The approach

In 2012, Dr Yokasta Guzmán became the Dominican Republic's first female Director of Public Procurement. Her office, the DGCP (*Dirección General de Contrataciones Públicas*), began to launch a range of initiatives aimed at women-owned businesses. These included:

- encouraging women to register as suppliers on the government database;
- setting a target of 5 per cent of all government contracts to go exclusively to women-owned businesses; and
- running events and workshops to familiarize women with public procurement.

To raise awareness, "procurement fairs" were held across the country. At these events, officials could find out where women-owned businesses were located and meet women face to face to explain the opportunities.

Follow-up events included training on how to use the government's eProcurement system and workshops on interview techniques and presentations. To reassure female suppliers that the system was not rigged in favour of men, a raffle system was introduced. Any business that met the selection criteria was entered into a "project lottery" with the winner announced in public.

Statistics on gender inclusion using clear charts and maps, rather than being buried in government reports or spreadsheets.

Figure 10: A procurement fair in Santo Domingo where women suppliers meet government officials

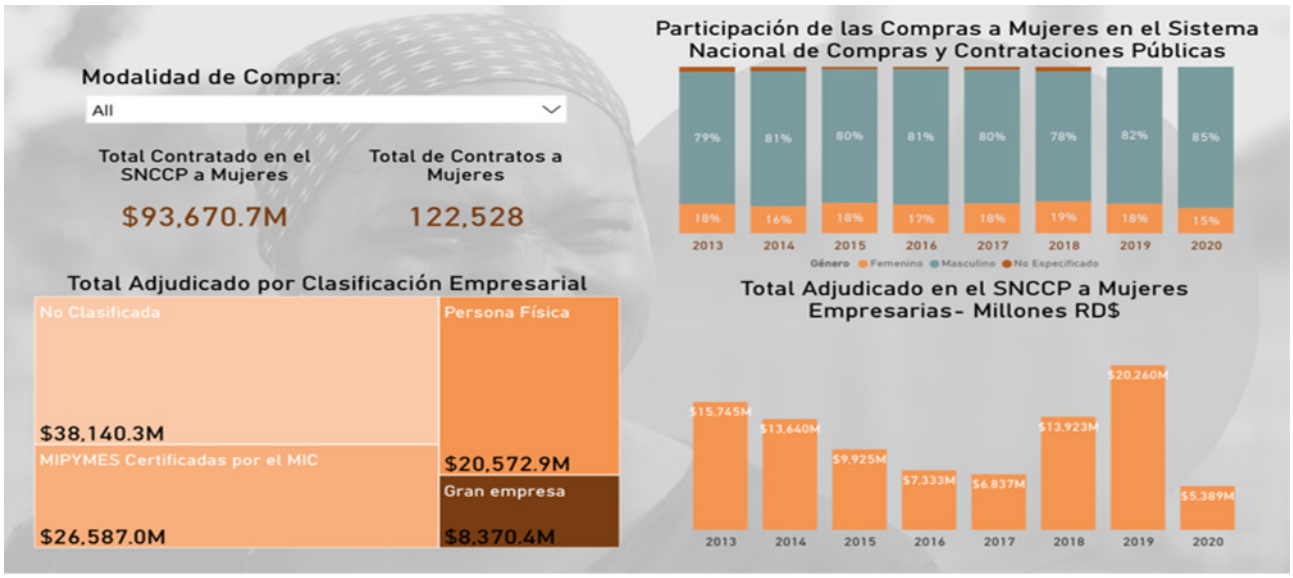

**The results**

Between 2012 and 2017, the number of women suppliers on the DGCP database grew from 2 000 to 15 000. As well as traditionally "female" sectors such as agriculture and services, almost every industry was represented, from mining and research to engineering and tech.

Women registered from across the island, even in more remote provinces, suggesting that the "we come to you" approach of procurement fairs had worked. By 2019, a fifth of government contracts, totalling (Dominican Republic Peso) DOP 20 billion (USD 350 million), went to women.

As Dr Guzmán put it, "women had stopped begging for favours and started claiming their rights".

Figure 11: A data visualisation showing the amount of government contracts awarded to women, published on the DGCP website




## The challenges

As with any policy designed to favour a specific group, there are risks involved. For example, companies might employ a token number of women simply to gain preferential status. The proactive approach taken by the DGCP in seeking out and meeting women at events and workshops made this less of a concern.

By supervising the registration process, government officials were able to verify that women either owned or had majority participation in a business. Once a women-owned business was added to the database, it was important to track what happened next.

This required painstaking work to add gender markers or "tags" to government data, a process known as "disaggregation". Once the tags were in place, the DGCP was able to see which women-owned businesses had won contracts, what type of contracts were awarded to them, and for what amount – crucial information for measuring the success of the policy.

## Next steps

The Dominican Republic has begun sharing its experience on gender inclusion with neighbouring countries, starting with El Salvador and Costa Rica. Similar schemes have been launched across Latin America, with Chile and the city of Buenos Aires introducing certification for women-owned businesses.

As governments react to the COVID-19 pandemic, however, there is a risk of gender inclusion slipping down the agenda. The challenge will be to ensure that women-owned businesses don't end up back where they started and can play an equal role in the recovery.

# 3 How has COVID-19 impacted smart sustainable city procurement?

The COVID-19 global health pandemic has exposed gaps and weaknesses in governments' digital resilience and exposed inaccessible digital planning of service, further undermining governance and accountability where systems were already weakened due to corruption and bribery.

Even before the pandemic, the World Economic Forum estimated that USD 455 billion of annual global healthcare spend was lost to fraud and corruption.

The previously referenced Carbon Disclosure Project report "Cities on the Route to 2030: Building a zero-emission, resilient planet for all", states:

> "Since the beginning of the COVID-19 pandemic, cities have been on the frontline of two complex global crises: tackling the pandemic and climate change simultaneously. What began as a public health crisis has now developed into a social and economic crisis. COVID-19 has highlighted inequalities and vulnerabilities, showing us that cities can't go back to business as usual – we need to build back better…
>
> As the world seeks to recover from COVID-19, recovery funds and stimulus packages need to focus on a green and just recovery. There is an opportunity here for cities to access funding and to implement climate projects focused on increasing resilience, protecting the most vulnerable and building an equitable and fair society. If COVID-19 recovery is not sustainable and equitable, we risk locking cities into infrastructure that is not aligned with the UN Sustainable Development Goals and a 1.5°C future."

Although both crises were combated at the same time; it is essential to note that tackling the pandemic had positive collateral impacts on the environment, including decreased consumption and mobility, and decreased transport of goods, which was reflected in lower $CO_2$ emissions during the period of the pandemic.

Knowing how to buy effectively during an emergency – identifying needs, supporting suppliers and ensuring standards are met – is critical to ensuring that public funds are directed where they are most needed for the response effort in fast, smart and open ways.

The Open Contracting Partnership (OCP) has published five recommendations to support emergency procurement for COVID-19:

- **Policy**: Make emergency procedures public and open. This includes coordinating and centralizing procurement, setting a clear test and a written justification for emergency procedures, publishing open data, targeting price gouging, creating standard tender documents, and requiring timely reporting.
- **Coordination**: Set clear goals & priorities and consolidate emergency committees for quick decision making. Create strategies for capacity building and increasing participation.

- **Data**: Use open procurement data to analyse and share information to predict and manage critical supply chains. Collecting tagging all contracting processes and budget lines with "COVID-19" to ensure high-quality, open and complete data, disclose technical comments from suppliers, and publish all contract awards under the emergency framework. Our research shows that this should also include information about suppliers.
- **Innovative partnerships**: Build innovative partnerships with business and civil society. Issue a list of essential medicines and devices so markets can react accordingly and encourage start-ups and data-driven civil tech projects.
- **Civic monitoring**: Trust and support civil society to play an important role in monitoring efficient spending and delivery of goods and services. Create clear feedback channels and spaces for meaningful participation.

Emergency telecommunications and other information and Communication Technologies (ICTs) are critical for monitoring the underlying hazards and for delivering vital information to all stakeholders, including the most vulnerable societies at risk.

The Guidelines for national emergency telecommunication, developed by ITU, is a critical tool to assist policymakers in developing a clear, flexible and user-friendly national emergency telecommunications plan with a multistakeholder approach. The NETPs set out a strategy to enable and ensure communications availability during the disaster mitigation, preparedness, response and recovery phases by promoting coordination across all levels of government, engaging stakeholders to think through the life cycle of a potential disaster or any emergency, determining the required capabilities for emergency responses, and establishing a governance framework of roles and responsibilities.

In the context of the COVID-19 pandemic, which provided irrefutable proof of the importance of ensuring that digital information, services and products are digitally accessible by all people and citizens, including older persons and persons with disabilities during emergencies and crises situations, ITU also developed Guidelines on how to ensure that digital information, services and products are accessible by all people, including persons with disabilities during the COVID-19 pandemic. These guidelines are available in all six UN languages, as well as in 22 additional languages.

## 3.1 Introduction to buying effectively during an emergency or crises

This advice is intended only to be used in an emergency, which includes "dos and don'ts" to ensure fair and transparent procurement. In all other circumstances, follow the practical steps to take towards smart sustainable procurement' section of these Guidelines.

### 3.1.1 What is emergency buying?

Emergency buying is when public officials and stakeholders buy products and services with extreme urgency in response to an unforeseen event such as a health crisis or natural disaster.

Under these circumstances, it can be difficult for buyers to maintain normal standards of fairness, open competition and value for money. At the same time, suppliers may be under significant stress and unable to provide services as normal.

To help mitigate the effects of an emergency, buyers can take several practical steps. These can include:

- clarifying when emergency conditions apply;
- preparing for emergency situations;
- using more flexible procedures to buy faster; and
- supporting suppliers while ensuring standards are met.

### 3.1.2 Defining an emergency

Clarify when emergency conditions apply to ensure that procedures can be used appropriately.

**Why it's important**

It is important to distinguish between genuine emergencies – sudden, unforeseen events requiring an immediate response – and urgent situations created because of the lack of planning.

Without a clear distinction, buyers and suppliers will not know when emergency buying procedures are appropriate or legal.

**What this means**

Public officials and stakeholders should clarify when emergency buying conditions apply. For example, during:

- natural disasters: such as earthquakes, cyclones, tsunamis, volcanic eruptions, flooding, fires or contamination;
- health emergencies: such as a pandemic or food safety incident;
- failures of critical infrastructure or equipment;
- political emergencies: such as war, coup or civil insurrection; and
- terrorist attacks, serious crimes or a major cybersecurity emergency.

In these cases, national or international governing bodies will usually declare a state of emergency.

Emergencies do not include:

- recessions or economic downturns;
- a sudden change in market prices; or
- a contract running out without a replacement supplier being found.

Emergencies usually occur in three phases, during which different buying procedures may be used:

- **Rapid response**: emergency buying is required to prevent loss of life or damage to critical infrastructure – for example, sourcing food and housing for displaced people.
- **Relief**: after the immediate threat to life or infrastructure has been addressed, accelerated buying may still be required; for example, sourcing laptops to allow remote learning while schools are closed.
- **Recovery**: once an emergency situation has stabilized, buyers should return to using routine procedures. However, accelerated buying and enhanced support for suppliers may still be appropriate.

During each phase, public officials and stakeholders need to balance the need to act without delay (for example, to save or preserve life or safeguard buildings) against meeting their obligations to act lawfully, reasonably and with integrity.

**Dos and don'ts**

Table 1: Dos and don'ts-defining an emergency (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ provide clear guidance on when emergency buying conditions apply and when they don't<br><br>✅ clarify which buying procedures are appropriate during each phase of an emergency | ❌ do not use emergency buying procedures for situations caused by poor planning or risk management |

### 3.1.3 Planning for an emergency

Plan how to respond to an emergency by training staff and anticipating risks.

### Why it's important

Having a clear strategy on what to do in an emergency is essential to act decisively once a crisis happens. Early intervention can help ensure an emergency does not reach the stage where suppliers are overwhelmed and unable to respond to buying requests.

Planning for an emergency can include:

- reviewing how previous emergencies were handled;
- training staff in using emergency buying procedures;
- carrying out risk assessments and continuity planning; and
- investing in or scaling up digital buying tools.

### What this means

To help prepare staff, public officials and stakeholders should:

- set up an emergency response team, including buyers, contract managers, legal and technical experts, and senior decision-makers;
- run training exercises to test processes and familiarize staff with emergency buying;
- prepare checklists and contract templates to use in an emergency buying situation;
- publish clear guidance on when emergency buying procedures can be used and how they will be approved; and
- use digital buying tools, for example, supplier databases and online contracting software, to help speed up the buying process.

To assess risks to essential services, public officials and stakeholders should:

- identify strategic suppliers that provide critical goods or services, for example, medical devices or cybersecurity services;
- monitor suppliers that may be facing financial challenges and will not be able to respond during an emergency; and
- review any previous emergency spending with suppliers, assessing any concerns around value for money, delivery and transparency.

**Dos and don'ts**

Table 2: Dos and don'ts-planning for an emergency (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ set up a team to respond to emergency situations<br><br>✅ identify strategic suppliers that provide critical services<br><br>✅ review previous emergency spending with suppliers | ❌ do not expect staff to respond to emergency situations without training and access to appropriate digital tools |

## 3.2 How to buy faster

Prioritize user needs, engage with suppliers, and use emergency and accelerated procedures.

**Overview**

During an emergency, it is essential to buy faster than usual to deliver lifesaving and priority products and services. To be able to do this depends on the ability of buyers to:

- quickly identify and prioritize for persons with disabilities and the most vulnerable and at-risk;
- develop requirements based on user needs;
- find new suppliers and support existing ones; and
- use flexible contracting and buying approaches designed for emergencies.

### 3.2.1 Prioritize needs

Prioritize those who will benefit most from emergency buying and base buying requirements on their needs.

**Why it's important**

As soon as an emergency hits, knowing what and who to prioritize allows government buyers to focus scarce resources to source the most critical items and get them to the communities most at risk.

To enable this, buyers need to establish valid user needs to help inform their buying strategy. Doing this during an emergency can be difficult but is essential to avoid buying the wrong product or service at a crucial time.

### What it means

To identify user needs during an emergency public officials and stakeholders should:

- listen to the most impacted communities – they have already been dealing with the problems of insecurity (e.g., food, health, shelter, sanitation) for longer than many others will have been and will have valuable experience from which to learn;
- speak to medical professionals, NGOs and key workers involved in an emergency response; and
- use data – for example, health information systems to identify at-risk groups and procurement records to check stock levels of critical supplies.

To prioritize what products or services public officials and stakeholders need to buy, they should:

- base buying requirements on the needs they discover by speaking to users and experts and for persons with disabilities;
- quickly test any assumptions they have about products or services they are intending to buy – for example, check if users have access to the Internet if they are proposing an online solution; and
- follow international guidance on priority emergency supplies to buy (for example, lists supplied by the World Health Organization).

### Dos and don'ts

Table 3: Dos and don'ts-Prioritize needs (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ base requirements on valid user needs, discovered through speaking to impacted communities<br><br>✅ follow international guidance on priority emergency supplies to buy<br><br>✅ test any assumptions you have about products or services you are intending to buy | ❌ do not assume that you know the challenges your users might face, or that you will be able to recognize if someone is more vulnerable than others |

### 3.2.2 Engage with and support suppliers

Support existing suppliers and identify new ones to work with during an emergency.

**Why it's important**

Managing supplier relationships is even more important during an emergency. As well as working with existing suppliers under difficult circumstances, buyers may need to approach, evaluate and contract new suppliers in a matter of days or weeks.

At the same time, buyers have important responsibilities to ensure suppliers are qualified, financially viable and able to supply what they say they will.

**What it means**

At the beginning of any emergency situation, public officials and stakeholders should:

- contact their existing suppliers and discuss any challenges they are facing; for example, sourcing components from their supply chain;
- share information openly about what they are planning to buy and if they are planning to use emergency procedures;
- invite new suppliers who may not have worked with government before to register on their supplier database;
- be clear with suppliers if they are using accelerated or emergency buying procedures and when contracts will revert to normal; and
- look at how to speed up supplier registration and reduce red tape.

During an emergency, public officials and stakeholders should also:

- consider whether they can use existing suppliers to provide services in a different way; for example, by using technology suppliers to provide medical equipment to hospitals;
- consult suppliers on whether they can repurpose existing products or services to meet emergency needs; and
- consider using international suppliers if needs cannot be met locally.

To help support suppliers during an emergency public officials and stakeholders should:

- provide extensions if an emergency has impacted their ability to deliver in the original timeframe;
- avoid terminating contracts and instead look into how modifications can be made to support delivery;

- adjust payment schedules to pay suppliers faster once an invoice is submitted; and
- use government-issued purchase cards or "procurement cards" to enable instant payments, up to a reasonable limit.

**Dos and don'ts**

Table 4: Dos and don'ts-Engage with and support suppliers (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ contact suppliers at the beginning of an emergency to discuss any challenges they are facing | ❌ do not terminate a contract during an emergency without first considering all the alternatives |
| ✅ encourage new suppliers to register with you | |
| ✅ provide extensions or other forms of relief to help suppliers during an emergency | |

### 3.2.3 Use emergency or accelerated procedures

Use emergency procedures to ensure that products and services can be bought faster than usual.

**Why it's important**

Emergency or accelerated buying procedures allow buyers more flexibility to source essential products and services during a crisis.

This can include:

- bypassing or speeding up the normal buying process;
- extending or modifying contracts;
- centralized or aggregated buying.

While these methods can be essential to deliver goods or services faster, they should be used with caution to avoid risks of corruption, uncompetitive pricing and a lack of transparency.

**What it means**

Emergency buying procedures can include:

- the direct award of contracts to suppliers without first carrying out an open and competitive bid process;
- extending or modifying existing contracts without using a new procurement procedure; and
- seeking additional products or services from an existing supplier, which are similar to those that have been bought previously.

Accelerated buying procedures can include:

- shortening normal timescales for a standard, competitive bidding process;
- increased use of framework agreements; and
- greater use of aggregated buying by central government.

When using emergency buying procedures public officials and stakeholders should:

- be able to demonstrate that it was impossible to comply with usual timescales due to a genuine emergency;
- show that they have not done anything to cause or contribute to an emergency - for example by failing to plan or delaying buying decisions; and
- limit contract extensions or other modifications to what is absolutely necessary to address the unforeseeable circumstances.

Public officials and stakeholders should also:

- keep a record of the reasons why an emergency or accelerated buying method was implemented;
- publish details of any contracts awarded using emergency or accelerated buying as soon as possible;
- be clear with suppliers when they are using an emergency or accelerated procedure and if or when it may be revoked; and
- review *force majeure* clauses, that is contract terms that apply only in an unforeseen or emergency situation.

### Dos and don'ts

Table 5: Dos and don'ts-Use emergency or accelerated procedure (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ use emergency buying to deliver products or services faster in a genuine emergency | ❌ do not use emergency buying procedures after an emergency situation has stabilized or recovered |
| ✅ use more transparent methods wherever possible | |
| ✅ keep a record of the reasons why emergency or accelerated buying was used | |

*Case study – How COVID-19 has accelerated procurement reform in Ecuador*

### National Public Procurement Service, Ecuador

Figure 12: Ecuador has used open data and social media to combat a wave of corruption in public buying during the pandemic (Digital Buying Guide)


### Summary

- The pandemic has created conditions in which corruption can flourish.
- Rooting out corruption depends on access to open data and an engaged public.
- Social media is a powerful tool in exposing wrongdoing and in promoting trust.

### The problem

Across the world, COVID-19 has brought with it not just a health emergency but a crisis of confidence in public buying. In September 2020, Transparency International reported that 1 800 cases of corruption had been reported by whistle-blowers during the pandemic.

Before COVID-19, Ecuador's public procurement agency, SERCOP, was in the process of upgrading its e-Procurement system to use the Open Contracting Data Standard, allowing users to disclose data and documents at every stage of the contracting process.

The move, made in response to years of public corruption scandals, *(iri Blog, 2020)* would take on a new urgency as the virus engulfed Ecuador, overwhelming the health system *(BBC, 2020)* and prompting panic buying of medical supplies.

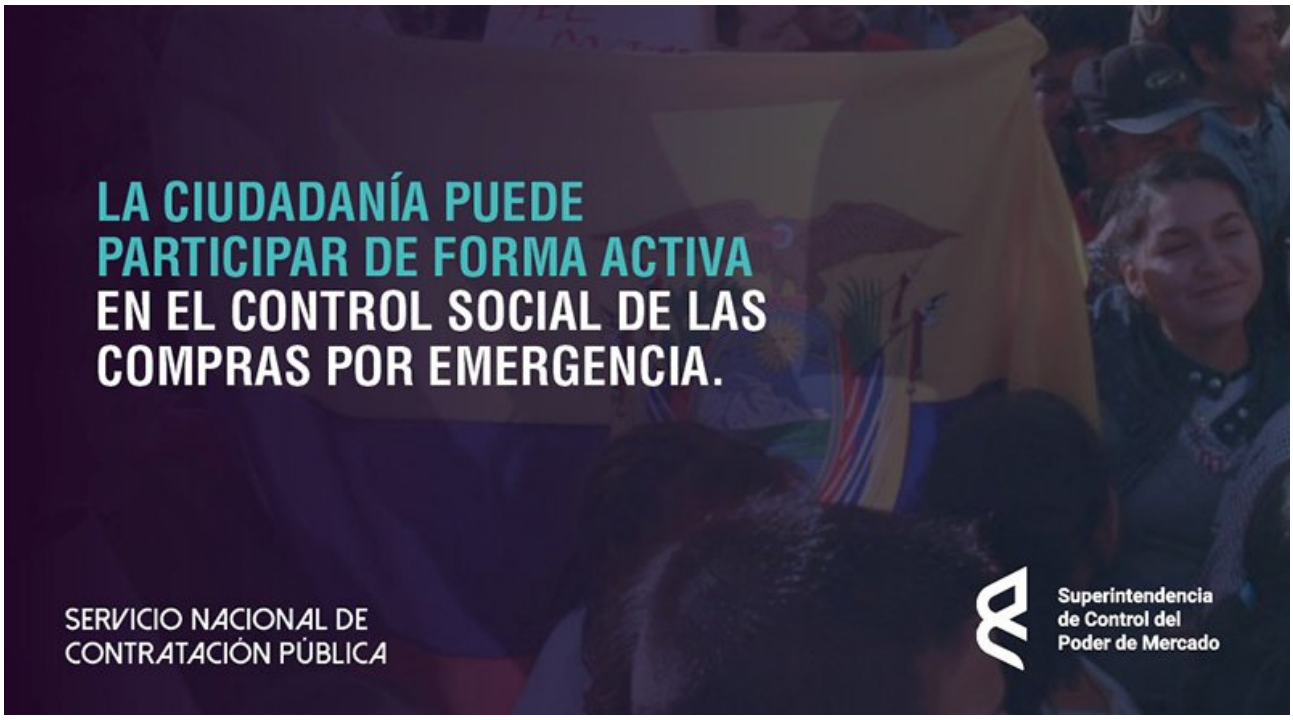
### The approach

At the start of April 2020, SERCOP unveiled a public monitoring tool for emergency buying on its e-Procurement platform. A video released via Twitter showed how to search for contracts issued during the pandemic and the public were encouraged to become whistle-blowers, reporting cases of wrongdoing through an online form.

Using social media also enabled users to provide feedback on the tool in real-time, identifying areas to improve.

The move, made in response to years of public corruption scandals, would take on a new urgency as the virus engulfed Ecuador, overwhelming the health system and prompting panic buying of medical supplies.

Figure 13: An image shared on Twitter by SERCOP encouraging the public to help monitor emergency buying




Guidance on emergency buying *(Digital Buying Guide)* followed, reminding contracting authorities to:

- only use emergency buying to contract works, goods and services related to the pandemic;
- publish the details of emergency contracts on the public procurement portal within 48 hours; and
- monitor suspicious behaviour from suppliers such as bid rigging and "price gouging", i.e., charging excessive prices to take advantage of increased demand.

**The results**

The open data provided by the tool enabled several cases of price gouging to be exposed. One of the worst involved the country's social security department, the IESS, buying thousands of surgical *masks (Ecuador Times, 2020)* at USD 12 each, three times the normal price. Following the exposure of the price discrepancies on Twitter, all procurement operations within the IESS were halted.

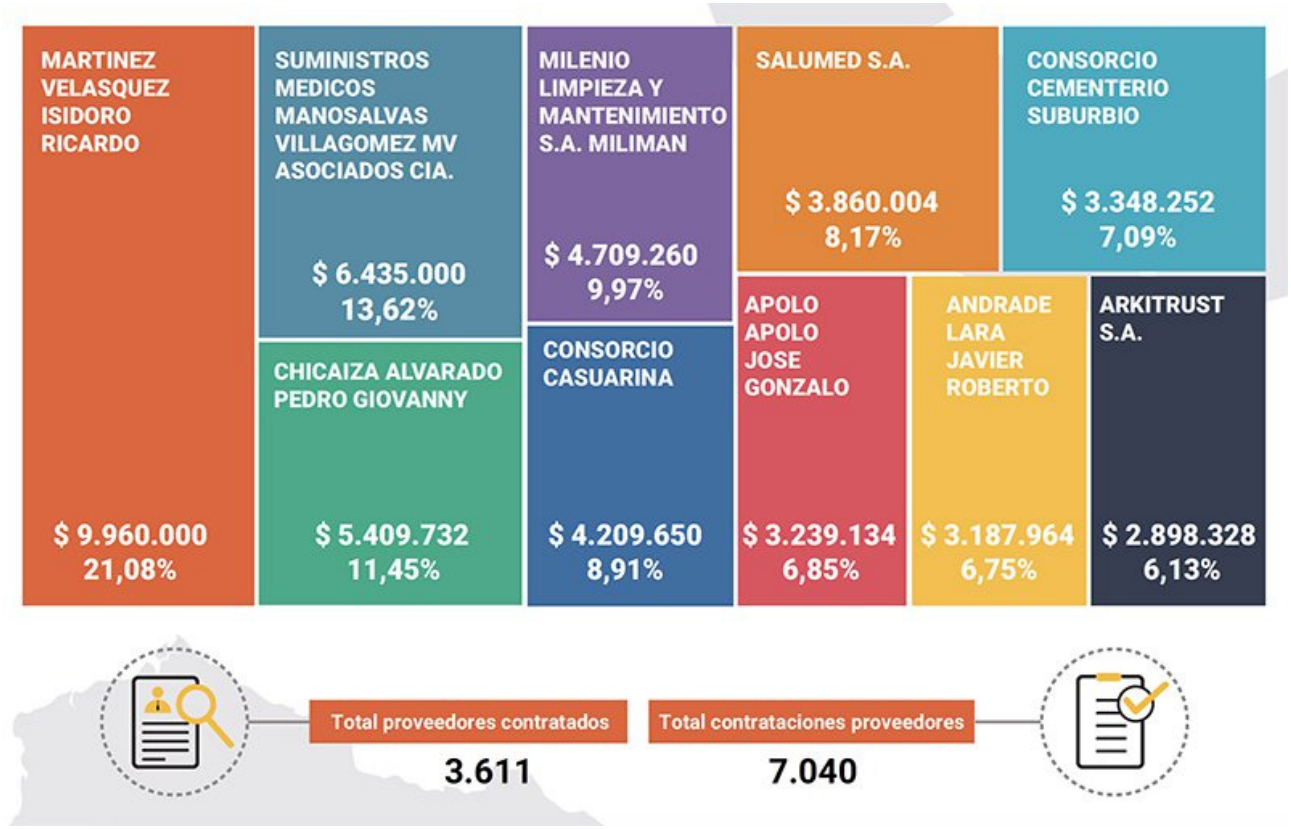
In August 2020, a report by local anti-corruption organization, Fundación Ciudadanía y Desarrollo (FCD), revealed that:

- USD 200 million of public money had been spent through emergency buying between April and July 2020;

- 20 per cent of the contracts went to just ten companies;
- the highest items by value included surgical masks and gloves, drugs such as paracetamol, and COVID-19 testing kits.

The report prompted investigative journalists to delve further, revealing that two individuals had received more than USD 15.3 million in public money.

Figure 14: Data showing that over a fifth of contracts were awarded to just 10 suppliers




**Challenges**

The FCD report pointed out several areas in which the data and the tool itself could be improved:

- searching for information, particularly unit prices, was not a simple process and would take too long for most members of the pubic;
- contracts did not indicate which buying procedure, for example direct award, was used during the emergency; and
- coding errors meant that many contracts had to be checked manually to ensure that the data were correct.

> "COVID-19 has made people aware of the costs of bad buying. The costs of getting it wrong have been uniquely apparent."
>
> Gavin Hayman, Executive Director, Open Contracting Partnership

**Next steps**

Since the release of the public monitoring tool, more than 45 corruption-related investigations *(Buenos Aires Times, 2020)* have been launched in Ecuador, with an estimated loss of more than USD 12 million in overpayments.

As well as improving the data issues in the tool, the SDP report recommended changing Ecuador's procurement regulations to take account of emergency situations and prevent another crisis being abused in the future.

## 3.3 How to maintain standards

Ensure the integrity of contracts awarded during a crisis through effective monitoring and transparent processes.

**Overview**

Crisis situations can provide the conditions for fraud or corruption to take place in public-sector buying. Financial controls are often reduced, funding levels can soar and there is immense pressure on buyers to act and be seen to act by the public and media.

To help maintain ethical and financial standards during an emergency, buyers need to ensure:

- fair and reasonable pricing;
- transparency and accountability;
- a clear roadmap or plan to return to "normal" or sustainable buying.

### 3.3.1 Ensure value for money

Make sure that products and services bought during an emergency meet minimum standards.

### Why it's important

Emergencies can make it difficult for buyers to ensure quality and value for money when using public funds. In particular, risks can include:

- "price gouging", where suppliers take advantage of high demand and supply bottlenecks to charge unreasonable prices;
- the supply of counterfeit or substandard products and services; and
- lack of competition, for example only one supplier is directly awarded a contract to provide essential products or services.

### What it means

To avoid overcharging or price gouging public officials and stakeholders should:

- use pricing data to get an overall picture of market conditions before and during the emergency;
- use a "should cost model" to estimate how reasonable prices are;
- pool forces and conduct "aggregated" or joint procurements with other departments or authorities; and
- report any instances of price gouging to the relevant authorities.

To avoid counterfeit goods public officials and stakeholders should:

- check standards for emergency goods provided by international bodies and relief agencies;
- include minimum standards in their requirements and evaluation criteria; and
- gain additional information on the origin and transport of supplies, from credible sources, using first-hand evidence when possible.

To ensure competitive bidding public officials and stakeholders should:

- avoid using over-prescriptive or tailored requirements that can only be supplied by one supplier;
- conduct a fast-track competitive procedure whenever possible, even if only between two to three suppliers; and
- if using a direct award procedure, check that the supplier with whom they intend to contract is the only one able to provide the required goods, services and/or works on time.

**Dos and don'ts**

Table 6: Dos and don'ts-Ensure value for money (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ carry out aggregated or joint procurements to increase value for money and limit price gouging by suppliers<br><br>✅ use fast-track competitive procedures whenever possible<br><br>✅ check international standards for emergency goods, track supply chains and to ensure digital procurement is accessibility to users and staff. | ❌ do not use over-prescriptive or tailored requirements that can only be met by one supplier |

### 3.3.2 Maintain transparency

Ensure, by publishing open data, that emergency buying can be monitored by others.

**Why it's important**

Since emergency purchases are more prone to corruption or misuse of funds, access to open data is essential to ensure transparency and accountability, as well as supporting emergency response efforts.

Public officials and stakeholders can help ensure this by:

- collecting and publishing open data about emergency buying; and
- monitoring and auditing buying during an emergency.

**What it means**

Whenever possible, but particularly during an emergency, public officials and stakeholders should publish information about:

- the products and services being purchased, their price and quantities;
- the name, size, location of the suppliers;
- who owns the supplier's business;
- the expected value and actual value awarded;

- how quickly contracts were awarded and which buying method was used;
- which suppliers have been given emergency support or relief measures;
- contract start and end dates; and
- where and when the products or services were delivered.

In addition, public officials and stakeholders should:

- use forms or templates to input and publish data in a consistent way; and
- consider using a data "dashboard", a visual representation with charts or maps that make it easier to interpret spending during an emergency.

### Monitoring and evaluation

To help ensure effective monitoring and evaluation of the data public officials and stakeholders should:

- enable "real-time" monitoring, that is providing immediate feedback to buyers and suppliers, so that they can make improvements rather than waiting for a review after a crisis has stabilized;
- develop reporting to document what is being monitored and thus provide a better ground for corrective actions;
- focus on outcomes rather than procedures in audits and evaluations: was satisfactory quality provided for a reasonable price?;
- directly inform the public, NGOs and the media about emergency buying decisions; and
- provide ways for whistle-blowers to report problems anonymously.

### Dos and don'ts

Table 7: Dos and don'ts-Monitoring and evaluation (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ publish open data about emergency buying, including information on pricing, suppliers and procedures used<br><br>✅ focus on delivered outcomes rather than procedures in audits and evaluations<br><br>✅ provide ways for whistle-blowers to report problems anonymously | ❌ do not wait until after a crisis has stabilized to monitor and evaluate emergency buying |

*Case study – Emergency buying: Colombia's digital approach to COVID-19*

**Colombia Compra Eficiente | Agencia Nacional de Contratación Pública (The National Agency for Public Procurement)**

Figure 15: Colombia's procurement agency has developed a range of digital tools to improve competition, efficiency and transparency during the pandemic

**Summary**

- Existing public procurement tools can be adapted to meet new demands.
- Sharing open data is essential to allow public monitoring.
- Aggregated buying can help ensure value for money.

**The problem**

On 6 March 2020, Colombia recorded its first case of COVID-19, and joined the global scramble to secure personal protective equipment (PPE), ventilators and other essential supplies.

As well as facing the universal challenge of finding these items on the open market, the country was also emerging from an epidemic of corruption in public procurement *(OAS, 2014)*.

Years of careful reform had made Colombia a pioneer in using digital tools to encourage transparency and accountability. However, the extreme urgency of the pandemic was about to put these systems to the test.

> "While emergency procedures are needed, they must remain publicly accountable for every contract concluded and spent. Taxpayers deserve to know how their money is spent."
>
> Open Contracting Partnership

**The approach**

On 17 March 2020, Colombia's President Ivan Duque declared a state of emergency. As well as measures aimed at limiting the spread of the virus, the order relaxed many rules around public procurement. Under conditions of "manifest urgency" or *force majeure*, this meant that contracts could be awarded to suppliers directly, and that approvals and funding could be fast tracked.

While these approaches can help source supplies faster, they can also raise corruption risks such as price gouging, bribery and the delivery of poor-quality products. Colombia's public buying agency, Colombia Compra Eficiente (CCE), looked into how to use its experience with digital tools to help accelerate the process while ensuring transparency and value for money.

Buyers were encouraged to use CCE's existing e-Procurement platform and guidance from the World Health Organization to prioritize needs, verify supplier details and check prices.

In addition, several new resources were developed including:

- a framework agreement for suppliers providing COVID-19-related products and services;
- an "aggregated buying tool" or online catalogue enabling bulk buying of emergency materials such as PPE, disinfection services and medical equipment; and
- a dedicated website to allow public monitoring of contracts awarded during the pandemic.

Figure 16: CCE Director announces the launch of the Aggregated Buying Tool on March 25, 2020; image source: CCE Twitter


Guidance for buyers emphasized that contract information must be published openly including:

- a clear description of goods, services or works with technical specifications, quantity and quality required;
- the unit price and total value of goods or services contracted;
- who signed and approved the contract; and
- how the contract would be supervised.

To ensure they were searchable online, the term "COVID-19" had to be used in the title of any contract associated with buying during the pandemic.

### The results

Using the new digital tools has allowed CCE to streamline buying during the pandemic while also enabling transparency.

Results so far have included:

- 251 suppliers joining the COVID-19 framework, 90 per cent of which are small or medium-sized businesses
- COP 127 billion (USD 34m) worth of sales made through the aggregated buying tool
- average savings of 14 per cent for buyers using the tool versus the open market
- 142 000 emergency contracts published using open data standards

CCE launched these tools within three weeks of the pandemic hitting Colombia, a process that would normally take 4–6 months of development. This was thanks to a scalable and adaptable e-Procurement system before the crisis began.

Figure 17: COVID-19 cases growing across Latin America: image source Google News


### The challenges

As the pandemic took hold in Latin America over the summer of 2020, public buying came under increasing scrutiny and corruption scandals began to emerge. In May, arrest warrants were issued for 10 Colombian mayors, following incidents of widespread overcharging for essential products.

That the authorities could uncover incidents such as these was thanks in part to an informed public, with access to open data on government buying. This allows those who want to monitor ongoing procurements in real time and report any potential irregularities anonymously.

> "The pandemic actually provides an opportunity for countries to strengthen anti-corruption and integrity, and so improve overall governance."
>
> U4 Anti-Corruption Resource Centre

**Next steps**

As of August 2020, Colombia has witnessed unprecedented use of its e-Procurement system and continued providing access to the aggregated buying tool.

The country has also been one of the most innovative in using technology to help tackle the challenges of the pandemic; for example, using AI to monitor the use of facemasks and experimenting with blockchain technology to prevent corruption.

For more information on how CCE created the aggregated buying tool, watch its YouTube video.

### 3.3.3 Return to sustainable buying

End emergency buying as soon as it is reasonable to and return to more sustainable procedures to help economies recover.

**Why it's important**

As a crisis situation stabilizes, it is important to consider if emergency buying procedures are still justified and, if not, when they will end.

If an emergency has caused a significant shock to the economy, contract adjustments or policy changes may be necessary to support the recovery and enable sustainable, equitable, inclusive and competitive buying in the long term.

**What it means**

As an emergency enters the relief and recovery phase, public officials and stakeholders should:

- phase out direct award procedures and contracts as needs become foreseeable and planning can resume;
- agree with suppliers if and when any outstanding goods or services are to be delivered;

- start planning competitive tendering for medium and long-term needs resulting from the crisis; and
- work in partnership with suppliers to develop transition plans to exit from any relief as soon as reasonably possible.

To help enable a sustainable recovery public officials and stakeholders should:

- continue to pay suppliers as quickly as possible, on receipt of invoices or in accordance with pre-agreed milestone dates;
- ensure that they are able to carry out contract management tasks digitally, for example issuing receipts and approving invoices; and
- avoid terminating contracts without first discussing alternative options with suppliers; for example, applying a contract variation with clear justifications, actions and timescales.

Whether any particular contract can return to "pre-emergency" terms will depend on a number of factors such as the scale of the crisis and how long it takes suppliers and the wider economy to recover.

Public officials and stakeholders should issue clear guidance on how and when any further adjustments will be made to the standard buying process, and aim to return to it as soon as is reasonable to do so.

**Dos and don'ts**

Table 8: Dos and don'ts-Return to sustainable buying

| Do | Don't |
|---|---|
| ✅ develop transition plans to end emergency relief in partnership with suppliers<br><br>✅ agree with suppliers if and when any outstanding goods or services are to be delivered<br><br>✅ return to "normal" or sustainable buying as soon as it is reasonable to do so | ❌ do not end emergency buying procedures abruptly without consultation with suppliers |

# 4 Practical steps to take towards smart sustainable procurement

This section provides step-by-step guidance for commissioning digital products or services for governments, which includes dos and don'ts to ensure fair and transparent procurement.

## 4.1 Planning

Explore and define needs before deciding on the best approach to deliver them.

**Overview**

The planning stage of any procurement should involve public officials and stakeholders learning about:

- who they are buying a product or service for
- why they are procuring it
- who to consult from their organization
- what technology is appropriate in the market
- how to ensure value for money
- whether it meet the needs of persons with disabilities

Exploring all of these areas may involve time and effort but it will ensure that public officials and stakeholders deliver appropriate solutions, for their organization and for end users.

Additional guidance has also been produced in these Guidelines to help public officials and stakeholders plan for buying effectively during an emergency.

### 4.1.1 Work as a team

It is essential to include skills and experience from across the organization at each stage of the procurement process.

**Why it's important**

Working as a team with people from across their organization will help public officials and stakeholders:

- make better choices at each stage of the procurement;
- strengthen their understanding of their requirements and the market;

- speed up decision making and budget approvals; and
- reduce the risk of individual corruption, particularly for high-value projects.

### What it means

Public officials and stakeholders should:

- involve colleagues with a diverse mix of skills, experience, disabilities, genders and ethnicities - this will help them consider a wide range of needs;
- consult senior stakeholders and decision makers as early as possible;
- seek out specialist expertise when appropriate, for example legal, policy, security or accessibility;
- review past procurements with the staff involved;
- include people expected to use the product or service that they are procuring; and
- ensure that one individual is not solely responsible for high-value projects.

The size of the team should be in proportion to the scale and budget of what public officials and stakeholders are planning to procure. The team may also need to change throughout the process as public officials and stakeholders move from defining requirements through to evaluation and contract management.

### Dos and don'ts

Table 9: Dos and don'ts-Work as a team

| Do | Don't |
|---|---|
| ✅ include colleagues with a diverse mix of skills, experience and backgrounds<br><br>✅ ask about past procurements and any lessons learned<br><br>✅ consult stakeholders and decision-makers as early as possible | ❌ do not allow one individual to be responsible for commissioning a high-value product or service |

*Case study – How to get public servants to work outside of their silos*

**National, International & Research Group | UK Government Digital Service (GDS)**

Figure 18: Building capability to address legacy IT


**Summary**

- All public-facing users and government users of government IT are impacted adversely by the threat of legacy IT. The public sector lacks awareness, knowledge and empowerment to work together to address legacy IT. It is not a single functional responsibility.
- Fixing capability to address legacy IT needs to challenge the status quo of written policy and guidance which is not working. Teams are suffering from "policy fatigue".
- Through reaching more than 150 participants for user research, testing and stakeholder validation GDS has created a series of learning and awareness products to support sustained behaviour change for government staff at all levels.

**The problem**

Digital, data and technology ("DDaT") teams cannot solve legacy IT on their own. But those that are able to help do not see it as lying within their remit. GDS set out to build skills and capabilities, and raise awareness of accountability, across functional areas to tackle legacy IT – a systemic problem within government.

**The approach**

*Step One – Audit*

Legacy IT has been a problem for decades. There is a wealth of guidance and training available. The team first created a content matrix of what is available and for whom.

*Step Two – Discovery*

Understanding what is and what is not working, with a focus on people, as well as on content.

A survey reached 115 people from across functions within central government, local authorities, devolved administrations and arms-length government bodies.

Twenty 1-2-1 interviews explored where different job roles and levels of seniority within legacy IT programmes were finding blockers and what they needed from leadership.

Eleven leaders interviewed on film about successful and unsuccessful programmes to address legacy IT.

Discovery Findings:

- Non-DDaT leadership does not always recognize what legacy IT is, why it is a risk or that they have a responsibility to address it.
- Non-DDaT leadership has the greatest influence on budget allocation and business case sign off.
- Non digital leadership would not see why they should learn about legacy IT.
- DDaT professionals do not have power to address legacy IT without leadership and funding. Funding is the biggest blocker.
- DDaT professionals are not necessarily aware of all the guidance and standards they should consider on any digital programme including legacy IT.
- Non-DDaT professionals need to be invited into multidisciplinary teams, but DDaT professionals do not always know which function and when to do this.
- When DDaT and non-DDaT professionals were presented with the 30 plus documents related to legacy IT GDS discovered during audits, they felt overwhelmed and that they did not have the time to read and understand everything. This was particularly acute for professionals who were contracting or new to government, regardless of their seniority.

*Step Three – Alpha*

The Legacy IT programme board approved the behavioural change approach.

Stakeholders were invited to online video conference co-design sessions on a weekly basis.

The team utilized the design sessions to develop tested content, which led to the development of five tangible learning products.

*Step Four – Beta*

The products have been moved into a business-as-usual maintenance status, in different parts of government. Each product has a team who will iterate it based on a feedback loop.

In particular, the Digital Standards in Government course is linked to the Service Standards team, who will ask teams going through a service assessment whether they have done the course.

*The team:*

Governance – Programme Board made up of five government bodies:

- Government Security Group
- Government Commercial Group
- Government Digital Service
- National Cyber Security Centre
- Central Digital & Data Office

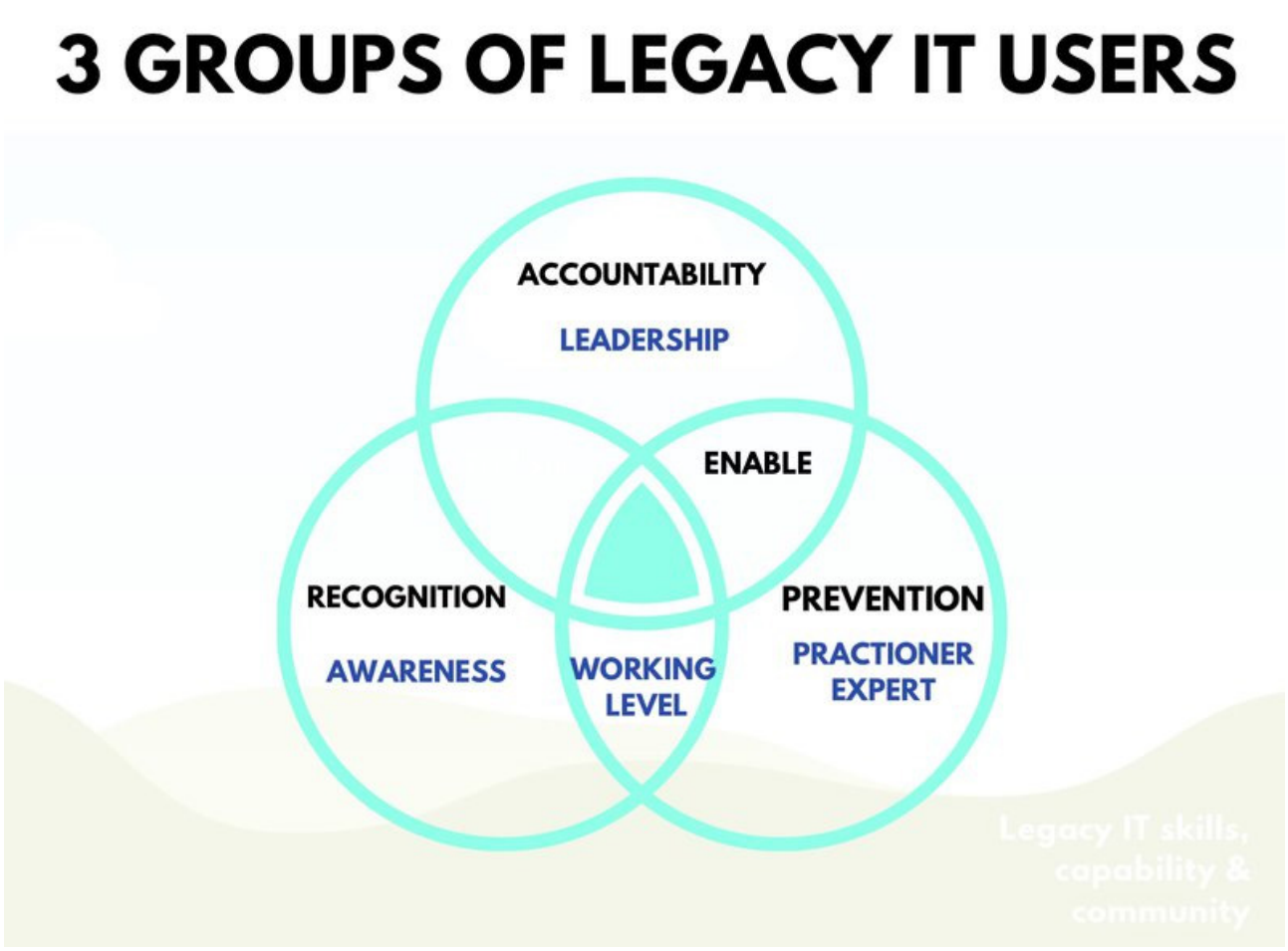
*Skills & Capability team*

GDS worked as a multidisciplinary team which was made up of a: Product Owner, Delivery Manager, User Researcher, Content Designer, Service Designer, and Learning & Development Lead.

*Stakeholders*

There was a concentrated effort to be inclusive of central government departments, with weekly communications to all 17 Whitehall departments, interested local authorities, ALBs and the devolved administrations. This included a standing invitation to a weekly online design session where feedback and opinion iterated the development of the products in the alpha stage. On average, 20 stakeholders joined each session, each representing a different department and skill set.

Figure 19: Capability level Venn Diagram




**The results**

Practical, accessible and user-friendly support, which is delivered to meet the user needs and barriers.

*A legacy IT skills curriculum*

This curriculum[5], which has been tested extensively with users in government, sets out the skills required at each level of seniority. It is a tool to be used at the recruitment stage to ensure job descriptions and skills checks reflect government's needs. It is also a tool to support career development.

*A cross functional guide to addressing digital programmes*

This guide was developed as a visual infographic to support teams already overwhelmed by guidance and policy. A visual tool enables teams to identify quickly where they are in the process and which other functions should be included.

*A remote learning course to support digital practitioners working with or within government called "Applying Digital Standards in Government".*

This course merges the key principles of government digital standards including into a series of bite-size modules, which can be accessed online:

- Technology Code of Practice
- Service Standard
- The Commercial Continuous Improvement Assessment Framework
- Government Functional Standard: Digital Data and Technology
- Spend Controls Assessment Pipeline Criteria

The course includes a strong use of audio files and visual files, as well as small bullet-point reading. This blended learning approach encourages users to access the content in the way which best suits their learning needs, rather than prescribing a rigid reading guidance technique.

*A series of films aimed at non DDaT leadership*

The films can be used in any leadership course or shared via any communication channel. The goal is to reach as many "reluctant" leaders as possible who do not identify that they are responsible for legacy IT.

*A series of podcasts aimed at DDaT and non DDaT leadership*

As with the films, the podcasts can be heard in isolation or as part of a wider piece of learning. They have been particularly well received given that they allow the audience to be away from screens while accessing the content, and due to the conversational style being an engaging way to hear about the topic.

**The challenges**

The Programme Board and the Skills & Capability team faced three key challenges:

*1) Working under COVID-19 critical conditions*

This meant that stakeholders and, at times, team resources were needed on critical delivery elsewhere, and there was also a heavy reliance on contractors in the discovery stage.

*2) Waterfall reporting on an agile development*

At the discovery stage of the programme, where learning products had not been scoped, there was a challenge from the Programme Board that the Skills & Capability strand would deliver on time and to budget. There was a further challenge that guidance or policy was not being written.

However, the evidence of "policy fatigue" being a major blocker in digital teams understanding the governance and standards, enabled the alpha to test the range of products.

*3) Preventing siloed working*

The Skills & Capability team was one of three strands under the Legacy IT Programme. The other two were audit and governance, and commercial. The three strands met weekly to ensure that interdependencies were highlighted, including stakeholder communications.

The deliberate breakdown of the strands ensured that the resulting products and policy development are holistic and complementary of each other. In particular, the Digital Standards in Government course focuses on ensuring all civil servants understand the audit, governance and commercial considerations when embarking on any digital programme.

**Next steps**

The products will be judged through the measurement of their direct impact on two key measures:

- Increased allocation of funding to address legacy IT
- Increased success rate of service assessments

GDS challenged the status quo of writing more guidance to address a problem. They looked at this from a behavioural change point of creating services and products, which support and sustain change by enabling the people who have the power to use it in the right way.

Of course, technology will inevitably always become legacy – what is new today will be old tomorrow; but GDS delved into possible ways to encourage and embrace behaviours, governance, teams, processes and cultures that allow for, and welcome, ongoing digital transformation.

Viewing the products, it is evident that everything has a module or chapter design, which is a deliberate design feature to allow for continued iteration at a low cost. There is also a feedback loop in the Digital Standards in Government Course to encourage all voices to share their real-life experiences keeping the content fresh and engaging.

### 4.1.2 Understand user needs

Develop a deep understanding of users and the problems to solve for them.

### Why it's important

Users are the people expected to use the product or service public officials and stakeholders are commissioning. Carrying out research on their needs will help ensure that public officials and stakeholders:

- test any assumptions they have about their users;
- ensure there is a valid need for what they are procuring; and
- make services better value and cheaper to run in the long term.

### What it means

User research means finding out what people are really trying to do, and the real problems they experience trying to get something done. This can involve some or all of the following activities:

- interviewing people about how they use a product or service;
- watching how users work through a given task, ideally at their workplace;
- inviting users to take part in a focus group;
- working directly with diverse Disabled People Organizations representatives;
- using analytics to find out what users do on a website;
- commissioning user research on a sample of citizens.

Unless public officials and stakeholders have a clear idea of who their users are, they should research with a diverse range of users with a mix of ages, abilities and backgrounds. Public officials and stakeholders should also consider how to include people who need help using computers or other digital services.

Always ask for consent when doing user research, and be clear on how people's data will be used. Where possible hire a professional user researcher to ensure research is carried out responsibly.

Once public officials and stakeholders have some research, they can look for patterns in user behaviour and, in particular, any frustrations users have. This will help them to write appropriate outcomes for their procurement based on valid needs.

### Dos and don'ts

Table 10: Dos and don'ts-Understand user needs (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ test any assumptions you have about your users before you write your requirements work with Disabled People Organizations<br><br>✅ research with a diverse range of users, ideally where they use a product or service<br><br>✅ ensure that user needs are worked into your plan | ❌ do not collect data about users without their consent |

*Case study – Designing cities that work for women: the value of inclusive design*

**UN Women / Pulse Lab Jakarta**

Figure 20: UN Women/Pulse Lab Jakarta

A project in Indonesia has shown the importance of including women in the planning of safe, sustainable cities.

### Summary

- City planning often neglects the needs, interests and routines of women and girls.
- In-depth user research can help design cities in a gender-inclusive way.
- Inviting stakeholders to meet users is an effective way to encourage change.

## The problem

Despite a revolution in how we work and an increasingly diverse society, most cities are still designed by, and for, men.

For women, especially those who do not work in a 9-to-5 job, the urban environment can be frustrating, inconvenient or downright dangerous.

For example, a recent survey in Indonesia reported that 60 per cent of women had experienced sexual harassment while travelling to and from work, a grim statistic echoed across the world.

As a result, many women and girls do not enjoy the basic right to freedom of movement and miss out on opportunities to work, study or simply enjoy themselves.

In 2019, UN Women Indonesia and Pulse Lab Jakarta launched a project to explore the problem in three cities across Indonesia.

> "Many women, girls, and sexual and gender minorities around the world feel inconvenienced, ill-at-ease, and unsafe in the urban environment."
>
> World Bank Handbook on Gender-inclusive Planning

## The approach

Research began by examining the existing literature on safety and mobility for women. It soon became clear that most studies had focussed on middle-class office workers.

Very little attention had been paid to women working at night such as shopkeepers, call centre workers or cleaners, who make up a significant part of Indonesia's retail economy.

Equally, the recommendations proposed – from installing CCTV to better street lighting – concentrated on improving infrastructure, rather than on the experiences of women getting to and from work.

The researchers realized they needed to get to know the female "users" of public transport in depth. To do this, 37 women from three cities across Indonesia were invited to take part in user research, including:

- diary studies – in which women recorded their travel experiences over four days;
- face-to-face interviews – allowing the researchers to probe further into the thought process, emotions and underlying beliefs behind the diary entries;
- field studies – where researchers accompanied women on their journeys to and from work.

Using this information, it was possible to create four "personas", i.e., fictional characters who summarized the types of women met during the research.

These ranged from "the anxious newcomer", a migrant worker who found every part of the city intimidating, to "the female warrior" a more confident and streetwise woman used to travelling at night.

Figure 21: Example personas produced during user research. Picture credit: Pulse Lab Jakarta


While each persona used different strategies to travel safely such as wearing plain clothes and face masks to avoid attention, a number of insights emerged from the research. For example:

- women felt that bus stops were intimidating, dark and hard to access; this meant they would prefer to wait in shops or at busy intersections;
- street vendors and minibus (*angkot*) drivers were seen as a reassuring presence rather than a nuisance;
- none of the women was prepared to report incidents of sexual harassment, due to feeling ashamed or afraid that they would lose their jobs.

The next step was to involve the people who could change things – government officials, transport operators, urban planners and community groups. This was done in a series of co-design workshops in which the results of the study could be shared and solutions proposed.

**The results**

The workshops produced a range of hypothetical solutions, including a street warden programme, ID cards for bus drivers and a smartphone app for new arrivals. The challenge was to find a city prepared to implement some or any of them.

Enter Medan, a city of 2.2 million in northern Sumatra. As well as taking part in the workshops, city officials here were invited to meet female commuters and travel with them at night to gain a better insight into their experience.

In December 2019, the Medan City Government announced plans to adopt several recommendations from the project including:

- designing better bus stops: for example, by adding transparent walls and better lighting to make them less intimidating;
- improving pedestrian access to bus stops, avoiding the need for women to walk down narrow alleyways;
- community engagement: including a poster campaign on how to safely help women who are experiencing street harassment.

Figure 22: Stakeholders at a co-design workshop held in Medan – Photo credit: UN Women/Putra Djohan

> "To really deliver the message home and get buy-in, nothing can replace meeting the user, shadowing them and understanding their perspective."
>
> Maesy Angelina, Pulse Lab Jakarta

**Next steps**

As well as publicising the research in Indonesia through events like the Global 16 Days Campaign, Pulse Lab Jakarta has continued to highlight the importance of good-quality data in designing inclusive and sustainable cities.

While mobility has been restricted globally due to the COVID-19 pandemic, the issue of sexual harassment of women and sexual and gender minorities has not gone away.

The World Bank recently highlighted this in a handbook on gender-inclusive planning, showing how important safe and affordable transport is for women.

To read the full UN Women and Pulse Lab Jakarta report click here.

### 4.1.3 Share information early

Share information about planned procurements to encourage innovation and interest from suppliers.

**Why it's important**

Sharing information early about their purchasing strategy allows public officials and stakeholders to:

- alert suppliers of a contract opportunity, encouraging more bids;
- learn about new technologies or approaches in the market;
- give a diverse range of suppliers time to become aware of the opportunity;
- build better relationships with suppliers; and
- inform and involve the public in their decision-making.

Early market engagement or "pre-market engagement" may be restricted in certain countries. When done carefully, however, its advantages outweigh any perceived disadvantages.

**What it means**

Sharing information early can include:

- issuing a "request for information" (RFI), a document alerting suppliers about potential opportunities and requesting information about their capabilities;
- inviting suppliers to an open meeting or event to discuss procurement goals; and
- visiting communities' public officials and stakeholders wishing to become more involved in procurement.

The publication of an RFI does not oblige public officials and stakeholders to buy anything or enter into any type of contract with suppliers.

Open meetings should provide an opportunity to discuss requirements and answer questions from suppliers in the presence of their competitors.

One-on-one meetings with suppliers should be used only after holding open events.

If public officials and stakeholders do meet one-to-one with suppliers, they should:

- ensure that they meet a diverse range of suppliers;
- ask each supplier the same questions and give them the same opportunity to respond; and
- have a clear scope of the things they will be discussing – this will help protect the fairness of the process.

The advice public officials and stakeholders receive from suppliers may be used in the planning and other stages of their procurement provided that:

- it does not distort competition by giving any supplier an unfair advantage;
- they share the advice with the other suppliers; and
- they don't exclude any suppliers involved in pre-market engagement later in the process.

**Dos and don'ts**

Table 11: Dos and don'ts-Share information early (Digital Buying Guide)

| Do | Don't |
|---|---|
| ✅ be transparent about what you need and the process you're following<br>✅ engage with a diverse range of suppliers<br>✅ inform the public about your procurement strategy | ❌ do not give any one supplier an unfair advantage by sharing information with them and not with others |

*Case study - Driving Artificial Intelligence adoption through procurement: How the UK is keeping its roads safe*

**Driver and Vehicle Standards Agency (DVSA), UK**

Figure 23: Helping you stay safe on Britain's roads


The UK's DVSA has developed an approach that uses Artificial Intelligence (AI) to help identify and target garages that may not be testing vehicles properly.

A version of this case study originally appeared in the World Economic Forum (WEF) "AI Procurement in a Box: Workbook" published in June 2020. It has been adapted and reproduced here under the Creative Commons "Attribution Share-Alike" license, with additions from the DVSA Digital blog post "Getting smart on MOT fraud" and the International Development Research Centre/Oxford Insights "Government AI Readiness Index 2020."

**Summary**

- Governments around the world are at varying levels of readiness to procure, implement and develop and use AI responsibly.
- New technologies need to work with existing technologies, processes and infrastructure, and be able to adapt to future demands.
- When exploring how best to use new technologies like AI, working collaboratively with the market can help to build internal capabilities, and save time and costs.

**The problem**

Every year in the UK, more than 40 million vehicles receive a standards test called an "MOT". These are carried out by more than 80 000 testers in around 23 000 garages across the country, generating more than GBP 1 billion for the economy.

However, some vehicles were not being tested properly, which was endangering people's lives. Inspection of authorized garages was resource intensive and there was limited knowledge to target these inspections effectively.

In support of the DVSA vision to help people stay safe on Britain's roads the digital team wanted to explore data-driven approaches to help them conduct intelligent inspections of authorized garages carrying out MOTs, to ensure that vehicle standards are enforced.

To do this, the DVSA wanted to work with supplier partners to collaboratively deliver improvements as part of blended agile teams, and develop internal skills to use digital technologies.

When thinking about introducing emerging technologies into digital service infrastructure, it is important to start with user needs to ensure that the right things are built.

Internationally, there is increasing recognition that when developing and implementing AI systems, these need to be designed to be safe, fair and trustworthy. For example:

- in May 2019, 42 countries signed up to the Organisation for Economic Co-operation and Development (OECD) Principles on AI;
- in June 2020, the Global Partnership on AI was created to support the responsible and human-centric development and use of AI, in a manner consistent with human rights, fundamental freedoms, and shared democratic values, as elaborated in the OECD Recommendation on AI.

**The approach**

The DVSA proactively shares information early with the market ahead of starting their procurements. They do this by running "meet the buyer" events to help potential suppliers find out about their work and plans.

Figure 24: Image showing a DVSA "meet the buyer" event to share their digital journey since 2014

For this procurement, the DVSA hosted a supplier open day to explain the challenges they face and to gather initial ideas of how to address these and with which technologies.

They ensured that the invitation to tender (ITT) defined outcomes and clearly stated which challenges it wanted to overcome.

The DVSA used the Crown Commercial Service Digital Outcomes and Specialists framework agreement available through the Digital Marketplace – a procurement platform that supports the digital transformation of public sector services.

Image showing a DVSA "meet the buyer" event to share their digital journey since 2014; image source: the DVSA's "Helping Digital Outcomes and Specialists suppliers to find out about us" blog post.

It is also essential to guarantee that digital products and service purchased within smart/sustainable environment (cities, villages, communities) are digitally accessible (in line with the ICT accessibility guidelines, principles and standards) to ensure that are inclusive to all its intended users. This is critical to avoid increasing the digital divide (since all services are supposed to be primarily available in digital formats) and ensure that the smart/sustainable cities are inclusive for all people.

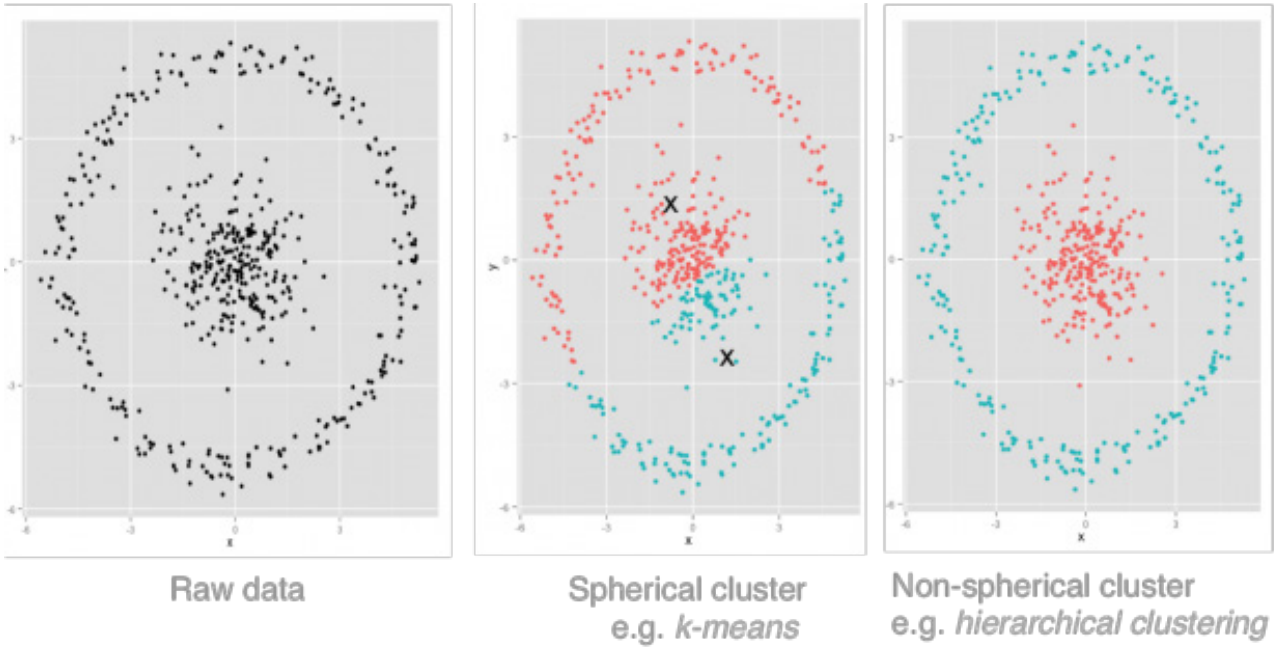
The ITT did not specify AI but focused on the use of technologies that would deliver the most effective outcomes. The aim of the procurement was to contract for digital services and capabilities that would help the DVSA team identify and deploy the right tools and systems to address the delivery challenges of improving the inspection of authorized garages that conduct MOTs.

The project started with a set of mini discoveries the insights from which would help the DVSA to:

- improve the quality of MOTs by better supporting testers;
- know which garages presented the greatest risks of testing poorly;
- identify those applying to be involved in MOT that may present risks to the integrity of the MOT service.

As the DVSA did not have labelled data it used unsupervised machine learning, where a computer finds patterns in data without any prior information about what it should be looking for. In collaboration with supplier partners, the DVSA applied a "Local Outlier Factor" clustering model against garage test data from a three-month period.

Figure 25: Examples of different shapes of data clusters



The clustering model grouped MOT-authorized garages based on the behaviour they show when conducting MOTs such as the test duration, time of test and result of inspection (compared to the expected result). The DVSA created a risk (of testing incorrectly) score for each garage, which allowed them to rank garages and their testers and helped it to identify regional trends.

The model was validated against those who had been identified as doing things incorrectly, ensuring that the model could learn what behaviours are good indicators of underperformance or potential MOT fraud.

An important consideration was the ability to explain the outcome of the risk rating without losing the integrity of the test. Having a human in the loop who interrogates and decides to take action on the risk score was crucial to making the use of AI successful. All the data used for the AI system were data that had already been collected by the DVSA and it did not include a lot of sensitive data.

**The results**

Clustering techniques offered new insights that help the DVSA make predictions, and now support a more targeted approach to inspections at garages and testers with the highest risk scores. By identifying areas of concern in advance, examiners' preparation time for enforcement visits has fallen by 50 per cent.

Figure 26: a tester in a garage


There has also been an increase in disciplinary action against garages, meaning that standards are now being enforced better. As more garages are delivering better MOT standards, there are more cars on the road that comply with roadworthiness and environmental requirements.

> "The DVSA digital team worked with our supplier partners to deliver an approach using machine learning. This helped build our capability, and, once they've finished working with us, will leave us with the skills and ability to develop this model. We'll then be able to apply this to other areas of our business and support other parts of the Civil Service."

Neil Barlow
Head of MOT Policy and the MOT Service Manager at DVSA, responsible for the service that records MOT results.

The DVSA found that most of the WEF "AI Government Procurement Guidelines" were implemented successfully:

**"Make use of innovative procurement processes to acquire AI systems - encourage collaboration between different bidders"**

It was important to rely on a team of suppliers for project delivery, rather than on just one supplier. Partnering with multiple suppliers and asking them to deliver the project in collaboration ensured that all relevant skills were available, and that checks and balances were in place. One supplier developed the AI model and another supplier helped to test it.

**"Focus on developing a clear problem statement, rather than on detailing specifications of a solution"**

The requirements in the ITT focused on outcomes rather than the means of how to achieve those outcomes. This gave suppliers flexibility to select the technology that best fit this purpose, and ensured that solutions were innovative and effective.

**"Work with a diverse, multidisciplinary team"**

The DVSA worked actively on upskilling internal teams and recruiting experts into the team where needed. This helped them to become a better customer for AI systems.

Project delivery was supported through close collaboration with the suppliers. Key to this was thinking as a single team and as partners, not as contractors.

On a practical level, this meant being open about the problems that needed to be solved, the challenges those different solutions may present, and the costs of different options. This experience showed that openness makes things better, bringing real reward in getting value from the partnerships.

**"Engage vendors early and frequently throughout the process"**

Extensive pre-market engagement helped to better target potential AI system providers. The DVSA asked shortlisted suppliers to present their proposed approaches, which helped them to evaluate the different delivery options.

### The challenges

The DVSA found that some of the WEF "AI Government Procurement Guidelines" were harder to implement:

### "Support an iterative approach to product development"

As elements of delivery might shift due to the agile nature of the work, it is important to ensure this is reflected in the ITT and how it is scored, and not only focus on the lowest price.

### "Consider during the procurement process that acquiring a tool that includes AI is not a one-time decision; testing the application over its lifespan is crucial"

Life cycle management of the tool was not considered fully upfront and became a challenge once the technology had been developed. When the DVSA team identified this issue, they worked with supplier partners to put together a plan to further develop the skills of the continuous improvement team. This ensured that the system continues to work effectively and meets users' needs, as well as providing technical support that addresses issues related to hosting and live service failures.

### Next steps

The DVSA is now using the AI approach to further develop its risk ratings data model to help identify where errors might be being made in the MOT, including a "predictive vehicle failure model".

This will fine tune their approach and help officers to better understand the likelihood of a vehicle passing or failing its MOT. They will then use this to target testers who repeatedly record results contrary to the prediction.

The DVSA is confident that their innovative use of AI is the correct approach. It allows them to be flexible, and to develop approaches to risk rating that keep getting better. They are more able to respond to what they learn and to any changes in tester behaviours.

*Case study – Buying in the open: renewing Mexico City's cycle hire scheme*

**Mexico City Government**

Figure 27: Bicycle hire scheme


Mexico City has used early engagement with suppliers to make sure its bicycle hire scheme has a sustainable future.

**Summary**

- Early engagement with suppliers encourages innovation.
- It is possible to share detailed requirements and broader outcomes.
- Using open data builds public trust and encourages participation.

**The problem**

Notorious for its grinding traffic and smog-filled air, Mexico City seemed an unlikely place to launch a bicycle hire scheme back in 2010. But today, it would be hard to imagine the capital without its fleet of little red "EcoBicis" weaving between gridlocked cars and buses.

In October 2019, the city announced its intention to expand the scheme and increase the number of bikes from 6 500 to 10 000 within five years. The problem was that since its inception, EcoBici had been run by just one supplier and a decade on, much of its infrastructure needed updating or replacing.

Private companies, including Uber and Dezba, had also arrived on the scene, offering residents shiny new e-bikes and motorized scooters via slick smartphone apps. City officials soon realized that they could not simply renew the current contract and hope for the best. Instead a new procurement approach was needed, to find a new supplier and explore how to improve the service.

> "EcoBici has transformed the image of bicycles in Mexico City. Once considered recreational, the bike is now a true alternative mode of transport."
>
> María Fernanda Rivera Flores
> Director of Sustainable Urban Mobility Systems, Mexico City

**The approach**

The city authorities began by working with the Open Contracting Partnership (OCP), a non-profit organization devoted to procurement reform. Through its "Lift" project, OCP was able to share examples of best practice from across the world, including the US city of Boston, which had used a new contracting approach to improve its own bike sharing system.

After a number of workshops, a strategy emerged:

- announcing the EcoBici opportunity publicly and to a global audience;
- sharing data, including financial and usage statistics via a dedicated website; and
- designing any new service together with suppliers and the public.

On 16 December 2019, these aims and the background to the project were explained at a press conference streamed online. Suppliers were told that all the information about the project would be shared on a dedicated website, through which they could post any questions and receive answers.

Any old-fashioned ideas about taking officials out to lunch or "leveraging relationships" soon evaporated.

Figure 28: A map showing the planned expansion of the EcoBici scheme in Mexico City


The next day, a supplier questionnaire was posted on the site, and was open to any interested company. It was made clear that responses were voluntary and did represent any commitment from the city to work with a supplier.

As well as being asked how they would solve the core requirements of the project – expanding EcoBici by 40 per cent, integrating with the city's smartcard system and so on – suppliers were asked more open-ended questions:

- How might we improve the user experience of EcoBici?
- What new sources of income could be used to fund the scheme?
- How could a shared income model work, allowing for fair profit levels?

This encouraged respondents to think more broadly about the project and contribute a range of ideas.

> "Collaboration and dialogue with the market is essential. We want to move from a 'them and us' relationship between government and suppliers to one built on trust."
>
> Rafael García Aceves, Open Contracting Director, Digital Innovation Agency, Mexico City

### The results

As well as the incumbent supplier, the city received responses from eight companies: six from Mexico, one from Brazil and one from Spain. Three of the Mexican companies formed a consortium, allowing them to compete with multinationals operating similar schemes in Paris, Barcelona and São Paulo. Included among the responses were a range of suggestions to help improve the service.

These included:

- 25 new bicycle designs, including hybrid and electric bikes;
- new mobile app features including health data and bike mapping; and
- a revised finance model combining sponsorship and government subsidies.

One thing all suppliers agreed on was the need for a multiyear contract, a reflection of the investment and time needed to implement a scheme of this scale.

### Next steps

At the time of writing, the city authorities were receiving answers to a second questionnaire posted in June 2020. This time, more detailed questions were asked; for example, how long would suppliers need to prepare a full technical proposal and build prototypes? Again, the principles of collaboration and early engagement were being used to set realistic deadlines and avoid any potential bumps in the road for EcoBici mark II.

For the latest on the project, please visit the city's EcoBici site. For more on the Lift initiative visit the OCP blog.

*Case study – Delivering social value in Norfolk through their supplier partners*

**Norfolk County Council**

Figure 29: Delivering social value in Norfolk


Huge gains for your local community by treating social value as a priority from the outset of your relationship with your supplier, and encouraging them to be open to ideas on how to deliver it.

**Summary**

- Social value is not a challenge; it is an opportunity
- Speak to suppliers early and ask them what they can offer
- This is an opportunity to build a better long-term relationship with a supplier and achieve outcomes in your region by working together

**The problem**

Social value is an important aspect of public procurement for local authorities in the UK. The Public Services (Social Value) Act 2012 requires local authorities to demonstrate social value when procuring suppliers; and yet, there is a lack of guidance to help public officials make this happen.

Equally, not all suppliers know how to address the social value requirements mandated in tender documents. This results in lost opportunities for social value to be demonstrated and the benefits resulting gained in communities.

### The approach

Norfolk County Council has managed to find innovative ways of maximising the social value of its contracts through its approach to pre-market engagement.

"Speak to suppliers early and ask them what they can offer, you may be surprised!"

Norfolk County council engaged early with suppliers on social value. Norfolk has a proactive and open conversation with suppliers in an attempt to sound out as many opportunities as possible. This approach keeps the conversation open, and leads ultimately to more creative ideas being identified.

Being clear and realistic with the supplier is key, as is demonstrating your commitment to social value. It is important to set goals tailored to be within the supplier's capabilities, as well as to engage regularly with the supplier to ensure that the social value work is on track and still available. This is crucial for ensuring the original social value element agreed does not get forgotten mid-project, forcing you to change the scope of a contract part way through.

Norfolk County Council's top tips on how to make "social value" work for ICT procurement in the public sector:

- Engage early and agree what you could do together.
- Once you have agreed, write it down.
- Ensure you have come to an agreement that if there is equipment involved how it is purchased.
- Once you have engaged in the contract, remind suppliers of their commitment for social value.
- Manage it and have social value as a standing item in your commercial meetings.

### The results

This approach has led to some big successes for Norfolk including:

- Contracts delivering up to GBP 160 000 of social value usually as an annual pot to be spent in agreement with the supplier.
- Help for young people to access technology – this included special events to improve digital skills, providing equipment and supplier professional staff support.
- Equipment/kits for schools to host and support events.
- Suppliers releasing their staff to provide staff hours to support special digital skills clubs.
- Positive staff engagement in the social value aspect of contracts, including awards ceremonies for the biggest contributors. Providing funding to organize the event, prizes and presenters.

- Much better working relationship with suppliers as you are working jointly on something that benefits the region with which both of you are engaged.
- Mobile network Wi-Fi access points to support digital learning in hard-to-reach areas.
- Internet of Things sensors to prototype new technology, to learn, monitor, manage and maintain existing services such as providing Air Quality sensors and creating a dashboard.
- Laptop and tablet devices to support the digitally excluded in the region where they are needed the most.

Figure 30: Equipment provided to schools to support digital learning

**Next steps**

Norfolk County Council is focused on two key aspects:

- Ensuring a focus on social value for every contract going forward.

- Looking strategically across the organization to see where social value and ICT procurement can provide the biggest impact. A key example of this in Norfolk could be the provision of Internet of Things (IoT) sensors to help vulnerable adults have independent lives reducing their reliance on the social care system, and the costs for the council which go with that.

The UK Government's Crown Commercial Service provides further guidance on social value.

### 4.1.4 Define outcomes

Decide on clear, measurable outcomes to ensure suppliers and internal teams understand the goal of the procurement.

**Why it's important**

Thinking in terms of goals or "outcomes" rather than specific products or services to buy in a procurement allows public officials and stakeholders to:

- reduce or eliminate bias towards certain products or suppliers;
- deliver better products and services for users;
- include wider social, environmental and economic benefits; and
- be more flexible with suppliers during the delivery phase.

**What it means**

Instead of deciding up front what to buy, public officials and stakeholders should discuss with their teams the desired outcome they want to achieve. For example:

- fewer non-emergency calls to an emergency service number;
- new drivers are able to apply for a driving licence without having to post documents or visit an office; and
- staff who work remotely can access and store documents securely.

Using the last example, if public officials and stakeholders assume the solution will be buying laptops for staff then they will only get laptops suggested by a supplier. If they specify the outcome a supplier may come forward with a different solution.

Outcomes may also be linked to the wider social and environmental goals of their organization. For example:

- creating opportunities for gender equality and social inclusion;

- improving skills and access to digital technology; and
- reducing or offsetting environmental impacts.

These goals should be linked to the subject matter of the procurement and be specific and measurable. For example, public officials and stakeholders could ask the supplier to:

- provide training opportunities or events for girls and women studying technology subjects;
- track user satisfaction or the uptake of a particular service by people with disabilities; and
- require the supplier to dispose of hardware responsibly and monitor the carbon footprint of a service.

To make sure outcomes are delivered, public officials and stakeholders should:

- include them in their requirements and contract with suppliers;
- consider linking payments to outcomes so suppliers only get paid in full if they deliver the desired outcomes;
- monitor outcomes during the delivery phase of the contract; and
- understand that changes may be required during the contract as they and the supplier discover how best to deliver a set outcome.

**Do's and don'ts**

Table 12: Dos and don'ts-Define outcomes

| Do | Don't |
|---|---|
| ✅ base goals or outcomes on research carried out with your organization, end users and suppliers<br><br>✅ ensure that outcomes are realistic for suppliers to provide<br><br>✅ insist that outcomes are measurable | ❌ do not write complex outcomes relating to particular software or hardware solutions<br><br>❌ do not include hard-to-measure outcomes, for example "reducing poverty" |

*Case study – How New Zealand is using procurement to benefit indigenous businesses*

**New Zealand Government**

Figure 31: Innovative procurement approach

The New Zealand government has used an innovative procurement approach to include indigenous businesses in public sector projects.

**Summary**

- It is possible to help indigenous people using inclusive procurement
- Early community engagement is essential
- Verification of indigenous businesses needs careful consideration

**The problem**

Despite its reputation for positive relations with its indigenous Māori and Pasifika (Pacific Islands) communities, New Zealand still sees significant inequality between these groups and the majority Pakeha (white) population. In the digital and technology sector, the disparity is even starker. Just 2.5 per cent of the Māori workforce are employed in the IT and communications industry and only 1 per cent of Māori are studying technology subjects in college.

Government procurement projects, although open to all, are often seen as out of reach for SMEs that make up much of the indigenous economy. This is made worse by:

- complex procedures, including lots of form filling, which can favour larger and more experienced suppliers;

- poor communication: for example, only advertising contracts online may be missed by community groups or smaller suppliers; and
- a lack of data: meaning government departments do not know which contracts were won by Māori or Pasifika businesses.

### The approach

In 2019, the New Zealand Government began including detailed social and environmental goals as part of its "broader outcomes" procurement approach. Departments were told to consider how they could create opportunities for Māori, Pasifika and regional businesses, as well as social enterprises. *(New Zealand Government Procurement)*

Official guidance outlined how to do this, including:

- sharing information early and designing services collaboratively with Māori and Pasifika groups;
- simplifying procurement documents and avoiding the use of complex technical requirements;
- considering Maori concepts such as *whānau*, or "extended family" when designing services.

> "For Māori to succeed in the 21st century we must build capability in digital technology and support a diverse, knowledge-intensive economy that will create new jobs in new industries."
>
> Megan Woods, Minister for Government Digital Services

### The results

A range of initiatives across the country have applied the broader outcomes strategy, including:

- The Southern Initiative – a social innovation project based in South Auckland that has used co-design workshops with Māori to design public services.
- Youth Justice – Oranga Tamariki – used a communication strategy including newsletters and events to engage with Maori community groups when commissioning a new remand service.

Figure 32: Māori women learning about procurement at the He Waka Eke Noa organization, South Auckland

**The challenges**

One of the main challenges around prioritising indigenous groups is to do it fairly and transparently. How, for example, do you define a Māori or Pasifika business? And how can you stop businesses falsely claiming indigenous ownership just to win a government contract?

To deal with these questions the New Zealand Government has looked to its neighbour, Australia, which runs a similar scheme for its Aboriginal and Torres Strait Islander businesses. Under this scheme an independent organization verifies that businesses are at least 50 per cent owned by indigenous people. New Zealand now plans to implement a similar policy as part of its broader outcomes approach.

**Next steps**

One intermediary, He Waka Eke Noa, has already shown success in linking Māori and Pasifika to procurement opportunities in the Auckland area. Its ethos has been to enable indigenous businesses through networking and training opportunities.

As it was put: "He Waka Eke Noa does not win you the work, you do, through your products, pitch, pricing, compliance and ability to provide a high-quality service".

Including Māori and Pasifika businesses in public sector procurement has also been prioritized as part of New Zealand's response to COVID-19.

*Case study – How Rotterdam is building the City Local Digital Twin using innovation procurement*

The basic design of Rotterdam's digital city consists of three layers. First, there are data sources such as city maps, blueprints of buildings, transport network information, and real-time sensors that together create the digital twin. Second, a generic platform which offers the basic digital twin functionality that can be accessed by authorized stakeholders, be they commercial, residential or governmental. Finally, applications can be developed that harness the power of the digital twin to create solutions for the social and the physical worlds.

**Summary**

At the forefront of the digital city movement is the Dutch city of Rotterdam. The historic port city has been developing and applying a variety of smart solutions to urban problems in recent years. A smart thermal grid is being constructed, for example, that will facilitate heat exchange between buildings and make entire neighbourhoods more energy efficient. Smart parking and intelligent (electric) mobility are supporting better traffic flow, and a range of other benefits are helping make life better for the inhabitants.

**The problem**

Many of these digital solutions have been around in the city for a while. However, the digital twin concept helps to pull all these disparate systems together under one coherent umbrella. Results of these individual solutions can be combined with one another to guarantee that there is a clearer development pathway that ensures an open flexible interoperable and "future-proof" roadmap for the city – one that has been designed to bring about positive local public outcomes, by the city for the city.

**The approach**

The most important principle is the development of a vision of purpose and basic generic functionality of an urban platform. In the case of Rotterdam, this vision developed from digital twin, which then evolved into a full-blown, suitably skilled urban digital community, in which all residents, shops and companies can have their own address. Other principles include the development of a data marketplace and the preparation of an API strategy. Developing this kind of digital city is technically challenging but also raises socio-political issues related to privacy, security, ownership and governance.

**The results**

Firefighting operations management through the new digital twin will make people safer. When responding to an emergency, firefighters would be able to access the 3-D model of the building they are entering, giving them knowledge of their surroundings as they attempt to save lives and manage the problem. Advanced digital twin models can also be linked to AI and real-time building occupant data so that firefighters know where people are and how the fire may spread. Furthermore, as augmented reality technology develops, all this information could be delivered through heads-up displays, allowing emergency responders to essentially see through smoke and walls as they navigate through buildings.

Rotterdam's waste services will also use the digital twin to bring benefits to citizens and the municipal government alike. Community waste receptacles equipped with sensors inform urban waste collection companies about how full waste containers are, meaning they can optimize their routes based on the areas that need collection most. Linking these data to the digital twin also keeps residents informed so, for example, carers for the elderly would not waste time searching for the nearest available waste bin after each home visit.

The bridges that traverse Rotterdam's many canals must open and close to allow water and road traffic to flow smoothly throughout the day. Accessing a broad network of cameras and sensors around the city, Rotterdam's digital twin tracks road and waterway traffic intensity to optimize bridge opening and closing, ensuring that each flows with minimum disruption to the other. Road and water vehicles linked to the system can be advised and rerouted in real-time for the benefit of individuals and the city as a whole. Better traffic flow offers profound benefits to a range of urban systems, especially in cities beset by bridged canals and similar infrastructure.

**The challenges**

The key element relies on a joint vision of purpose and basic generic functionality of an urban platform. In the case of Rotterdam, this vision developed from digital twin, which then evolved into a full-blown, suitably skilled urban digital community, in which all residents, shops and companies can have their own address.

**Next steps**

Other principles include the development of a data marketplace, the preparation of an API strategy. Developing this kind of digital city is technically challenging but also raises socio-political issues related to privacy, security, ownership and governance.

### 4.1.5 Estimate costs

Before public officials and stakeholders decide to commission a particular product or service, they should estimate the costs.

### Why it's important

Doing detailed research to estimate the likely costs of the procurement is an essential part of planning. Estimating and sharing budgets will:

- help determine what your organization can and cannot afford;
- enable suppliers to suggest the most appropriate technology or service;
- encourage competitive bidding and avoid price fixing; and
- reassure the public that money is being spent appropriately.

### What it means

Public officials and stakeholders can estimate the cost of delivering a product or service by:

- looking at available data on procurement and contracts;
- asking buyers what they paid for similar product or services;
- forecasting how much a service should cost a supplier to provide; and
- calculating the "whole life cost".

For example, if public officials and stakeholders wanted to use an external supplier for their IT helpdesk, they could forecast the expenses they would incur for office space, technology and salaries. This should then give them an appropriate figure that will help them evaluate bids.

Calculating the "whole life cost" should include:

- the initial outlay in buying a product or service;
- the time, costs and expertise required to switch from one technology or provider to another (at the beginning and end of a contract);
- ongoing subscription or licence costs; and
- additional technical support services.

Forecasting can be sped up significantly by using electronic procurement or "e-Procurement" tools, which store available data on past and current procurements.

Once public officials and stakeholders have a firm idea of what a product or service should cost, they will be able to:

- verify that funds are available from budget holders;
- consider combining or splitting up procurements where appropriate;
- share their budget openly with suppliers and the public; and

- spot uncompetitive bids during the evaluation phase.

Public officials and stakeholders should avoid significant delays between estimating costs and sharing them with the market. This will help ensure that they remain accurate and are not affected by changes in currencies or market rates.

**Dos and don'ts**

Table 13: Dos and don'ts-Estimate costs

| Do | Don't |
|---|---|
| ✅ forecast what a product should cost before money is spent | ❌ do not allow significant delays between estimating costs and advertising an opportunity |
| ✅ share budget data openly to promote competition and transparency | |
| ✅ consider using e-Procurement tools to plan budgets and control spending | |

### 4.1.6 Use digital buying tools

Use digital buying tools to enable faster buying and attract a broader range of suppliers.

**Why it's important**

Digital buying tools can speed up the buying, contracting and supply process considerably. Without them, buyers and suppliers may be forced to rely on paper documents, sealed bid envelopes and returning contracts by post or in person.

As well as accelerating the buying process, digital tools can help to:

- increase transparency by publishing open data at all stages, from planning to delivery;
- attract a more diverse range of suppliers, for example women-owned SMEs;
- reduce administrative costs; and
- increase value for money through aggregating demand.

**What this means**

Buying departments should invest in or scale up digital tools including:

- e-Procurement systems that allow "end-to-end" digital buying, that is from publishing an opportunity online and receiving bids to allowing electronic signature and invoicing;
- supplier databases that include details of supplier capabilities, how they have performed in the past and who they are owned by and stands to benefit from the award of contracts;
- digital frameworks – online lists of pre-qualified suppliers that can bid to provide specific goods or services; and
- online catalogues or purchasing platforms – allowing fast "off-the-shelf" purchases of products such as laptops, tablets, software and accessories.

When choosing a digital buying tool public officials and stakeholders should make sure that it:

- meets user needs, based on research with their users (including staff and suppliers);
- is easy to share or "interoperable" with other government systems;
- is easy to maintain and scales for future use;
- meets their security and data requirements, for example by providing information on where data are stored if in the cloud; and
- is less dependent on single third-party suppliers.

Public officials and stakeholders should also:

- make sure their staff have suitable training to use any e-Procurement system; and
- tell suppliers about any new systems and show them how to use them if necessary

### Dos and don'ts

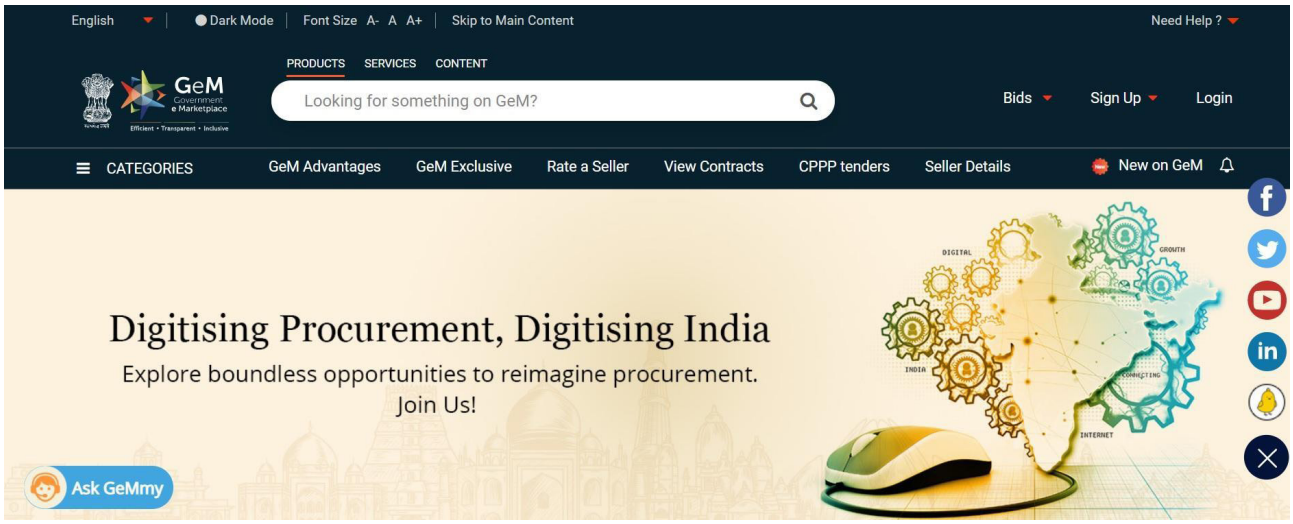
Table 14: Dos and don'ts-Use digital buying tools

| Do | Don't |
|---|---|
| ✅ use digital buying tools to enable faster procurement and attract a broader range of suppliers<br><br>✅ make sure any digital tools you choose can be shared easily<br><br>✅ inform suppliers about any new digital tools you would like them to use | ❌ do not choose digital tools that require you to be "locked in" to use a certain provider over a long period |

*Case study – Government e-Marketplace (GeM): Procurement reimagined in India*

### Government of India

Figure 33: Government e-Market Place




### Summary

- GeM aims to transform the way in which procurement of goods and services is done.
- GeM is a completely paperless, cashless and system driven e-market place.
- GeM helps in not only making public procurement efficient and accountable but also enhances resource efficiency.

### The problem

For a geographically large and politically diverse nation such as India, standardizing public procurement is a challenging task. The public procurement regime in India was characterized by fragmented processes and policies that operate in silos and required high levels of manual intervention. The increasing volume of public procurement opportunities in India, approximately 22 per cent of India's total GDP, coupled with the scale and magnitude of government projects, the existing malpractices in the system due to buyer-supplier interaction lead to the genesis of the Government e-Marketplace (GeM) initiative, which is driven by the need to deliver a step change in the public procurement process in the country and usher in an era of e-governance by leveraging the power of digital.

The public procurement regime in India comprises a framework of overlapping administrative rules and guidelines, sector-specific manuals and state-specific legislation, no comprehensive central legislation. At the core of the procurement framework lies the General Financial Rules ("GFR"), initially implemented in 1947, which comprises comprehensive administrative rules and directives on financial management and procedures for all government procurement.

### The approach

As public procurement forms a very important part of government activity in India. The Directorate General of Supplies & Goods (DGS&D), with the technical support of the National eGovernance Division (Ministry of Electronics and Information Technology), India has developed Government e-Marketplace (GeM) for the procurement of Products & Services by the Government Ministries and Departments, Public Sector Undertakings and other apex autonomous bodies of the Central Government in 2016.

The Government eMarketplace (GeM) platform was launched on 9 August 2016 as an online, end-to-end solution for procurement of commonly used goods and services for all Central Government and State Government Ministries, Departments, Public Sector Units (PSUs) and affiliated bodies. Procurement on GeM has been authorized by GFR by making necessary changes in government rules, last modified in 2017.

GeM is a dynamic, self-sustaining and user-friendly portal by which government officers can make procurements. It is a completely paperless, cashless and system-driven e-market place that enables procurement of common use goods and services with minimal human interface. It increased access for procurement – broader outreach, wider variety of goods and services, increase transparency and efficiency (time & cost) of procurement, encouraged small business units/individuals to do business with the government and make procurement data easily available for auditors, administrators, vigilance, and so on.

For the sellers, it provides direct access to all government departments, one-stop shops for marketing, bids/reverse auction on products/services. It allowed new product suggestion facility,

dynamic pricing based on market conditions, consistent and uniform purchase procedures and a dashboard for the selling and monitoring of supplies and payments.

For the buyers, it provided a listing of products for individual categories of Goods/Services, facility to search, compare, select and buy, buying goods and services online, continuous vendor rating system, useful for low-value buying and also for bulk buying at competitive price using reverse auction/e-bidding, user-friendly dashboard for buying and monitoring supplies and payments and an easy return policy.

The Government e Marketplace Special Purpose Vehicle (GeM SPV), a Section 8 (Non-Profit) Private Limited Company under the Ministry of Commerce has been incorporated under the Companies Act, 2013 to develop, manage and maintain the GeM platform.

**The results**

A major transformation has taken place in the last few years in the way procurement is made in the government by setting up GeM. This allows procurement to take place in a completely paperless, cashless and system driven e-market with minimal human interface. The platform helps in not only making public procurement efficient and accountable but also enhances resource efficiency.

GeM eliminates human interface in vendor registration, order placement and payment processing, to a great extent. Being an open platform, GeM offers no entry barriers to bona fide suppliers who wish to do business with the government. At every step, SMS and e-mail notifications are sent to the buyers, the heads of their organizations, paying authorities, and the sellers. Online, cashless and time-bound payment on GeM is facilitated through integration with PFMS and State Bank Multi Option System (SBMOPS). Seamless processes and online time-bound payment, which is also mandated by the Department of Expenditure, has given confidence to the vendors and reduced their “administrative” cost involved in pursuing officers for timely payment.

Direct purchasing on GeM can be done in a matter of minutes and the entire process in online, end-to-end integrated and with online tools for assessing price reasonability. For procurements of higher value, the bidding/Reverse Auction (RA) facility on GeM is among the most transparent and efficient, in comparison to e-procurement systems in vogue within the government sector. For creating a bid/RA, buyers do not need to create their own technical specifications as they have been standardized on GeM. The bid/RA is notified via e-mail and SMS to all the eligible suppliers. GeM bidding/RA therefore ensures competition, fair play, speed & efficiency and leads to proper price discovery. The reasonableness of the rates can also be confirmed through online comparison with market price on leading e-Commerce portals.

GeM is a completely secure platform and all the documents on GeM are e-Signed at various stages by the buyers and sellers. The antecedents of the suppliers are verified online and automatically through MCA21, Aadhar and PAN databases. In addition, SEBI empanelled credit rating agencies are also being used for conducting third-party assessment of suppliers.

On GeM, the filters for selecting goods which are Preferential Market Access (PMA) compliant and those manufactured by Small Scale Industries (SSI), enables the government buyers to procure "Make in India" and SSI goods very easily. Easily accessible MIS also enables the administrators and policy makers to easily and effectively enforce the government regulations on PMA and SSI sourcing.

The transparency, efficiency and ease of use of the GeM portal has resulted in a substantial reduction in prices on GeM, in comparison to the tender, rate contract and direct purchase rates. The average prices on GeM are lower by at least 15-20 per cent, and in some cases even up to 56 per cent. Demand aggregation for most of the common-use goods and services procured by various Central/ State Government Departments is estimated to result in annual savings to the tune of INR 40 000 Crore (approx. USD 4.8 billion) per annum.

Presently, more than 4 million products and 2 million service providers are available on GeM portal. Transactions for more than 110 000 Crore have already been processed through GeM. The GeM Portal has won the BusinessLine Changemaker Award for Digital Transformation in March 2020.

**Challenges**

The GeM team concedes that some challenges remain. Although efforts are being made to make GeM a Unified Procurement System for goods and services procurement, there are multiple portals in central government departments such as the defence procurement portal, the Indian Railways e-Procurement System, which could limit GeM's effort to achieve its mandate as the National Public Procurement Portal and provide the benefit of economies of scale and efficiency.

GeM also faces a bit of a challenge in getting all central organizations to comply with Rule 149 of the General Financial Rules (GFR) 2017, which mandates that all common-use goods and services that are available on the GeM portal should necessarily be procured on the platform.

Sellers noted that on-boarding onto the portal requires significant computer knowledge, and this is sometimes a challenge. However, GeM personnel are very proactive in offering help to onboard.

Figure 34: Promotional image outlining the benefits of GeM

**Next steps**

Buoyed by the growth of the platform, GeM had launched a revamped version of the marketplace dubbed GeM 4.0 with "sweeping changes that will go a long way in improving the buying and selling process."

The portal has a revamped incident management policy with an AI chatbot-based customer support system called GeMMy. The portal displays information on, for example, quantity procured, the amount spent, terms and conditions for major procurements. The CRM system is also improved for tracking the grievances through customer life cycles.

GeM Sahay is an initiative launched by GeM brings a complete financial solution for proprietorships partners. The app assists them to avail instant, frictionless financing to serve government orders without hassle.

There is work underway for the GeM 5.0 version, but the rollout will likely take some time.

*Case Study – How Nigeria completed the move to an e-Procurement platform making the process simpler and smarter*

Figure 35: Nigeria Introduces e-procurement system

## Summary

The importance of public procurement can be perceived through the opening up of cities, the provision of critical infrastructure, leading to the improvement of the quality of life of the citizens. The adoption of e-Procurement is gaining global acceptability, and Nigeria has taken steps to modernize its public procurement system by disseminating the federal e-procurement platform. The introduction of e-Procurement came at an interesting period for the nation when the need for improved fiscal discipline was vital. If the country is to achieve transparency and efficiency, e-procurement is an inevitable option.

## The problem

Over the years, the Nigerian Government procedure has been carried out manually by the process of inviting contractors to bid for projects, the selection of successful bidders and then finally project completion. In this procurement procedure, purchase order is not being processed in a timely fashion and delivery dates are not being met. The failure is traced to poor procurement systems, and the resultant effect is that Nigeria and Nigerians have had to suffer this defect for a long time.

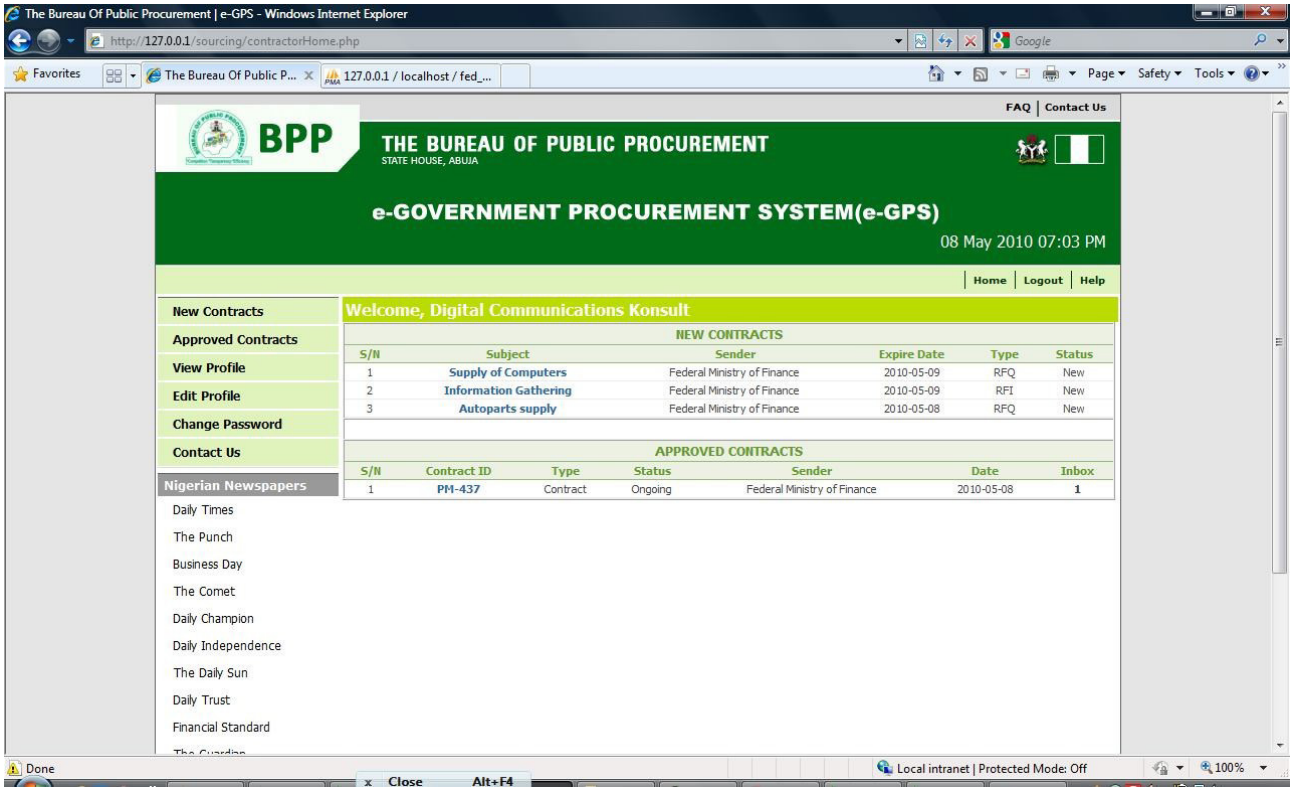
The following highlights the overall problems with the traditional system of procurement in Nigeria:

- Absence of economic cost/benefit analysis of projects as a way of justifying the need for the project.
- Projects are not prioritized and harmonized.
- Lack of completion and transparency in project procurement leading to high cost of projects.
- Unjustifiable gap existed between budget and actual release leading to underfunding, delayed completion, price escalation and project abandonment.
- Absence of efficient and effective project monitoring.
- Frequency government policy reversal.

## The approach

e-Procurement is the business-to-government purchase and sale of supplies, work and services through the Internet, as well as other information and networking systems. e-Procurement tools and technologies used by construction stakeholders to announce or notify, exchange project information, conduct tendering and submission of a proposal, notification on the award of contract, monitor the progress of work and make and receive payment for work done in the public procurement sector. e-Procurement technologies can be used to eradicate corrupt behaviour and tendencies. e-Procurement systems are needed to improve the environment for doing business and minimize wastage. It offers appropriate solutions to the issues of transparency and accountability in public expenditure. *(International Journal of Construction Management)*

Figure 36: e-Procurement platform




## The results

e-Procurement can be an invaluable tool for governments experiencing difficulties in their supply chain. The benefits of e-Procurement have been identified in cost saving, improved efficiency and control. Nigeria's new platform enhanced probity, accountability, transparency, competitiveness, value-for-money and fairness in public procurement, as well as fairness in the executive of government projects and programmes.

The introduction of the e-Procurement platform will further deepen the implementation, workability and effectiveness of procurement process. It aims to improve the ease of doing business and make it easier for all stakeholders in the procurement cycle to conduct business engagements and transactions. e-Procurement will undoubtedly become the essential pillar of the current anti-corruption war for many reasons, especially because it will reduce human interference in the procurement process to a minimum.

**Challenges**

With all digitization efforts come challenges in implementation. e-Procurement is no different. The following highlights the challenges that Nigeria has faced in implementing the public e-Procurement platform: *(Journal of Construction Materials, 2021)*

- Lack of technical expertise
- Corruption or bribery in the system
- Lack of commitment by government
- Lack of compliance
- Lack of legislative backing

**Next Steps**

To ensure critical mass uptake of the e-procurement platform and maximization of its benefits in Nigeria, there is a need for concerted efforts by all stakeholders in the industry to eliminate the barriers. Nigeria pledges to promote the development of innovative policies, usage of open data and action plans to encourage the implementation of technology in public procurement.

### 4.1.7 Simplify contracts

Simplify contracts to help speed up buying and appeal to the widest range of suppliers.

**Why it's important**

Procurement contracts can be notoriously long and complicated, using repetitive and in some cases irrelevant terms and conditions. This can make them difficult for buyers and suppliers to understand, particularly smaller suppliers who may not have access to legal advice.

Simplifying and standardising contracts will help public officials and stakeholders:

- reduce the time it takes for contracts to be drafted and approved;
- avoid disputes or misunderstandings later in the buying process; and
- encourage more SMEs to apply once they share an opportunity.

### What it means

When writing contracts public officials and stakeholders should:

- design contracts specifically for what they are buying – for example, what is relevant to a digital and technology contract, may not be relevant to facilities management, marketing or office supplies;
- use plain language and avoid legal jargon; if they have to use legal wording explain what it means;
- avoid using negative or controlling terms where possible, for example: "termination", "consequences", "liabilities", "penalties", "dispute", and so on; and
- check the document with a lawyer to eliminate any risks.

Public officials and stakeholders should also:

- ensure that language is inclusive and accessible to a diverse range of users; for example, those with special needs – check with non-governmental organizations (NGOs) before finalising the text;
- give clear guidance on when emergency conditions apply, that is an exceptional situation beyond the control of the buyer or supplier known as *force majeure*; and
- use visual aids such as flowcharts and timelines to provide a summary and clarify what is stated in the text:

### Framework agreements

If public officials and stakeholders regularly commission a certain type of service; for example, software development, they should consider setting up a framework agreement.

Framework agreements allow suppliers to sign up in advance to supply specific services for a limited period. Buyers and suppliers still need to sign a contract (a "call-off contract") each time a service is bought, but these contracts are much shorter and faster to produce than traditional contracts.

### Open contracting

All contracts should be published so that they are:

- accessible to the public (ideally via the Internet);
- published in full, except for legitimately sensitive information; and
- in a digital, machine-readable format.

For more information visit the Open Contracting Data Standard website.

**Dos and don'ts**

Table 15: Dos and don'ts-Simplify contracts

| Do | Don't |
|---|---|
| ✅ use plain language and avoid legal jargon; if you have to use legal wording explain what it means | ❌ do not use negative or controlling language; this is likely to discourage smaller suppliers from working with government |
| ✅ use framework agreements to allow faster contracting | ❌ do not use language that is biased towards a particular gender or group |
| ✅ publish contracts online so that they are accessible to the public | |

### 4.1.8 Choose an approach

Choose the best way to approach the market and the correct contract terms and conditions.

**Why it's important**

Once public officials and stakeholders have a set of agreed outcomes and an idea of their budget it is important to decide:

- if running a procurement is the best way to meet their needs;
- how to approach the market; and
- the best type of contract to deliver their outcomes.

**What it means**

Before public officials and stakeholders consider procurement approaches, they should first ask:

- Can and should we build the product or service ourselves? Sometimes known as a "make or buy" decision
- Can we use or extend an existing contract to deliver the same outcomes?
- Can we get a better price through "aggregated" or collective buying with other departments?

These options can avoid public officials and stakeholders having to run a new procurement process. However, they need careful consideration to ensure that:

- public officials and stakeholders have the expertise and capabilities to deliver a solution;
- they will get better value for money by building a product or service in-house;
- contract changes are permitted and cover the same scope of the original contract; and
- the product or service can be bought "off the shelf" and does not need to be tailored to their needs.

If the answer to any of these questions is no, then public officials and stakeholders will need to choose from the following procurement procedures:

- open procedures, where any supplier can bid for the work;
- restricted procedures, in which only certain suppliers can bid; for example, those with specific skills or experience;
- negotiated or "competitive dialogue" procedures, which allow them to negotiate requirements with suppliers before inviting them to bid;
- direct-award procedures, in which contracts are awarded direct to one supplier, without competition, generally used only in defence or emergency contexts.

Of these options the "open" procedure should be considered the default choice as it maximizes transparency and competition.

**Dos and don'ts**

Table 16: Dos and don'ts-Choose an approach

| Do | Don't |
|---|---|
| ✅ consider whether a procurement process is the best way to achieve your needs<br><br>✅ combine with other departments to buy commonly bought products or services at a better price<br><br>✅ use open procurement procedures to maximize transparency and competition | ❌ do not use the direct award process except for emergency or security-related buying |

## 4.2 Informing the market

Share what public officials and stakeholders need with the market, encouraging open competition.

**Overview**

After completing the planning stages it is time for public officials and stakeholders to tell suppliers that they are ready to receive bids for a specific project.

Public officials and stakeholders should let suppliers know:

- their requirements: what they are trying to achieve and why;
- their evaluation criteria: how they will choose the best supplier;
- how suppliers can ask questions about the project; and
- their timetable for awarding the contract.

### 4.2.1 Write requirements

Write clear requirements that help a supplier understand what public officials and stakeholders need and propose their best solution.

**Why it's important**

During the planning stage, public officials and stakeholders will have defined the outcomes they want from a given procurement. It is important to communicate these to suppliers clearly and concisely.

**What it means**

When writing requirements, public officials and stakeholders should provide suppliers with enough information to propose the best solution for meeting their needs, and nothing more. They should be based on their defined goals or outcomes and not favour or be "tailored" towards a specific supplier.

Requirements should include:

- the problem to solve;
- the citizen or "end user" for whom this work is being carried out, and what they need to do;
- any essential skills or experience the supplier must have;
- any technical or quality standards required by their organization;
- the stage that the work is currently in;
- the latest date for the supplier to start work;
- details of their maximum budget;

- the payment approach being used, for example fixed price, time and materials or outcomes-based;
- any incentive schemes being used;
- expected contract length;
- how suppliers can submit questions and when they should expect a response.

Public officials and stakeholders should also think about including:

- the results of their early market engagement;
- information on working arrangements, for example if remote working is preferred;
- handover details, for example if a new supplier is expected to work alongside an existing supplier at the start of a project;
- any security clearance the supplier must have when they start work;
- invoicing procedures and payment timings.

When writing their requirements, public officials and stakeholders should not:

- demand excessively high technical standards or experience levels – this may reduce competition and exclude smaller suppliers;
- use jargon or overly technical language – if this has to be used, it must be explained;
- use gender-specific language – for example using male pronouns such as "he/him" when referring to a supplier instead of "they".

**Dos and don'ts**

Table 17: Dos and don'ts-Write requirements

| Do | Don't |
|---|---|
| ✅ explain why the work is being carried out and who it is for<br>✅ be clear about the skills or experience you require<br>✅ use plain language and avoid jargon or gender-specific language | ❌ do not write requirements that you know can only be delivered by a particular supplier |

### 4.2.2 Write evaluation criteria

Write clear evaluation criteria so that suppliers understand how they will be selected.

### Why it's important

Public officials and stakeholders should tell suppliers how they will be evaluated if they bid for a piece of work. The chosen criteria should be:

- objective, that is free from bias, prejudice or subjectivity;
- proportionate and relevant to delivering their outcomes; and
- designed to deliver value for money.

### What it means

Public officials and stakeholders should set evaluation criteria for:

- cost effectiveness – based on the "whole life cost" they calculated in the planning phase;
- technical merit – the performance and reliability of a proposed solution;
- skills and experience – the competence of the supplier; and
- after-sales support and assurance.

Each criterion should be given a value or "weighting" to reflect their relative importance to you. This can be done by using a scoring scheme, for example:

- cost effectiveness – 20 points
- technical merit – 15 points
- skills and experience – 5 points

Whilst cost will always be an important evaluation criterion, in most circumstances quality should be weighted higher than price. This recognizes the importance of service delivery over simply buying a product at the lowest price.

To avoid a bias towards low-cost, public officials and stakeholders should:

- ensure that they consider whole life cost rather than just initial cost;
- consider using a low-cost threshold below which the bid will be considered abnormally low; and
- include a minimum quality threshold based on technical merit.

Technical merit should be measured objectively; for example, by allocating points to:

- performance – such as coverage or network capacity
- reliability – how mature is the proposed solution and is it well maintained?

- flexibility – can the solution be customized (which should be kept to a minimum) to fully meet their needs?
- assurance – for example, is there a Service Level Agreement (SLA)?
- integration – will the solution work with their other technology?
- security – does the solution's security meet their needs?

**Dos and don'ts**

Table 18: Dos and don'ts-Write evaluation criteria

| Do | Don't |
|---|---|
| ✅ explain why the work is being carried out and for whom<br><br>✅ be clear about the skills or experience you require<br><br>✅ use plain language and avoid jargon or gender-specific language | ❌ do not write requirements that you know can only be delivered by a particular supplier |

### 4.2.3 Advertise the opportunity

Advertise requirements openly to ensure the widest range of suppliers are aware of the opportunity.

**Why it's important**

Public officials and stakeholders should advertise procurement opportunities as widely as possible, including internationally, so that all eligible suppliers can apply for the work.

This will help ensure:

- transparency;
- equal treatment;
- competition.

**What it means**

In most cases public officials and stakeholders should use the "open" procurement process described in "Choose an approach". This means posting the opportunity on their department website and using other channels such as online and print media to advertise it.

Public officials and stakeholders should include:

- the time by which any interested supplier must respond if they wish to be considered;
- how the supplier should respond, for example filling in an online form or e-mailing an attachment in a specific format;
- the level of detail they need – give a maximum word count to avoid suppliers writing too much;
- links or access to supporting information, including their requirements and evaluation criteria; and
- links or access to their contract terms and conditions.

Adverts should be accessible to the widest range of suppliers, including small and medium-sized enterprises. This may involve posting the advert in several places and using different venues or events to publicize the opportunity.

Public officials and stakeholders should only restrict or remove information from the advert when there is a legitimate reason to do so; for example, risks to intellectual property or national security. Where this is the case public officials and stakeholders should:

- only remove information that is legitimately sensitive;
- give a clear and detailed justification for its removal;
- state for how long the information is considered sensitive: and
- disclose the information at the moment it ceases to be sensitive.

Once their opportunity has been made publicly available, public officials and stakeholders should allow suppliers adequate time to prepare bids. The response time should reflect the nature and complexity of the procurement.

For example, there might be one deadline for suppliers to submit questions, say 10 days after the publication of the advert, followed by a closing date for submissions two weeks after that.

**Dos and don'ts**

Table 19: Dos and don'ts-Advertise the opportunity

| Do | Don't |
|---|---|
| ✅ advertise opportunities widely, including internationally<br><br>✅ make all procurement information available, free of charge<br><br>✅ allow suppliers enough time between you advertising the opportunity to bid submission | ❌ do not restrict or remove any information unless it is legitimately confidential or commercially sensitive |

### 4.2.4 Answer supplier questions

Ensure that suppliers can ask questions, and provide them with useful answers before moving to evaluation.

**Why it's important**

After public officials and stakeholders have publicly advertised their opportunity, suppliers may want to ask questions about it. It's important to answer these questions in as much detail as possible so that:

- suppliers can decide whether a piece of work is right for them and whether to offer their services; and
- it encourages an open and transparent dialogue.

**What it means**

Suppliers should be able to ask questions easily, for example via e-mail or direct to a website.

When answering supplier questions public officials and stakeholders should:

- ask the supplier to explain what they mean if they do not understand the question;
- reply within the time they specified in their advert, and at least one working day before the deadline for bids;
- publish all the questions that have been asked and the answers online so that all suppliers have access;

- remove any supplier information from the questions and answers they publish, so people cannot see who asked the question;
- make sure that they have access to any expert advice they need; and
- extend deadlines if they cannot answer questions in time or need to make any changes or clarifications to the advertised opportunity.

Public officials and stakeholders can run an online meeting to respond to a lot of supplier questions at the same time. However, they must publish all questions and answers from each session so that suppliers who did not attend are not at a disadvantage.

Where possible, supplier e-mails should be sent to a general group e-mail rather than to individual staff. This ensures that the whole procurement team can see the questions and respond in time.

**Dos and don'ts**

Table 20: Dos and don'ts-Answer supplier questions

| Do | Don't |
|---|---|
| ✅ ask the supplier to explain what they mean if you don't understand the question<br><br>✅ publish all the questions that have been asked and the answers online<br><br>✅ use a group e-mail account so that the whole procurement team has access to supplier questions | ❌ do not reveal commercially sensitive information when you answer a supplier question, for example the supplier's price for the work |

## 4.3 Evaluation and award

Evaluate suppliers using clear and objective criteria and select a winner.

**Overview**

Once public officials and stakeholders have received a number of bids from interested suppliers they should:

- shortlist suppliers;
- evaluate and assess each supplier; and
- award the contract.

The evaluation process needs to be fair, open and transparent. Suppliers should be assessed using a clear scoring scheme and the winning supplier announced publicly.

Public officials and stakeholders should make sure that they:

- evaluate suppliers as a team, composed of all stakeholders who will be involved in the use of the product/service;
- balance the level of evaluation to the value or complexity of the work;
- avoid any bias affecting the evaluation; and
- keep a record of every stage of the evaluation and award process.

### 4.3.1 Shortlist suppliers

Use shortlisting to ensure that the right suppliers get through to the evaluation stage.

**Why it's important**

Shortlisting can be used to ensure that only suppliers who meet minimum standards get through to the evaluation stage. While using shortlisting can help speed up the procurement process, it must not be used to limit competition. Public officials and stakeholders may choose to take all suppliers through to the evaluation stage.

**What it means**

How many suppliers, public officials and stakeholders choose to shortlist depends on their needs. In general, public officials and stakeholders should aim to evaluate at least three or more suppliers.

Use some or all of these criteria to shortlist interested suppliers:

- proof of skills and experience;
- accreditation to any technical standards required;
- evidence of financial standing – for example, the supplier's turnover and profit margins should be proportionate to the value of the contract.

Any criteria public officials and stakeholders choose must be applied to all suppliers and scored objectively. A rating system can be used such as:

- 0 Not met or no evidence
- 1 Partially met
- 2 Met

- 3 Exceeded

If, for example, a supplier fails to score a 2 in any criteria public officials and stakeholders can choose to exclude them.

A supplier can also be excluded if:

- they can't start work by the latest start date stated in the requirements;
- their fees exceed the maximum budget published with the requirements;
- they are unable to accept minimum terms and conditions.

Public officials and stakeholders should keep a record of how they shortlisted suppliers, along with any e-mails they send. They should invite the shortlisted suppliers to take part in further evaluation.

Methods can include:

- written proposals;
- presentations;
- interviews or tests.

Public officials and stakeholders should notify unsuccessful suppliers in writing, explaining why they have not been shortlisted.

**Dos and don'ts**

Table 21: Dos and don'ts – Shortlisting suppliers

| Do | Don't |
|---|---|
| ✅ score suppliers using a clear points system and apply it to all suppliers<br>✅ keep a record of how you shortlisted suppliers, along with any e-mails you send<br>✅ notify unsuccessful suppliers by e-mail | ❌ do not use shortlisting to limit competition or favour suppliers you have worked with previously |

### 4.3.2 Evaluate suppliers

Assess the shortlisted suppliers using clear and fair criteria.

### Why it's important

The evaluation stage enables public officials and stakeholders to assess suppliers fairly and decide on a winner. They must evaluate suppliers using the assessment methods and evaluation criteria they published with their requirements.

### What it means

The most common way to assess suppliers is against a written proposal describing how they will deliver the outcomes published by public officials and stakeholders. This is often combined with a presentation, allowing them the chance to meet the supplier and ask questions.

If the supplier is proposing a team, it is important to meet some or all of them during the evaluation stage. This will help public officials and stakeholders direct technical questions to the right person. Other assessment methods such as interviews or tests might be more appropriate if they are hiring an individual specialist, for example a software developer.

Public officials and stakeholders should make sure that they:

- ask suppliers to provide information in the same format, whichever method they choose; for example, give suppliers a template to fill in so that it is easier to assess them; and
- do not look at any suppliers' proposals until after the deadline.

Public officials and stakeholders can ask suppliers questions in order to clarify their written proposals, but they should not allow them to resubmit proposals with modifications. Use an evaluation team or panel to score the suppliers. This will help ensure objectivity and reach a consensus.

The team should:

- include people from across the organization who will be involved in the use of the product/service;
- include people with a diverse range of skills, experience, genders and backgrounds;
- be aware of their evaluation criteria and requirements and have read the supplier proposals; and
- use the scoring system published with the opportunity and add justifications for their scores.

The team should not evaluate suppliers based on:

- experience of working with a particular supplier;
- personal preferences for a certain technology or brand; or
- social background, age or gender.

If public officials and stakeholders evaluate and are still unable to find a suitable supplier, they do not have to award a contract. They must tell all remaining suppliers that they:

- have not found one that meets their needs; and
- are not going to award a contract.

Public officials and stakeholders may choose to review what they need and then publish new requirements. They should keep a record of how decisions are made, including the evaluation team's individual and agreed scores, and any communication they have had with suppliers.

**Dos and don'ts**

Table 22: Dos and don'ts-Evaluate suppliers

| Do | Don't |
|---|---|
| ✅ evaluate suppliers using a diverse team made up of people from across your organization | ❌ do not choose a supplier based on a personal preference for a certain technology or brand |
| ✅ score suppliers against the same criteria you published with the opportunity | ❌ do not allow supplier proposals to be changed or modified during the evaluation stage |
| ✅ keep a record of how you have reached your decisions | ❌ do not award a contract if there are no suitable suppliers |

### 4.3.3 Award the contract

Inform successful and unsuccessful suppliers and begin the contracting process.

**Why it's important**

When awarding a contract public officials and stakeholders should:

- tell the winning supplier of their intention to award a contract;
- publicize the decision on their website and in the media; and
- notify and give feedback to unsuccessful suppliers.

This helps public officials and stakeholders ensure that:

- they are clear with the supplier on how and what they will deliver;

- the public know that their organization is awarding contracts fairly and appropriately; and
- unsuccessful suppliers can improve any future applications they make.

**What it means**

Public officials and stakeholders should allow time between notifying all suppliers of their decision and awarding the contract (often referred to as the "standstill period"). This will enable suppliers to ask questions and to provide feedback before a contract is formally signed.

Public officials and stakeholders should not negotiate with the winning supplier on core parts of the contract such as their requirements. This changes the nature of the work they advertised and gives the winning supplier an unfair advantage. Providing feedback to unsuccessful suppliers will help ensure that they are better able to compete for contract opportunities in the future.

When giving feedback to unsuccessful suppliers public officials and stakeholders should:

- explain how they performed against the evaluation criteria;
- explain how they performed against the successful supplier; and
- answer any concerns or questions.

Do not give unsuccessful suppliers information about how they performed in comparison to other unsuccessful suppliers.

Public officials and stakeholders should be clear with the winning supplier about:

- the agreed start and expiry dates of the work;
- the total contract values;
- how and when the supplier will be paid; and
- deliverables; for example, what needs to be done and by when.

Public officials and stakeholders may also need to include details on:

- anything a new supplier will need from their existing supplier;
- any staff training, they need as part of the handover of work; and
- who will own any intellectual property created during delivery.

For larger projects public officials and stakeholders should consider:

- breaking the work into smaller sections or "Statements of Work"; and
- being able to exit the contract after each section is completed.

### Dos and don'ts

Table 23: Dos and don'ts-Award the contract

| Do | Don't |
|---|---|
| ✅ tell the successful supplier you intend to award them the contract and share your decision publicly<br><br>✅ allow time between notifying all suppliers of your decision and awarding the contract<br><br>✅ give detailed feedback to unsuccessful suppliers | ❌ do not negotiate essential terms of the contract at the award stage<br><br>❌ do not enter into long-term contracts with no exit options |

## 4.4 Managing delivery

Ensure that projects run smoothly by working with suppliers to deliver outcomes.

### Overview

After the contract award phase, public officials and stakeholders will need to agree how they will work with their supplier, oversee delivery and then close the contract. This stage involves a number of activities including:

- supplier relationship management;
- onboarding and delivery management;
- contract administration;
- continuity planning;
- end of project reviews.

### 4.4.1 Manage supplier relationship

Develop a strong collaboration with suppliers throughout the delivery phase.

### Why it's important

Managing relationships with suppliers is important at all stages of the procurement cycle, but particularly critical during the delivery phase.

Effective supplier relationship management helps to:

- develop mutual trust and understanding;
- drive continuous improvement, value for money and capture innovation;
- manage risk; for example, in the supplier's ability to carry out the work; and
- deal with any unexpected events during delivery.

**What it means**

Challenges to building trust and understanding can include:

- using the contract to overcome problems rather than discussion;
- overuse of performance monitoring, leading to a lack of trust;
- misunderstandings relating to working culture or values;
- using rigid, "one-size-fits-all" contracts that are not designed for technology projects;
- an over dependence on one supplier, leading to a deterioration in quality or a lack of innovation.

To meet these challenges public officials and stakeholders should:

- ensure that problems are resolved as early as possible, without involving the contract or legal teams;
- use contracts that allow for flexibility and adaptability in how outcomes are delivered;
- agree a code of conduct with the supplier at the start of the contract;
- use incentives to drive improvement in supplier performance;
- involve the supplier in drawing up product plans or "roadmaps";
- allow the suppliers to propose how they will deliver their outcomes;
- allow the supplier to review the performance of their organization; and
- allow more than one supplier to work on larger projects, by breaking them into chunks or allowing suppliers to collaborate.

Public officials and stakeholders should only end a contract early with a supplier if there has been:

- a serious breach of contract; for example, if a supplier has not abided by the terms of the contract and has not provided the promised services; or
- consistent poor performance that has not improved following an improvement plan.

### Dos and don'ts

Table 24: Dos and don'ts-Manage supplier relationship

| Do | Don't |
|---|---|
| ✅ resolve problems early through discussion and collaboration, not contract enforcement<br><br>✅ allow the supplier to feed-back and suggest improvements<br><br>✅ consider involving the supplier in product strategy and planning sessions | ❌ do not end a contract early without following an improvement plan<br><br>❌ do not become "locked in" or over dependent on one supplier |

*Case study – How China is encouraging suppliers to involve in life cycle management of smart city projects*

### Summary

As a smart city project involves a long term of construction and operation, it is vital to maintain a strong supplier relationship. China has developed a series of approaches to strengthen cooperation and collaboration with suppliers in the smart city project.

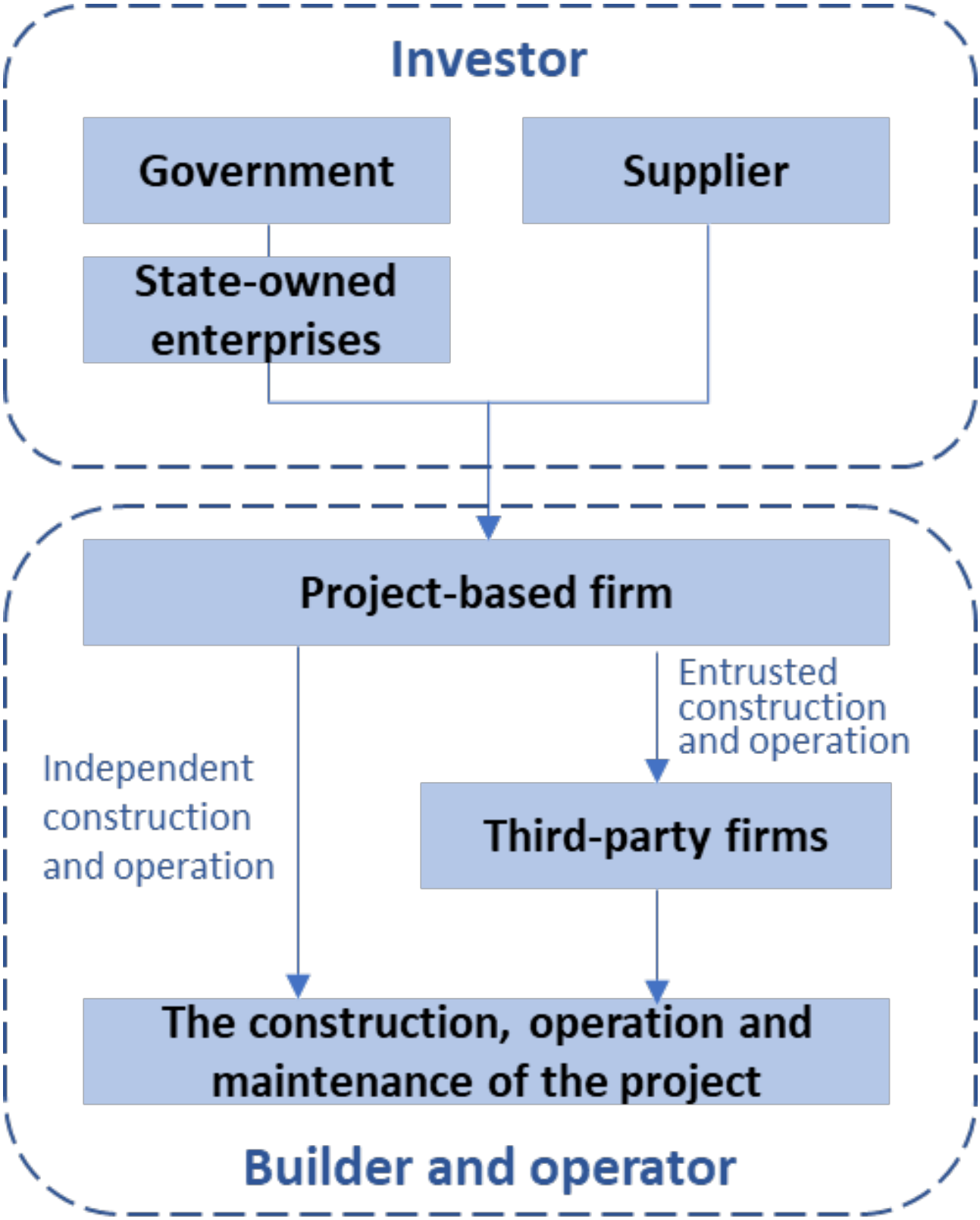
### The problem

- The suppliers have been actively involved in the construction stage; however, the maintenance and operation of smart cities still need strong support from suppliers
- The cooperation and collaboration between different suppliers are weak, which will lead to silos in smart cities
- A long-term relationship between local governments and suppliers needs to be built to ensure the life cycle management of smart cities
- The evaluation system for suppliers need to be further developed to enhance the continuous improvement

### The approach

To enhance supplier relationship, China has been developing a new approach, which emphasis the cooperation between government and suppliers and the life cycle management of smart city project.

Figure 37: A new approach to enhance supplier relationship in smart city project



- State-owned enterprises on behalf of government or local governments cooperate with smart city project suppliers to work as investors and establish a project-based firm.
- This project-based firm is responsible for the construction, operation and maintenance of the smart city project.
- Some projects are deployed by this firm independently.
- Some large projects are broken down into chunks to allow other supplier to participate and collaborate.
- A criterion to evaluate the participation of suppliers has been added to the smart city key performance indicators (KPIs).

**The results**

As a result of this new approach, the supplier relationship has been strongly enhanced. Firstly, suppliers will be responsible for the life cycle development and management of the smart city project because of that project-based firm invested by government and supplier. Secondly, the business procedure becomes flexible and adaptable to allow more than one supplier to work on large projects. Thirdly, the evaluation of suppliers' participation has been established to ensure the cooperation between government and suppliers and the continuous improvement of suppliers' performance.

Gaoxin district in Hefei City aimed to launch a smart city project. It co-established the Times-Smart High Technology Investment Management Co. Ltd with Anhui Publishing Group Co. Ltd and Beijing Haotian Zhicheng Technology Development Co. Ltd. This new company is responsible for smart city planning, construction, operation and maintenance. It also manages the project, which is entrusted to other companies.

Figure 38: Gaoxin district in Hefei city

"Suishenban" is one of key platforms for smart Shanghai. It has integrated more than 50 mobile terminals of all municipal departments in the city to provide the citizens with smart living.

"Suishenban" was launched by Shanghai Minxinxiang Information Service Co. Ltd, which was co-established by a state-owned platform firm in Shanghai and Wonders Group. This new company provides operational services to "Suishenban" and is monitored by Big Data Centre in Shanghai.

Figure 39: "Suishenban" in Shanghai


## Challenges

- Many projects are still adapted to traditional procurement processes, which do not have a strong supplier relationship.
- It is difficult to ensure the long-term operational support from suppliers after the construction.
- The relationship between government and suppliers in the co-established firm needs to be explored further.

## Next steps

- The new approach will be developed and promoted further in the future projects.
- The co-established firms will put the emphasis on the operation and maintenance of smart city projects after its construction.
- The suppliers will take a larger stake of the co-established firm to empower suppliers in the planning, construction, operation and maintenance.

### 4.4.2 Manage supplier delivery

Use effective project management and monitoring to ensure that outcomes are delivered.

**Why it's important**

Beginning a new project with a supplier is a crucial stage in the procurement and contract life cycle. Public officials and stakeholders will need to be clear about:

- how they intend to work with them;
- roles and responsibilities; and
- how they will measure and reward performance.

**What it means**

Public officials and stakeholders should meet the supplier at the start of the project to agree:

- where the supplier will work and which tools or software they will use to collaborate;
- roles and responsibilities;
- how the project will be managed; for example, using agile or another delivery methodology;
- key milestones for the project, displayed in shared diagram or "roadmap";
- how the work will be assessed; for example, which metrics they will use to monitor performance; and
- how and when any incentives will be paid.

During the delivery phase public officials and stakeholders should:

- meet regularly to discuss ongoing performance, where possible with the whole supplier team not just the project manager;
- identify any areas for improvement and agree how to make changes;
- consider how to work with suppliers with specific needs; for example, women-owned businesses may require more flexible hours; and
- regularly review the exit plan that was drafted at the beginning of the contract.

The level of monitoring should be proportionate to the value and importance of the contract. For high-value or complex projects this should involve a range of stakeholders, ideally including those independent of awarding the contract.

During crisis response situations, a less intensive or targeted approach may be required to ensure that public officials and stakeholders can still deliver services with their supplier.

### Dos and don'ts

Table 25: Dos and don'ts-Manage supplier delivery

| Do | Don't |
|---|---|
| ✅ define roles and responsibilities at the start of the project<br><br>✅ agree where the supplier will work and which tools you will use to collaborate<br><br>✅ agree a shared set of milestones and clarify how they will be assessed | ❌ do not allow one person to monitor high-value projects on their own, particularly if they also awarded the contract |

*Case study – Increasing transparency and accountability: How Mexico is opening up and connecting procurement data*

### National Anti-corruption System Secretariat, Mexico

Figure 40: Mexico's National Digital Platform


Mexico's National Digital Platform is a pillar of the country's General Law of the National Anti-Corruption System. It is now moving into an exciting new phase of development.

### Summary

- Rooting out corruption depends on access to open data and an engaged public.
- Bringing data together from different levels of government, making it accessible, comparable and useful in combating corruption, can be a challenge.
- A coordinated national approach can help sub-national governments, which often lack the necessary skills and resources, to provide data to a national platform.

### The problem

The General Law of the National Anti-Corruption System (NACS Law) puts in place obligations on procurement transparency for the whole country; however, as a Federal Republic, much of Mexico's public sector spending is devolved to the 32 sovereign, autonomous states and federal entities. The law requires that each state put in place systems to provide local procurement data to the national platform; however, obtaining quality data from each of Mexico's 32 states, institutions and autonomous bodies has been one of the biggest challenges for the national platform team.

As the Organisation for Economic Co-operation and Development (OECD) compendium of good practices on the use of open data for anti-corruption says:

> "Open data can help prevent and tackle corruption by shedding light on government activities, decisions, and expenditures, and by increasing levels of accountability, allowing citizens and government to better monitor the flow and use of public money"

For example, to stop a corrupt official who has been debarred in one state from finding a job in another (as currently happens in Mexico), the national platform requires that all states provide data on debarred civil servants and companies. Currently only the Federal Government, the State of Mexico and Sonora are providing this information.

### The approach

The National Digital Platform (Plataforma Digital Nacional – PDN) enables key information to be gathered, consulted and cross-examined by the National Anti-Corruption System (*Sistema Nacional Anticorrupción*) to prevent, investigate and sanction corruption from all levels of government.

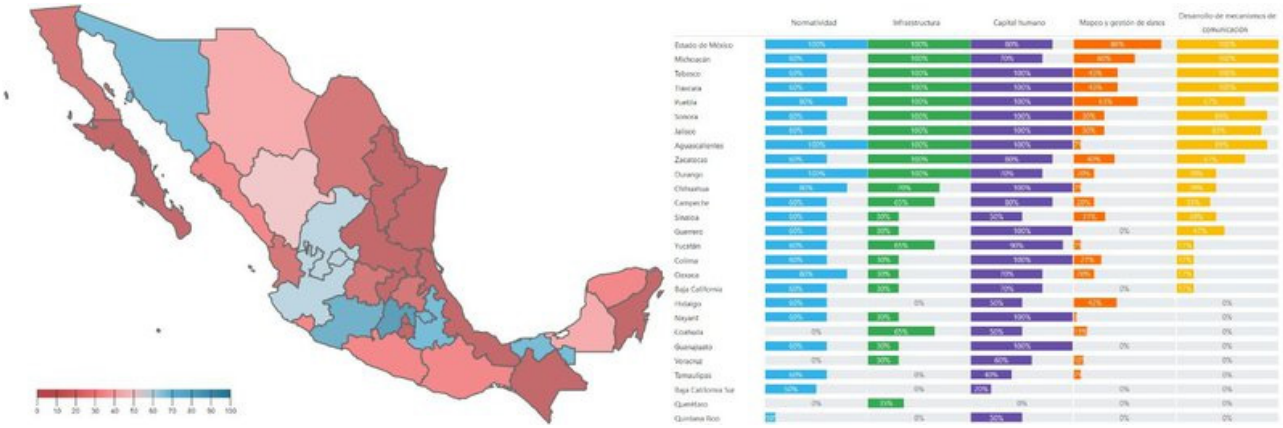
The PDN, which is developed and administered by the National Anti-corruption System Secretariat (SESNA), aims to populate six datasets from across federal and state government institutions and make them publicly accessible. The six datasets (referred to as "Systems") are:

- assets, conflict-of-interest, and tax declarations ("System 1")
- public officials involved in public procurement contracts ("System 2")
- sanctioned public officials and individuals ("System 3")

- information and communications system of NACS and the national auditing system ("System 4")
- public complaints related to corruption ("System 5")
- public procurement contracts ("System 6")

The PDN team at SESNA saw the need to support the sub-national governments to provide data, while recognising that needs and contexts would vary across the country. In order to provide a clearer picture of each state's situation, SESNA launched a dashboard to illustrate where success had been achieved and where more progress was needed.

Figure 41: SESNA's dashboard illustrating how each state is delivering open data



The launch of the dashboard was accompanied by a library providing open source, easy-to-replicate tools to enable the sub-national governments to overcome the technical challenges of providing their data to the national platform. The library (*Mercado Digital Anticorrupción*) launched with tools for conflicts of interest declaration and web services for connecting local Civil Service Buyers Registers and the Debarred Civil Servants and Companies lists.

Figure 42: An illustration from the video promoting the new tools library


The Global Digital Marketplace Programme has been working with the PDN team in SESNA since December 2019, supporting them to run a pilot project with three states (Chihuahua, Jalisco and Oaxaca) with a focus on "System 2" and "System 3" of the PDN.

This involved managing collaborative delivery with a local supplier partner, supporting and working as part of the PDN multidisciplinary technical teams, to develop a shared and scalable solution to provide states' data into the national platform via an application programming interface (API).

**The results**

In addition to developing the API, the PDN team is supporting:

- knowledge transfer to each pilot states' technical teams, so that they are self-sufficient to use, update and maintain the API; and
- the creation of API documentation and guides, which are necessary to reproduce the project in other states.

Although the data currently collected on the national platform are still predominantly from the Federal Government, there is now a new momentum behind the drive to connect state-level data. Along with the data from Sonora and the State of Mexico, the states of Aguascalientes and Jalisco are supplying conflicts of interest data and the three states participating in the pilot are on schedule to add their buyers' registers and disbarred lists in January 2021.

The launch event for the latest version of the national platform attracted hundreds of attendees from government and civil society, and included an expert panel discussion with representatives from the local chapter of Transparency International and the Inter-American Development Bank.

SESNA's hands-on approach, supporting pilot projects and the open-source tools, manuals and guides to help those generating and standardizing data at local level, should see significant quantities of quality data starting to reach the PDN over the next year.

### Challenges

The PDN has some way to go before data for all six "Systems" is being collected from all areas of government. As the Follow-up Report on the OECD Integrity Review of Mexico states:

> "The [NACS] has the potential to be a 'game changer' in Mexico's fight against corruption. [However...] the interoperability of existing information systems present significant technical challenges"

As Pablo Villarreal, Head of the PDN Unit, points out:

> "We want everything to be 'transparent'. This is great, but transparency without purpose is not useful. [...] To move on, there needs to be a real drive to open and standardize data, and a true political commitment".

Combining the political commitment with a tenacious focus on delivering technical solutions, is a challenge that still faces the SESNA team in order to get the PDN fully up and running with quality usable data.

### Next steps

Building on the current momentum, SESNA have a busy schedule ahead to complete the pilot with Chihuahua, Jalisco and Oaxaca, as well as to make more tools available to government agencies via the Mercado Digital Anticorrupción Library and expand support to states and federal entities to provide more and better data to the platform.

The GDS Global Digital Marketplace Programme continues to support the SESNA PDN team over the coming months and into 2021, laying the foundations to scale the work to all 32 states. This will help Mexico to have a truly national view on and ability to mitigate, corruption and fraud risks and to implement the obligations of the NACS Law.

### 4.4.3 Manage contract changes

Work with suppliers to manage any changes during the contract.

**Why it's important**

Changes during a contract are often necessary, particularly in the case of complex technology projects where there may be a need to adapt and iterate how outcomes are delivered. Any contract changes need to be managed carefully to ensure that public officials and stakeholders avoid any legal or corruption risks.

**What it means**

What public officials and stakeholders can and cannot change during a contract will be informed by the terms and conditions agreed with the supplier. In outcomes-based contracts, appropriate changes are allowed providing that:

- the supplier still delivers the outcomes that public officials and stakeholders have defined;
- there is no impact on value for money for their organization; and
- the changes fall within any contingency margin; for example, when extending a contract length by a certain percentage.

It may still be possible to make more significant changes providing that public officials and stakeholders:

- agree the change in writing with the supplier;
- approve any change in budget with senior stakeholders;
- assess any impact on services for end-users; and
- publish details of the changes online.

If public officials and stakeholders' requirements change significantly so that they are no longer covered by the original scope of their contract, they should cancel the contract and start the buying process again. This is so that:

- they can find a service that meets their requirements at the best price; and
- suppliers who might be more suited to the work have a fair chance to apply.

**Dos and don'ts**

Table 26: Dos and don'ts-Manage contract changes

| Do | Don't |
|---|---|
| ✅ be aware of any risks caused by contract changes<br><br>✅ agree changes in writing with your supplier<br><br>✅ keep evidence of any contract changes in case of disputes and to maintain an audit trail | ❌ do not allow contract changes that go significantly beyond the scope of your original requirements |

### 4.4.4 Close the contract

Work with suppliers to close projects and review how they went.

**Why it's important**

Closing a contract should begin well in advance of the end date of a specific project. This is so that public officials and stakeholders can:

- ensure they received what was agreed from their supplier;
- pay the supplier;
- manage any handover issues; and
- review how the whole project went.

This work may need to be done while public officials and stakeholders are simultaneously managing an existing contract or starting a new procurement. However, it is a crucial step to help inform future buying decisions.

**What it means**

There will be a number of administrative steps to carry out with suppliers at the contract closure stage including:

- formal acceptance of deliverables;
- payment of invoices;
- transfer of data and information;

- archiving documents;
- providing feedback to the suppliers and asking for their feedback.

If a service or product delivery is moving to a new supplier, public officials and stakeholders should consider including them in their final few meetings with the existing supplier. This is so that the new supplier can understand how public officials and stakeholders work, and ask any questions before the previous supplier leaves the project.

Public officials and stakeholders should also:

- review the buying process and delivery phase with their team;
- analyse how problems could have been overcome or minimized;
- suggest recommendations for future contracts;
- review whether they need to procure the same product or service again; and
- plan to avoid any interruption of digital services for end users.

Above all, public officials and stakeholders should be able to answer the following questions at the end of a contract:

- Did they get what they requested?
- Did they get what they actually needed?
- Can they see a difference between the two? If yes, can they explain the difference?

**Dos and don'ts**

Table 27: Dos and don'ts-Close the contract

| Do | Don't |
|---|---|
| ✅ plan well in advance for contract closure<br>✅ ensure that data and technology can be transferred back to you or to a new supplier<br>✅ review the buying process and the delivery phase at the end of the contract | ❌ do not close a contract without carefully considering the continuity of services |

# 5 Conclusions

The international challenges facing societies, cultures and economies are interrelated and increasingly complex. These challenges are associated with climate, health, food, education, aging and equality. The 2030 Sustainable Development Agenda provides the pathway for the current decade, and the foundation for the decades to follow to transition towards a resilient future for all.

The potential of technology and how it is purchased can improve public services and benefit society has expanded substantially as we move towards the digital age. However, this potential will not be realized when governments at all levels – national, regional or local – purchase unsuitable technology, fail to work effectively with suppliers, or prioritize bureaucracy over the needs of the people and organizations that have no choice but to interact with governments, e.g., citizens, businesses and social enterprises, and charities.

In this scenario, SSC strategies should be outcome-oriented, and ensure that shared data are used efficiently and effectively to support the multiagency model for changing outcomes.

The COVID-19 global health pandemic has exposed gaps and weaknesses in governments' digital resilience, as well as further undermining governance and accountability where systems were already weakened due to corruption and bribery.

Improving procurement globally has benefits for citizens, civil servants and governments around the world. It helps tackle corruption and improves services for users. With the global cost of corruption being at least an estimated USD 2.6 trillion every year, and with businesses and individuals paying more than USD 1 trillion in bribes every year, it also has the potential to save vast sums of money.

To venture forward on establishing smart and sustainable cities, it is essential to understand the landscape of key cross-sectoral stakeholders along with the key digital, data and technology service providers, who can contribute collectively and collaboratively to the transition process.

Efficient supply chains (in the urban context) are essential to support smart and sustainable city transformations, while helping to stimulate the circular economy in the urban realm.

Smart sustainable procurement in this context means:

- **Mainstreaming accessible, human-centred design, data-driven and open approaches** in public procurement.
- **Investing in empowered multidisciplinary and cross-functional teams** founded on honesty, transparency, collaboration and integrity.
- **Using public procurement approaches that are fit for the twenty-first century** as a lever to achieve inclusive, equitable and sustainable policy outcomes that have positive economic, social and cultural and environmental impacts.

- **Seizing the opportunities provided by digital government, open data and new technologies throughout the full public spending life cycle** – from planning, informing the market, evaluation and award and managing delivery to help prevent corruption and sustainably meet the needs of communities.

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# 7 Annex

## 7.1 UK Government Digital Services

UK GDS has partnered with national, state and local governments across five emerging economies through its Global Digital Marketplace Programme, to make the procurement process more open and effective. This work is possible through the UK Government's successes over the last decade to 2020, including the Digital Marketplace, standards-based assurance of spending and service delivery, and the Crown Commercial Service buying digital community, which are collectively helping to transform the way the public sector acquires digital technology.

As COVID-19 pushes more governments worldwide towards digital, data and technology solutions and opportunities, it is imperative to continue and scale these efforts to improve public procurement. By working to make procurement open, this will help to make the process more transparent and assist governments to function better.

### The evolutionary and iterative approach taken to develop the Guidelines

The Guidelines provide practical steps to take at each stage of the technology buying cycle, from planning, informing the market, evaluation and award and managing delivery of a product or service.

Each stage is supported by a growing set of case studies from public-sector organizations around the world; therefore, understanding and researching in context is important.

The online accessible version, the Digital Buying Guide, is initially available in English, Spanish and Bahasa Indonesia versions, which were prioritized because of UK GDS's work in Latin America, South Africa and Southeast Asia.

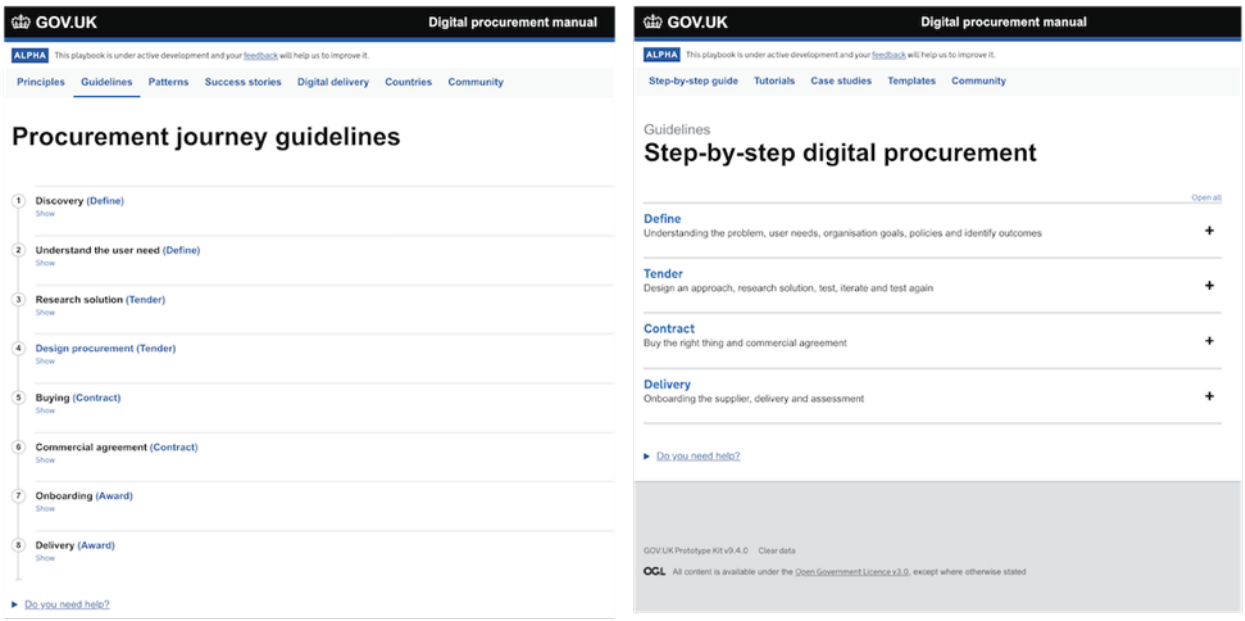

The Digital Buying Guide beta has evolved from the "ICT Commissioning Playbook" alpha that the UK GDS Global Digital Marketplace Programme delivered towards the end of 2018, with help from partners and supported by the OECD.

Work on the Guidelines commenced following the launch of the Thematic Group on Procurement Guidelines for Smart Sustainable Cities at the ninth Green Standards Week and the fourth Annual Meeting of the U4SSC Implementation Programme in Valencia, Spain, in October 2019.

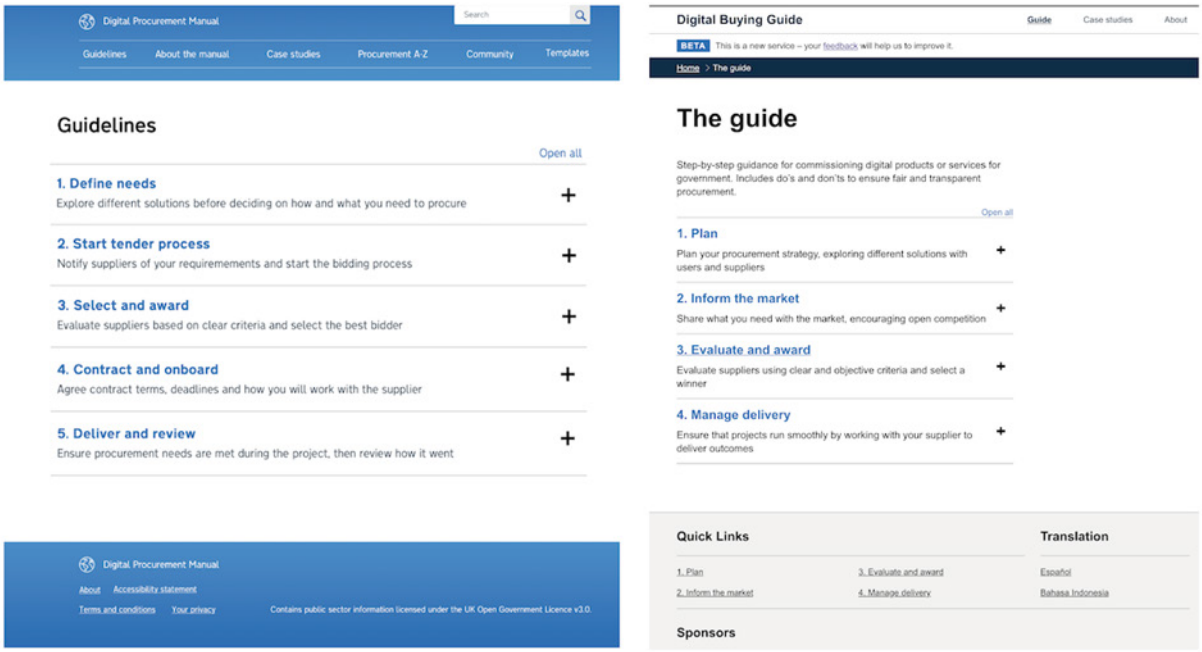
At the beginning of 2020, UK GDS began to iterate the "ICT Commissioning Playbook" alpha. The multidisciplinary team drew inspiration from the GOV.UK Design System and from the UK National Health Service (NHS) Digital Design System, as well as from other design styles used by multilateral and non-governmental organizations that work on international development.

UK GDS has been interacting extensively with users and stakeholders, in national and local governments around the world. At the beginning, this was mostly face-to-face; however, when the COVID-19 pandemic escalated internationally in 2020, the UK GDS Global Digital Marketplace Programme team switched to full remote delivery. The team quickly adapted to using a range of online tools and virtual techniques to support remote research, analysis, user testing and live language interpretation.

The private beta design went through a number of iterations based on feedback gathered throughout the testing with users and stakeholders.




Two screenshots, showing one stage of the iteration of the Digital Buying Guide. The left-hand screenshot illustrates a page titled “Procurement journey guidelines”, which had eight steps. The screenshot on the right depicts the guidelines titled “Step-by-step digital procurement”, with four headings: Define, Tender, Contract, Delivery.




Two screenshots, showing one stage of the iteration of the Digital Buying Guide. The left screenshot shows a page titled "Guidelines", with five steps. The screenshot on the right shows a page titled "The guide", with four headings: Plan, Inform the market, Evaluate and award, Manage delivery.

In parallel, UK GDS also worked with commissioned partners Development Gateway and Oxford Insights, whose research, analysis and recommendations informed the Digital Buying Guide content and case studies:

- Gender Equality and Social Inclusion in ICT Procurement: Discovery Report
- Resilience by eDesign: Digital Emergency Procurement

In July 2020, the Digital Buying Guide was externally audited for accessibility, and it is fully compliant to "AA" standard with the Web Content Accessibility Guidelines (WCAG) version 2.1.

The UK GDS Global Digital Marketplace Programme team's work with Development Gateway and Oxford Insights included creating indicator framworks for emergency procurement, and gender equality and social inclusion in public procurement. These indicators can be used to assess maturity and define incremental actions to take for improvement, and are provided at the end of these Guidelines.

Additional user needs have emerged during research and testing. To meet these needs, UK GDS has a prioritized roadmap to develop new features, including:

- **community elements** – for officials around the world to connect, share experiences and better practices, and learn from each other;

- **resources** – such as templates for simplified ICT contracts, standards for assuring ICT investment plans and service delivery;
- **more indicators** – for assessing maturity and actions for incremental improvement on a number of digital buying themes.

In October 2020, the Digital Buying Guide public beta was launched during the annual meeting of the OECD Working Party of Senior Digital Government Officials, and with the support of ITU.

Between May and August 2021, UK GDS resumed the virtual meetings of the U4SSC "Procurement Guidelines for Smart Sustainable Cities" Thematic Group to complete the development of these Guidelines, and in preparation for the sixth Annual Meeting of the U4SSC Implementation Programme, in December 2021.

## 7.2 Smart sustainable procurement - key performance indicators

The following key performance indicators (KPIs) are an initial set that have been developed through the work of the UK GDS Global Digital Marketplace Programme team, and supported by the ITU U4SSC and OECD Thematic Groups led by Warren Smith at UK GDS.

These KPIs are anticipated to expand with further input from the Thematic Groups, which can be used to assess maturity and define incremental actions to take for improvement throughout the public spending life cycle.

### 7.2.1 Gender Equality and Social Inclusion (GESI) in ICT Procurement

With thanks to UK GDS delivery partner Oxford Insights, the following GESI in ICT procurement Monitoring, Evaluation, Assessment and Learning (MEAL) indicator framework has been developed with an associated user guide, and reproduced here.

| Category 1: Data | |
|---|---|
| **Indicator 1: General Government Data** | **Sub-indicator 1: SME Ownership in the country**<br>1 (a) Disability<br>1 (b) Gender<br>1 (c) Sexual Orientation and Gender Identity (SOGI)<br>1 (d) Race/Ethnicity<br>1 (e) Socio-economic background<br>1 (f) Regional representation within the country<br>**Sub-indicator 2: Disabilities in the population**<br>2 (a) Physical<br>2 (b) Neurodiversity |
| **Indicator 2: Government Procurement Data** | **Sub-indicator 3: Procurement team composition**<br>3 (a) Disability<br>3 (b) Gender<br>3 (c) SOGI<br>3 (d) Race/Ethnicity<br>**Sub-indicator 4: Data on who owns the companies that bid**<br>4 (a) Disability<br>4 (b) Gender<br>4 (c) SOGI<br>4 (d) Race/Ethnicity<br>4 (e) Regional representation within the country<br>**Sub-indicator 5: Data on who runs the companies that bid**<br>5 (a) Disability<br>5 (b) Gender<br>5 (c) SOGI<br>5 (d) Race/Ethnicity<br>5 (e) Regional representation within the country<br>**Sub-indicator 6: Data on who runs the companies that win**<br>6 (a) Disability<br>6 (b) Gender<br>6 (c) SOGI<br>6 (d) Race/Ethnicity<br>6 (e) Regional representation within the country<br>**Sub-indicator 7: Data on who owns the companies that win**<br>7 (a) Disability<br>7 (b) Gender<br>7 (c) SOGI<br>7 (d) Race/Ethnicity<br>7 (e) Regional representation within the country |

| Category 2: Policy | |
|---|---|
| **Indicator 3: Procurement Law, Policy, and Practice** | **Sub-Indicator 8: Does the government mention GESI factors in their procurement law?**<br>8 (a) Disability<br>8 (b) Gender<br>8 (c) SOGI<br>8 (d) Race/Ethnicity<br>8 (e) Regional representation within the country<br>**Sub-Indicator 9: Does the government actively procure for GESI friendly ICT goods/ services?**<br>**Sub-Indicator 10: Do they have certification models?**<br>10 (a) Disability<br>10 (b) Gender<br>10 (c) SOGI<br>10 (d) Race/Ethnicity<br>10 (e) Sustainability<br>**Sub-Indicator 11: Does the government provide financial (or other) assistance for the certification process?**<br>**Sub-Indicator 12: Are there reserved procurement opportunities for the above certified models?**<br>**Sub-Indicator 13: Are there reserved procurement opportunities for SMEs?**<br>**Sub-Indicator 14: Do tenders require suppliers to demonstrate commitment to the local community?**<br>**Sub-Indicator 15: Do tenders require bidders to demonstrate commitment to GESI in the project?**<br>15 (a) Approach<br>15 (b) Personnel structure<br>**Sub-Indicator 16: Do governments/departments include award clauses relating to GESI practices in the supplier company?**<br>16 (a) Product design<br>16 (b) Product production<br>**Sub-Indicator 17: Are there pre-market engagement events?**<br>**Sub-Indicator 18: Is there a procurement strategy/roadmap?**<br>18 (a) Long-term<br>18 (b) Short-term<br>**Sub-Indicator 19: Does the government evaluate the success of these laws/ policies/practices?** |
| **Indicator 4: Anti-Discrimination Policy and Law** | **Sub-Indicator 20: Does the government have laws protecting against discrimination in general?**<br>**Sub-Indicator 21: Does the government have laws protecting against discrimination based on:**<br>21 (a) Disability<br>21 (b) Gender<br>21 (c) SOGI<br>21 (d) Race/Ethnicity |

| Category 3: Government | |
|---|---|
| **Indicator 5: Quotas** | **Sub-Indicator 22: Does the country employ the use of quotas in government employment generally for:**<br>22 (a) Disability<br>22 (b) Gender<br>22 (c) SOGI<br>22 (d) Race/Ethnicity<br>**Sub-Indicator 23: Does the government employ the use of quotas in government procurement teams for:**<br>23 (a) Disability<br>23 (b) Gender<br>23 (c) SOGI<br>23 (d) Race/Ethnicity<br>**Sub-Indicator 24: Does the government have procurement quotas?**<br>24 (a) Disability<br>24 (b) Gender<br>24 (c) SOGI<br>24 (d) Race/Ethnicity<br>24 (e) Regional representation within the country |
| **Indicator 6: Training** | **Sub-Indicator 25: Does the government require training around:**<br>25 (a) Disability<br>25 (b) Gender<br>25 (c) SOGI<br>25 (d) Race/Ethnicity<br>**Sub-Indicator 26: Does the government empower people at all levels to engage in GESI practices/how?** |
| **Indicator 7: Initiatives** | **Does the government have initiatives supporting the creation of SMEs run by socially excluded groups in the ICT sector?**<br>**Are there cross-governmental working groups on GESI best practices?** |

### 7.2.2 Digital Emergency Procurement

With thanks to UK GDS delivery partner Development Gateway, the following emergency procurement MEAL indicator framework has been developed with an associated user guide and reproduced here.

| **Category 1: Buying smarter and faster in crisis** | |
|---|---|
| **Indicator 1: Understanding Needs** | 1.1. Prioritising needs<br>1.2. Identifying at-risk communities<br>1.3. Monitoring needs of at-risk communities<br>1.4. Allocating resources |
| **Indicator 2: Aggregating Demand and Distribution** | 2.1. Pooling demand<br>2.2. Spend control<br>2.3. Centralising procurement<br>2.4. Emergency procurement authority |
| **Indicator 3: Quickly Identifying and Contracting Reliable Suppliers** | 3.1. Supplier verification<br>3.2. Supplier database<br>3.3. List of banned suppliers<br>3.4. Framework agreements<br>3.5. Expanding pool of eligible suppliers<br>3.6. Supplier database fields (1 point per field) |
| **Indicator 4: Emergency Procurement Policies** | 4.1. Price standards<br>4.1. Emergency<br>4.3. Bid & contract timelines |
| **Indicator 5: e-Procurement** | 5.1. Telework capabilities<br>5.2. Electronic tendering<br>5.3. Electronic bid submission<br>5.4. Electronic bond verification<br>5.5. Electronic contract signature<br>5.6. Electronic payment |
| **Indicator 6: Simplifying Contracting** | 6.1. Emergency contract templates |

| | |
|---|---|
| **Category 2: Ensure quality supplies and services** | |
| **Indicator 7: Avoiding Fraud and Counterfeit** | 7.1. Product standards<br>7.2. Enforcement<br>7.3. Supplier due diligence<br>7.4. Price gouging |
| **Indicator 8: Accountability and Transparency** | 8.1. Emergency spending oversight<br>8.2. Performance metrics and evaluations<br>8.3. Open data for accountability<br>8.4. Citizen feedback & CSO engagement<br>8.5. Data standards<br>8.6. Open data Platforms<br>8.7. Open Contracting Data Fields (1 point per field published) |
| | |
| **Category 3: Maintaining service delivery and sustaining the economy** | |
| **Indicator 9: Supply Chain Risk Management** | 9.1. Risk Assessment<br>9.2. Prioritising public service delivery |
| **Indicator 10: Supporting Existing Suppliers** | 10.1. *Force Majeure*<br>10.2. Extensions and renewals<br>10.3. Timelines and payment schedules<br>10.4. Adjusting deliverables |
| **Indicator 11: Digital Tools for Service Delivery** | 11.1. Deploying Digital Services Quickly<br>11.2. User-centred design<br>11.3. Accessibility |

## Endnotes

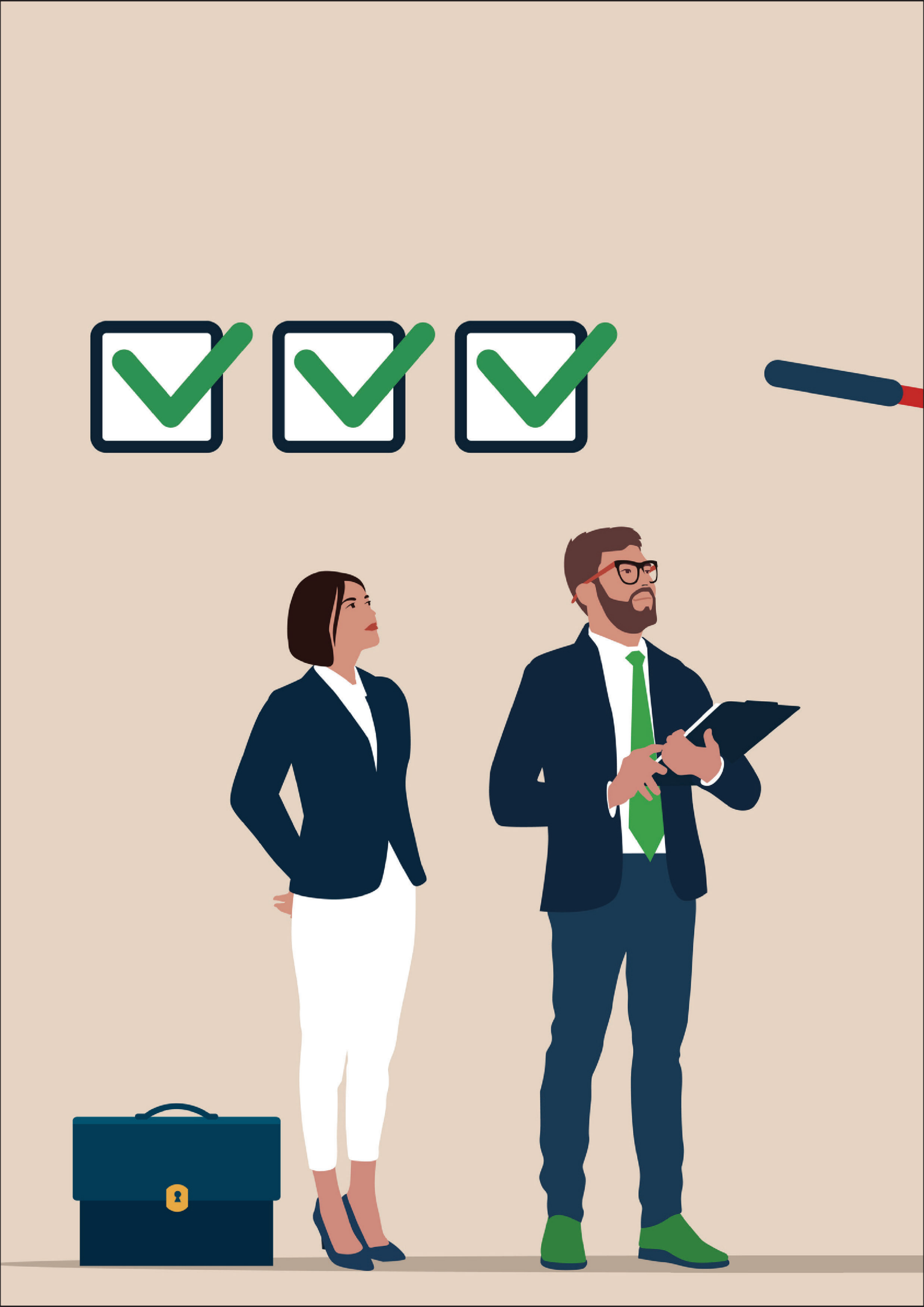
1 https://www.oecd.org/governance/the-oecd-digital-government-policy-framework-f64fed2a-en.htm

2 https://scioteca.caf.com/handle/123456789/1580

3 https://academy.itu.int/training-courses/full-catalogue/beyond-smart-cities-equals-smart-all-towards-building-inclusive-and-digitally-accessible

4 https://github.com/alphagov/la-digital-maturity-analysis

5 https://digital-buying-guide-7nv59.ondigitalocean.app/documents/40/Legacy_IT_Skills_Curriculum.pdf



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