

OECD Public Governance Reviews

Good Practices for Procuring Computers and Laptops in Latin America

FOSTERING NEUTRALITY AND MARKET ENGAGEMENT



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Foreword

In 2022, the National Business Association of Colombia (ANDI) and the Organisation for Economic Co-operation and Development (OECD) agreed that the OECD would conduct an analysis and evaluation of information and communication technology (ICT) procurement practices and processes in three Latin American countries: Chile, Colombia and Mexico. The OECD would focus on analysing practices related to competitive neutrality and market engagement in the procurement of computers and laptops, in light of the principles established in the 2015 OECD Recommendation of the Council on Public Procurement. The objective was to identify best practices and areas of opportunity and to develop evidence-based recommendations. The recommendations in this report are aimed at improving competition, efficiency, effectiveness, neutrality and dialogue with markets in the procurement of computers in Latin America.

This report provides an overview of the public procurement process for computers in Chile, Colombia and Mexico, focusing on the general context, competition and technological neutrality, industry engagement and the roles played by key entities such as government buyers, suppliers and the leading procurement and digital government authorities (ChileCompra, the Budget Directorate [DIPRES] and the Division of Digital Government [DGD] in Chile; *Colombia Compra Eficiente* [CCE], the Office of the Senior Counsellor for Digital Transformation and the Ministry for ICT [MinTIC] in Colombia; and the Ministry of Public Administration [SFP] and the Co-ordination for the National Digital Strategy [CEDN] in Mexico). The report highlights some of the most important challenges and opportunities and provides recommendations for improving the procurement process and fostering innovation and competition.

The report also includes information and perspectives from different stakeholders, including control and audit bodies, competition agencies, digital government authorities, business chambers and academia. Such perspectives were vital to compare views and collect evidence to support the findings and recommendations. The report thus brings together the visions and the opportunities identified by stakeholders for competitive, fit-for-purpose and cost-efficient processes for the procurement of computers.

This report also builds on the evidence base the OECD has been developing relative to ICT procurement practices, particularly in countries such as Greece and the Slovak Republic. Indeed, the 2022 reports *Digital Transformation Projects in Greece's Public Sector: Governance, Procurement, and Implementation* and *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations* analysed the synergies between public procurement policies and digital government strategies leading to improved service delivery. Although the present report focuses specifically on computers and laptops, some of the lessons and recommendations, particularly regarding vendor neutrality, can be applied to other digital products, such as software.

Focusing on the main actors involved and the challenges and opportunities identified, the report is organised into four main sections: supporting public service delivery and digital transformation through ICT procurement; structuring procurement processes to foster competition and vendor neutrality; market engagement strategies; and challenges, good practices and recommendations to foster competition and neutrality in the procurement of computers in Latin America.

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The OECD would also like to thank other institutions from the three countries analysed that contributed information to this report, namely contracting entities, control and audit bodies, competition authorities, budget departments, digital government authorities, business chambers, academia, and civil society organisations. Their support was critical to collect all the necessary information for the analyses presented in this report.

This report is part of a series of governance reviews in OECD and G20 countries. The project included the organisation of fact-finding missions to the three countries under analysis during March 2023, as well as a webinar on 24 April 2024 to launch this report, discuss its findings, and share good practices and recommendations with the wider public procurement community of Latin America.

This document was approved by the OECD Working Party of Leading Practitioners in Public Procurement (LPP) on 12 April 2024 and declassified by the Public Governance Committee on 20 May 2024.

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Abbreviations and acronyms

AEFCDMX	<i>Autoridad Educativa Federal en la Ciudad de México</i> , Federal Education Authority of Mexico City
AGESIC	<i>Agencia de Gobierno Electrónico y Sociedad de la Información y del Conocimiento (Uruguay)</i> , Agency for Electronic Government and the Information and Knowledge Society (Uruguay)
ANDI	<i>Asociación Nacional de Empresarios de Colombia</i> , National Business Association of Colombia
Bitkom	<i>Asociación Alemana de las Tecnologías de Información, Telecomunicaciones y Medios</i> , German Association for Information Technology, Telecommunications and New Media
BPQR	<i>Mejor relación calidad-precio</i> , Best price-quality ratio
CCE	<i>Colombia Compra Eficiente</i> , Colombia Buys Efficiently (procurement agency)
CCS	<i>Servicio Comercial de la Corona (Reino Unido)</i> , United Kingdom Crown Commercial Service
CEDN	<i>Coordinación de Estrategia Digital Nacional (México)</i> , National Digital Strategy Coordination (Mexico)
CIO	<i>Oficial en Jefe de Información</i> , Chief information officer
CONPES	<i>Consejo Nacional de Política Económica y Social (Colombia)</i> , National Council for Economic and Social Policy (Colombia)
COP	<i>Peso colombiano</i> , Colombian peso
CPB	<i>Órgano central de contrataciones</i> , Central purchasing body
CPEUM	<i>Constitución Política de los Estados Unidos Mexicanos</i> , Political Constitution of the United Mexican States
CPU	<i>Unidad central de procesamiento</i> , Central processing unit
CTO	<i>Oficial en Jefe de Tecnología</i> , Chief technology officer
DaaS	<i>Dispositivo como servicio</i> , Device as a service
DBG	<i>Guía de Compras Digitales (Reino Unido)</i> , Digital Buying Guide (United Kingdom)
DGD	<i>División de Gobierno Digital (Chile)</i> , Digital Government Division (Chile)
DIPRES	<i>Dirección de Presupuestos (Chile)</i> , Budget Directorate (Chile)
DNP	<i>Departamento Nacional de Planeación</i> , National Planning Department
DPS	<i>Sistema de compra dinámica</i> , Dynamic purchasing system
EDN	<i>Estrategia Digital Nacional (México)</i> , National Digital Strategy (Mexico)
EU	<i>Unión Europea (UE)</i> , European Union
FAI	<i>Instituto Federal de Adquisiciones (Estados Unidos)</i> , Federal Acquisition Institute (United States)
FGR	<i>Fiscalía General de la República</i> , General Attorney's Office
GDP	<i>Producto interno bruto (PIB)</i> , Gross domestic product
ICT	<i>Tecnologías de la información y las comunicaciones (TIC)</i> , Information and communication technology
IMSS	<i>Instituto Mexicano del Seguro Social</i> , Mexican Institute for Social Security
ISSSTE	<i>Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (México)</i> , Institute for Security and Social Services of the State Employees (Mexico)
JUNAEB	<i>Junta Nacional de Auxilio Escolar y Becas (Chile)</i> , National Board for School Support and Scholarships (Chile)
LAASSP	<i>Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público (México)</i> , Law on Acquisitions, Leasing and Services of the Public Sector (Mexico)
LAC	<i>América Latina y el Caribe</i> , Latin America and the Caribbean
LCC	<i>Costo de ciclo de vida</i> , Life cycle cost

LOAPF	<i>Ley Orgánica de la Administración Pública Federal (México)</i> , Organic Law of the Federal Public Administration (Mexico)
MAAGMAASSP	<i>Manual Administrativo de Aplicación General en Materia de Adquisiciones, Arrendamientos y Servicios del Sector Público (México)</i> , Administrative Manual of General Application relative to Procurement, Leasing and Services of the Public Sector (Mexico)
MINSAL	<i>Ministerio de Salud (Chile)</i> , Ministry of Health (Chile)
MinTIC	<i>Ministerio de TIC (Colombia)</i> , Ministry for ICT (Colombia)
NASPO	<i>Asociación Nacional de Funcionarios Estatales de Compras</i> , United States National Association of State Procurement Officials
OCF	<i>Órgano de Control y Fiscalización</i> , Control and Audit Body
OECD	<i>Organización para la Cooperación y el Desarrollo Económicos (OCDE)</i> , Organisation for Economic Co-operation and Development
OM	<i>Oficialía Mayor (México)</i> , Chief Administrator's Office (Mexico)
PAA	<i>Plan Anual de Adquisiciones</i> , Annual Procurement Plan
PAAS	<i>Programa Anual de Adquisiciones, Arrendamientos y Servicios</i> , Annual Procurement, Leasing and Services Programme
PC	<i>Computadora personal</i> , Personal computer
PGD	<i>Política de Gobierno Digital (Colombia)</i> , Digital Government Policy (Colombia)
PIANOo	<i>Red holandesa de contrataciones profesionales e innovadoras para las autoridades gubernamentales</i> , Dutch Professional and Innovative Tendering Network for Government Contracting Authorities
PNCCIMGP	<i>Programa Nacional de Combate a la Corrupción y a la Impunidad y de Mejora de la Gestión Pública</i> , National Programme to Fight Corruption and Impunity and Improve the Public Administration
POTIC	<i>Portafolio de proyectos de tecnologías de la información y comunicación</i> , Portfolio of ICT Projects
RUP	<i>Registro Único de Proponentes</i> , Supplier registry
SDG	<i>Objetivos de Desarrollo Sostenible</i> , United Nations Sustainable Development Goals
SECOB	<i>Sistema Electrónico para la Contratación Pública (Colombia)</i> , E-procurement platform (Colombia)
SEGPRES	<i>Ministerio Secretaría General de la Presidencia (Chile)</i> , Ministry of the Presidency (Chile)
SENASICA	<i>Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria (México)</i> , National Service for Animal and Vegetal Health and Quality (Mexico)
SEP	<i>Secretaría de Educación Pública (México)</i> , Ministry of Education (Mexico)
SFP	<i>Secretaría de la Función Pública (México)</i> , Ministry of Public Administration (Mexico)
SHCP	<i>Secretaría de Hacienda y Crédito Público (México)</i> , Ministry of Finance and Public Credit (Mexico)
SIC	<i>Superintendencia de Industria y Comercio (Colombia)</i> , Superintendence of Industry and Trade (Colombia)
SMEs	<i>Pequeñas y medianas empresas (PYME)</i> , Small and medium-sized enterprises
SPP	<i>Contratación pública sostenible (CPS)</i> , Sustainable public procurement
SRE	<i>Secretaría de Relaciones Exteriores (México)</i> , Ministry of Foreign Affairs (Mexico)
STPS	<i>Secretaría del Trabajo y Previsión Social (México)</i> , Ministry of Labour (Mexico)
TVEC	<i>Tienda Virtual del Estado Colombiano</i> , Virtual Store of the Colombian State
UK	<i>Reino Unido</i> , United Kingdom
UPIM	<i>Unidad de Planeación e Investigaciones de Mercado (México)</i> , Unit for Planning and Market Research (Mexico)
USD	<i>Dólares de los Estados Unidos de América</i> , United States dollar
UTIC	<i>Unidad de Tecnologías de la Información y Comunicaciones (México)</i> , ICT Unit (Mexico)
UTM	<i>Unidad Tributaria Mensual</i> , Tax Monthly Unit

Executive summary

Main findings

In OECD countries, public procurement has become a tool for delivering quality public services. The volume of resources spent in public procurement leads to risks related to inefficiencies, for example, stemming from insufficient competition, but also to opportunities to pursue complementary policy objectives such as facilitating the digital transformation of the public sector. Despite the evident synergies between public procurement and digital government policies, Latin American countries are not alone in facing the challenge of developing procurement policies for information and communication technology (ICT).

One of the main challenges in procuring computers and other ICT is ensuring technological neutrality, which means that government agencies should not favour any particular brand or technology. In this report, the term is used indistinctly from vendor neutrality in the sense that the challenge is to prevent a public institution from becoming unduly dependent on a single brand or supplier beyond the timeframe of the initial procurement contract, which can damage competition for future procurement.

The three countries under analysis in this report – Chile, Colombia and Mexico – have set up institutions and strategies to harness the synergies between public procurement and digital government policies. In Chile, for example, Law No. 21.180 (Law on Digital Transformation) introduced changes to the fundamentals of administrative processes to promote their digital transition and facilitate more accessible, simple and agile services for citizens. In Colombia, the Digital Government Policy (*Política de Gobierno Digital*, PGD) is the national policy for the digital transformation of the public sector and for strengthening the relationship between citizens and the state by improving service delivery and building trust. Decree 767/2022 establishes general guidelines for the PGD. In Mexico, the National Digital Strategy 2021-2024 (*Estrategia Digital Nacional*, EDN) describes the actions to be undertaken by the federal government to enable the efficient, democratic and inclusive use and development of ICT.

In Chile, co-ordinated purchasing is the main procedure used by government buyers to purchase or lease computers. There is also a framework agreement to purchase laptops and desktops available in the framework agreement catalogue and not covered by co-ordinated purchasing. A clause has been incorporated in the award process for the fourth version of the co-ordinated purchase, which requires at least three new brands to be awarded. This condition has allowed greater access to new brands.

Colombia Compra Eficiente (CCE) established a framework agreement to procure computers and accessories, which includes purchasing and leasing. However, given that the procurement plan and the national budget are laid out on a yearly basis, there are disincentives for leasing or device-as-a-service (DaaS) schemes. The framework agreement adopted a regionalisation strategy to attract SME participation and a diversity of brands. It was segmented into six regions (1 national and 5 regional), using more than 20 lots for the different types of computers and accessories. The strategy is supported by the Virtual Store of the Colombian State (*Tienda Virtual del Estado Colombiano*, TVEC) and its catalogue, which is designed to address the different needs of the contracting entities.

In Mexico, even though the regulatory framework allows for consolidated procedures, only a framework agreement was drafted for leasing computing equipment, and this is also the preferred tool for other ICT procurement. Two tools support the strategy: the e-procurement platform CompraNet and the virtual store. The framework agreement for leasing computers establishes requisites and technical specifications that suppliers should meet, and contracting entities cannot require additional specifications. The decision to favour leasing was made to avoid obsolescence in equipment and disposal procedures and costs.

Market engagement is relatively weak in Latin America. Chile and Colombia organise major events for that purpose: ExpoMercado Público and Colombia 4.0 respectively. However, ample opportunities exist to diversify engagement channels to favour a constructive and transparent dialogue between public procurers and the computer industry.

Recommendations

Drawing on the experiences of Chile, Colombia and Mexico, this report provides lessons on areas of opportunity and recommendations to tackle them and promote a competitive environment and value for money in the procurement of computing equipment and robust practices, building a constructive relationship between the public and private sectors in Latin America:

- Governments should recognise the strategic nature of public procurement. Specifically, the procurement of computers can support the provision of seamless public services, the modernisation of public institutions and the connectivity of marginalised regions.
- It is important to build the capacities of the procurement workforces in Latin America to effectively tackle challenges such as vendor lock-in.
- Contracting authorities should seek to realise value for money and allow experimentation and risk taking to favour innovation and dynamic approaches.
- Contracting authorities should avoid using brand names when procuring computers and favour the use of technical standards and benchmarks to allow comparisons of the performance of computers and their components.
- Contracting authorities should strengthen market research and engagement practices to create a level playing field for all computer suppliers and understand lock-in risks.
- Chile's experience indicates that other mechanisms, beyond framework agreements, can also lead to significant benefits. Hence, contracting authorities may carry out co-ordinated procurement processes and assess the value for money realised.
- Contracting authorities could pilot dynamic purchasing systems (DPS) for the procurement of computers to allow for wider supplier participation and the dynamic incorporation of innovations.
- Given the lack of experience with life cycle costing (LCC) in Latin America, procurement authorities should take a phased approach to implementation, with the first phase focusing on developing practices and methodologies by providing support structures.
- The decision to purchase or lease computers should be based on evidence and cost-benefit analysis, according to each procedure's conditions and the market's capacities.
- Contracting authorities can develop user profiles to advance standardisation while also incorporating the flexibility specific users need.
- Procurement authorities in Latin America should promote the review of their respective regulatory frameworks to provide greater flexibility for market engagement while establishing proportionate measures to control the risks entailed by this activity.

1 Supporting public service delivery and digital transformation through ICT procurement

This chapter starts by discussing the synergies between information and communication technology (ICT) procurement and digital government policies and how they can be leveraged for the digital transformation of the public sector. It then analyses the digital government policies of Chile, Colombia and Mexico, their regulatory frameworks and institutional setup, as well as good practices relative to pre-screening the procurement of ICT, including computers, and other digital investments.

The synergies between ICT procurement and digital policies

In OECD countries, public procurement has become critical for delivering quality public services. On average, it represents about 13% of gross domestic product (GDP) and close to 30% of general government expenditures in OECD countries. Table 1.1 illustrates the importance of public procurement in Chile, Colombia and Mexico.

Table 1.1. Public procurement as a percentage of GDP and general government expenditures in Chile, Colombia and Mexico, 2021

	Chile	Colombia	Mexico
Public procurement as a percentage of GDP	4.7	10.5	4.5
Public procurement as a percentage of general government expenditures	14.9	21.6	15.5

Source: OECD (2023^[1]), *Government at a Glance 2023 Database*, <https://www.oecd.org/publication/government-at-a-glance/2023/> (accessed on 10 November 2023); information provided by ChileCompra.

The volume of resources spent in public procurement leads to risks related to inefficiencies, such as those stemming from insufficient competition and failure to advance vendor neutrality, but also to opportunities to advance complementary policy objectives such as promoting small and medium enterprises (SMEs) and facilitating the digital transformation of the public sector. Indeed, the OECD Recommendation of the Council on Digital Government Strategies (2014^[2]) highlights the role of an information and communication technology (ICT) procurement environment and strategy in supporting digitalisation and modernisation of the public sector. According to this Recommendation, such a framework should include: i) ICT procurement rules that are compatible with current trends in technology; ii) fostering the development of shared ICT services and resources; and iii) strengthened capacities to improve ICT procurement (Box 1.1).

Box 1.1. OECD Recommendation of the Council on Digital Government Strategies

The Council

IV. Recommends that, in implementing the digital government strategies, governments should:

11. Procure digital technologies based on assessment of existing assets, including digital skills, job profiles, technologies, contracts, inter-agency agreements to increase efficiency, support innovation, and best sustain objectives stated in the overall public sector modernisation agenda. Procurement and contracting rules should be updated, as appropriate, to make them compatible with modern ways of developing and deploying digital technology.

Source: OECD (2014^[2]), *Recommendation of the Council on Digital Government Strategies*, <https://www.oecd.org/gov/digital-government/recommendation-on-digital-government-strategies.htm> (accessed on 10 November 2023).

At the same time, the OECD Recommendation of the Council on Public Procurement (2015^[3]) calls adherents to advance access and efficiency (Box 1.2). This Recommendation builds on good practices from OECD countries and provides a comprehensive framework for designing a public procurement system that supports digital transformation.

Box 1.2. OECD Recommendation of the Council on Public Procurement

Access

IV. RECOMMENDS that Adherents facilitate access to procurement opportunities for potential competitors of all sizes. To this end, Adherents should:

i) Have in place coherent and stable institutional, legal and regulatory frameworks, which are essential to increase participation in doing business with the public sector and are key starting points to assure sustainable and efficient public procurement systems. These frameworks should:

- 1) be as clear and simple as possible;*
- 2) avoid including requirements which duplicate or conflict with other legislation or regulation; and*
- 3) treat bidders, including foreign suppliers, in a fair, transparent and equitable manner, taking into account Adherents' international commitments.*

Efficiency

VII. RECOMMENDS that Adherents develop processes to drive efficiency throughout the public procurement cycle in satisfying the needs of the government and its citizens. To this end, Adherents should:

i) Streamline the public procurement system and its institutional frameworks. Adherents should evaluate existing processes and institutions to identify functional overlap, inefficient silos and other causes of waste. Where possible, a more service-oriented public procurement system should then be built around efficient and effective procurement processes and workflows to reduce administrative red tape and costs, for example through shared services.

Source: OECD (2015^[3]), *Recommendation of the Council on Public Procurement*, <https://www.oecd.org/gov/public-procurement/recommendation/> (accessed on 10 November 2023).

In line with the OECD recommendations, countries can leverage public procurement to advance the digital transformation of their governments. In doing so, they need to be aware of specific challenges discussed in this report, such as considering market capacities, planning and carrying out the pre-tendering stage, avoiding vendor lock-in, diversifying procurement mechanisms and tools to maximise competition and value for money and responding to user needs.

In responding to these challenges, OECD countries have advanced recent initiatives. In Australia, for example, an ICT Procurement Taskforce was set up in 2016 to identify obstacles and opportunities to streamline ICT procurement, as well as make it easier for SMEs to compete for ICT public contracts. The resulting outcome was the introduction of a new ICT procurement framework. Likewise, The OECD Working Party of Senior Digital Government Officials (also known as E-Leaders), through one of its thematic groups and in partnership with the United Kingdom (UK) Government Digital Service put together a manual of good practices for ICT procurement reform. In consequence, the working group developed the ICT Commissioning Playbook, advancing the following principles:

- Opening up data throughout the procurement and contracting lifecycle.
- Encouraging more modular and agile approaches to contracting.
- Procurement transparency to help tackle corruption and improve value for money.
- Stimulating and accessing a more diverse digital and technology supply base.
- Encouraging more flexible, digital, agile and transparent interactions focused on joint delivery.

- Sharing and reusing platforms and components, and better practices for delivering successful programmes.

The ICT Commissioning Playbook addresses the full procurement lifecycle and provides practical advice and good practices for the pre-tendering, tendering and contract management stages. The playbook was presented in 2018 and has been continuously revised based on its use in OECD countries and others (OECD, 2022^[4]).

Box 1.3. The ICT Commissioning Playbook

The ICT Commissioning Playbook discusses ICT procurement reform and its role in the digital transformation of the public sector. It illustrates how traditional procurement can evolve towards agile procurement. The playbook addresses the main issues faced by governments and explores what works and what does not, sharing real-life cases.

The playbook provides a set of actionable guidelines (plays) that countries can adopt to implement agile approaches for ICT procurement. The 11 plays include the following:

- Setting the context.
- Starting by understanding user needs.
- Embracing openness and transparency.
- Working as a multidisciplinary team.
- Building collaborative relationships.
- Sharing and reusing solutions that were developed for other parts of the government.
- Public procurement for public good.

The plays describe how to overcome common issues, supported by case studies to illustrate real challenges and achievements. The playbook is aimed at public procurement professionals and relies on the experiences of the United Kingdom, with contributions from Australia, Canada, Chile, Finland, Mexico, New Zealand, Portugal, the United States and Uruguay.

Source: OECD (2022^[4]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 6 September 2023).

Despite the evident synergies between public procurement and digital government policies, Latin American countries are not alone in facing the challenge of developing ICT procurement policies. The 2019 OECD Digital Government Index shows that 67% of OECD countries had developed formal guidelines on ICT procurement, while only 12% reported having a dedicated ICT procurement strategy for the public sector at the central level (OECD, 2020^[5]). Moreover, 64% of OECD countries had integrated strategic planning of ICT procurement into a whole-of-government procurement strategy, 67% had adopted a standardised model for ICT project procurement but only half made it mandatory (OECD, 2020^[5]). This is illustrative of the opportunities to fully leverage the synergies in favour of seamless public service delivery.

This chapter will review the digital government policies of Chile, Colombia and Mexico and how they interact with public procurement policies and strategies. Even though the report focuses on the procurement of computers (i.e. desktop computers [PCs], laptops, tablets), its findings could also provide useful lessons for the Latin American countries' wider ICT procurement strategies.

Chile

Chile's modernisation and digital government policy is based on a set of institutions and regulations. The Permanent Advisory Council for the Modernisation of the State is responsible for “advising the President of the Republic on the analysis and evaluation of the policies, plans and programmes that make up the State modernisation agenda; formulating recommendations on such matters; submitting for his consideration proposals for structural or institutional reform to be carried out as legislative initiatives or within the powers conferred on him by the legal system in matters of internal organisation; and responding to the consultations formulated by this authority”.

The Executive Committee for the Modernisation of the State is composed of the Ministry of Finance, through the Secretariat for Modernisation, the Budget Directorate (*Dirección de Presupuestos*, DIPRES), the National Directorate of the Civil Service and the Government Laboratory of Chile as well as the Ministry of the Presidency (*Ministerio Secretaría General de la Presidencia*, SEGPRES), through the Digital Government Division (*División de Gobierno Digital*, DGD) and the Inter-ministerial Coordination Division, responsible for co-ordinating actions around the implementation of the modernisation and digital government policy.¹

On the other hand, Law No. 18.993, which creates SEGPRES, includes the DGD within the organisation of the aforementioned Secretariat of State, which is responsible for proposing the digital government strategy to the minister and co-ordinating its implementation, ensuring that a whole-of-government approach is maintained.

The DGD is responsible for co-ordinating, advising and supporting the strategic use of digital technologies, data and public information to improve the management of public agencies and the delivery of services and acting as the co-ordinating entity for the implementation of Law No. 21.180, as amended by Law No. 21.464, which establishes the digital transformation of the state. The aim is for the complete cycle of administrative procedures of all public agencies, subject to Law No. 19.880 – which establishes the bases of administrative procedures governing the acts of state public agencies – to be carried out in electronic format.

In accordance with the provisions of Law No. 18.993, specifically relative to advice and support for the strategic use of digital technologies, data and public information to improve the management of public agencies and the delivery of services, the Digital Government Division, within the framework of the modernisation agenda, is in the process of designing a technology procurement policy, which is in the diagnostic stage and in respect of which the following route has been drawn up:

- Setup of an inter-institutional roundtable on technology procurement (March 2023).
- Diagnosis and analysis of new technology procurement mechanisms (August 2023).
- Proposal for new technology procurement mechanisms (December 2023).

Law on Digital Transformation

Law No. 21.180, enacted on 11 November 2019, introduces changes to the fundamentals of administrative processes with the purpose of promoting their transition to digital in order to facilitate the provision of more accessible, simple and agile services for citizens.

In line with this regulation, every administrative process must be carried out through the electronic channels established by law, except in the cases specifically recognised as exceptions. The advantages of implementing this law include improving accessibility for people, fostering effective co-operation between government bodies, saving time and making the most of the various technological tools currently available, with the aim of facilitating a more agile, efficient and timely administration, where people's needs are the main priority.

The Law on Digital Transformation of the State applies to a variety of institutions, including ministries, armed and security forces, public services, presidential delegations, regional governments and municipalities, among others. In order to facilitate implementation, these institutions have been segmented into three categories: A, B and C. Depending on the category to which the entity belongs, specific deadlines and procedures are established for implementation.

It is relevant to note that in June 2022, considering the internal processes necessary in the institutions to prepare for the implementation of their digital transformation process, the original implementation sequence related to this regulation was modified. A preparation phase was introduced and the stages and deadlines for each group of institutions were restructured. In this way, the management bodies, both at the central and local levels, aim to have the right conditions in place to fully implement the law by 31 December 2027.

This new gradual approach started in 2022 with a preparatory phase, in which administration bodies, including ministries, public services, the Comptroller General of the Republic, the armed forces, order and security forces, regional and provincial presidential delegations, regional governments, municipalities and universities subject to the law, must identify and map their administrative procedures. This will allow for the collection of the basic information necessary to facilitate the implementation of the subsequent phases of the law.

Following this readiness phase, the path towards full implementation of the standard in 2027 will include the following six stages:

1. **Official communications:** Official communications between bodies will be recorded on a designated platform.
2. **Initiation of administrative procedures in digital form:** Each body shall establish electronic platforms or forms for individuals to submit requests or documents to the state digitally.
3. **Document management, workflow systems and electronic files:** Each administrative procedure shall include electronic files available to interested parties through electronic platforms to improve the transparency of the processes.
4. **Digitisation of paper documents:** If a person is unable to use electronic means, the corresponding body shall digitise and add their requests to the electronic file.
5. **Principle of interoperability:** Bodies shall comply with the principle of interoperability, ensuring that electronic media can interact and operate with each other within the state administration through open standards for secure and efficient interconnection.
6. **Electronic notifications:** Notifications to natural or legal persons will be made electronically, according to the information contained in a single register managed by the Civil Registry Service.

In this context, the digital transformation co-ordinators have played a key role in advancing this process in each public entity. Their function is to facilitate communication and co-ordination with the different areas involved in the organisation, as well as enable a comprehensive approach to formulating and monitoring the institutional digital transformation plans.

These co-ordinators also act as the official liaisons with the DGD on matters related to digital transformation. Their objective is to maintain a continuous connection and monitor progress in the fulfilment of all implementation stages of the Act. They are also responsible for reporting on their institutions' progress and communicating internally on achievements, timelines and training opportunities related to the Act.

It is important to note that because the digital transformation co-ordinator is not always the same official as the chief information officer (CIO) or the chief technology officer (CTO) of the organisation, the evaluation and supervision of technology projects are not always under their responsibility.

EvalTIC

General elements

EvalTIC is a system designed and implemented by DIPRES in response to the lack of standardisation detected in the requests received from public sector agencies. It is a joint effort between DIPRES, the DGD and the Ministry of Finance's Secretariat for Modernisation. EvalTIC allows institutional CIOs, procurement officials and other strategic decision makers to register and justify their technology needs and projects through an online platform.

This tool has improved the evaluation and planning capabilities of agencies and moved them to adopt practices to ensure that their needs meet EvalTIC standards and are fit for initial approval, which eventually allows for a more optimal route to get the required budget.

Since 2002, EvalTIC is backed by the yearly Budget Law and allows for the analysis of technology procurement projects with the objective of providing information to DIPRES to define budgets for each agency. The system is also considering providing feedback to each agency and evaluator.

EvalTIC has been in operation since 2018 and has evolved through joint work between DIPRES, the Ministry of Finance and the DGD, which elaborated a complementary process to the usual budget formulation for the design and evaluation of technology projects, ending with a technical recommendation, to those responsible for budget clearance, regarding approval or rejection.

Based on an initial inventory of its technological assets through EvalTIC, each public agency must register its projects annually, considering a set of general principles that make it possible to standardise project elements and facilitate analysis.

Submission of projects to EvalTIC

In order to submit projects through EvalTIC, each purchasing agency establishes a team responsible for the formulation and submission of ICT projects, preferably composed of the Head of Administration and Finance, the Head of Information and Communication Technologies and the agency's digital transformation co-ordinator. The purpose of this structure is to integrate the institution's strategic guidelines, the digital government guidelines and the budgetary criteria provided by DIPRES.

This team co-ordinates the work to ensure that the project design and architecture are aligned with current international ICT standards and protocols, have well-defined components and deliverables and respect a maximum implementation period of one budget year, with some exceptions.

Furthermore, in addition to defining a set of general technical criteria for each project, the formulation must also comply with criteria specifically aimed at optimising projects, compliance with DGD and ChileCompra guidelines, and implementation of the Presidential Instruction on Digital Transformation and the Digital Transformation Law, which requires institutions to interoperate, all with the aim of ensuring that projects are geared towards achieving efficiency in the state and massifying the use of standards and best practices in information technology (IT).

In the case of computer equipment purchases, DIPRES has indicated that the 36- or 48-month lease versus purchase modality should always be evaluated, so this comparison has to be included. In addition, it has established that the function/task to which the equipment or licence will be assigned must be clearly defined and all the software that will be installed must be considered in order to evaluate the final price and compare it with the leasing alternative (each operating system licence, antivirus, office automation, etc., if included in the price, must be specified).

A platform for project submission

Three different forms are used for the formulation of ICT projects, prepared according to whether they are: i) new projects, which are not related to the operational continuity of each agency; ii) operational continuity and licence renewal projects, which should include all of those involving the renewal of equipment and licences; or iii) carry-over projects from previous years, which correspond to those related to the continuity of projects already submitted and approved.

The basic steps that users must follow to start uploading ICT projects to the EvalTIC platform are the following:

- Going to the DIPRES website (<https://dipres.gob.cl>) and selecting the restricted access link presented in the padlock in the upper right corner of the screen (Figure 1.1).
- Entering username and password on the page, selecting the process in the dropdown menu, then clicking on the Go button (Figure 1.2).
- Reviewing the information about the process displayed on the screen, then clicking on the Continue button (Figure 1.3).
- Clicking on the ICT Project Evaluation button (Figure 1.4).
- Creating a new application, entering the requested data and uploading the form called “Project form” with all of the required details, as well as any other document/annex considered relevant for a better understanding of the submitted project.

Figure 1.1. DIPRES website



Source: DIPRES (n.d.^[6]), *Homepage*, <https://dipres.gob.cl> (accessed on 10 October 2023).

Figure 1.2. Identification page



Source: DIPRES (n.d.^[6]), *Homepage*, <https://dipres.gob.cl> (accessed on 10 October 2023).

Figure 1.3. Page to review information about the EvalTIC process



Source: DIPRES (n.d.^[6]), *Homepage*, <https://dipres.gob.cl> (accessed on 10 October 2023).

Figure 1.4. Budget elaboration page





Source: DIPRES (n.d.^[6]), *Homepage*, <https://dipres.gob.cl> (accessed on 10 October 2023).

Project formulation templates

There are three official project forms, one for each type of project, which are: i) new projects; ii) business continuity and equipment or licence renewal projects; and iii) continuation or carry-over projects. The form for business continuity and licence renewal projects, including all projects on the renewal of equipment and licences, is illustrated in Figures 1.5-1.8. It requests information about the official submitting the project, its justification (i.e. problem to be addressed and suggested solution), characteristics, timeline, goods and services to procure, budget and risks.

Figure 1.5. Template for business continuity and equipment or licence renewal projects, Part I

FORMATO PROYECTO DE CONTINUIDAD Y LICENCIAS

El formato de documento "Formulación de Continuidad y Licencias", que debe ser utilizado en aquellas iniciativas donde esté involucrada la continuidad operacional, renovación de equipamiento y/o licencias se deberá ser ingresado obligatoriamente a la plataforma EvalTIC, el documento se describe a continuación. **(NO SE ADMITIRÁ OTRO TIPO DE FORMATO QUE PRESENTE EL SOLICITANTE, EL NO USARLO IMPLICARÁ QUE LA SOLICITUD SERÁ RECHAZADA.)**

Identificación del Solicitante


Servicio		
Ministerio		
Tipo de Proyecto	<input type="checkbox"/> Continuidad Operacional <input type="checkbox"/> Renovación/Adquisición de Licencias <input type="checkbox"/> Renovación o Adquisición de Equipamiento	
Área Responsable		
Jefe de Proyecto	Nombre	e-mail
Formulador	Nombre	e-mail


Marcar con una X en la opción que corresponde en el recuadro "Tipo de Proyecto"

1. **Resumen Ejecutivo** (breve descripción de los que necesita para su ejecución. Este resumen debe ser copiado en el campo "Objetivo General Resumido" del formulario de la plataforma.
2. **Justificación del proyecto**
 - 2.1. **Problema, necesidad u oportunidad de mejora detectada**

Source: Information provided by DIPRES.

Figure 1.6. Template for business continuity and equipment or licence renewal projects, Part II





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FORMATO DE PROYECTOS TIC

A. Identificación clara del problema, necesidad u oportunidad. En el caso de detectarse un problema, se deben identificar además las causas de este. En la solución propuesta, se debe indicar cómo ésta aborda la causa del problema.

2.2. Justificación de la propuesta de solución como la mejor alternativa

A. Describir soluciones alternativas, en el caso de compra de equipamiento debe haber evaluado a lo menos la opción de arriendo y compararla con la compra.

B. Motivo por el cual se optó por la solución propuesta, especificando claramente las razones para escoger una u otra opción.

2.3. Sustentabilidad de la propuesta

A. Coordinaciones / complementariedades con otras iniciativas y/o instituciones en caso de ser necesarias.

3. Proyecto

3.1. Caracterización

A. Se debe especificar las razones por las cuales está adquiriendo equipamiento, licencias

Obsolescencia	
Aumento de Parque	
Renovación licencias en uso actuales	
Otros	

Si especificó "Otros", debe identificar claramente a que corresponde.

3.2. Plazos

A. Calendario de Hitos

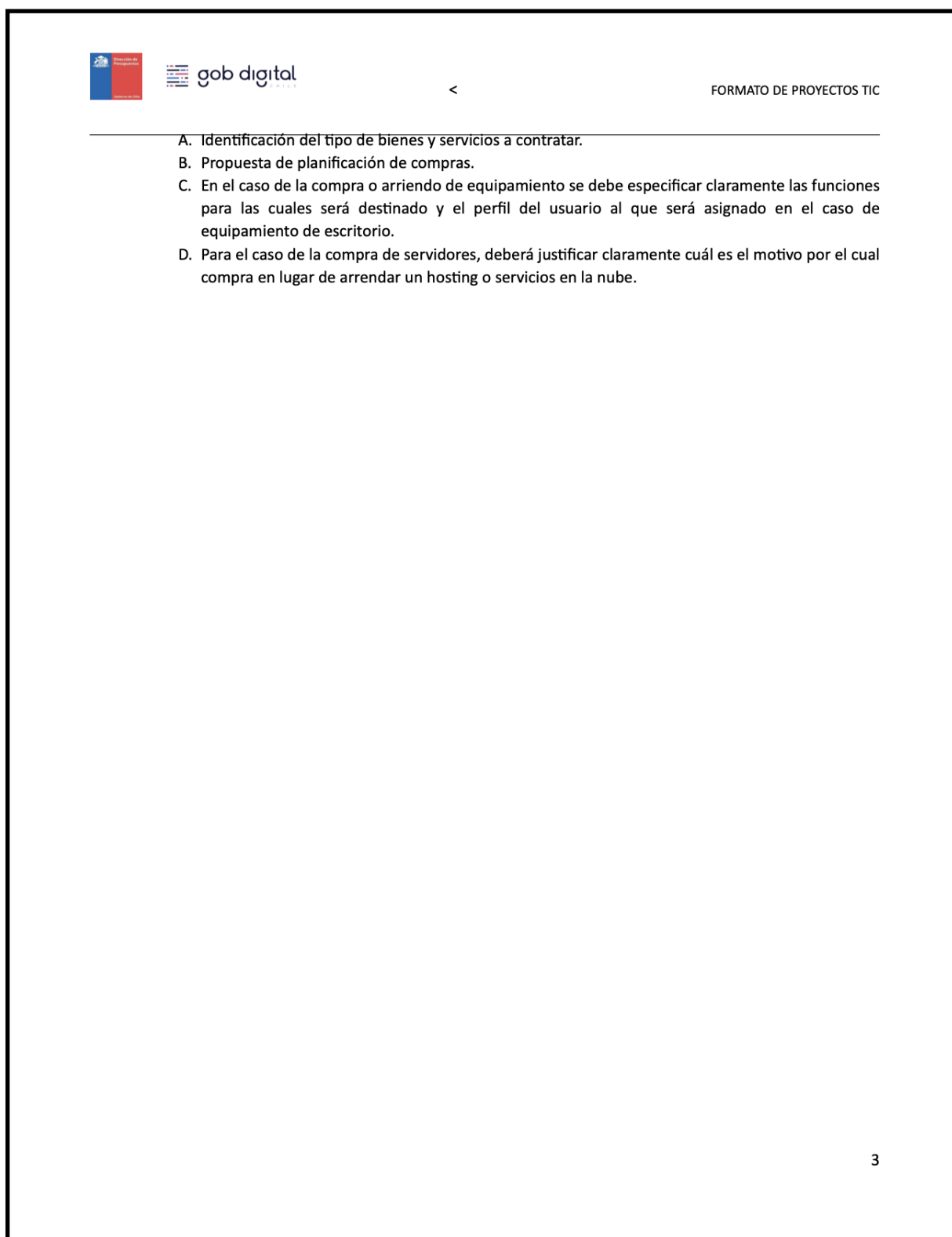
B. Etapas.

3.3. Bienes y servicios a contratar

Los bienes y servicios a contratar deben estar claramente identificados, no se aceptarán ambigüedades, si se indican que se adquirirán licencias éstas deben ir claramente identificadas por su código y cantidad, lo mismo para el hardware, se deben identificar claramente cuántos, de qué modelo y/o tipo se requieren adquirir. Igualmente, para el caso de la contratación de HH deberá proceder a la identificación de las HH que se requieren. Identificar claramente el perfil, la cantidad de cada uno y el costo unitario por perfil.

2

Source: Information provided by DIPRES.


Figure 1.7. Template for business continuity and equipment or licence renewal projects, Part III


The image shows a document template for 'gob digital' projects. At the top left is the logo of the Ministry of Digital Government (Ministerio de Gobierno Digital) and the text 'gob digital'. At the top right is the text 'FORMATO DE PROYECTOS TIC'. Below this, a horizontal line is followed by a list of four items (A, B, C, D) detailing requirements for procurement. Item A is 'Identificación del tipo de bienes y servicios a contratar.' Item B is 'Propuesta de planificación de compras.' Item C is 'En el caso de la compra o arriendo de equipamiento se debe especificar claramente las funciones para las cuales será destinado y el perfil del usuario al que será asignado en el caso de equipamiento de escritorio.' Item D is 'Para el caso de la compra de servidores, deberá justificar claramente cuál es el motivo por el cual compra en lugar de arrendar un hosting o servicios en la nube.'

3

Source: Information provided by DIPRES.

Figure 1.8. Template for business continuity and equipment or licence renewal projects, Part IV





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FORMATO DE PROYECTOS TIC

3.5. Presupuesto del proyecto.

Para este tipo de proyectos no es necesario poner lo proyectado a años posteriores. **(ES IMPORTANTE QUE TODOS LOS VALORES SEAN EXPRESADOS EN MILES DE PESOS M\$, SI NO SE CUMPLE CON ESTO, EL PROYECTO SERÁ RECHAZADO DE INMEDIATO. SI TIENE TRASPASOS DEBE INDICAR LA SUMA TOTAL ASOCIADA AL AÑO CORRESPONDIENTE Y EN EL RECUADRO DESTINADO PARA ESTE EFECTO INDEPENDIENTE DEL SUBTÍTULO DE DONDE PROVENGAN).**

Tipo de costo	Subtítulo	Ítem	Total
Trasposos		Máquinas y equipos	Sum Trasposos
		Equipos informáticos	
		Licencias	
Costo de implementación (CAPEX)	29	Máquinas y equipos	Sum 29
		Equipos informáticos	
		Licencias	
Costos operacionales (OPEX)	22	Máquinas y equipos	Sum 22
		Equipos informáticos	
		licencias	
		Servicios de HH	
Total (M\$)			Total Proyecto

A. Detallar sólo para los subtítulos e ítems necesarios (descripción y cuadro resumen).

- a. Los trasposos corresponden a los montos que recibe la institución en relación al proyecto (ejemplo Subtítulo 24), debe poner la sumatoria total asociada a este proyecto para el año correspondiente.
- b. CAPEX: Gastos de capital, que se ejecutan ya sea para adquirir un activo fijo o para añadir valor a un activo existente. Para nuestros fines, corresponderán a los costos de implementación del Proyecto TIC.
- c. OPEX: Costos operacionales que podrían generarse durante la ejecución del proyecto.
- d. Subtítulo 22: Bienes y Servicios de Consumo
- e. Subtítulo 29: Adquisición de activos no financieros

4. Riesgos

A. Describa brevemente si existe algún riesgo relevante asociado al proyecto.

4

Source: Information provided by DIPRES.

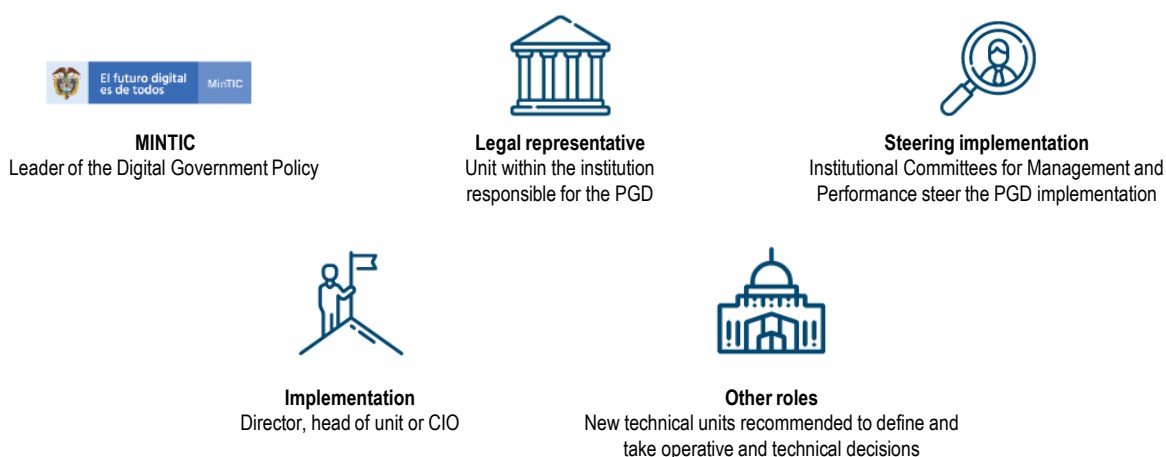
Colombia

The Digital Government Policy (*Política de Gobierno Digital*, PGD) is the national government policy aiming at the digital transformation of the public sector and the strengthening of the citizen-state relationship by improving service delivery and building trust in public institutions. The Office of the Senior Counsellor for Digital Transformation (*Alta Consejería para la Transformación Digital*) and the Ministry for ICT (MinTIC) produce the strategic guidelines for the PGD.

The Digital Government Policy

The objective of the PGD is to positively impact citizens' quality of life and the country's competitiveness, creating public value through the public transformation of the state in an inclusive, proactive and articulated manner, allowing the exercise of cyberspace user rights. PGD implementation relies on a network of institutions, illustrated in Figure 1.9.

Figure 1.9. Institutions supporting the PGD



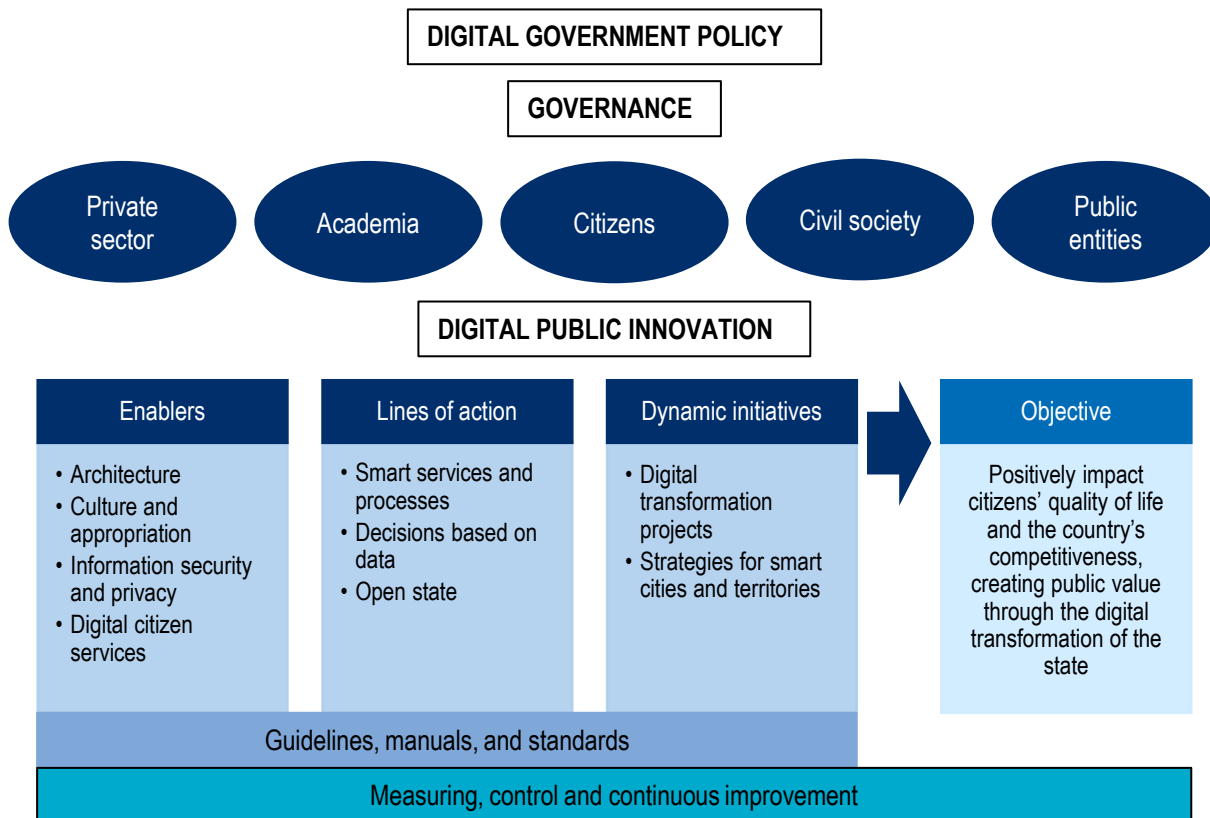
Source: MinTIC (n.d.^[7]), *Digital Government* (website), <https://gobiernodigital.mintic.gov.co/> (accessed on 14 November 2023).

The PGD structure considers the following elements (Figure 1.10)

- **Governance:** Relations between the national and subnational levels and between the central and decentralised levels. It also considers stakeholders in decision making, the definition of strategic actions and the allocation of available resources.
- **Digital public innovation:** Creating public value by introducing creative solutions leveraging ICT and innovation methodologies to address public problems through a citizen-centred approach. In order to facilitate digital public transformation, public entities will leverage procurement processes that facilitate the acquisition of technologies that tackle public challenges but are not available in the market or, if available, require upgrades and improvements.
- **Enablers:** Architecture, security and privacy of information. The framework agreement to procure computers is part of the architecture.
- **Lines of action:** Actions to develop smart services and processes, take data-based decisions and consolidate an open state to articulate dynamic initiatives as part of the PGD.

- **Dynamic initiatives:** Projects for digital transformation and strategies for smart cities and territories. These initiatives include the implementation of public procurement mechanisms that advance digital public innovation.

Figure 1.10. Structure of the PGD



Source: MinTIC (n.d.^[7]), *Digital Government (website)*, <https://gobiernodigital.mintic.gov.co/> (accessed on 14 November 2023).

There is a set of rules governing the digital government policies and strategies in Colombia, dating back to 1985 and including primary laws, CONPES,² directives, decrees, resolutions, agreements and other types of secondary regulations. The most recent element of this regulatory framework is Decree 767/2022, which establishes general guidelines for the PGD and was subject to public consultation on 12-27 April 2022. Some of the principles established in this decree are directly related to technological neutrality:

- **Technological legality:** The obligated subjects will ensure that the use of ICT is aligned with the Constitution and the regulatory framework.
- **Technological foresight:** The obligated subjects will identify emerging technologies for implementation to fulfil their strategic objectives.
- **Technological resilience:** The obligated subjects will take measures to mitigate risks that may affect digital security and, in this way, will ensure the availability of equipment, recovery and continuity of public services.

The decree mandates MinTIC to produce a Manual of Digital Government, which is available on line (<https://gobiernodigital.mintic.gov.co/>) and consolidates a series of guidelines and standards for PGD implementation. The manual establishes that public entities should submit technology initiatives to MinTIC's Digital Government Directorate to receive methodological feedback. However, in clear contrast

to the practices of Chile and Mexico, MinTIC only issues a technical concept on the application of the PGD guidelines but does not have the power to approve or block such initiatives.

Mexico

In Mexico, at the federal level, digital government policies and strategies run from the centre of government. In November 2018, the Organic Law of the Federal Public Administration (*Ley Orgánica de la Administración Pública Federal*, LOAPF) was amended to establish a technical support unit at the executive level to define policies relative to ICT and digital government. Indeed, Mexico's digital government policy is consolidated in the National Digital Strategy (*Estrategia Digital Nacional*, EDN) and led by the National Digital Strategy Coordination (*Coordinación de Estrategia Digital Nacional*, CEDN), a technical support unit of the Office of the President.

The National Digital Strategy

The EDN 2021-2024 entered into force on the day of its publication in the Official Gazette, 6 September 2021 and describes the actions to be undertaken by Mexico's government aiming to enable the efficient, democratic and inclusive use and development of ICT. This roadmap for the institutions of the federal public administration steers technology and information security initiatives in a consistent direction, addressing their own needs and those of citizens while aligning with the policies established in the National Development Plan 2019-2024.

The EDN is organised in two axes of action: i) digital policy of the federal public administration; and ii) social digital policy to ensure citizens' right to access ICT. Quite importantly, in terms of avoiding vendor lock-in, the EDN establishes the principle of technological independence, understood as avoiding being subject to commitments and conditions dictated arbitrarily by technology suppliers or producers, so as to also avoid monopolies and technical dependence. The other five principles guiding the EDN are:

- **Austerity:** Achieving high-quality services with the best use of public resources and optimising spending.
- **Fighting corruption:** Avoiding unfair, perverse, and damaging practices that benefit private interests to the detriment of the state.
- **Efficiency in digital processes:** Streamlining the operations and focusing the attention of government procedures.
- **Information security:** Ensuring the stability, protection and security of the information produced and stored in digital systems and platforms.
- **Technological sovereignty:** Advancing the power to make decisions without external interference on digital and technology policies and strategies.

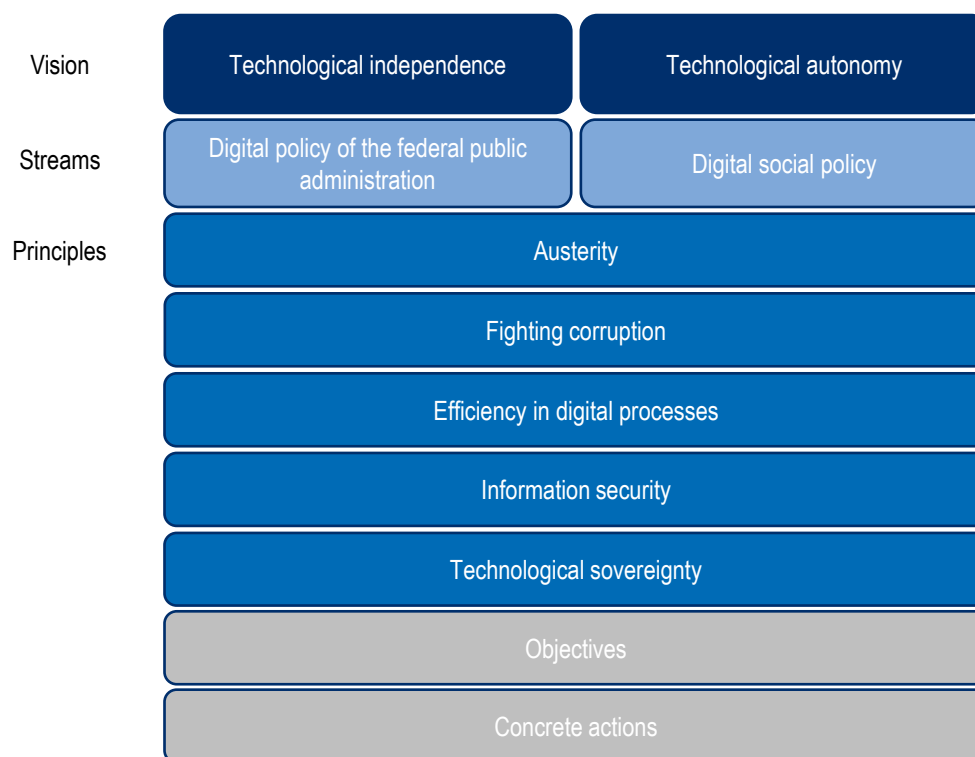
The EDN vision aims for a digitised country and an austere, honest and transparent government, with technological autonomy and independence, focused on citizen needs, particularly those of the most vulnerable. The EDN is then divided into nine specific objectives and 42 lines of action (Figure 1.11).

Objective 2 of the EDN – standardising ICT procurement through transparent, austere and effective actions leading to savings and the responsible use of public resources – is particularly relevant for the procurement of computers and ICT. This objective is disaggregated into three concrete actions:

- Developing actions so that ICT procurement principles are standardised and promote competition. This entailed a policy to carry out ICT procurement through framework agreements.³
- Making ICT procurement transparent.

- Defining technical standards for ICT projects procured or developed and implemented leveraging institutional capacities.

Figure 1.11. EDN framework



Source: Government of Mexico (n.d.^[8]), *Mexico's Official Gazette* (6 September 2021), *Agreement that Issues the National Digital Strategy 2021-2024*.

Other key actions envisioned by the EDN include the following:

- **Unifying ICT policies:** Defining ICT projects following general policies from a single institution.
- **Verifying and analysing technical and economic feasibility of the projects:** Focus on the need addressed.
- **Digitising administrative procedures previously simplified.**

An opportunity for the EDN is to advance the idea that technology can be an enabler for service delivery and government efficiency beyond curtailing corruption.

The National Digital Strategy Coordination

The CEDN is a technical support unit attached to the Office of the President. Its mission is promoting and advancing access to ICT, broadband services and the Internet and their transformative potential for economic, social and cultural development. This mission is disaggregated into six objectives:

- Regaining the stewardship of the state over governmental ICT and leveraging their potential for social development.
- Contributing to an upgraded execution of ICT spending.
- Leveraging the technical talent of the government to develop its own technologies.
- Fighting corruption.

- Participating in the improvement of governmental digital services.
- Co-ordinating Internet connectivity and broadband strategies throughout the country.

CEDN powers also include designing and issuing specifications and standards for procuring and leasing ICT goods and services.

The CEDN carried out a review of the situation of governmental ICT starting in December 2018, which concluded that systems procurement, leasing, development, hosting and operations were being contracted without an analysis of horizontal impacts, leading to spending volumes that did not correspond to the benefits realised. It also criticised the lack of infrastructure owned by the state, as it was mostly being procured with private suppliers. Likewise, it indicated that the officials in charge of ICT in public institutions did not fulfil a technical profile or, when they had it, they were basically managing and monitoring contracts without significant participation in technical and operative decisions. In a nutshell, the conclusion was that the technical capacities of the government were weak.

Specifically referring to ICT procurement, the review found procured systems overlapping and addressing the same needs at different prices, lack of data compatibility, expensive development of systems and costly maintenance to obsolete systems.

The Agreement issuing policies and guidelines to advance the use and leverage of ICT, digital government and cybersecurity in the federal public administration

In order to address the weaknesses identified during the process to elaborate the EDN, the CEDN published the Agreement issuing policies and guidelines to advance the use and leverage of ICT, digital government, and cybersecurity in the federal public administration (the Agreement, hereinafter). It came into force the day of its publication, 6 September 2021. It replaced the Agreement that issued the administrative manual for general application relative to ICT and information security, published in the Official Gazette on 8 May 2014.

The Agreement's objective is to dictate the policies and guidelines for using and leveraging ICT, digital government and information security. In line with the EDN, it aims to promote the use of free software and open standards, advancing technological independence and autonomy, and reducing costs and time in ICT procurement procedures.

Some of the general technology policies established in the Agreement include the following:

- Favouring specific contracts stemming from framework agreements in force or the undertaking of consolidated procurement to ensure the best conditions for the state.
- Meeting the technical standards set by the CEDN, certifying the standards and models recognised by the industry as best practices and meeting technical regulations (*normas oficiales*).

The Agreement also establishes the Portfolio of ICT Projects (*Portafolio de proyectos de tecnologías de la información y comunicación*, POTIC), which is the set of strategic and operative ICT and information security projects that public institutions plan to carry out during the next fiscal year.

The POTIC and the CEDN technical resolution

The integration of POTIC is a mechanism to formalise the planning of ICT projects and should include those projects developed with public institution's own resources and those outsourced to private suppliers. On the one hand, a strategic ICT project is defined as a project that implies a temporary effort to create an ICT product, service or outcome and whose implementation contributes significantly to the achievement of the institution's strategic objectives. On the other, an operative ICT project is defined as a non-strategic project that implies a temporary effort to create an ICT product, service or outcome that supports daily operations. Both cases may or may not require the procurement of ICT goods or services.

In order to put together its POTIC, each institution may define its own methodology but should at least consider the following elements:

- Size and requirements of the institution.
- Co-ordination mechanisms between administrative units.
- Institutional impact from ICT.
- Technological architecture required.
- Information assets and the Information Security Management Framework
- Technical and operative capacities.
- CEDN technical standards.

Each project included in the POTIC should be based on analysis that considers the following elements at least:

- **Background:** Context prevailing before the project.
- **Problem statement:** Clear and brief description of the issue to be addressed, including a general diagnosis of the problem.
- **Justification:** Concrete description of the project's motivation, explaining how the scope was determined.
- **Objective:** Description of the expected outcomes stemming from the activities included in the project.
- **Impact:** Concrete description of the contribution or significant effect stemming from the implementation of the project relative to the objectives of the National Development Plan, the EDN, the National Programme to Fight Corruption and Impunity and Improve the Public Administration (*Programa Nacional de Combate a la Corrupción y a la Impunidad y de Mejora de la Gestión Pública, PNCCIMGP*) and other institutional objectives.
- **Evaluation criteria:** Perceptible and measurable characteristics defined by the institutional ICT Unit (*Unidad de Tecnologías de la Información y Comunicaciones, UTIC*) to monitor and assess the achievement of the project's objectives.
- **Scope:** General definition of the product, service or outcome to be achieved at the end of the project.
- **Start and closing date:** Timeline for the execution of the project.
- **Date for project evaluation:** Date on which the outcomes of the project will be evaluated.
- **Estimated budget:** Plan for the allocation of financial resources for the execution of the project.
- **Timeline for project milestones:** Brief description of the project's phases.

Each public institution's UTIC is the unit in charge of putting together the corresponding POTIC. Once reviewed by the senior management, it is uploaded to a platform in the July of every year. The CEDN then reviews each POTIC and makes recommendations to the different institutions to address and resubmit. Once the CEDN is satisfied, it approves the POTIC (*visto bueno*), by 31 October of the year prior to its implementation at the latest.

The POTIC, as authorised by the CEDN, is the basis and obligated reference for the analysis of technological resolution requests (*dictamen técnico*) for ICT procurement. In other words, all ICT procurement to be carried out should have been anticipated in the POTIC. A technical resolution is a document issued by the CEDN to approve an ICT procurement project: it is, in fact, an essential step for its execution,⁴ as explained in Chapter 2.

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Notes

¹ As of March 2024, the DGD became the Secretariat of Digital Government, under the Ministry of Finance.

² Public policy documents issued by the National Council for Economic and Social Policy (*Consejo Nacional de Política Económica y Social*, CONPES).

³ Consolidated ICT procurement is also envisioned but it has not been implemented.

⁴ Exceptions include the procurement of peripheric and minor supplies and the procurement, leasing and services below the value of 300 times the unit of measurement (*Unidad de Medida y Actualización*, UMA) in force. The value of the UMA in 2023 was MXN 103.74.

2 Structuring procurement processes to foster competition and vendor neutrality

This chapter discusses how the three countries analysed in this report structure their procurement procedures and their impacts on vendor neutrality and competition. For each case, good practices and potential areas for improvement are identified. The steps examined include needs assessment and planning, market research, defining tender strategies, drafting tender documents and technical specifications, awarding the contract, leveraging framework agreements and facilitating user feedback.

Current practices for the procurement of computers in Chile

In terms of public procurement, the Chilean government is one of the country's largest purchasers of goods and services, accounting for approximately 5% of gross domestic product (GDP). A set of laws and regulations governs the public procurement process to ensure transparency, competition and efficiency.

Public procurement is a fundamental tool for governments to acquire goods and services, including computers and other information technology products. In the case of Chile, the main entity responsible for overseeing the procurement process is ChileCompra, a public institution created in 2003 under the Ministry of Finance.

This entity operates a digital platform that allows government agencies to carry out their procurement and contracting processes and manage the entire procurement cycle. The platform is designed to promote transparency, competition and efficiency in the public procurement process.

According to Law No. 19.886 on the basis for administrative supply contracts and provision of services, better known as the Public Procurement Law, the functions of ChileCompra are the following:

- Advising public agencies on planning and managing their procurement and contracting processes.
- Tendering for the operation of the information system and other means of electronic purchasing and contracting of public agencies.
- Tendering for goods and services through the signing of framework agreements.
- Representing or acting as an agent for one or more public agencies referred to in the law in the tendering of goods or services in the manner established by regulations.
- Administering, keeping up to date and tendering the operation of the Register of Contractors and Suppliers.
- Promoting the maximum possible competition in the administration's contracting acts, developing initiatives to incorporate the greatest possible number of bidders.
- Establishing the policies and conditions for the use of the public procurement information system.

In the design and execution of instruments to implement the procurement policy, ChileCompra makes use of the following tools:

- Procurement directives (*recomendaciones de compra*).
- Information technology (IT) developments in the public procurement information system (www.mecadpublico.cl).
- Information and communication technology (ICT) framework agreements.
- ICT tender bases.
- Mandated co-ordinated purchases (public tenders carried out by ChileCompra).
- Joint co-ordinated purchases (demand aggregation processes within a framework agreement).
- Strategic consultancies.

Competition is a critical element of the procurement process as it helps to ensure that government agencies obtain the best value for money and encourages innovation and efficiency in the market. In the case of computer procurement, competition is particularly important given the rapid evolution of technology and the need for government agencies to keep up with it.

One of the key principles of public procurement in Chile is technological neutrality, which means that government agencies should not favour any particular brand or technology when procuring goods or services. This principle is designed to promote competition and innovation in the market and ensure that government agencies obtain the best value for money.

Since the OECD report *Public Procurement in Chile: Policy Options for Efficient and Inclusive Framework Agreements* (2017^[1]), ChileCompra has made significant progress in implementing actions to design procurement models that facilitate the highest value for money, ensuring efficient processes for both buyers and suppliers of the public market. While ChileCompra may still mention some specific brands in the specifications of, for example, processors (e.g. AMD or INTEL), it always includes “or equivalent” to support neutrality and relies on a benchmark to classify processors. It also refers to the technology in a neutral way (e.g. X86, X64 or ARM).

The OECD report (2017^[1]), requested by ChileCompra as part of a review process of the design and operation of framework agreements, aimed to optimise this procurement modality based on the *Recommendation of the Council on Public Procurement* (OECD, 2015^[2]) and on international good practices and expert knowledge in the implementation and management of this procurement tool.

The report also assessed the performance of framework contracting in Chile and offered recommendations on how to improve this contracting modality, suggested ways to optimise processes, improve the system’s effectiveness, increase efficiency and promote inclusiveness (OECD, 2017^[1]). Specifically, the report offered, as a result, a series of recommendations related to the design and management of framework agreements, obtained from the comparison of the benefits obtained in various OECD countries, which resulted in new policy options that ChileCompra considered to further strengthen the strategic approach to its centralised purchasing function, thus offering complementary options to the procurement modality via framework agreements, aimed at maximising the degree of compliance with the objectives in each case, options that take the form of new procurement models (OECD, 2017^[1]).

Based on those recommendations, since 2018, one of the new models implemented by ChileCompra has been co-ordinated purchasing, the main procedure used by government buyers to purchase computers.

This process has involved standardising equipment and grouping them into ranges, from which buyers categorise their needs and submit them to the Budget Directorate (*Dirección de Presupuestos*, DIPRES), which produces reports indicating the relevance of each purchase and the available budget for each case.

Although initially used only for equipment purchases, from 2020 and as a result of the demand analysis carried out, the savings potential revealed, the flexibility required and the budget structure that differentiates between investment and expenditure, this practice also began to be used for leasing. ChileCompra has documented the range of additional costs under leasing. Initially, it collected information from the Ministry of Health (MINSAL) but this has been revalidated for each request for information (RFI).

This can be seen when analysing Resolution 22, for example, which approves the standard format of the bidding conditions and annexes for the contracting of computer leasing services for 36 months, validated by the Office of the Comptroller General of the Republic of Chile on 17 June 2021, and an instrument for the development of the respective tenders to promote this type of purchase.

The aforementioned document establishes, among others:

“1. That, by virtue of the provisions of Law No. 21,289 of the public sector budget for the year 2021 and Instruction No. 7 of the Budget Directorate of the Ministry of Finance, when central government agencies need to contract computer leasing services, they must first request authorisation from the aforementioned Directorate and be subject to co-ordinated procurement procedures.

2. Consequently, this Directorate will be permanently making co-ordinated purchases for the lease of computers in order to provide this service to the agencies subject to the aforementioned instructions.

3. That, by virtue of the market study of the process, a market consultation was carried out, published in the system with ID 1122317-3-RF21, and the information obtained from this was used as input to prepare the present bases.

4. That, from the information obtained in this consultation and the amount of demand to be added, it is expected that in general these co-ordinated purchases will exceed the amount established to be submitted for approval.

5. That, given their recurrent nature and in order to make the administrative procedure of these procurements more efficient, this Directorate deems it necessary to submit to the approval process a set of standard terms and conditions for the co-ordinated procurement of computer leasing services for 36 months.

8. The service covered by these standard terms and conditions is not included in the catalogue of products and services tendered by this Directorate through the framework agreement mechanism."

It follows that ChileCompra developed the leasing modality as a complement, in order to keep available the options required by buyers according to their usual behaviour.

On the other hand, ChileCompra has completed a thorough analysis of the use of framework agreements to purchase computers and how to improve this modality of purchase. By using RFI, it designed several leasing options, including different periods, modalities and combinations; the 36-month term is the one used after the agreement with DIPRES.

Therefore, the main analyses so far have been related to the way demand is structured in terms of models and equipment, and to the standardisation that has resulted in significant efficiencies and savings (Table 2.1).

For both equipment leasing and purchases, the main process is co-ordinated purchasing: only in cases where buyers need to purchase equipment that does not fit with the available ranges are exceptional processes applied. On the plus side, co-ordinated purchasing has delivered significant savings, as illustrated in Table 2.1. However, it also implies challenges such as the capacity to address specific institutional needs and excluding small and medium-sized enterprises (SMEs) unable to meet the requirements of aggregated demand, which may ultimately exacerbate lock-in risks. For example, as confirmed during the fact-finding mission, given the needs of the Internal Revenue Service (*Servicio de Impuestos Internos*, SII), the co-ordinated approach may sometimes fall short of addressing such needs. In any case, it would be important to review the process regularly to balance benefits and costs, as well as to assess how risks are being mitigated.

Table 2.1. Savings achieved via co-ordinated purchasing

	2019	2020	2021-1	2021-2	2022-1	2022-2
Computer purchases (%)	36		26.2	30.2	36.6	14.3
Computer leasing (%)		21	16.3		34.4	27.2

Source: Information provided by ChileCompra.

To date, ChileCompra has developed the following initiatives to structure and support the procurement of personal computers and laptops by public agencies:

- **Directive** for the procurement of goods and services related to information technology.
- **Publication of standard bidding terms and conditions for the lease of computers**, a procurement modality that supports purchasers of public entities in the preparation of the bidding terms and conditions, thanks to the standardised administrative clauses approved by the Office of the Comptroller General of the Republic of Chile. This allows for greater efficiency and competition, with a reduction in the time required to prepare the bidding conditions and greater participation of suppliers in the most complex and costly acquisitions.

- **Framework agreement for the procurement of laptops, desktops and all-in-one:** The fourth version of this framework agreement tender (ID 2239-17-LR22 at www.mercadopublico.cl) was awarded in the first quarter of 2023 and its inclusion in the electronic catalogue will allow public agencies to access personal computers: desktops, all-in-one, and laptops standardised and classified by range.
- **Mandated purchases of computer leases:** On 19 August 2022, a previous co-ordinated purchase was awarded for the laptop leasing service (ID 1122317-13-LR22), allowing savings for the state of 42% with respect to the estimated budget established for this acquisition, thanks to the aggregation of demand from 20 public agencies and 4 133 computers from three different ranges for a period of 36 months. In addition, on 29 August 2022, the co-ordinated purchase of the leasing service for all-in-one and desktop computers (ID 1122317-12-LR22) was awarded, allowing savings of more than USD 1.7 million. This cost reduction of 27% was achieved for the lease of 4 913 computers for a period of 36 months for 25 public services. As of December 2022, ChileCompra invited central government agencies and services to register and be part of the new 36-month co-ordinated computer leasing procurement processes.
- **Joint co-ordinated purchase of computers** (through a large purchase under the framework agreement) **and consultancies on request.** In the case of this joint co-ordinated procurement, the last large purchase process was the one identified in ID 65827.

Importantly, the procurement of computing equipment has supported educational programmes such as I Choose My PC (*Yo elijo mi PC*) and I Connect to Learn (*Me conecto para aprender*). *Yo elijo mi PC* is a scholarship programme run by the National Board for School Support and Scholarships (*Junta Nacional de Auxilio Escolar y Becas*, JUNAEB) that benefits Chilean students with high academic performance. Its objective is to facilitate access to education, close the digital gap and benefit vulnerable children. Notably, the programme includes the delivery of computers for the students. *Me conecto para aprender* (www.meconecto.mineduc.cl) also aims to close the digital gap and support student learning through the distribution of computers, educational resources and Internet access. According to JUNAEB, since its implementation, it has benefitted more than 266 000 students.

Finally, there is currently a gap in addressing municipalities' needs, which are not considered in the policies established by DIPRES and have problems with timely payment and the non-compulsory nature of aggregating demand.

Needs analysis and procurement planning

Currently, the requirement analysis is developed from the information prepared by agencies regarding their equipment needs in the purchase planning process, which is strengthened in the recently approved procurement law. This information-gathering process is structured and carried out through EvalTIC. Furthermore, by facilitating clustering and cross-analysis, this tool is useful to ensure the coherence of the policies designed.

The contracting authorities affected by the current year's budget law obligation for co-ordinated, mandated procurement processes request the equipment according to the computer's technical standard defined by DIPRES and ChileCompra.

As noted above, the process is currently developed through EvalTIC, through which each institution enters its IT project formulation, which, after being reviewed by technical experts from different public bodies, receives observations and recommendations, along with approval or rejection.

Since entering into force in 2018, EvalTIC has grown from 64 to 168 institutions using the platform in 2022 and increased from 322 to 2 538 the number of projects analysed. Its scope now even reaches the public procurement system, which, within the requirements for carrying out tenders or issuing purchase orders, requires buyers to incorporate the project code generated by EvalTIC into the electronic system.

In the case of computers, in order to issue a positive recommendation, DIPRES requires purchases to be made through co-ordinated purchases, which provides important support to the consolidation of this procurement modality. Once DIPRES communicates the approved quantities, purchasers must review the technical standard and decide whether to join the process for the current period.

Buyers may, exceptionally, make purchases without adhering to co-ordinated purchasing and need special approval to do so. These exceptional cases, which are mostly executed through direct procurement, are managed outside the usual procedure of the EvalTIC platform. Each exception request is submitted directly by the purchasers to the DIPRES officials responsible for budget management, with information to justify the need for carrying out the procurement process without adhering to co-ordinated purchasing.

The main justifications presented by purchasers in these requests relate to the timing of the co-ordinated purchases and the technical characteristics of the equipment being procured through the co-ordinated purchases. In the case of timing, co-ordinated purchases are carried out twice a year; given that the timing of these processes has not yet been sufficiently harmonised with budget planning or due to failures in the purchasers' planning, there are cases, as reported during the OECD fact-finding mission, in which the purchasers state that they need to carry out their procurement processes without adhering to joint purchasing.

In relation to the equipment's technical characteristics, during the fact-finding mission, purchasers argued that, in certain cases, the conditions of the equipment considered for co-ordinated purchasing do not meet the standards they require, due to the demands for the fulfilment of specific functions. This might be understandable as mandated purchases aim to address the needs of most users (80/20 of the Pareto Principle) so there is always a possibility that very specific needs are not fully incorporated.

While this information, especially temporality, is being considered in the process of continuous improvement of co-ordinated purchases, the conditions reflect the need to evaluate other contracting modalities, such as dynamic purchasing agreements, which, while taking care of efficiency and effectiveness, offer buyers the necessary flexibility.

Finally, although this model has significantly improved the way needs analysis is carried out, buyers highlight the need to include the "impact" dimension in the project evaluation process, as the cost is not always a good indicator of the criticality of each project.

Market research

When defining the computer procurement model through ranges, market research was undertaken jointly with the University of Chile, for which historical data on public procurement, web scraping, national and international market studies, cost models through reverse engineering and statistical methodologies such as hedonic regressions were used. The objective of the study was to determine the most convenient model for the state to purchase computers that ChileCompra could implement.

Currently, the market research work is mainly carried out by the ChileCompra unit in charge of co-ordinated purchases, with less participation from other teams that could complement the process. This work is carried out according to the pre-established format developed by a team of economists, which was used when the market research that defined the computer procurement model was carried out and has been applied according to the information on changes and innovations in the market collected periodically.

ChileCompra analyses the information available in the public procurement system, which, in the case of purchases made through framework agreements, is structured for these purposes, while in other processes, such as tenders or lower-value purchases, the information is less structured. In addition, ChileCompra carries out RFI processes, through which it obtains the information required to design and implement strategic computer procurement processes, such as framework agreements or co-ordinated purchasing.

The market offer was identified through these practices and clauses were established to allow different actors to participate and access the market. These actions made it possible to delineate the market's capacity to respond in terms of time and volume, identifying key actors and supporting standardisation and definition of categories.

However, the business sector is reticent about the level of business participation in policy definitions and the effectiveness of the market analysis developed, considering that knowledge of the industry is fundamental for the design of successful policies. In this line, companies have reported that this is an area of opportunity and that the market research process could be developed with a broader view and not only focused on the specific elements established by the procurement agency.

Tender strategies

Law No. 19.886 and its regulations and Article 12 of the Budget Law 2023 establish the administrative procurement procedures, in order of general priority:

- **Framework agreements:** Suppliers and their products are awarded through public tenders, which are made available to all agencies subject to procurement law so that they can purchase the products in a procurement catalogue. This mechanism is the preferential option for central government agencies and the armed forces and is optional for municipalities. For acquisitions over 1 000 monthly taxing units (*Unidad Tributaria Mensual*, UTM), there is a special second-stage selection mechanism called “large purchase”, regulated by Article 14 bis of the regulation of Law 19.886 and the respective bidding conditions of each framework agreement.
- Under this mechanism, “**joint co-ordinated purchases**” are carried out in which two or more agencies purchase jointly, normally in a large purchase process in the respective framework agreement available at www.mercadopublico.cl. Procurement under this mechanism usually has ceilings for purchase orders, in particular in the computer framework agreement, the limits are for in-store purchases between 30 UTM (USD 1 969) up to 25 000 UTM (USD 1 643 566).
- **Public tender:** Administrative procedure of a competitive nature by means of which the public agencies issue a public call for tenders, summoning interested parties to submit proposals, subject to the established terms and conditions, from which they will select and accept the most suitable one. This mechanism has no ceilings but, depending on the amount, there are changes in the periods of publication and the process of acknowledgement by the Office of the Comptroller General of the Republic of Chile. This procedure has leveraged standardised templates (*bases tipo*) for PC leasing but new versions will also anticipate purchasing.
- Under this modality, **mandated purchases** are carried out, in which ChileCompra represents agencies to carry out the procurement process from the design of the procurement strategy to the award, after which each mandating public agency carries out contractual management. This modality has standard bidding terms and conditions for tendering the lease of computers.
- **Agile procurement:** This modality (regulated in Article 10 bis. of the public procurement regulation) facilitates acquisitions in amounts less than or equal to 30 UTM, streamlining bureaucracy by reducing the formal requirements for these processes and increasing the participation of smaller companies. It is a form of direct award.
- **Private tender:** Administrative procedure of a competitive nature, subject to a well-founded resolution that establishes it, by means of which the administration invites certain suppliers to submit proposals, subject to the established bases, from which it will select and accept the most convenient one.

- **Direct contracting:** A contracting procedure that, due to the nature of the negotiation involved, must be carried out without the concurrence of the requirements indicated for public and private tenders or proposals. This circumstance must, in any case, be accredited as determined by the regulations.

Applying the concept of using a tool for each objective and considering that depending on the amount, criticality and possibility of consolidation, procurement processes must cover different objectives, ChileCompra has established as a strategy that computer purchases be carried out through different instruments, specific to each objective. Currently, computer purchases are carried out mainly leveraging three tools:

- Co-ordinated purchasing, both for purchase and leasing of computers, for those cases where requirements are significant and planning allows consolidation.
- Framework agreements, to purchase laptops and desktops available in the framework agreement catalogue and not covered by co-ordinated purchasing.
- Other modalities, such as specific tenders or minor purchases, to meet needs that, due to their nature, such as the equipment's particularities, do not fit within the previous options. In the case of tenders, ChileCompra has made available standard bidding documents (*bases tipo*) that facilitate buyers' operations.

Especially in the case of purchases through framework agreements, the National Economic Attorney's Office has analysed competitive neutrality, concluding that these processes meet a positive standard.

As illustrated in Table 2.2, direct awards increased by more than 300% between 2020 and 2022 in terms of the value of contracts. This is something to follow up closely to ensure that such direct awards are justified and do not unnecessarily hinder competition. As a general rule, competitive procedures are preferable to advance efficiency and value for money.

Table 2.2. Number of contracts awarded and amounts for the procurement of personal computers and laptops by type of procedure and year

Year	Type of procedure	Number of contracts awarded	Amount (USD)
2022	Framework agreement	606	9 909 947
	Direct award	2 297	13 650 796
	Tender	701	53 662 878
2021	Framework agreement	356	10 535 140
	Direct award	1 885	4 951 029
	Tender	386	51 511 116
2020	Framework agreement	1 137	8 902 472
	Direct award	677	3 391 620
	Tender	93	41 235 454

Source: Information provided by ChileCompra.

Drafting of tender documents and the use of vendor-neutral technical specifications

The Public Procurement Law facilitates competitive neutrality since it establishes that requirements cannot refer to specific brands unless needed for a better definition; in this case, a brand could be indicated as a reference rather than a mandatory element. This condition applies to purchases in the public market managed by each agency and also to processes managed by ChileCompra, such as those based on framework agreements and co-ordinated purchasing.

In this line, ChileCompra adopts a series of actions in the development of the technical standard that is included in the bidding documents for computer leases, framework agreements, joint co-ordinated purchases and mandated co-ordinated purchases: i) carry out market consultations (or RFI) through the platform www.mercadopublico.cl, where the technical specifications of equipment and services are validated with the industry and interested suppliers in an open and participatory manner; ii) define technical specifications contrasted with the market that the main manufacturers can meet; and iii) seek to capture those innovations that the vast majority of industry manufacturers have in the market.

Additionally, in the processes it leads, in addition to focusing on achieving savings estimated to reach 30% with respect to market prices for similar equipment, ChileCompra seeks to define the standard of equipment used by most public agencies (80/20 rule) as a minimum requirement. Nevertheless, particularly when referring to parts and components, specific brands are sometimes mentioned in procurement processes, though always mentioning “or equivalent/superior” to support neutrality.

Figure 2.1. Technical description of computers

Tender ID: 2239-17-LR22 CM for the acquisition of laptops, desktops and all-in-one computers

	Especificación Técnica del Equipo	Requisito mínimo Gama 1	OFERENTE DEBE COMPLETAR DETALLE DE ESPECIFICACIÓN DEL EQUIPO OFRECIDO PARA LA GAMA 1	Requisito mínimo Gama 2
Part Number	Part Number Fabricante OEM	Sin valor de referencia		Sin valor de referencia
Marca	Nombre comercial del Fabricante OEM	Sin valor de referencia		Sin valor de referencia
Modelo	Modelo Comercial Fabricante OEM	Sin valor de referencia		Sin valor de referencia
Sistema Operativo	Windows 10 pro, Mac OS 10 , equivalente o superior.	Se requiere que el equipo sea compatible con Windows 11 pro o equivalente (considere TPM 2.0 habilitado de fábrica, UEFI, compatible con Arranque Seguro). Además, el equipo debe contar con BitLocker o equivalente implementado y activado de fábrica.		Se requiere que el equipo sea compatible con Windows 11 pro o equivalente (considere TPM 2.0 habilitado de fábrica, UEFI, compatible con Arranque Seguro). Además, el equipo debe contar con BitLocker o equivalente implementado y activado de fábrica.
CPU Benchmark	PassMark software CPU benchmarks [mínimo]	9.000		12.000
Especificaciones del Procesador definidas por el fabricante OEM del procesador	Tipo de Procesador	AMD RYZEN 3 EQUIVALENTE O SUPERIOR / INTEL CORE I3 EQUIVALENTE O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más		AMD RYZEN 5 EQUIVALENTE O SUPERIOR / INTEL CORE I5 EQUIVALENTE O SUPERIOR / X64 O EQUIVALENTE, de 6 núcleos o más
	Procesador	Sin valor de referencia		Sin valor de referencia

Source: ChileCompra (n.d.^[3]), *Mercado Público*, www.mercadopublico.cl (accessed on 15 December 2023).

Figure 2.2. Standards and estimated prices

Budget process 2022

ESTÁNDARES ARRIENDO DE EQUIPOS COMPUTACIONALES CON OPCIÓN DE COMPRA									
<ul style="list-style-type: none"> Plazo Arriendo: 36 meses, con opción de compra con cuota 37. Precios calculados considerando los precios máximos definido para las compras coordinadas en 2022, que consideran mejoras de servicio, mejoras del equipo, accesorios y servicios adicionales de seguridad y uso. La definición de los precios consideró los aumentos de costos de transporte y el efecto de la inflación, estimado para 2022. Precio incluye IVA, despacho y servicios adicionales a nivel nacional. 									
Característica	LAPTOP			DESKTOP (con Pantalla)			ALL-IN-ONE		
	Gama 1	Gama 2	Gama 3	Gama 1	Gama 2	Gama 3	Gama 1	Gama 2	Gama 3
Procesador	AMD RYZEN 3 O SUPERIOR / INTEL CORE I3 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más	AMD RYZEN 5 O SUPERIOR / INTEL CORE I5 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más	AMD RYZEN 7 O SUPERIOR / INTEL CORE I7 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más	AMD RYZEN 3 O SUPERIOR / INTEL CORE I3 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más	AMD RYZEN 5 O SUPERIOR / INTEL CORE I5 O SUPERIOR / X64 O EQUIVALENTE, de 6 núcleos o más	AMD RYZEN 7 O SUPERIOR / INTEL CORE I7 O SUPERIOR / X64 O EQUIVALENTE, de 8 núcleos o más	AMD RYZEN 3 O SUPERIOR / INTEL CORE I3 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más	AMD RYZEN 5 O SUPERIOR / INTEL CORE I5 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más	AMD RYZEN 7 O SUPERIOR / INTEL CORE I7 O SUPERIOR / X64 O EQUIVALENTE, de 4 núcleos o más
RAM	8 GB o superior	16 GB o superior	16GB o superior	8GB o superior	16GB o superior	16 GB o superior	8 GB o superior	16 GB o superior	16 GB o superior
Sistema Operativo *	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente	Windows 10/11 Pro o equivalente
Almacenamiento	480 GB SSD (o superior) M.2 PCIe NVMe	480 GB SSD (o superior) M.2 PCIe NVMe	480 GB SSD (o superior) M.2 PCIe NVMe	550 480 GB O SUPERIOR M.2 PCIe NVMe	550 480 GB O SUPERIOR M.2 PCIe NVMe	550 480 GB O SUPERIOR M.2 PCIe NVMe	SSD DE AL MENOS 480 GB M.2 PCIe NVMe	SSD DE AL MENOS 480 GB M.2 PCIe NVMe	SSD DE AL MENOS 480 GB M.2 PCIe NVMe
Tamaño Pantalla	DESDE 14" (incluido) - HASTA 15,6" (incluido) FULL HD o superior.	DESDE 14" (incluido) - HASTA 15,6" (incluido) FULL HD o superior.	DESDE 14" (incluido) - HASTA 15,6" (incluido) FULL HD o superior.	MONITOR (MISMA MARCA DEL EQUIPO) 22 PULGADAS FULL HD PANEL (O SUPERIOR)	MONITOR (MISMA MARCA DEL EQUIPO) 22 PULGADAS FULL HD PANEL (O SUPERIOR)	MONITOR (MISMA MARCA DEL EQUIPO) 22 PULGADAS FULL HD PANEL (O SUPERIOR)	FULL HD (1080P) 21" O SUPERIOR	FULL HD (1080P) 21" O SUPERIOR	FULL HD (1080P) 21" O SUPERIOR
Puntaje Passmark ¹	6000	9.000	10.500	8.000	12.000	16.000	8.000	10.000	12.000

Source: DIPRES (n.d.^[4]), *Sistema de Información para la Gestión Financiera del Estado*, <https://dipres.gob.cl> (accessed on 19 September 2023).

Award criteria and procedures

In order to encourage greater participation and coverage, in addition to the general conditions that ChileCompra applies in all of its processes, specific rules have been defined in the case of computers to ensure a sufficient number of brands are present in the electronic catalogues.

Likewise, based on initial experiences, a clause has been incorporated in the award process of the fourth version of the co-ordinated purchase, which requires at least three new brands to be awarded. This condition has allowed greater access for new brands while maintaining a wider choice for buyers, which in turn has impacted not only end user satisfaction but should facilitate a less concentrated distribution in the market, thus minimising lock-in risks.

However, it is important to consider that the reform to the procurement law just approved in Congress does not include dynamic purchasing agreements as part of the set of possible procedures to be used, even though these procedures would help consolidate technological neutrality. In this sense, it is critical to consider that dynamic purchasing agreements make it possible to avoid the problem of obsolescence of framework agreement catalogues, which, although they may consider specific elements to maintain an updated supply, are not a purchasing tool designed to facilitate permanent access to new suppliers and an updated supply of products.

Framework agreements

Technology procurement from the public sector reached USD 89.6 million in 2022, representing a 34% increase over 2021. Since 2014, the strategy to execute technology purchases from the public sector moved from a model in which practically everything was procured through framework agreements to a mixed model, in which procurement through framework agreements is complemented with other modalities such as purchases using standard bases, smaller purchases and especially co-ordinated purchases, in response to the need identified at that time to rationalise the use of framework agreements as a procurement modality.

In the specific case of computer purchases, elements such as the outdated product catalogue, difficulties when comparing equipment from different suppliers, brands or product generations, and when capturing the price decline, and the large number of requests for products that are not traded across the board led to new procurement modalities, which ended up in the first segmentation of product categories in 2018.

From the definition of minimum technical specifications of the ranges (central processing unit or CPU, random-access memory or RAM, and storage) and a classification of the products into laptops, desktops and all-in-one PCs, categories were identified to facilitate product comparison and, therefore, greater competition.

This first segmentation facilitated the first co-ordinated purchase in 2019, designed to satisfy equipment leasing needs. As mentioned above, for this procurement, a standard was defined for three types of products (laptops, desktops and all-in-one PCs), generic files were included in the framework agreement, new technical characteristics were added to the product classification and the CPU benchmark (PassmarkCPU) was also adopted.

Also, based on this segmentation, and considering that the electronic framework agreement catalogue provided an important space to validate the conditions of the computer procurement process and thus allowed important lessons to be learned, computer framework agreement tenders with new features were developed between 2019 and 2021.

Through A/B testing, it has been verified that buyers do not consider price a critical attribute of the products, but they do consider the supplier from whom they buy as important (users who purchased without knowing the supplier later cancelled their orders). Based on this and other findings, the tender gradually focused on prices considering technical specifications as minimum requirements, the segmentation model was refined by opening categories with and without an operating system, the awarding process was adjusted considering the level of sales and distribution was included in the price of the product.

User participation

An important challenge in the procurement of computers is balancing the needs of users and the procurement authorities while realising neutrality and value for money. Users may want to ensure that what is requested will do exactly what they need. However, customised computers will generally be more expensive than standard options, more difficult to reuse and will create lock-in risks. Communication and feedback channels are key to finding the right balance.

Through interviews with buyers, it was verified that while there is a relevant information channel from ChileCompra to buyers, this communication does not operate with the same strength in the opposite direction. During such interviews, the OECD team heard buyers claiming they could have greater participation in the design process and during the operation stage of the framework agreements or co-ordinated purchases. Currently, there is no formal feedback mechanism for ChileCompra regarding the operation of co-ordinated purchasing.

It would be especially relevant to permanently consider the opinion of the main buyers since, according to figures provided by ChileCompra, the five main buyers in 2022 accounted for more than 60% of the total amount spent by the central government on computers and laptops (see Tables 2.3 and 2.4).

Table 2.3. Procurement of personal computers and laptops, 2018-22

Year	Amount (USD)
2022	77 223 621
2021	66 997 285
2020	53 529 546
2019	74 803 814
2018	75 856 877

Source: Information provided by ChileCompra.

Table 2.4. Public entities with the highest procurement spending on personal computers and laptops, 2022 and 2021

2021		2022	
Public entity	Amount (USD)	Public entity	Amount (USD)
JUNAEB	44 360 082	JUNAEB	36 867 155
Internal Revenue Service	2 038 344	University of Chile	3 302 001
University of Chile	1 477 974	National Board of Pre-schools (JUNJI)	2 605 151
University of Valparaiso	1 033 096	University of the Bio-Bio	2 340 910
University of the Border	986 144	Internal Revenue Service	1 961 227
Percentage of total	74.5	Percentage of total	61

Source: Information provided by ChileCompra.

Current practices for the procurement of computers in Colombia

Public procurement in Colombia represents about 10.5% of its GDP and 22% of government expenditures.¹ Procurement activities are governed by a set of rules, notably Law 80/1993, also known as the Public Procurement Statute, and Decree 1150/2007. The statute includes general principles to be observed in all procurement activities, such as objective selection, free concurrence, economy and effectiveness. These principles prescribe avoiding discriminatory treatment for any bidder.

However, after some years, Decree 1150/2007 intended to close gaps found in Law 80/1993. The most important changes introduced were the extension of selection modalities, the establishment of framework agreements for goods and services with standard characteristics and common use throughout the public administration and the setup of the e-procurement platform (*Sistema Electrónico para la Contratación Pública*, SECOP) and the supplier registry (*Registro Único de Proponentes*, RUP) (ICP, 2007^[5]).

Colombia Compra Eficiente (CCE) is the governing body of the public procurement function and, as such, issues policies and rules and identifies good practices relative to public procurement. It was created through Decree 4170/2011 and is in charge of recommending public policies, plans, programmes and rules to the national government relative to public procurement, aiming to achieve effectiveness between supply and demand and regulatory simplification, as well as efficiency, transparency and the best use of public resources.

In line with the Digital Government Policy (*Política de Gobierno Digital*, PGD), the CCE established a framework agreement to procure computers and accessories, including purchasing and leasing PCs and laptops. All framework agreements related to ICT should observe the following principles:

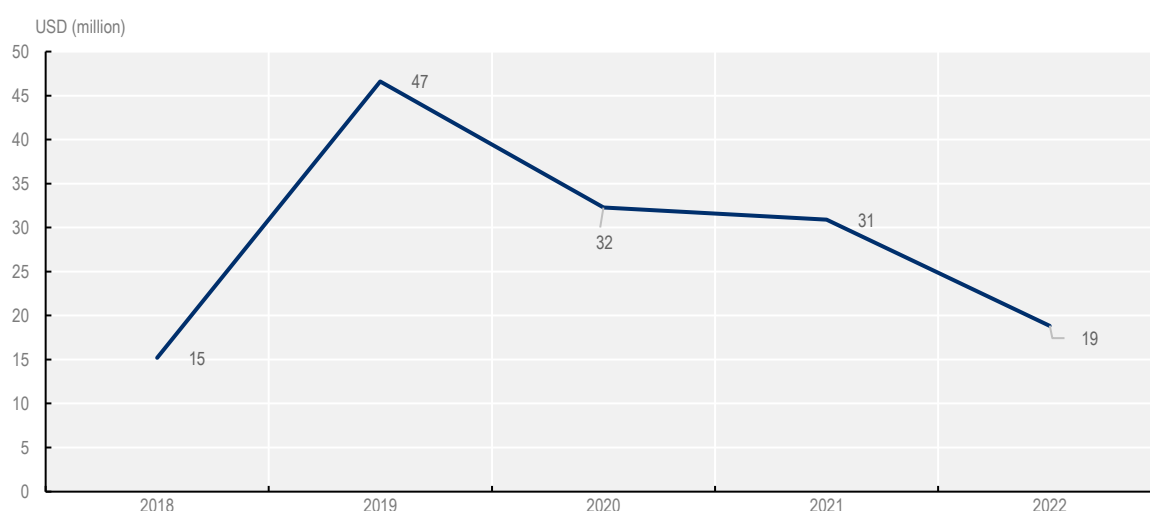
- Favouring modalities as a service, whenever possible.

- Technological neutrality.
- Favouring functional specifications and avoiding definitions based on brands.
- Minimising lock-in risks.

The Ministry for ICT (MinTIC) also defines technological neutrality in its guidelines and there is a concept on the subject from the Constitutional Court of Colombia.

According to the information registered in the Virtual Store of the Colombian State (*Tienda Virtual del Estado Colombiano*, TVEC), during the last five years, the procurement of computers and accessories reached 2 240 purchase orders for 515 342 computers. However, the amount of resources involved has decreased since 2019 (Figure 2.3). According to the CCE, this is because some procurement was delayed to avoid the rising prices after supply chain issues during the COVID-19 pandemic.

Figure 2.3. Value of the procurement of computers and accessories in the TVEC, 2018-22



Source: Information provided by the CCE.

The top five institutions in terms of procurement of computers and accessories changed completely from 2021 to 2022 (Table 2.5). Educational institutions and local governments concentrate high volumes of purchases.

Table 2.5. The top five institutions in terms of procurement of computers and accessories, 2022-21

2021		2022	
Institution	Value (COP)	Institution	Value (COP)
Ministry of Finance and Public Credit	1 652 903 473	Department of Antioquia	976 915 957
University of La Guajira	1 630 035 581	Institute for the Development of Cesar	457 220 864
National Institute for Technical Professional Training Humberto Velásquez García, Ciénega	999 598 650	Municipality of Puerto Concordia	404 998 638
Municipality of Kennedy	954 273 000	Caldas People Contact Manizales	400 000 000
Municipality of Usme	886 079 579	University of Antioquia	385 780 573

Source: Information provided by the CCE.

Needs analysis and procurement planning

Public entities are required to adequately plan their procurement. For that purpose, they must prepare an Annual Procurement Plan (*Plan Anual de Adquisiciones*, PAA), which should be published by 31 January each year and can be updated at least once a year. According to the guidance provided by the CCE, the PAA aims to: i) facilitate identifying, registering, programming and publishing entities' needs for goods, works and services; and ii) design procurement strategies based on demand aggregation to maximise efficiency. This guidance is compiled in a guide to drafting annual procurement plans.²

Furthermore, contracting authorities carry out market research to identify market alternatives and demand features. Likewise, they have to choose the more convenient procurement modality according to their needs. When using the framework agreement, contracting entities can define the requirements for computers and laptops according to processing scores that can be related to workloads and the final user, which is precisely the output that an adequate benchmark should provide. In other words, each entity identifies the equipment it needs based on its own analyses, which should include technical and economic considerations.

Market research

Contracting entities carry out market research independently. However, the CCE recommends them to use public procurement data such as purchases and characteristics of the procured equipment by the different entities, as well as market trends. In fact, MinTIC and the CCE make open data platforms available so that contracting entities can analyse market trends and behaviours. With this information, they can determine technical features and estimate budget requirements.

The CCE also produced a guide to sectoral studies, which provides practical tools and guidance to carry out a comprehensive analysis to understand, from the planning stage, the sector at which the procurement will be directed and design the process accordingly.³ According to this guide, sector analyses should include the following topics:

- **General market characteristics:** Economic, technical and regulatory, among others.
- **Spending behaviour:** Previous procurement of the contracting entity and others.
- **Supply analysis:** Production, distribution and delivery dynamics, who the suppliers are, etc.
- **Demand analysis:** Historic prices.

Tender strategies

The procurement of computers and laptops may take place following two modalities:

- **Traditional:** The contracting entity carries out the tendering process and its execution up to the payment stage. The control authorities supervise this modality: the Comptroller's Office (*Contraloría*), the Attorney's Office (*Fiscalía*) and the Public Prosecutor's Office (*Procuraduría*).
- **Framework agreement:** The CCE tenders a framework agreement, following the advice of MinTIC, and once awarded, contracting entities procure as per the agreement's conditions. Such entities are responsible for paying suppliers. The control entities may also supervise procurement executed through the framework agreement.

MinTIC strongly recommends contracting entities rely on the framework agreement. They can procure under the modality of device as a service (DaaS) or traditional leasing using the framework agreement to buy or lease computers and accessories:

- **Traditional leasing:** Contracting authorities lease computing equipment, which may include desktops, all-in-one PCs, workstations, thin client computers, laptops or tablets, for a fixed time and independently of the additional services included in the framework agreement for the leasing

category. Contracting entities cannot request new or used equipment, only the lease time and minimum conditions. The management of the equipment is the responsibility of the contracting entity.

- **DaaS:** This allows the procuring of new computers as a service, with recurrent payments and the supplier being responsible for managing the equipment. The supplier guarantees the contracting entity the computing capacities defined in the selected configurations. This modality includes desktops, all-in-one PCs, workstations, thin client computers, laptops and tablets as a service or a comprehensive solution of resources such as configuration, installation of software owned by the contracting authority, information security, preventive maintenance, technology updates, technical support, parts replacement and monthly reports of incidents.

The National Business Association of Colombia (*Asociación Nacional de Empresarios de Colombia*, ANDI) commissioned a study on the implementation of DaaS, which summarised the challenges and opportunities for its implementation (Box 1.1).

However, it should be noted that the PAA and the national budget are laid out on a yearly basis, which creates disincentives for leasing or DaaS schemes. The yearly basis often leads contracting entities towards the purchase of equipment instead of opting for leasing or “as a service” models because when a contract is planned to last longer than a year, procuring entities have to develop and justify a long-term project through a budget mechanism known as *vigencias futuras* (i.e. a budget guarantee for the following years). In such a case, the project has to be presented to the National Planning Department (*Departamento Nacional de Planeación*, DNP) and the Ministry of Finance (*Ministerio de Hacienda*). Nevertheless, if a purchasing entity has enough budget, it can just purchase the equipment during the fiscal year without having to request such clearances. Furthermore, a budget line must be classified as either as an investment (CAPEX) or an operating expense (OPEX). However, the Ministry of Finance usually rejects IT procurement when it is classified as OPEX, favouring the purchase of new hardware. In other words, the CAPEX/OPEX trade-off usually used as an argument for “as a service” models has not been fully accepted.

Box 2.1. Challenges and opportunities for the implementation of DaaS in Colombia

ANDI recognises the need to accelerate the country’s digital transformation, while the government has placed particular emphasis on inclusiveness and closing digital gaps among the territories.

ANDI commissioned a report on the implementation of DaaS in Colombia, which found the following challenges:

- **Personal data protection:** The moment data transfer materialises should be clarified with regards to DaaS suppliers.
- **Risk aversion by procurement officials:** The rules should be clarified and showcase good practice examples through pilot projects, raising awareness amongst control entities so that they understand the modality and do not block its use.
- **The possibility of contracting services beyond a 12-month period:** Since most DaaS contracts can be expected to go beyond 12 months, it is important to review the normative framework to establish exceptions to the annual principle (*principio de anualidad*) and overcome rigidities.
- **Price prevalence:** Award processes tend to favour the price criterion, which may lead to end up procuring poor quality equipment.

Additionally, the report recommends implementing regulatory sandboxes to open opportunities for experimentation of value propositions relative to innovative public procurement. This could temper regulatory uncertainty and risk aversion.

Source: ANDI (2021^[6]), *Consultoría para la implementación del modelo DaaS en compra pública en Colombia: Análisis, viabilidad jurídica y mecanismos de implementación*.

The framework agreement strategy is supported by the TVEC and its catalogue, designed by the CCE to address the different scenarios and needs of the contracting entities, which identify the fiches of the products that better meet their requirements on the understanding that there may be minimal variations that do not impact on performance, observing the principle of neutrality with respect to the available brands in the market.

The computing equipment in the catalogue was selected based on performance and suppliers must demonstrate that they meet the required level when delivering to the contracting entity. If a user requires a different type of equipment on the basis that it does not fit the current specifications, it may request its inclusion via the CCE and justify the performance features required.

According to the CCE, the main achievement of these strategies has been the standardisation of the technical characteristics of the computing equipment procured, as a good of common use throughout the public administration. While the COVID-19 crisis led to delays in the delivery of components, it also opened the opportunity to look for substitutes with equivalent performance but at lower cost.

In terms of risks, given that the computers and laptops procured are imported, problems in the supply chain of components may lead to delays in delivery and an inability to meet institutional goals. Planning would be key to mitigating these risks.

Drafting of tender documents and the use of vendor-neutral technical specifications

Considering that purchase orders by contracting authorities under the framework agreement must follow the conditions set forth, there is a good level of standardisation in contract clauses to procure computing equipment and accessories. Indeed, the framework agreement aims to establish: i) conditions to buy or lease computers; ii) conditions for contracting authorities to subscribe to it; and iii) conditions for payment for the acquisition or lease of computers.

The CCE has not produced manuals for drafting tender documents to procure computers. However, standardisation in contractual procedures could be advanced through the use of template documents (*documentos tipo*) that include enabling conditions, technical, economic and other factors determining the selection of suppliers.

The parameters defined in the framework agreement include the operating system, screen resolution, benchmark version, energy saving, levels of information security, environmental certifications, military degree certifications, data migration, extended guarantee and preventive maintenance, among others. Additionally, the minimum requirements for computer configuration include the performance score, CPU, RAM, solid-state drive (SSD), graphics card, network connection, interfaces, data security, eco-labels, military certifications and energy-saving certifications. The use of the latter certifications should be mindful of the risk of excluding potential suppliers, so it would be important to work with the market to ensure they are aware and ready.

Award criteria and procedures

The regulatory framework establishes thresholds to determine the type of procurement procedure to follow:

- Minimum value (*minima cuantía*): This threshold represents 10% of the value of lesser amount (*menor cuantía*). Procurement below this value takes place through a minimum-value abbreviated selection, which means that the contracting entity invites suppliers to bid and establishes the conditions to satisfy its needs. The length of this procedure is very short.
- Lesser amount (*menor cuantía*): This value is established based on the budget of each contracting entity (between 280 and 1 000 monthly minimum wages) and leads to an abbreviated selection process. The length of this procedure is short and allows contracting entities to define enabling conditions and weighting criteria.

- If the amount exceeds the minimum value, the contracting entity must verify if there is a framework agreement that satisfies its needs. If the framework agreement does not exist, the entity applies the procedure for lesser amount or, if the amount exceeds it, a public tender or a reverse auction, according to the characteristics of the equipment to procure.

Purchase orders for computing equipment uploaded to TVEC under framework agreements illustrate that direct awards decreased significantly from 2020 to 2023. The special regime was the most used procedure in terms of amounts procured, except in 2020 when direct awards concentrated the highest amount (Table 2.6). Procurement through minimum value procedures during 2020 and 2022 had the highest average number of bidders (Table 2.7).

Table 2.6. Purchase orders of computers in the TVEC under framework agreement by type of procedure, 2020-23

Year	Type of procedure	Contracts awarded	Value (COP)
2023	Direct award	8	42 453 160
	Two parts agreements	1	10 000 000
	Special regime	3	570 580 911
2022	Direct award	26	177 559 603
	Minimum value	54	995 102 050
	Two parts agreements	3	139 486 475
	Public tender	1	404 998 638
	Special regime	121	2 722 153 708
	Abbreviated selection	5	1 624 956 070
	2021	Direct award	39
	Minimum value	66	923 735 173
	Special regime	379	8 569 788 785
	Abbreviated selection	18	6 905 768 657
2020	Direct award	33	71 398 288 937
	Minimum value	84	1 111 175 590
	Two parts agreements	2	3 159 450
	Special regime	307	4 089 080 909
	Abbreviated selection	12	3 888 894 434

Note: The highlighted cells indicate the highest values per year.

Source: Information provided by the CCE.

Table 2.7. Average number of bidders by type of procedure for the procurement of computing equipment, 2020-22

Year	Type of procedure	Average number of bidders
2022	Abbreviated selection	6.5
	Special regime	0.25
	Minimum value	6.7
2021	Abbreviated selection	6.9
	Minimum value	4.8
2020	Abbreviated selection	4.2
	Minimum value	5.1

Note: The highlighted cells indicate the highest values per year.

Source: Information provided by the CCE.

Selection criteria are defined by law and include legal capacity, financial capacity, experience and technical specifications. The CCE defines these criteria in framework agreements, which cannot specify brands or specific suppliers. Price is the predominant selection criterion, even where other criteria are scored such as certifications, parts collection, waste management and social criteria.

The framework agreement establishes benchmarks in terms of performance. The benchmark currently used is PCMark 10 and the contractual arrangements require the use of the most updated PCMark version. The use of this benchmark was not decided unilaterally but in consultation with suppliers and the industry. In order to mitigate the risk of the benchmark being manipulated through hardware tweaks, a testing protocol was implemented. The benchmark score is guaranteed through the performance of such testing protocol, which includes hardware tests and a general review by the contract overseer. Furthermore, given the time it takes to review the framework agreement, caution should be exercised to avoid the benchmark becoming obsolete.

National treatment is granted to international suppliers to fulfil commitments stemming from international trade agreements. Any supplier, independent of its origin, can bid without establishing a subsidiary in Colombia. However, if it were selected, it would be required to formally establish a subsidiary to execute the contract.

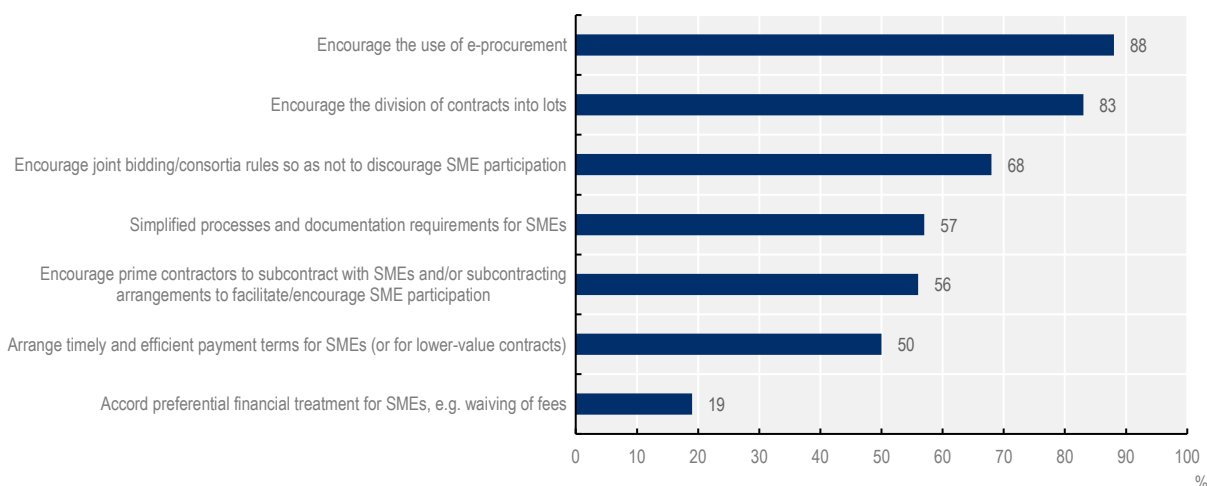
Framework agreements

As mentioned previously, the CCE currently uses the framework agreement to procure computers and accessories (purchasing and leasing) as the single tool to aggregate demand. It will be in force for three years and can be extended for an additional 12 months. As of March 2023, 75 suppliers had subscribed to the framework agreement.

The structure of the framework agreement is intended to allow the participation of as many suppliers as possible as long as they meet the standards for the adequate execution of contractual conditions. In this sense, the framework agreement adopted a regionalisation strategy to attract SME participation and a diversity of brands. Indeed, the CCE defined SME inclusion as a priority. The framework agreement was segmented into six regions (1 national and 5 regional), using more than 20 lots for the different types of computers and accessories. It also allows joint bids through temporary partnerships and consortia. Furthermore, it established procurement amounts for SMEs. This strategy led to this framework agreement having the highest number of participation applications (105) and the highest number of awarded bidders, facilitating competition in the computer market. Ninety of the 105 applications came from SMEs. Indeed, the division of contracts into lots and joint bidding are some of the most recurrent strategies in OECD

countries to facilitate the participation of SMEs in public procurement (Figure 2.4). There is, however, a risk to be aware of in terms of hindering value for money by impeding competitive suppliers from participating in the different regions and contracting authorities ending up paying higher prices. For example, a supplier participating in the national lot cannot engage in a regional one.

Figure 2.4. Measures and approaches used to support SMEs in public procurement (percentage)



Note: Based on survey responses received from 20 OECD and 5 non-OECD countries.

Source: OECD (2018^[7]), *SMEs in Public Procurement: Practices and Strategies for Shared Benefits*, <https://doi.org/10.1787/9789264307476-en> (accessed on 8 August 2023).

From a technical point of view, procurement based on functional and performance specifications, such as those assessed through benchmarking, also facilitates competition by hindering brand biases. Regarding bid rigging, the Superintendence of Industry and Trade (*Superintendencia de Industria y Comercio*, SIC) is the competition authority in charge of suggesting measures to prevent it. According to the CCE, the risk of bid rigging is not significant, given the high number of suppliers in the market.

During the fact-finding mission, the OECD heard positive feedback from industry representatives and users in the sense that the framework agreement is efficient in terms of time to award contracts and savings stemming from timely technological choices. While the framework agreement has some flexibility to keep updated catalogues and incorporate equipment as it enters the market, the CCE may want to pilot dynamic purchasing exercises, and document findings and results so that it proposes legal reforms to allow the possibility for this procurement modality. Users also pointed out this opportunity and would create opportunities to update benchmark metrics.

User participation

User feedback can be critical to advance towards better outcomes when it comes to ICT procurement. It is helpful, for example, to build user profiles and define the characteristics of the equipment to be procured in line with the specific tasks to be performed. Value for money can be realised by maximising the use of the features of the equipment procured or, in other words, providing users equipment tailored to their needs, avoiding applications and characteristics that will not be useful their specific tasks. However, it is also useful to evaluate user experience with the equipment procured in the past and, if needed, adjust accordingly.

Just like in the case of Chile, during the fact-finding mission, the OECD heard from users that there could be more direct feedback channels to make suggestions to improve the management of the framework

agreement. This is key as one of the opportunities pointed out by the industry is that contracting entities sometimes enter into parallel agreements to avoid purchasing through the framework agreement, which may lead to biases for an operating system or brand, eventually ending up in vendor-lock-in. For example, one of the municipalities expressed that they sometimes avoid framework agreements because services not included are expensive and unsatisfactory. This may indicate the need to set up mechanisms for users to point out opportunities and for the CCE to allow such feedback and build on direct user experience.

Current practices for the procurement of computers in Mexico

Public procurement in Mexico represents about 4.5% of GDP and 16% of government expenditures.⁴ The procurement activity of the federal government, as well as procurement carried out by subnational governments but funded with federal transfers, is governed by a set of laws and secondary regulations.

First, the Political Constitution of the United Mexican States (*Constitución Política de los Estados Unidos Mexicanos*, CPEUM) establishes in Article 134 that the financial resources spent by the federation, the federal states, the municipalities and the territories of Mexico City should be managed following principles of efficiency, economy, transparency and honesty. Likewise, it dictates that procurement, leasing and acquisitions of goods and services, as well as the contracting of public works, should prioritise the best conditions for the state in terms of price, quality, financing, opportunity and other relevant circumstances.

The constitutional mandate is then elaborated in a set of laws and secondary regulations. For the procurement of goods and services, the main regulations are the Law on Acquisitions, Leasing and Services of the Public Sector (*Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público*, LAASSP) and its bylaws (*Reglamento de la Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público*).

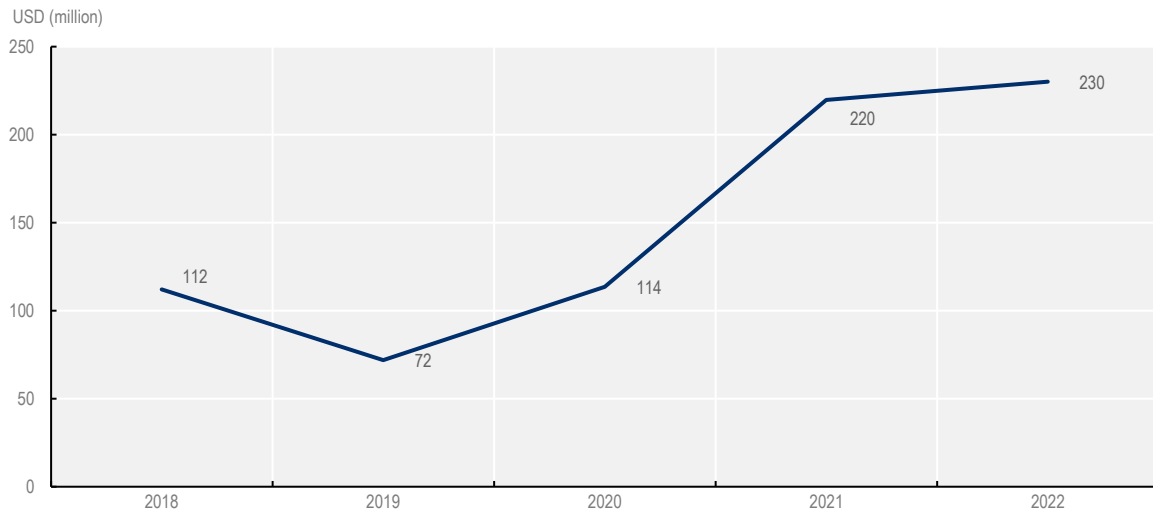
Other applicable laws for the procurement of computers and laptops include the Agreement issuing policies and guidelines to advance the use and leverage of ICT, digital government, and cybersecurity in the federal public administration (hereafter the Agreement) and the National Digital Strategy (*Estrategia Digital Nacional*, EDN), and other general rules such as the Federal Law of Republican Austerity (*Ley Federal de Austeridad Republicana*) and the Guidelines on Republican Austerity for the Federal Public Administration (*Lineamientos en Materia de Austeridad Republicana de la Administración Pública Federal*).

A reform to the Organic Law of the Federal Public Administration (*Ley Orgánica de la Administración Pública Federal*, LOAPF) in May 2023 allocated the procurement function to the Ministry of Public Administration (*Secretaría de la Función Pública*, SFP). Article 37, Section XXI Bis, grants the SFP the power to serve as consolidating entity in procedures for procuring goods and services. For that purpose, the SFP can determine the goods and services of general use that should be procured in a consolidated manner. Within the SFP, the Unit for Consolidated Public Procurement is in charge of co-ordinating consolidated procurement procedures and setting up framework agreements, supervising the drafting of framework agreements and their modifications, according to Article 44 of the Internal Bylaws (*Reglamento Interior de la Secretaría de la Función Pública*).

ICT procurement, including for computers and laptops, should follow principles of technological sovereignty and independence, as established in the Agreement. It follows that the procurement model should adopt and develop open standards that allow interoperability, scale, sustainability and stability, as well as flexibility to incorporate technological evolution, considering technological sovereignty and independence for the benefit of the state. Furthermore, market research should ensure the existence of a diversity of suppliers. Likewise, the LAASSP bylaws require explicit justification from the contracting entity in the event it demands a specific brand.

The procurement of computers and laptops has increased over the last five years, except in 2019 (Figure 2.5).

Figure 2.5. Value of the procurement of computers and laptops in the federal public administration, 2018-22



Source: Information provided by the Ministry of Finance and Public Credit.

The top five institutions of the federal public administration in terms of procurement of computers and laptops changed from 2021 to 2022, except for the Mexican Institute for Social Security (*Instituto Mexicano del Seguro Social*, IMSS) (Table 2.8). The sectors to which these institutions belong are mostly education and health.

Table 2.8. The top five institutions of the federal public administration in terms of procurement of computers and laptops, 2021-2022

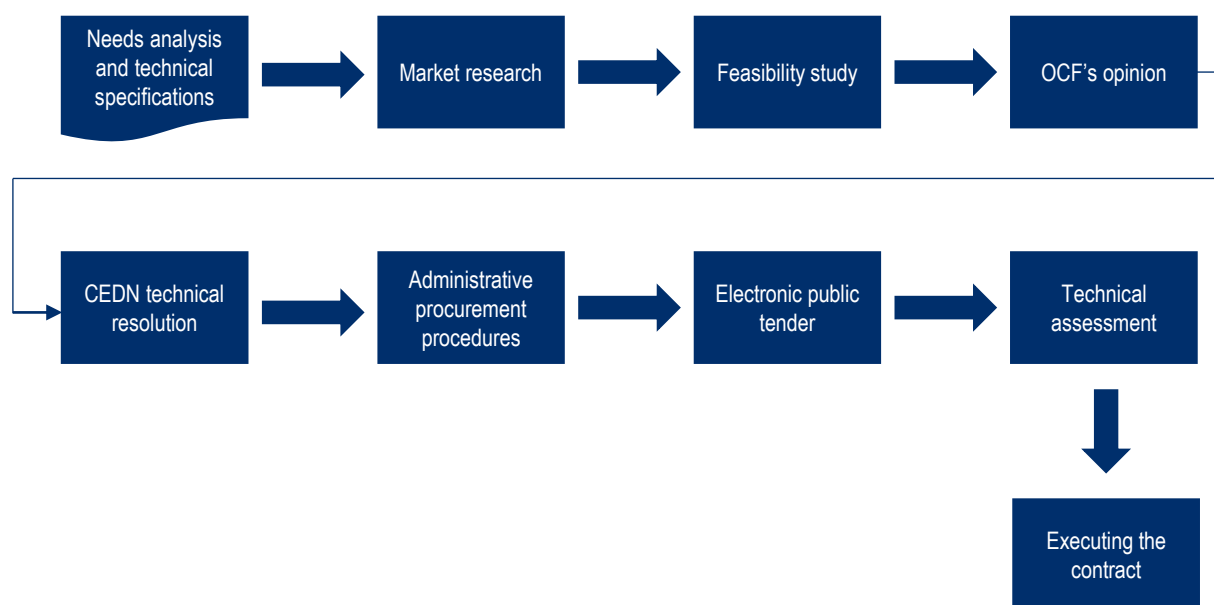
2021		2022	
Institution	Value (USD)	Institution	Value (USD)
Ministry of Labour (STPS)	28 648 556	IMSS**	53 043 118
IMSS**	17 055 126	General Attorney's Office (FGR)	41 964 829
Ministry of Education (SEP)*	14 885 575	Institute for Security and Social Services of the State Employees (ISSSTE)**	36 645 877
Ministry of Foreign Affairs (SRE)	14 467 480	Federal Education Authority in Mexico City*	31 931 711
National Co-ordination for Benito Juárez Scholarships*	12 856 397	National Service for Animal and Vegetal Health and Quality (SENASICA)	4 335 622

Note: * denotes an institution in the education sector; ** denotes an institution in the health sector.

Source: Information provided by the Ministry of Finance and Public Credit.

In general terms, the procurement of computers and laptops follows the process illustrated in Figure 2.6.

Figure 2.6. Overview of the procurement procedure for computers and laptops



Note: CEDN = National Digital Strategy Coordination; OCF = Control and Audit Body.

Source: Information provided by the Ministry of Public Administration.

Needs analysis and procurement planning

Two instruments are key for planning the procurement of computers and laptops and anticipating demand: the Annual Procurement, Leasing and Services Programme (*Programa Anual de Adquisiciones, Arrendamientos y Servicios*, PAAAS) and the Portfolio of ICT Projects (*Portafolio de proyectos de tecnologías de la información y comunicación*, POTIC). Each ministry and contracting entity should prepare a PAAAS and upload it to CompraNet, Mexico's e-procurement platform, by 31 January every year. It can be adjusted throughout the year but the SFP must be informed of such changes and updated every month in CompraNet.

As described before, all ICT projects (including the procurement of computers and laptops) should be aligned to the National Development Plan and the EDN, as well as to the rules on budget, austerity and transparency. The planning is formalised in the POTIC.

When a ministry or contracting entity wants to initiate the procurement of computers or laptops it has to request the CEDN technical resolution; a pre-requisite is for the corresponding POTIC to have been approved, with no outstanding comments to be addressed. The requests filed by ICT Units (*Unidades de Tecnologías de la Información y Comunicaciones*, UTICs) must include the following:

- **Justification:** Presentation of the background, current situation and needs motivating the procurement.
- **Technical annex:** Description of technical and quality specifications, as well as the scope of the procurement process.
- **Market research findings:** These are issued by the corresponding specialised unit in the contracting entity, which analyses the findings from market research, including identification of estimated prices for each technology component required.
- **Cost-benefit analysis:** Assessment of potential procurement alternatives and their feasibility.

- **Feasibility analysis:** Decision on the convenience to procure, lease or contract goods or services, including the analysis of ongoing procurement and the adequacy of renewing it, the benefits from leveraging framework agreements or consolidated procurement, as well as maintenance, support and operation costs.
- **Budget sufficiency:** This is issued by the contracting entity's corresponding programming and budgeting unit, which validates that the contracting unit budgeted the necessary resources and, therefore, has budget sufficiency to meet payment commitments stemming from procurement procedures.

Once these documents are integrated, the UTIC sends them to the institutional Control and Audit Body (*Órgano de Control y Fiscalización*, OCF) for review and approval. The OCF's review looks exclusively at procedural and normative compliance, respecting the CEDN's technical opinion. Once the UTIC has a favourable opinion from the OCF, it can send the complete file to the CEDN, which has 15 working days to carry out its review. The CEDN resolution might be favourable, unfavourable, requesting adjustment of the scope or requesting clarification.

In terms of needs analysis, the industry has expressed concerns about the lack of profiling users according to their needs, which could make the framework agreement less attractive. This is so even when the CEDN claims that in the preparation of computer equipment profiles, the industry, through business chambers, participated in the formulation of technical standards. The framework agreement for the leasing of computers was updated with new profiles in January 2023.

Market research

According to the SFP's Internal Bylaws, its Unit for Planning and Market Research (*Unidad de Planeación e Investigaciones de Mercado*, UPIM) is in charge of, among other things:

- Leading planning analyses and processes to identify goods and services of general use subject to aggregating demand.
- Determining the criteria for market research methodologies.
- Co-ordinating market research relative to consolidated procedures and framework agreements.

According to the LAASSP, the objectives of market research are:

- Determining the availability of goods and services in terms of quantity, quality and opportunity required.
- Verifying the existence of national and international suppliers with the capacity to meet the procurement needs.
- Defining the prevailing price of the required goods or services.

Market research, if conducted adequately, could be useful to overcome the practice of "reinventing the wheel" with every change of administration. Market analyses are conducted according to the Administrative Manual of General Application relative to Procurement, Leasing and Services of the Public Sector (*Manual Administrativo de Aplicación General en Materia de Adquisiciones, Arrendamientos y Servicios del Sector Público*, MAAGMAASSP). The UPIM also produced a document called "Elements to consider in market research", which provides guidance for procurement officials.

The UPIM co-ordinates ministries and contracting entities for the procurement planning process and analyses their requirements for goods and services that could be standardised. It carries out a feasibility analysis to assess the possibility of aggregating demand. Such an assessment includes the analysis of spending in the last three years at the least, the PAAAS, criteria for standardisation (i.e. quality, delivery conditions, validity, etc.), the degree of procurement recurrence, previously awarded suppliers, the number

of ministries and contracting entities requiring the good or service, as well as the potential benefits from aggregating demand.

During the process, the UPIM meets with the users to estimate requirements and volumes (i.e. what and how much will be procured). It then determines the technical specifications and scope of the requirements, including technical, physical and normative characteristics that potential suppliers must meet to participate. If the UPIM finds it convenient, it issues “consolidation resolution” (*dictamen de consolidación*) confirming standardisation, the recurrence and relevance of the amount to be procured.

The UPIM then proceeds to identify potential suppliers by consulting several sources: CompraNet information from previous years, the Internet, previous market analyses, business chambers and official databases. It sends a request for quotes (RFQ), using standard format FO-CON-04 (Box 2.2) to the identified suppliers, then publishes it on CompraNet to communicate widely and advance inclusion. As part of the RFQ, there is time for participants to ask questions related to the procurement procedure, which are uploaded to CompraNet, along with the corresponding answers.

Box 2.2. The standardised RFQ format FO-CON-04

The format FO-CON-04 is a standardised template through which the UPIM requests quotes from potential suppliers. For this purpose, the UPIM must include the following information:

- Goods, leasing or services to quote.
- Delivery conditions (i.e. one-off or partial deliveries, delivery location, etc.).
- Payment due 20 days after invoicing, subject to satisfactory delivery of the goods or services.
- Advance payment, if applicable.
- Guarantee percentage.
- Sanctions in case of delays or lack of compliance.
- Annex including technical specifications required.
- Technical regulations and testing methods to verify compliance.
- Origin of the goods and suppliers’ nationality.
- In the case of imports, currency for the quote.
- Production time (if it exceeds 60 days).
- Request to indicate installation and training costs.

Source: CompraNet, https://compranetinfo.hacienda.gob.mx/un/doctos/adquisiciones/maag_fo-con-04_2013-02-03.doc.

Once quotes are received, they are consolidated in a format called FO-CON-05 and reviewed to analyse prices and other conditions, such as quantity, opportunity, quality and origin of the goods. Likewise, the UPIM analyses historical prices from previous procurements registered on CompraNet. With the information collected, price parameters are calculated (i.e. maximum, minimum, average) to determine the prevailing price that incorporates the best conditions for the state in terms of quantity, quality and opportunity.

The findings of the market research are compiled in a report that is organised as follows:

- Objective.
- Legal justification and market research framework:
 - LAASSP.

- Manuals, guidelines, and other related documents.
- Findings from the market research.
- Regulation for the type of good or service.
- Regulatory barriers for suppliers and purchasers.
- Procedures:
 - Analysis of the good or service.
 - Demand determination and conditions.
 - Supply identification.
 - FO-CON-05.
 - Price analysis.
 - Conclusions.

In summary, thorough market research should end up providing the information illustrated in Table 2.9.

Table 2.9. Information obtained from the market research process

Element	Description
Prices	Quoted prices, historic pricing, price parameters and prevailing price
Information about potential suppliers	Segment, capacity, opportunity, coverage, origin of the good or service, origin of suppliers, revenue, main clients, compliance with regulations and required conditions and logistical capacity
Goods or services	Availability of the goods or services in the required conditions and potential substitutes
Supply characteristics	Characteristics of the sector (number of participants, segments, revenue, profit margin, presence), degree of competition (oligopoly, monopoly, etc.), supply chain, producers, intermediaries and final consumers
Recommendations	Type of procedure (open tender, direct award, etc.), procurement strategy (consolidation, framework agreement, etc.) and type of open tender (national or international)
Barriers to competition	Technical specifications inhibiting competition, clusters, alliances, etc.
Regulatory framework	Applicable rules in force

Source: Information provided by the Ministry of Finance and Public Credit.

Tender strategies

Even though the regulatory framework anticipates the possibility of consolidated procedures and framework agreements for the procurement of goods of common use throughout ministries and contracting authorities, as is the case of computers and laptops, only a framework agreement was drafted for leasing, and in fact, this is the preferred tool also for other ICT such as software, cloud, Internet, printing, data warehouse, LAN and wireless LAN networks. There are 26 computer equipment profiles and 12 peripheral profiles in the framework agreement for leasing computers.

The strategy is supported by two tools: CompraNet⁵ and the virtual store.⁶ Mexico's e-procurement platform, CompraNet has been in operation since 1996. It used to be an outsourced platform but, on 2 January 2022, a new version was launched, fully owned by the Mexican government. The unit currently in charge of managing CompraNet is the SFP's Unit for the e-Procurement System (*Unidad del Sistema Electrónico de Contrataciones Públicas*).

The SFP issues an intention statement and establishes in an annex the characteristics and technical requisites that interested suppliers must fulfil to formalise a framework agreement. After analysing the legal, administrative and technical documents the interested suppliers provide, they may endorse the framework agreement if they meet the requirements. The full procedure is published on CompraNet.

One of the modules in CompraNet is the virtual store backing up framework agreements. The virtual store was established through an Agreement on 18 July 2019. Contracting entities could lease computers directly if the models procured are included in the electronic catalogue stemming from the framework agreement. During OECD interviews, officials from the Chief Administrator's Office (*Oficialía Mayor*, OM) of the Ministry of Finance and Public Credit (*Secretaría de Hacienda y Crédito Público*, SHCP)⁷ justified the leasing option with two reasons:

- It allows them to avoid the equipment becoming obsolescent and keep it up to date.
- There are burdensome and complex procedures to dispose of old computers.

According to CEDN officials, the framework agreement for leasing computers has led to several achievements, such as setting maximum prices and standardising the equipment required, as well as decreased times to complete purchases. The framework agreement may be revised yearly to avoid obsolescence, review reference prices and improve operations.

While the framework agreement has been useful for standardisation purposes, OM officials recognise the challenge of making the computers and laptops available in the electronic catalogue apt for the jobs of most officials. Building feedback loops from users may be a good alternative to collect their opinions on the adequacy of the model offered.

Drafting of tender documents and use of vendor-neutral technical specifications

As mentioned previously, technological sovereignty and independence are established as procurement principles in the Agreement. The procurement model should adopt and develop open standards that allow interoperability, scale, sustainability and stability, as well as flexibility to incorporate technological evolution, considering technological sovereignty and independence for the benefit of the state.

The framework agreement for leasing computers establishes requisites and technical specifications that suppliers should meet and contracting entities cannot require additional specifications. The CEDN leads such a definition. If justified, contracting entities can request authorisation to procure outside the framework agreement but this is rather exceptional and related to seeking the best contracting conditions for the state. The framework agreement for leasing computers establishes standard documents in annexes that suppliers should include in their bids (Table 2.10).

Table 2.10. Standard documents suppliers should include in their bids to subscribe to the framework agreement for the lease of computers

Annex	Description
A	Format to declare under oath the legal existence and identity of the natural or legal person
B	Format to declare under oath that the interested supplier does not match any of the criteria in Articles 50 and 60 of the LAASSP ¹
C	Integrity declaration
D	Format to declare compliance with the laws applicable to the framework agreement
E	Stratification of the legal or natural person
F	Economic offer
G	Technical offer
H	Format to declare under oath that prices or discounts offered have not been agreed upon with other potential suppliers ²
I	Format for the potential supplier to commit to ensure full compliance with leasing of the goods
J	Declaration on business, working, professional, personal or consanguinity relations, up to the fourth grade, with public officials
K	Format to declare under oath the legal, technical and financial capacity, as well as the experience, administrative organisation and human resources to comply with the duties stemming from the framework agreement

1. These articles list criteria to exclude potential suppliers, such as conflicts of interest of procurement officials, lack of compliance in previous procedures (delays, quality, etc.), and blacklisted companies.

2. This document aims to prevent bid rigging.

Source: Ministry of Finance and Public Credit (n.d.^[8]), "Comunicado 2023/1/08, Comunicado to interested suppliers in the sixth adhesion round to the framework agreement for the leasing of personal computers and accessories for ministries and entities of the federal public administration".

The parameters defined in the framework agreement include the operating system, screen resolution, benchmark version and energy saving. Technical annexes establish the latest released Windows OEM operating system or Linux Mint Mate in its latest released LTS version. Additionally, the minimum requirements for computer configuration include the CPU, RAM, graphics card, network connection and interfaces.

Award criteria and procedures

The framework agreement for leasing computers establishes award criteria and procedures:

- If the procurement does not exceed the threshold amount for direct awards established in the first paragraph of Article 42 of the LAASSP, the contracting entity should request quotes through Compranet from all potential bidders having fulfilled the characteristics of the equipment to be procured.
- If the procurement exceeds the threshold, the contracting entity should follow an electronic invitation procedure to at least three bidders.

Notwithstanding the previous conditions, the practice is that contracting entities invite all of the suppliers that subscribed to the framework agreement. In both cases, price is the prevailing criteria to select the supplier. The volumes of procurement of computers and laptops by type of procedure for 2020-22 are shown in Table 2.11, Figures 2.7 and 2.8).

Table 2.11. Number of awarded contracts and procurement amounts by type of procedure for computers and laptops, 2020-22

Year	Type of procedure	Awarded contracts	Amounts (USD)
2022	Public tender	108	55 653 735
	Invitation to at least three bidders	148	82 896 601
	Direct award	228	91 320 893
2021	Public tender	127	21 443 318
	Invitation to at least three bidders	288	167 946 786
	Direct award	307	30 300 689
2020	Public tender	226	38 952 396
	Invitation to at least three bidders	125	19 367 141
	Direct award	291	55 256 064

Source: Information provided by the Ministry of Finance and Public Credit.

As illustrated in Figures 2.7 and 2.8, in terms of number of contracts, direct awards prevailed throughout the 2020-22 period. The same is true in terms of awarded amounts, except for 2021, when the amounts awarded through an invitation to at least three bidders grew significantly.

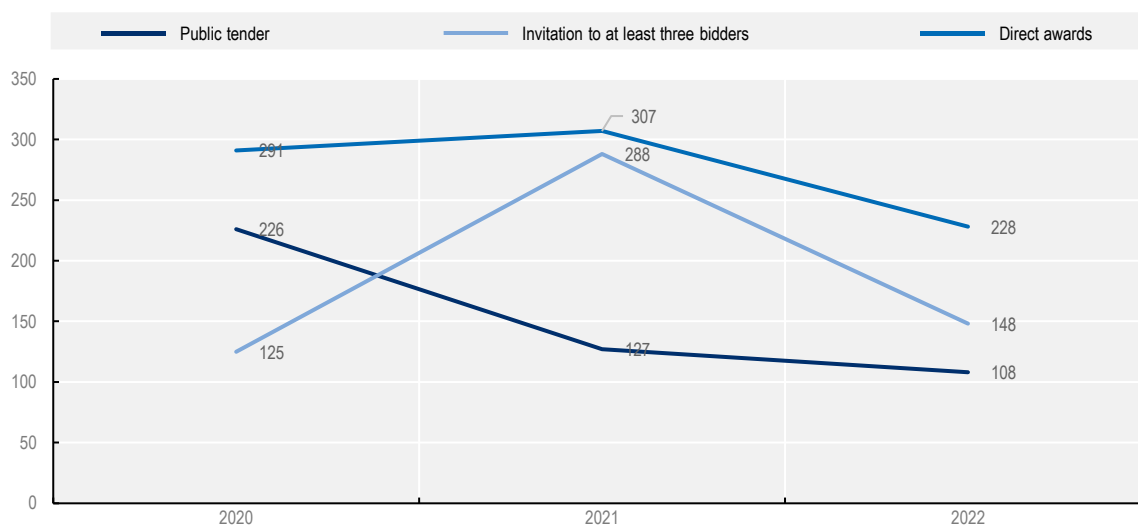
The Agreement establishes that suppliers should meet the following requirements:

- Proven technical experience of the supplier's staff.
- Agreement with confidentiality policies.
- Duties to communicate immediately security incidents that may directly or indirectly affect the contracting entity.
- Duty to support the corresponding authorities in investigations related to security incidents, transgressions or crimes.

- Consideration of measures to rescind the contract and assign legal responsibilities in case suppliers or their staff violate confidentiality policies and agreements or undertake activities that expose institutional information or fail to comply with regulations on personal data protection.

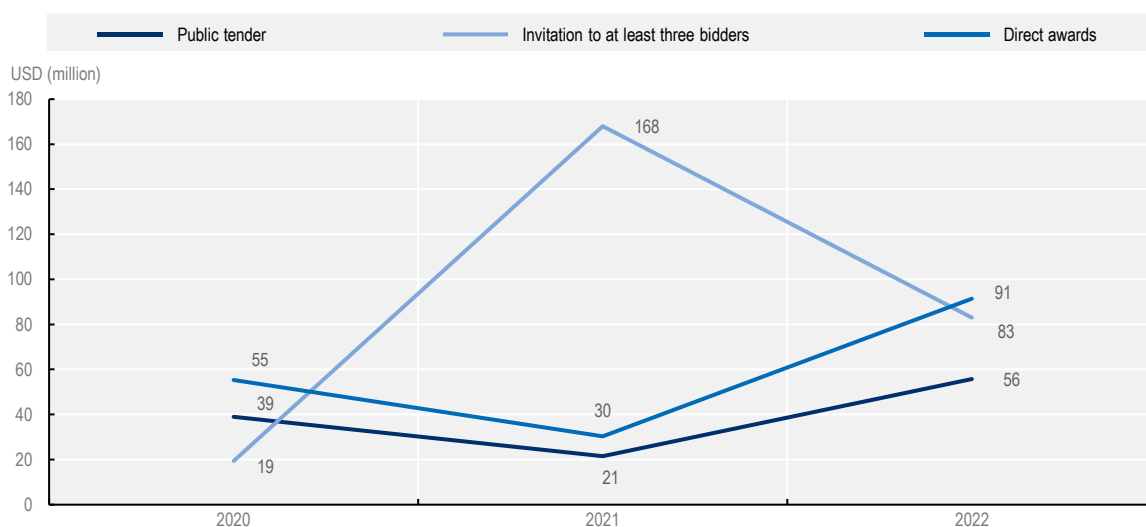
In principle, there are no restrictions to the participation of foreign suppliers. However, in practice, those restrictions exist as framework agreements are not legally considered for international public tenders. Furthermore, the use of certifications is not a common practice.

Figure 2.7. Number of contracts awarded for computers and laptops by type of procedure, 2020-22



Source: Information provided by the Ministry of Finance and Public Credit.

Figure 2.8. Amount of contracts awarded for computers and laptops by type of procedure, 2020-22



Source: Information provided by the Ministry of Finance and Public Credit.

Framework agreements

Framework agreements are tools that have gained traction for goods and services commonly used in different entities. Seventeen framework agreements related to ICT have been implemented since 2020. Aggregating demand is certainly one of the justifications for using framework agreements. Just in 2023, for example, the Federal Education Authority of Mexico City (*Autoridad Educativa Federal en la Ciudad de México*, AEFCDMX) ordered about 42 000 devices.

Formalising a framework agreement requires issuing a statement of intention and establishing a technical annex with the characteristics, technical requirements and information interested suppliers must fulfil to subscribe to the agreement. Legal, administrative and technical documents submitted by potential suppliers are reviewed to assess compliance and, if approved, they can subscribe to the framework agreement. The full process is published on CompraNet.

The framework agreement for leasing computers and accessories includes 26 profiles currently in force, including laptops and tablets, as well as 12 profiles for accessories, which are considered enough to satisfy the general requirements of the federal public administration. Annex 2 to the framework agreement describes the characteristics of the equipment to be leased. The equipment is classified by:

- Type of desktop equipment (Windows or Linux).
- Type of laptops (Windows or Linux).
- Type of computers with Apple technology.
- Tablets.
- Type of equipment and accessories.

Notably, one of the classifications specifically refers to a brand (Apple), which may create lock-in risks. Indeed, Apple technology is the reference to describe those who use the iOs operating system exclusively. Even though this is required in specific cases, it is not considered an essential element to guarantee the quality of the equipment. Additionally, during interviews, Mexico's procurement officials recognised that technical specifications could be more generic; but, in their opinion, there is a risk for the quality of the leased equipment.

In July 2019, the SHCP, then in charge of the procurement function, issued an agreement to establish the virtual store of the federal government as a new module in CompraNet. Contracting entities can directly award the leasing of computers to suppliers incorporated in the framework agreement and whose products are described in the virtual store.

The framework agreement is updated as needed and according to technological progress. The incorporation of new suppliers is opened at least twice a year, establishing the equipment characteristics for which bids will be taken, as well as the requirements and processes for suppliers to be incorporated in the framework agreement. However, during fact-finding meetings, the industry expressed concerns about the lack of criteria on obsolescence (e.g. latest available generation, age of system/processor, etc.) and poor timing for upgrades.

The framework agreement anticipates the participation of "natural and moral persons with business activities", which is a business classification to simplify tax reporting procedures. It is worth noting that most of the businesses under this classification are SMEs. At the time of the fact-finding mission (March 2023), there were 67 suppliers for the framework agreement for leasing computers and accessories. Considering Mexico's size, this number seems low.

In order to prevent bid rigging, any procurement under the umbrella of the framework agreement is carried out electronically. So far, no collusion cases or red flags have been identified in the procurement of computers and laptops.

Finally, a notable opportunity linked to the framework agreement for leasing computers and accessories lies in simplifying the requirements for supplier participation. Altogether, the documents required to justify the bidder's legal personality, support the technical offer and demonstrate compliance with legal and administrative conditions are more than 35 items.⁸ Furthermore, the public administration (i.e. tax authorities, social security institutions, etc.) already has some of this information.

User participation

End users are one of the most important considerations in defining procurement outcomes. The procured computers should be easy to use and compatible with user experience and tasks. Establishing feedback loops can offer the means to better understand user needs and support the development of user profiles.

As mentioned before, the SFP considers the profiles included in the framework agreement to be sufficient to satisfy the general requirements of the federal public administration. However, it does recognise that users have sometimes complained of the extent to which the computers offered match their needs and functions. Likewise, there is some degree of resistance to the adoption of cutting-edge equipment and innovations.

As in Chile and Colombia, it would be useful to implement feedback loops from users to the SFP and CEDN so that these institutions can adjust the framework agreement and the items in the virtual store so that computers are better aligned with user expectations.

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Notes

¹ OECD.Stat.

² See https://www.colombiacompra.gov.co/sites/cce_public/files/cce_documents/cce_guia_plan_anual_a_dquisiciones.pdf.

³ See https://www.colombiacompra.gov.co/sites/cce_public/files/cce_documentos/cce-eicp-gj-18_gees_v.2_2.pdf.

⁴ OECD.Stat.

⁵ See www.compranet.hacienda.gob.mx.

⁶ See <https://www.gob.mx/compranet/documentos/tienda-digital-del-gobierno-federal>.

⁷ At the time of the interviews, the SHCP was in charge of the procurement function. A reform later granted this responsibility to the SFP.

⁸ Ministry of Finance and Public Credit, Communiqué 2023/1/08, Communiqué to interested suppliers in the sixth adhesion round to the framework agreement for the leasing of personal computers and accessories for ministries and entities of the federal public administration.

3 Market engagement strategies

This chapter discusses market engagement policies and practices in Chile, Colombia and Mexico, particularly in the context of the procurement of computers. It analyses the benefits of such strategies, the good practices and the opportunities to further engage while mitigating risks, such as those related to integrity and conflicts of interest.

Current market engagement practices in Chile

Through market consultations with suppliers registered on the platform www.mercadopublico.cl and open citizen consultations, ChileCompra gathers information from the market in order to have updated opinions and data. In addition, due to the growing momentum of open government and citizen participation policies, a space for collaboration between buyers and suppliers has gradually emerged in Chile.

Information on the procurement of personal computers and laptops is public through the procurement information system and an open data platform, allowing potential suppliers and users to know the status and results of procurement procedures and facilitating the extraction and reuse of data.

The information and communication technology (ICT) industry maintains a fluid relationship with the Digital Government Division (*División de Gobierno Digital*, DGD) and the Budget Directorate (*Dirección de Presupuestos*, DIPRES) as designers of digital transformation and budget management policies, as well as with ChileCompra in its role as operator of the public procurement policy.

The current operating model of the public procurement system also facilitates the incorporation of new suppliers, strengthens participation and favours technological neutrality, elements that are valued by the industry. Indeed, during 2022, the average number of bidders in tenders for the procurement of personal computers and laptops reached a three-year record of 9.96.

Table 3.1. Average number of bidders in tenders for the procurement of personal computers and laptops, 2020-22

Year	Average number of bidders
2022	9.96
2021	5.80
2020	7.62

Source: Information provided by ChileCompra.

In initial interviews with representatives of the ICT sector, it has been verified that the industry does not have significant concerns regarding elements that could limit technological neutrality in public procurement. Representatives state that the processes are competitive and open.

However, as noted above, the industry has also expressed an opportunity for improvement in relation to the efficiency and effectiveness of the computer procurement strategy, both because of the aforementioned risks of the market research process, which, in the opinion of industry players, is currently carried out in a very limited manner, and because of the risks of collusion, which in ChileCompra's opinion is low given that the model focuses on manufacturers and not distributors, as well as the perception that the use of references or standards for comparison implies a very high administrative burden.

In addition, industry players have pointed out that the timing of the processes is not the most appropriate since the first iteration occurs during the year-end period and the second coincides with the phase of transition to new equipment versions.

Annually, ChileCompra sponsors supplier fairs, not only allowing suppliers to showcase their products and service offerings but also hosting workshops and discussions to gather industry experience on how to participate in the public market. The most widely known of these events is ExpoMercado Público, an annual major event organised jointly by the public and private sectors with the following objectives:

- **Matching suppliers and public buyers and communicating success cases:** Facilitating networking and providing a space for dialogue between public procurement experts and helping them to get to know the products and services offered by the industry.

- **Capacity building:** Providing training opportunities for public buyers and suppliers, on ChileCompra's digital services, methodological and regulatory updates for example.
- **Supplier display:** Creating business opportunities for suppliers in a transparent environment, free from complex restrictions and formalities.
- **Co-operation:** Building a network allowing participants to maintain active communication according to their interests, both for suppliers and public buyers.

During 2023, the event included seminars on how to participate in the public market, procurement strategies, the regulatory framework of public procurement, green public procurement, innovation and inclusion.

Meanwhile, the industry is preparing an annual meeting with the government to strengthen collaboration and encourage the exchange of knowledge.

The case of the United States National Association of State Procurement Officials (NASPO) Annual Exchange Conference also provides a good illustration of major events (expos) that facilitate market engagement in a transparent environment (Box 3.1).

Box 3.1. NASPO's Annual Exchange Conference, United States

The NASPO Exchange Conference helps build relationships among the supplier community and state governments, the largest consumers of goods and services in the United States. The conference is a place where learning, networking and partnering come together to develop business relationships to support public procurements that are effective, efficient, transparent and fair. Its objectives include:

- Providing the business community with learning opportunities through dedicated and targeted education on current trends in state procurement.
- Facilitating networking throughout the conference in one-on-one appointments, educational sessions and a networking lounge.
- Partnering between suppliers and state government representatives to support effective public procurement outcomes.

In order to address integrity risks, the conference takes place following explicit standards and expectations:

- NASPO members, as public employees directly or indirectly involved in the expenditure of public funds through the state procurement process, must always conduct themselves in a manner that promotes the highest ethical standards.
- NASPO members shall at no time accept gifts, gratuities or other things of value from suppliers which might influence or appear to influence procurement decisions.
- NASPO members attending the Exchange Conference shall commit to fulfilling all scheduled one-on-one appointments. Members are expected to participate fully in programme elements to foster engagement and education in the supplier community.
- Suppliers shall refrain from offering gifts, gratuities or other items of value to NASPO members.
- Suppliers shall refrain from contacting members before or during the conference to arrange meetings outside the one-on-one system provided by NASPO.
- Suppliers shall ensure they are familiar with and abide by the one-on-one rules and guidelines associated with the selected registration type.

- Members and suppliers shall conduct themselves in a manner that promotes the highest ethical standards and avoids activities and behaviour that would place or even appear to place a NASPO member in a conflict of interest.

Source: NASPO (n.d.^[11]), *Homepage*, www.naspo.org (accessed on 20 December 2023).

Current market engagement practices in Colombia

As it is the case in the Latin American context, market engagement is an opportunity in Colombia. In the pre-tendering phase, the main tools used for market engagement are the Annual Procurement Plan (*Plan Anual de Adquisiciones*, PAA), requests for information (RFI), and the publication of draft calls for tender. Public entities must publish their PAA in January to communicate their needs to potential suppliers early and facilitate their participation. The framework agreement for the procurement of computers and accessories establishes that contracting authorities can request clarifications about the technical characteristics of the equipment offered by suppliers through RFI in the Virtual Store of the Colombian State (*Tienda Virtual del Estado Colombiano*, TVEC) or directly through *Colombia Compra Eficiente* (CCE). Likewise, the regulatory framework requires draft calls for tender to take feedback from the industry. The drafts are usually open for comments during five to ten working days and comments are recorded on the e-procurement platform SECOP.

Additionally, since 2011, the Ministry for ICT (MinTIC) has organised an annual event called Colombia 4.0, showcasing and discussing technology trends. As part of the event, the CCE organises a public roundtable with interested suppliers and listens first-hand to their concerns and suggestions. The CCE also organises workshops with the industry during the preparation of framework agreements.

During the tendering phase, any questions or comments from the market should be submitted through SECOP. Finally, at the post-tendering stage, after the award takes place in a public audience (sometimes in virtual mode), a resolution is published addressing any observations received. However, there is no process to provide direct feedback to the participating bidders.

The main mitigation element deployed to avoid integrity risks consists of structuring the framework agreement and its specifications to advance the principle of technological neutrality, allow the participation of as many bidders as possible, a diversity of brands and avoid steering the tenders to benefit specific bidders. Likewise, using SECOP to take comments on draft documents hinders the possibility of irregularities by avoiding physical contact between procurement officials and suppliers.

Current market engagement practices in Mexico

There is no robust market engagement practice in Mexico and industry fora are not leveraged. The main instruments in the pre-tendering phase, as described in chapter 2, are the Annual Procurement, Leasing and Services Programme (*Programa Anual de Adquisiciones, Arrendamientos y Servicios*, PAAAS) and the market research carried out by the Unit for Planning and Market Research (*Unidad de Planeación e Investigaciones de Mercado*, UPIM) and in which there is engagement with suppliers through request for quotes (RFQ) and a period for suppliers to ask questions or make suggestions. In general, such suggestions tend to be related to technical specifications, the availability of the good or service meeting the specified conditions (characteristics, obsolescence, etc.) and obstacles to participation (i.e. certifications, the capacity of the market to deliver within a restricted timeframe, etc.). Part of the reason for the lack of diversity in market engagement tools is that the regulatory framework to tackle corruption is rather restrictive in terms of market dialogue; the perception and practice of how restrictive it is are even stricter.

Indeed, the Protocol on the behaviour relative to public procurement, granting and extending licenses, permits, authorisations and concessions (*Protocolo de actuación en materia de contrataciones públicas, otorgamiento y prórroga de licencias, permisos, autorizaciones y concesiones*, hereinafter the Protocol) was part of a package of rules intended to respond to corruption scandals and therefore emphasises control measures. While it certainly mandates communication between individual suppliers and procurement officials in written form and official places, in the presence of the respective Control and Audit Body (OCF) officials, it does not prevent the organisation of massive events to communicate with the supplier community as a group.

No events such as ExpoMercado Público, Chile, or the NASPO Exchange, United States, are currently organised, even when in the past, the Ministry of Economy used to organise the Small and Medium-sized Enterprise (SME) Week (*Semana PYME*), where different ministries and agencies showcased their support programmes and opportunities for SMEs, including those related to public procurement. For example, the federal state of Nuevo León organises the event Supply NL 2023 (*Provee NL 2023*), which facilitates market engagement with the supplier community (Box 3.2).

Box 3.2. Provee NL

This event provides a space for interaction and learning for businesses subscribed to the state of Nuevo León supplier registry and for SMEs interested in becoming suppliers of the state government. The activities during the event include workshops, conferences, tailored assistance to register as a supplier of the state government and fulfil other administrative procedures, and the live opening of a tender procedure.

The workshops and contents in the 2023 edition are the following:

- **It is easy to supply to the state government:** Registering in the supplier registry, offering goods and services to the state and understanding the Annual Procurement Plan.
- **The ABC of the e-procurement platform (SECOP):** Includes practical exercises to access the platform and submit a bid.
- **Submitting a winning bid:** Types of procurement procedures, reverse auctions (including practical exercises), how to participate and processes to follow to comply with the call for tender and be awarded.
- **I was awarded, what is next?:** Steps to follow to deliver the good or service, signing a contract and invoicing.

Source: Provee NL (n.d.^[2]), *Homepage*, www.provee.nl.gob.mx (accessed on 20 December 2023).

The Chief Administrator's Office of the then Ministry of Finance and Public Credit (*Secretaría de Hacienda y Crédito Público*, SHCP) claimed, during OECD fact-finding meetings, that they meet industry organisations at the beginning of the market research process, even when this is not mandatory and is rather done in an ad hoc basis. Some of the measures taken to mitigate risks in the current market engagement activities include the publication of the market engagement process in CompraNet, including questions and answers from suppliers, so that any business can have access to the information, the opportunity for suppliers to provide comments on the technical specifications to avoid obstacles to participation, the fact that any contact with suppliers should happen through official means and in a limited timeframe, and the documentation of all the processes, including evidence engagement. Some of these measures – a limited timeframe for engagement for example – may restrict the use of alternative methods of engagement, for instance during the post-tendering phase.

References

- NASPO (n.d.), *Homepage*, National Association of State Procurement Officials, [1]
<http://www.naspo.org> (accessed on 20 December 2023).
- Provee NL (n.d.), *Homepage*, <http://www.provee.nl.gob.mx> (accessed on 20 December 2023). [2]

4 Challenges, good practices and recommendations to foster competition and neutrality in the procurement of computers in Latin America

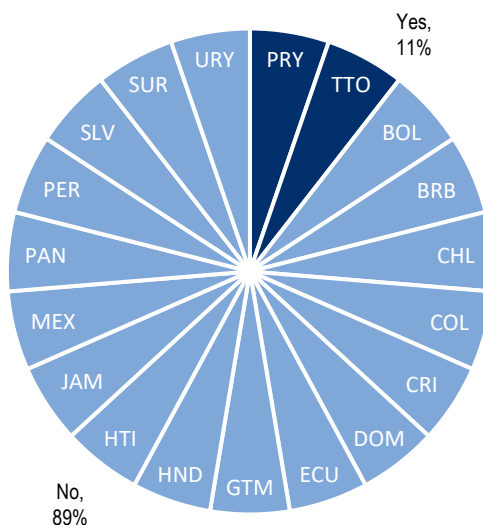
The findings of the practices in Chile, Colombia and Mexico illustrate that there are common challenges, as well as lessons learnt that could be leveraged to advance efficiency and promote competition, not only in these three countries but in the wider Latin American context. This section will take stock of such challenges and good practices, as well as provide recommendations to build a level playing field for the procurement of computers.

Tackling the most basic challenges

One of the main challenges in any public procurement system is the recognition of this activity as a strategic tool for achieving policy priorities beyond an operational tool to procure goods and services at the lowest price. Indeed, the procurement of computers and information and communication technology (ICT) can support the effective delivery of public services and the modernisation and digital transformation of public institutions. The findings of this report indicate that such strategic recognition is stronger in Chile and Colombia. Chile, for example, just completed a major reform of its public procurement regulatory framework and Colombia is strongly advocating for the leverage of public procurement for inclusion processes. For instance, *Colombia Compra Eficiente* (CCE) recognises the procurement of computers as a means to connect remote and marginalised regions and provide them with better public services and economic opportunities.

Another major challenge is developing the capacities of the procurement workforce. A skilful and trained procurement staff can facilitate the uptake of market research and engagement practices, which are key to understanding the computer market and devising strategies to avoid vendor lock-in. This is certainly an opportunity in Latin America, where public procurement is recognised as a profession in only 10% of the countries (Figure 4.1). Even though Chile did not report an explicit recognition of public procurement as a profession, it has developed a competency matrix and a certification framework that supports professionalisation (see Table 4.1 on ChileCompra's certification framework). Neither Colombia nor Mexico have developed such professionalisation tools.

Figure 4.1. Public procurement recognised as a profession in Latin America, 2022



Source: IDB-OECD (2022^[1]), "Survey on the implementation of the 2015 OECD Recommendation on Public Procurement", OECD, Paris.

Table 4.1. ChileCompra's certification framework

Level	Condition	Deadline	If approved...	Expiration	If not approved...
Basic	<ul style="list-style-type: none"> • Induction plan (for new users) • Two virtual conferences • One e-learning course • Certification exam 	Two months	<ul style="list-style-type: none"> • Can move to next level • Keeps access to the e-procurement platform 	One year	<ul style="list-style-type: none"> • Can try the failed activities again (within the deadline) to take the exam • If failed, access to the e-procurement platform will be blocked
Intermediate	<ul style="list-style-type: none"> • Basic level approved • Two virtual conferences • Two e-learning courses • Certification exam 	Four months	<ul style="list-style-type: none"> • Can move to next level • Keeps access to the e-procurement platform 	Two years	
Advanced	<ul style="list-style-type: none"> • Intermediate level approved • Three virtual conferences • Two e-learning courses • Certification exam 	Four months	<ul style="list-style-type: none"> • Keeps access to the e-procurement platform 	Two years	
Recertification	<ul style="list-style-type: none"> • Advanced level approved • Updating seminar • Certification exam 	Seminar twice a year	<ul style="list-style-type: none"> • Keeps access to the e-procurement platform 	Two years	

Source: ChileCompra (n.d.^[2]), *Certificación de Competencias en compras públicas*, <https://www.chilecompra.cl/certificacion/> (accessed on 14 December 2023).

Some OECD countries are going beyond, recognising the need for specific skills related to ICT procurement, covering the full procurement cycle and using different methods. The United States, for instance, invested heavily in developing dedicated training (Box 4.1).

Box 4.1. ICT procurement training in the United States

Recognising that the digitalisation of public services often requires information technology (IT) skills that are difficult to master for public procurement professionals, the United States Digital Service joined forces with the Federal Acquisition Institute (FAI) to set up the specialised Digital IT Acquisition Professional Training Programme, which includes training and certification.

The programme teaches federal procurement professionals how to design flexible and innovative procurement processes for IT and digital services. The aim is for participants to become ambassadors for change. Participants who complete the programme acquire learning credits and receive a Federal Acquisition Certification in Contracting Core-Plus Specialization in Digital Services from the FAI. After a pilot phase, the training is offered to all professional levels across several agencies.

Source: OECD (2022^[3]), *Digital Transformation Projects in Greece's Public Sector: Governance, Procurement and Implementation*, <https://doi.org/10.1787/33792fae-en> (accessed on 10 October 2023).

Another important challenge that is common in many Latin American countries is the prevalence of a compliance approach rather than looking for value for money. This may lead to risk-averse behaviour among procurement officials, which hinders the adoption of innovative and dynamic approaches or market engagement strategies. The organisational culture may make it difficult for contracting authorities to accept the risks linked or perceived to be linked with dynamic purchasing. The illustration of such risk aversion can be clearly seen in the rigidity of market engagement strategies in Mexico, for example. While a protocol regulates contacts between procurement officials and the supplier community, such interactions are not prohibited; even so, officials tend to avoid them to remain on the "safe side". However, by doing so, they may be failing to fully understand the market for computers.

Recommendations

- Latin American governments should explicitly recognise the strategic nature of public procurement. In the specific case of the computer procurement, it can support the provision of seamless public services, the modernisation of public institutions and the connectivity of remote and marginalised regions to advance a more inclusive and balanced development.
- Latin American governments should build the capacities of their procurement workforces to effectively tackle challenges such as vendor lock-in. Good OECD practices to professionalise the procurement workforce usually include developing a strategy, designing a competency matrix, adopting a certification framework and providing specialised training on ICT procurement to the relevant officials (OECD, 2023^[4]).
- Latin American governments should advance the objective of realising value for money and allow for experimentation and risk taking to favour the adoption of innovations and dynamic approaches. Experimentation can take the form of piloting dynamic purchasing and communicating the results, as well as building communities of practice to share experiences. Such understanding should include raising awareness among control and audit authorities, which were pointed out, particularly in Colombia, as a factor breeding risk aversion.

Tackling the lock-in challenge and advancing competition

Given the dynamic nature of computers and the innovation behind them, as well as concerns related to data security, their procurement has become increasingly complex. Emerging trends introduce uncertainties (for example, relative to dominant standards) and new issues that should be managed by contracting authorities (e.g. exit strategies and transitioning from legacy systems). Likewise, high levels of dependency on single brands over long periods are also common traits. Long-held incumbent contractual relationships imply not only over-dependence on specific equipment but also on the brand's advice and services. This creates a situation in which public organisations may end up unintentionally “locked-in” to particular brands and equipment because the knowledge about how they work is only available or mastered by specific suppliers and, when the public organisations need to buy new components or licenses, only a specific brand can deliver. This vendor lock-in issue is usually caused by poor knowledge about drafting tender specifications in a way that facilitates sufficient flexibility and allows for vendor turnover according to needs.

Vendor lock-in occurs when a public institution is unduly dependent on a single brand or supplier beyond the timeframe of the initial procurement contract, damaging competition for future procurement. For example, vendor lock-in may be illustrated when one supplier is entrenched over a number of years to provide computer equipment, using specific brand names in procurement documents and requesting backward compatibility with proprietary systems of which only a few suppliers have expertise. In consequence, costs for the public institution of migrating to equipment from other suppliers increase significantly, even if there are other advantages from such migration. Lock-in reduces the ability of market participants to compete for public contracts, which in turn results in higher prices and hinders efficiency. As a result, lock-in reduces the supplier base, excludes new companies from providing alternative equipment and solutions, and causes the market to stagnate. Vendor lock-in is also quite relevant to other IT goods and services, such as devices and software (e.g. branded software for specific needs) (OECD, 2022^[5]).

The prevalence of a lock-in situation can lead procurement authorities to engage in practices that minimise competition intensity and restrict the ability of suppliers to engage in the public market. Symptoms of possible lock-in include the use of brand names in procurement documents and requests for backward

compatibility with proprietary systems, for which only a few suppliers have expertise. Furthermore, there is a risk of operational continuity in case those few suppliers are unable to deliver.

This report found that, even though there have been improvements in the last few years, the use of brand names has not been fully abandoned in the region, even when, for example, in Mexico, technological independence and autonomy are part of the vision of the National Digital Strategy (*Estrategia Digital Nacional*, EDN). However, in order to ensure that as many brands as possible are present in the electronic catalogue, ChileCompra incorporated a clause in the award process for the fourth version of the co-ordinated purchase, which requires at least three new brands to be awarded. This condition allowed greater access for new brands while maintaining a wider choice for buyers, which in turn should facilitate a less concentrated distribution in the market, thus minimising lock-in risks. Similarly, in Colombia, selection criteria in framework agreements cannot specify brands or specific suppliers. Instead, the framework agreement establishes benchmarks in terms of performance. Furthermore, the regionalisation strategy aims to attract more suppliers (including small and medium-sized enterprises or SMEs) and brands.

The good practice to favour vendor-neutral tendering of computers is described in a manual by the German Association for Information Technology, Telecommunications and New Media (Bitkom) (Box 4.2).

Box 4.2. Bitkom's manual on vendor-neutral tendering of computers

Bitkom represents more than 2 700 digital economy companies, including 1 900 direct members, which produce an annual turnover of EUR 190 million, including EUR 50 million in exports, and employ more than 2 million workers in Germany. Its members also include 1 000 SMEs and over 500 start-ups.

Bitkom's manual on vendor-neutral tendering of computers encourages contracting authorities to formulate their tenders in a non-proprietary manner that avoids using brands or referencing specific manufacturers while leveraging current technical standards. This is consistent with legal requirements in Germany, which mandate equal treatment of suppliers and market products by using descriptions of the procurement objects based on factual and non-discriminatory criteria. Indeed, Bitkom considers vendor-neutral tendering as an opportunity to ensure fair and open competition, prevent early technical determination and avoid lock-in effects. As the number of competing suppliers increases when the tender is based on factual and technical criteria, better options and savings are realised, minimising obstacles to change providers as deemed suitable.

In the case of public tenders, contracting authorities are advised to draft a list of criteria that allows comparison of different offers and sufficient differentiation. Such award criteria should be needs-based, vendor-neutral and transparent. However, Bitkom also recognises that technical complexities may lead to difficulties in describing the desired performance of computing equipment. In consequence, it recommends the use of technical standards and benchmarks.

Source: Bitkom (2022^[6]), *Product-Neutral Tendering of Desktop PCs: Guideline for Public IT Procurement*, <https://www.bitkom.org/sites/main/files/2023-09/ICT-Procurement-Product-Neutral-Tendering-of-Desktop-PCs-2022.pdf> (accessed on 12 October 2023).

Recommendations

- Contracting authorities should avoid using brand names when procuring computers and privilege using technical standards and benchmarks. This practice will help markets remain open and competitive and allow public institutions to choose from a wider choice of products, minimising claims that the used procurement strategies do not respond to their needs. Indeed, technical

standards and benchmarks can prevent reliance on single vendors by identifying key elements and performance features required and ensuring that they are not limited to specific brands or manufacturers.

- Procurement authorities could pilot dividing computer contracts into lots (or regionalisation, as in Colombia) as a means to attract the participation of more bidders and applicants (including in framework agreements), particularly SMEs. This would make vendor lock-in more difficult and increase competitive pressures. In applying this recommendation, procurement authorities should be aware of the risk of hindering value for money by impeding competitive suppliers from participating in different lots or regions. Piloting would provide opportunities to assess the costs and benefits of this strategy and act accordingly.
- Preventing lock-in demands understanding the market to assess the risk and take the necessary measures. Hence, contracting authorities in Latin America should strengthen market research and engagement practices to create a level playing field for all computer suppliers and understand lock-in risks, as well as other risks (e.g. collusion, bid rigging, etc.) and variables (e.g. market composition, manufacturers with regard to distributors, etc.).

Using benchmarks

As mentioned before, selection criteria should avoid the use of brands and be based on standards and performance features. However, the dynamic nature of computer technologies creates complexities in comparing their performance based solely on technical specifications. For example, a processor with a higher clock rate does not always have more processing capacity. In this context, benchmarks facilitate performance comparisons (Bitkom, 2022^[6]).

Benchmarks are programmes that measure the overall performance of a system or individual elements (e.g. graphics card, memory drive, etc.). The benchmark programme applies standardised tests that simulate specific tasks and produces a score for the performance of the system or component. Such scores facilitate objective and evidence-based comparisons. Benchmarks are developed independently from the industry and should be recognised by all competitors. They are updated annually to take into account innovations. Indeed, outdated benchmarks may disadvantage innovative and newer, more powerful products, which is why it is important to ensure that the benchmark used incorporates new technologies. Using benchmarks facilitates having multiple participants and, thus, a plurality of offers, avoiding mere brand comparisons, achieving vendor neutrality and preventing the potential purchase of obsolete technology.

One particular challenge for procurement authorities is choosing the benchmark to apply in the calls for tender. Using an inadequate benchmark may end up excluding suppliers, hindering the potential to realise value for money. As mentioned before, there are two types of benchmarks: i) system-level, measuring the general performance of computer systems based on user scenarios; and ii) component-level, measuring the performance of individual components. Considering this categorisation, a good benchmark has the following qualities (Bitkom, 2022^[6]):

- Measures the general performance of a system and its overall actual workload, and not only single components.
- Tests scenarios based on the intended use and represents applications in typical office environments.
- Represents all relevant manufacturers and computer platforms.
- Its development process is independent and transparent.
- Is relevant, representative and up to date.
- Reflects the balance of the expected performance during the lifetime of the computer.

In its manual, Bitkom recommends the use of SYSmark 2018, SYSmark 25 (overall score) and PCMark 10 (standard score) (Box 4.3).

Box 4.3. Examples of benchmarks allowing the comparison of computers

SYSmark 2018

This is the current benchmark of the BAPCo consortium (a non-profit benchmark developer) for the performance of Windows Personal Computer (PC) platforms. It uses three application scenarios to measure performance: productivity, creativity and responsiveness. It offers a supplementary energy consumption measurement for the performance test and covers applications of various software developers such as Microsoft, Google and Adobe 3. SYSmark 2018 produces an overall result and a value for each application scenario (the higher the score, the better). BAPCo has replaced version SYSmark 2018 with version SYSmark 2018 1.5, which also supports Microsoft operating systems, Windows 10 and Windows 11.

SYSmark 25

This is the successor of SYSmark 2018 for the performance of Windows PC platforms. It tests the same three application scenarios, productivity, creativity and responsiveness, as well as performance. SYSmark 2018 is still used for tenders with Windows 10.

PCMark 10

This is a benchmark that measures the performance of Windows PC platforms. PCMark 10 measures system performance in three groups: essential, productivity and digital content creation. Office space applications, such as writing documents, browsing the Internet, creating spreadsheets and making video conference calls, are used for the tests. Likewise, image and video editing, as well as rendering and virtualising, are tested. PCMark 10 measurements produce an overall and a partial score for each usage scenario (the higher the score, the better).

CrossMark

This is a benchmark for different operating systems (Windows 10/11, Android, iOS and macOS) that measures system performance and system responsiveness. The test uses models from well-known applications and generates values for productivity, creativity and responsiveness.

Source: Bitkom (2022^[6]), *Product-Neutral Tendering of Desktop PCs: Guideline for Public IT Procurement*, <https://www.bitkom.org/sites/main/files/2023-09/ICT-Procurement-Product-Neutral-Tendering-of-Desktop-PCs-2022.pdf> (accessed on 12 October 2023).

In Colombia, the framework agreement currently uses PCMark 10, which was selected after consultation with the industry. One of the greatest challenges reported is designing clauses that allow the update of score thresholds for each category or lot, as well as differentiating single core scores with regard to multiple core scores, in the understanding that both should be defined because they are relevant for different tasks. ChileCompra uses a different benchmark to classify processors and central processing units (CPUs). PassMark CPU is free and based on user feedback, so not necessarily made for professional comparisons.

Recommendations

- Procuring authorities in Latin America should advance the use of benchmarks to allow comparisons in the performance of computers and their components. Such benchmarks should be relevant, representative and up to date, incorporating the latest technologies and developed independently and transparently.
- Given that technological performance is increasing at exponential levels, procurement authorities in Latin America could leverage benchmarks to continuously revisit existing procurement mechanisms, particularly those related to framework agreements.
- As did the CCE, procuring authorities in Latin America could consult with the industry and relevant stakeholders to choose benchmarks for use in their calls for tender.

Diversifying procurement methods and tools

Public procurement can be a powerful enabler of digital transformation and innovation in government; unfortunately, if managed inadequately, it can also be a barrier. For example, the public procurement process can be long and complex. It can be focused on searching for the cheapest solution – not the one delivering the best value for money – and long-term contracts can become an obstacle to the participation of innovative companies in the public market. Indeed, interviews conducted for the OECD report *Digital Government Review of Latin America and the Caribbean* found that public procurement was the most quoted barrier. Some of the main issues found include the inability of start-ups to demonstrate the experience required to fulfil evaluation criteria, rules establishing that requirements and deliverables must be spelled out in advance by public sector organisations, and long processing times (OECD/CAF, 2023^[7]).

Chapter 2 of this report found that framework agreements are the preferred tool to procure computers in the three countries analysed. Indeed, in Colombia and Mexico, the use of framework agreements for such procurement is the required tool, while in Chile, public entities can also rely on co-ordinated purchasing (leasing and purchase), which has delivered significant savings. In Colombia, the framework agreement supports purchasing and leasing, while in Mexico, it only supports leasing, which is preferred to avoid costs related to the disposal of obsolete equipment.

OECD evidence illustrates that wider digital needs in the public sector are addressed through different mechanisms in Latin America. This finding suggests that countries could pilot and assess other mechanisms beyond framework agreements (e.g. dynamic purchasing, challenge-based procurement and innovative public procurement) for the procurement of computers. For example, eleven out of fifteen countries never or rarely used challenge-based mechanisms, while six countries never or rarely used innovative public procurement (Table 4.2).

Table 4.2. Procurement mechanisms to address digital needs in Latin America

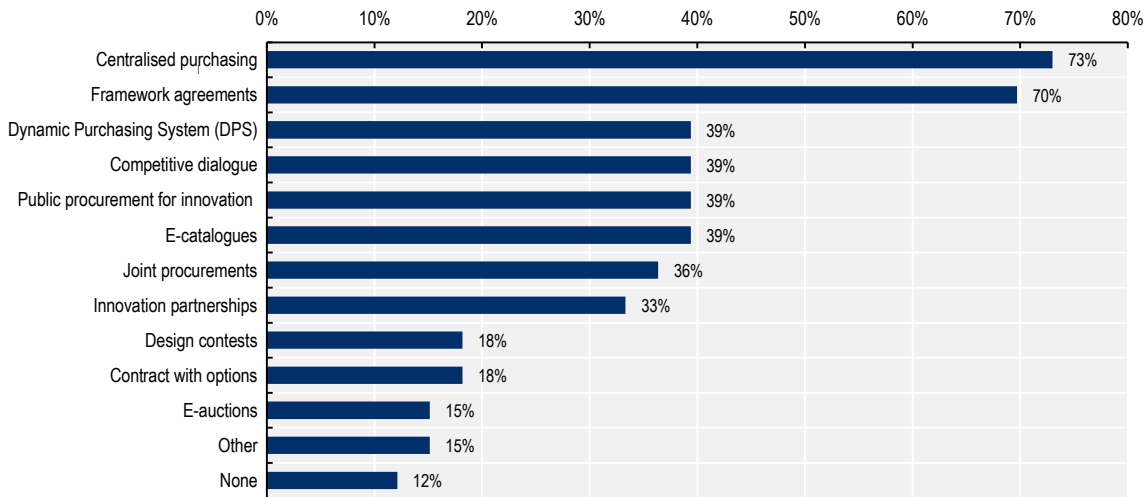
Digital government authorities, when asked to indicate to what extent public sector institutions use the below procurement methods to purchase ICT goods and services

	Open public tenders (including tenders with negotiation)	Purchases below thresholds of formal tender procedures	Framework agreements	Direct purchases (single source purchasing)	Public-private partnerships (project-financed schemes)	Innovative public procurement	Challenge-based and/or prize-based procurement
Argentina	Sometimes	Neutral	Neutral	Sometimes	Often	Neutral	Rarely
Barbados	Often	Often	Sometimes	Sometimes	Sometimes	Rarely	Sometimes
Brazil	Often	Sometimes	Often	Sometimes	Rarely	Rarely	Rarely
Chile	Rarely	Sometimes	Often	Sometimes	Rarely	Neutral	Never
Colombia	Rarely	Sometimes	Sometimes	Never	Never	Never	Never
Costa Rica	Often	Sometimes	Neutral	Neutral	Sometimes	Neutral	Never
Dominican Republic	Often	Rarely	Often	Never	Often	Neutral	Never
Ecuador	Often	Neutral	Rarely	Rarely	Rarely	Rarely	Rarely
Jamaica	Often	Often	Rarely	Often	Neutral	Rarely	Rarely
Mexico	Often	Neutral	Often	Neutral	Neutral	Neutral	Never
Panama	Often	Rarely	Neutral	Neutral	Rarely	Neutral	Neutral
Paraguay	Often	Often	Neutral	Neutral	Rarely	Rarely	Sometimes
Peru	Often	Often	Often	Neutral	Neutral	Sometimes	Never
Uruguay	Sometimes	Often	Neutral	Often	Never	Sometimes	Never

Source: OECD/CAF (2023^[7]), *Digital Government Review of Latin America and the Caribbean: Building Inclusive and Responsive Public Services*, <https://doi.org/10.1787/29f32e64-en> (accessed on 3 November 2023).

As in the case of the procurement of computers in Chile, Colombia and Mexico, framework agreements are the most widely used mechanisms for digital spending in Latin America, which may be due to the simplification provided by granting access to approved suppliers under predefined conditions. This situation is common in OECD countries, where framework agreements are also one of the preferred mechanisms to acquire digital goods and services (Figure 4.2). According to the OECD Digital Government Survey (IDB-OECD, 2022^[11]), centralised procurement and framework agreements are the most common procurement mechanisms for purchasing digital goods and services in OECD countries. As mentioned, Chile has realised important savings through co-ordinated purchasing, which allows aggregate demand through a competitive process that improves procurement conditions for contracting authorities.

Figure 4.2. Procurement mechanisms used to purchase digital goods and services in OECD countries



Note: Percentages are based on the 33 OECD member countries that completed the survey. Data are not available for Germany, Greece, the Slovak Republic, Switzerland and the United States.

Source: IDB-OECD (2022^[1]), "Survey on the implementation of the 2015 OECD Recommendation on Public Procurement", OECD, Paris.

As described above, there is an evident opportunity in Latin America to leverage the use of innovative public procurement mechanisms such as competitive dialogue, design contests and innovation partnerships when procuring digital goods, including computers. The European Commission, for instance, published guidance on these tools (Box 4.4).

Box 4.4. European Commission Guidance on Innovation Procurement

The European Commission published in 2021 a non-binding notice providing guidance to member countries on innovation public procurement. The notice aims to support public institutions in the use of innovation procurement to contribute better to the economic recovery, the twin green and digital transition and the resilience of the European Union. The guidance provides an overview of the innovation procurement concept, the policy framework required to advance towards a strategic approach, a description of the public procurement procedure to transform public service and the criteria needed to leverage innovation procurement. The notice provides a description of specific innovation procurement mechanisms including:

- **Competitive dialogue:** This two-round procedure allows public institutions to describe needs in a descriptive document or contract notice, setting the minimum requirements for candidates and later defining the contract award criteria based on best price-quality ratio (BPQR).
- **Design contests:** This procedure provides flexibility to propose innovative solutions based on contest needs. An independent jury evaluates designs using criteria outlined in the contest notice. The evaluation should follow an objective and transparent procedure balancing measurable quality criteria and cost-efficiency.
- **Innovation partnerships:** This three-phased procedure applies in cases where there are no available solutions in the market, allowing public institutions to co-create solutions with provider support by identifying a precise need to address. The innovation partnership was specifically designed to allow public buyers to build a partnership to develop and subsequently purchase innovative solutions. Providers and beneficiaries collaborate through the research and development phase by developing prototypes and measuring performance.

Source: OECD/CAF (2023^[7]), *Digital Government Review of Latin America and the Caribbean: Building Inclusive and Responsive Public Services*, <https://doi.org/10.1787/29f32e64-en> (accessed on 3 November 2023).

In Chile, for example, it was suggested that co-ordinated purchasing be maintained as a specific instrument to generate savings in prices and processes with respect to large volume purchases and to avoid distorting this modality according to purchasers' particular needs. Timing of co-ordinated purchases can be checked and better aligned with the budget cycle and the temporality required by user areas, as well as with market conditions such as international trade closures and version renewal periods. In addition, framework agreements can be developed for computer leasing to offer more flexibility for buyers. In particular, the feasibility of incorporating dynamic purchasing agreements as a procurement modality in public procurement regulations should be re-analysed, mainly because it is recognised as a good practice for purchases in industries such as personal computers.

Recommendations

- While there is certainly a case to leverage framework agreements for the procurement of computers, Chile's experience indicates that other mechanisms can also lead to significant benefits and savings. Hence, contracting authorities in Latin America may also carry out co-ordinated procurement processes and assess the value for money realised.
- In diversifying procurement mechanisms, procurement authorities in Latin America should consider better balancing user needs with regard to the benefits of aggregating demand, particularly in light of very specific institutional needs.

- Contracting authorities in Latin America could pilot and assess different forms of innovative public procurement. For example, in December 2022, Brazil's Ministry of Management and Innovation in Public Services issued Normative Instruction 94/2002, which establishes procurement procedures for ICT, including new modalities such as competitive dialogue.

Making room for innovative and dynamic approaches

Innovation is critical to procuring the best and most modern computers, as well as to realise value for money. In this sense, the regulatory framework is key to enabling innovation in the procurement of computers and ICT in general. When overly prescribed features are included in tender notices, room for innovation is restricted and the outcomes may not be the intended ones. An outcome-based approach may be better suited to access a variety of solutions. Australia, for example, could provide inspiration on how to encourage innovation in procurement entities in Latin America (Box 4.5).

Box 4.5. Innovation-friendly ICT procurement in Australia

The Digital Transformation Agency developed guidance in Australia to help buyers with ICT procurement. In terms of innovation-friendly ICT procurement, the guidance suggests the following actions for contracting authorities:

- Start by describing the outcome to be achieved rather than starting with a solution. Avoid specifying activities, tasks or assets when describing outcomes.
- Use an outcome-based approach by focusing on the result of the work to be performed (the “what”) rather than specifying the way it is to be performed (the “how”).
- Use descriptive requirements to promote innovative solutions when describing the desired outcome, such as seeking a 10% increase in user satisfaction or a 5% increase in productivity.
- Avoid overly prescriptive requirements by not specifying the way in which the outcome is to be achieved, such as rolling out specific brands.
- Instead of focusing on a brand or product, prioritise factors like integration, training, efficiency, effectiveness, ease of use and adaptability.
- Avoid custom solutions, which can become expensive and difficult to support and adapt over the life of an investment.

Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

As part of the exploration of alternative methods to address current challenges in the three countries analysed in Chapter 3, the OECD team discussed the potential to test dynamic purchasing systems (DPS). Indeed, the OECD Recommendation of the Council on Public Procurement (2015^[8]) calls for adherents to develop and use tools to improve procurement procedures, reduce duplication and achieve greater value for money, including dynamic purchasing (principle of efficiency).

The most notable difference between a DPS and a framework agreement is that the DPS lets new qualified suppliers join the system throughout its duration. Customers can also join a DPS at any point of its duration. This dynamic feature allows contracting authorities to change suppliers more easily and economic operators to continuously incorporate advances in technology. The DPS is thus very suitable to repeated purchases of standardised items, where technology developments occur fast (OECD, 2022^[3]). In contrast, in a framework agreement, suppliers are usually selected for a fixed term and no new suppliers are added during the agreement period unless specific adhesion periods are anticipated. The common practice is that the duration of each DPS is announced at the time of its creation.

DPS are quite common, for example, in Europe. The United Kingdom Crown Commercial Service (CCS) explains that DPS function in a similar way to traditional framework agreements in that they offer a range of searchable goods and services, allowing buyers to filter and engage with suppliers offering relevant products. DPS also offer those products on predefined contractual terms, making the procurement process more efficient. The “dynamic” feature in DPS is what sets them apart from other agreements as it allows suppliers to join at any time, increasing competition and choice, and opening them up to new businesses, innovations and emerging technologies throughout their life cycle. In other words, DPS are a marketplace that can continuously keep up with evolving technology, offering the potential for the public sector to rapidly access new capabilities.

Finland’s central purchasing body, Hansel, points out the benefits of leveraging DPS:

- Good and reliable contractual suppliers.
- Mini competition is faster and easier than an open tendering process (see Box 4.6).
- Hansel experts provide support in organising a mini-competition.
- Suitable suppliers for the contracting authority’s needs.
- Customer-friendly contractual terms and support for supplier management during the agreement period.

Box 4.6. Mini competitions in Hansel’s DPS

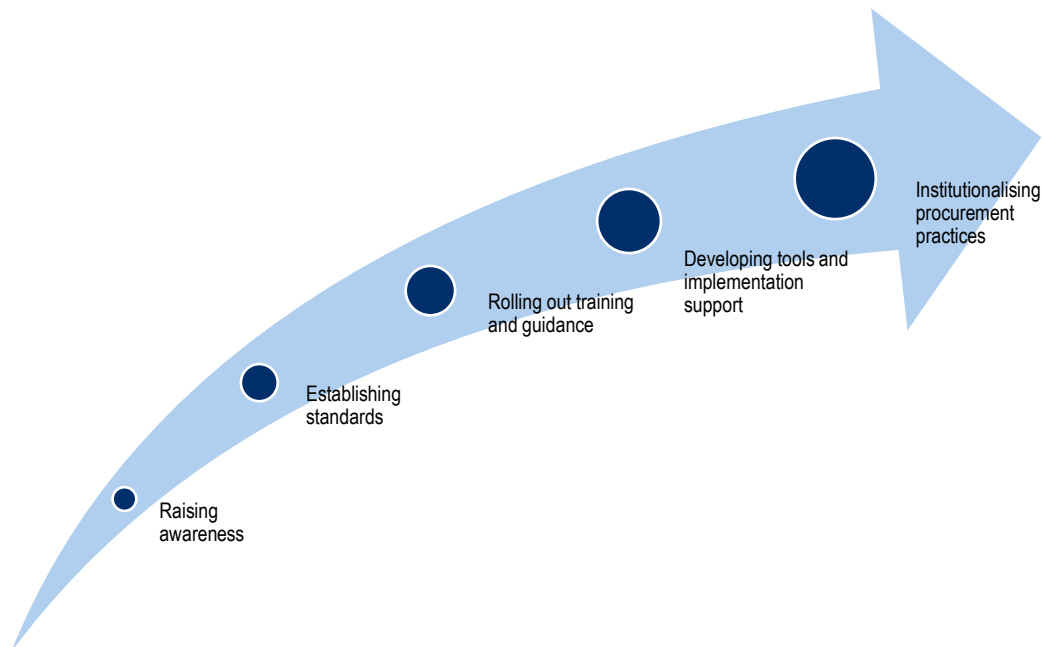
Hansel’s customers carry out mini competitions, i.e. competitions based on a framework agreement, by sending an invitation to tender to all suppliers that are eligible to participate in the DPS in an electronic tendering system, such as Hansel’s own digital mini competition assistant (Cloudia). The customer defines the overall economic criteria for the procurement carried out within a DPS in the invitation to tender. Suppliers admitted will have at least ten days after the publication of the invitation to tender to submit a tender. The customer can also specify a longer tendering period. After the tendering period ends, the customer opens and compares the tenders and makes a procurement decision. After this, the customer can conclude a procurement contract and order a product or service.

Source: Hansel (n.d.^[9]), *What Is a Dynamic Purchasing System?*, <https://www.hansel.fi/en/procurement-info/dynamic-purchasing-system/> (accessed on 8 December 2023).

Despite the fact that Chile’s new legislation provides ChileCompra some flexibility, DPS are not allowed. The same is true in the regulatory framework of Colombia and Mexico. So, there is no experience with DPS and it might be worth running a few pilots to develop experience before fully engaging in a reform to apply DPS more widely. Indeed, one of the main obstacles to applying DPS in Latin America is the level of confidence and capability of contracting authorities. For example, a lack of capacities and expertise in risk management strategies may hinder the mitigation of potential risks created by DPS; coupled with a risk-averse organisational culture, new approaches might be difficult to accept and adopt. In consequence,

raising awareness of the potential benefits of DPS and building capacities to adopt them make up one of the key steps to advance successful implementation. Figure 4.3 shows the evolution of practices to build procurement workforce skills, which could serve as a model for contracting authorities in Latin America.

Figure 4.3. Evolution of capacity-building practices in OECD countries



Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

Another strategy that could contribute to the successful implementation of DPS consists of creating safe spaces for experimentation through pilot DPS projects and communicating the results widely, as well as establishing communities of practice to facilitate peer learning and the exchange of knowledge and experiences. This can also contribute to developing confidence in the procurement workforce in going beyond traditional approaches, controlling the risks of DPS and overcoming bureaucratic silos and fragmented structures.

Communities of practice can take different forms. They can be formal, with governance structures and established processes, or rather informal (e.g. working groups, task forces, etc.). Regarding participation, they can engage public officials only or be open to the engagement of the private sector and civil society (Box 4.7 illustrates the experiences of the Netherlands and Portugal).

Box 4.7. The experiences of the Netherlands and Portugal with communities of practice to facilitate reform

Portugal

The Common Knowledge Network is a collaborative network built by the Portuguese government to promote the sharing of best practices and information about modernisation, innovation and the simplification of public administration. Membership of the network is open to public bodies, central and local administrations, private entities and any citizen who wishes to participate. Participation involves

presenting and describing a best practice and its results. The network aims to become a central reference point for the dissemination of good practices and lessons learned. It hosts over 500 examples of best practices documented from all levels of government.

The network also serves as a place to conduct debate on public policies and their implementation at the local, regional and national levels, as well as for participatory decision making with interest groups or communities of practice. It works to strengthen relationships between the various stakeholders and co-ordinate information sharing. Lastly, the network helps participating government organisations obtain a common perspective on public administration activities, with a view to standardising services and identifying similar quality standards in different services.

The Netherlands

The Dutch Professional and Innovative Tendering Network for Government Contracting Authorities (PIANOO) was created in 2005 as a network for public procurers with the goal of disseminating knowledge. Since then, the institution's role has expanded. PIANOO now serves as an expertise centre for public procurement, building on a network of 3 500 contracting authorities. These practitioners provide input for PIANOO's work. Its approach combines different activities:

- **Publications:** Based on members' questions and concerns, PIANOO publishes guidance documents that can support procurers in their daily work.
- **Meetings:** PIANOO organises regular fora in which members come together to discuss current challenges and exchange good practices. These meetings are regional, for specific industries or procurement markets, and one overarching annual PIANOO conference.
- **Online portal:** On the organisation's website, tools, publications and guidance are collected, serving as an "encyclopaedia" for public procurement, including an innovation procurement toolbox.
- **Training:** PIANOO provides training on the public procurement legal framework.

Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

Recommendations

- Contracting authorities in Latin America could pilot DPS for the procurement of computers to allow for wider supplier participation and the dynamic incorporation of innovations, keeping catalogues up to date with the technology that delivers the best value for money.
- Raising awareness and building capacities is critical for the successful implementation of DPS. In addition to targeted training to build expertise and confidence in managing DPS, the Latin American government could provide safe spaces for experimentation and build communities of practice to exchange experiences.

Incorporating life cycle costs

A low initial cost for specific computer equipment does not necessarily imply it will represent value for money. Costs incurred after the initial purchase can often change the whole-of-life cost. This means a solution with a low initial cost could have a high whole-of-life cost. Considering such life cycle cost (LCC) is critical to assess value for money. The LCC looks beyond the initial purchase price to other cost elements such as maintenance costs, transition costs, licensing costs, the cost of additional features added after the

initial investment, consumable costs and disposal costs. A comprehensive LCC analysis may also take into consideration the costs of mitigating external environmental impacts. In Mexico, for example, disposal costs are the critical element to opt for leasing instead of purchasing. In Chile, during the OECD fact-finding mission, users suggested analysing logistical costs, as especially buyers with a higher degree of decentralisation reported problems with this variable, and licensing costs, given that buyers reported that the licensing included with the equipment purchased does not cover their needs and leads to investing additional resources to complement what was procured through the co-ordinated purchase. Evidently, such additional costs may alter the value-for-money estimation and change the decision to use one specific procurement method or another.

Several OECD countries have developed supporting tools for the calculation of the LCC. Countries tend to introduce product-specific tools, which simplify the LCC calculation for non-expert users based on select product groups. Common product groups for LCC tools include energy-intensive and frequently purchased products, such as IT equipment. For instance, in Denmark, the Ministry of Environment and the Environmental Protection Agency developed LCC tools for several products and services, including computers (laptops, desktop computers, tablets and thin client computers). In Germany, the Federal Environmental Agency developed product-group-specific Excel tools that assist in calculating the life cycle costs of computers, among other goods. The *Berliner Energieagentur* calculation tools for products such as IT can be used without any comprehensive prior knowledge. They enable fast access to calculating life cycle costs. Italy's Consip, for example, applies LCC (energy consumption) in its framework agreements for computers (Box 4.8).

Box 4.8. Consip's incorporation of LCC in framework agreements for computers

Italy's central purchasing body Consip developed a simplified methodology to consider LCC in some of its framework agreements, such as those relating to ICT. The methodology consists of taking into account the product's energy consumption combined with green criteria and is adjusted on a case-by-case basis depending on the product group.

A simplified yet effective LCC approach is used for the procurement of desktop computers and monitors. The award was based solely on the lowest cost, considering minimum environmental and social requirements, as well as energy consumption during the duration of the contract (three years). Suppliers are now requested to provide data on the energy performance based on specific Calculated Typical Energy Consumption (ETEC) parameters defined by the International Electrotechnical Commission standard IEC 62301:2011. An independent entity certifies the ETEC energy performance. The energy performance is multiplied by the reference price of electricity, as defined by the Authority for Energy Regulation and Environment, and the full cost calculation formula is included in tender documents to ensure transparency and clarity on the rules applied during the procedure.

Source: OECD (2022_[10]), *Life-Cycle Costing in Public Procurement in Hungary: Stocktaking of Good Practices*, <https://doi.org/10.1787/8d90f627-en> (accessed on 30 August 2023).

Incorporating LCC is not a straightforward task. Overall, the adoption of LCC remains low across OECD countries despite many commitments to sustainable public procurement (SPP). The map of LCC tools concludes that the vast majority of OECD countries have SPP policies in place, while only 48% have introduced LCC tools (OECD, 2022_[10]). Time pressures and capacity gaps are major barriers to wider adoption by practitioners. Furthermore, tools are necessary, but not sufficient, conditions for success. They need to be user-friendly and supported by a favourable policy climate. Practitioners need to trust the methodological soundness of tools and have access to specific training.

Recommendations

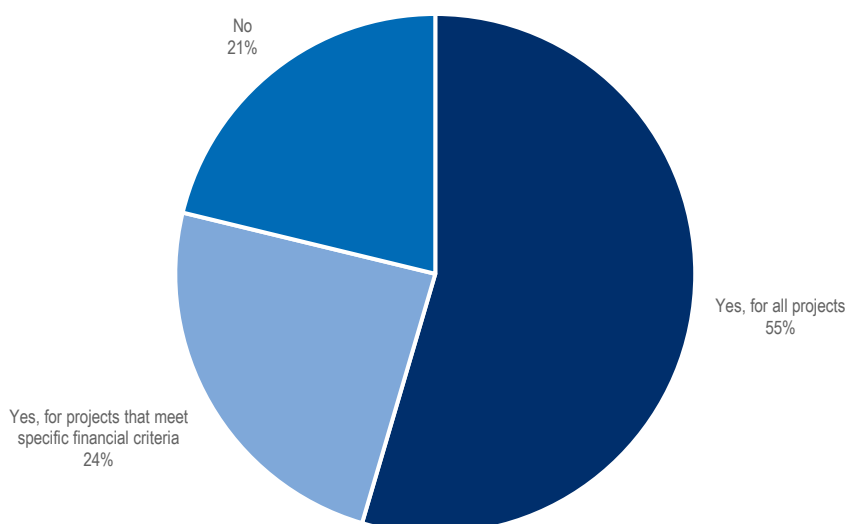
- Procurement authorities in Latin America could set up inter-institutional co-operation mechanisms to enable policy makers, contracting entities and control and audit bodies to discuss plans and challenges in LCC and align relevant practices.
- Given the lack of experience with LCC in Latin American countries, procurement authorities should advance a phased approach to implementation. The first phase focuses on developing LCC practices and methodologies by providing support structures (e.g. guidance and tools, communities of practice, training and pilot projects).

Developing guidelines and support materials

As mentioned earlier, implementing new approaches to procure computers, including DPS, and addressing common challenges such as vendor lock-in can be facilitated by raising awareness and building capacities. Guidelines and manuals can be effective in illustrating in practice how these new approaches can be adopted and leveraged. Indeed, adherents to the Recommendation of the Council on Digital Government Strategies (OECD, 2014^[11]) show a high level of adoption of guidelines for digital procurement. According to the 2022 OECD Digital Government Survey, 55% of OECD countries rely on such guidelines for all types of projects and 24% do so for projects that meet specific financial criteria (IDB-OECD, 2022^[11]) (Figure 4.4).

Figure 4.4. Guidelines for digital procurement in OECD countries

Are there any guidelines that assist public sector institutions when conducting digital procurement?



Note: Percentages are based on the 33 OECD member countries that completed the survey. Data are not available for Germany, Greece, the Slovak Republic, Switzerland and, and the United States.

Source: IDB-OECD (2022^[11]), "Survey on the implementation of the 2015 OECD Recommendation on Public Procurement", OECD, Paris.

Guidelines and manuals can be particularly useful in contexts where the level of expertise is limited. They complement formal training and provide a practical and accessible resource for procurement officials. These tools can also create important synergies with experimentation and pilots, as the lessons learned can feed into them. Relevant examples include the Slovak Republic's Methodological Document for ICT Procurement, issued by the Working Group on Public Procurement and ICT Contracting, and the United Kingdom's Digital Buying Guide (Box 4.9).

Box 4.9. Guidelines on digital procurement in the Slovak Republic and the United Kingdom

United Kingdom

The Digital Buying Guide (DBG) aims to present modern approaches to public procurement that are fair, open, transparent, effective, multidisciplinary and focused on meeting user needs. The DBG is for anyone who buys for the public sector, whether for local, regional or national government organisations. The information is intended to be internationally relevant and not specific to any regulatory environment. Notably, the DBG aligns with the United Nations Sustainable Development Goals (SDGs), and standards and guidelines on corruption prevention and gender equality in public procurement.

The DBG contains practical steps to take, with a collection of illustrative case studies from governments around the world. It evolved from the ICT Commissioning Playbook that the Global Digital Marketplace programme delivered towards the end of 2018, with help from partners and supported by the OECD.

Slovak Republic

The Working Group on Public Procurement and ICT Contracting, led by the Ministry of Investment, Regional Development and Informatisation, developed a Methodological Document about ICT Procurement, discussing issues in ICT procurement and providing methodological advice to contracting authorities on challenges such as preventing vendor lock-in, terminating unbalanced contracts from the past, dividing contracts into lots, preliminary market analysis, common availability of goods and services on the market, selection criteria and design contest.

Source: UK Government (2020^[12]), “Buying digitally, with social purpose”, <https://gds.blog.gov.uk/2020/10/19/buying-digitally-with-social-purpose/>; OECD (2022^[15]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

Recommendations

- Procurement authorities in Latin American countries could support tackling common challenges and adopting new approaches through practical manuals and guidelines on the procurement of computer equipment.
- Pilots and experimentation exercises, for example relative to DPS, should feed guidelines and manuals to align them more with practical experiences in procuring computers.

Selecting a commercial model: Purchasing or leasing?

As described in Chapter 2, in Chile, public entities rely on co-ordinated purchasing to lease and purchase computers. In Colombia, the framework agreement also supports purchasing and leasing, while in Mexico it only supports leasing. Usually, leasing includes a purchasing option for the leased equipment at the end of the contract.

There are several factors which may influence the decision to purchase or lease. Mexico, for example, opts for leasing on the grounds that it allows for avoiding obsolescence and the burdensome procedures for disposal. However, there is no evidence-based study justifying the decision, for example, in terms of overall costs and benefits. Colombia did not provide evidence of having carried out such analysis. Out of the three countries included in this study, only Chile carries out such analysis. Indeed, the decision should be based on the procurement policy, which in turn should be supported by feasibility and cost-benefit analyses.

Another factor that may influence the decision is budget availability. Leasing may be cheaper and allow for stage payments to be made according to how the computer equipment is delivered and returned. In contrast, concerns for information security may lead procurement authorities dealing with sensitive information to opt for purchasing. It is also important to reflect on whether the computers should be obtained from one source in the framework of a uniform contractual agreement (bundling) or different providers. Table 4.3 provides some criteria for making the decision.

Table 4.3. Criteria to decide whether purchasing or leasing computer equipment

	Hardware from different providers	Bundling	Financing
Hardware	Purchase	Purchase	Leasing
Operating system	Purchase or licensing	Purchase or licensing	Leasing
Costs for hardware service (i.e. repair and maintenance)	Borne by the contracting entity	Borne by the contracting entity	Payment includes services
Costs for software services (i.e. deployment and updates)	Borne by the contracting entity	Borne by the contracting entity	Payment includes services
Ownership of hardware	Contracting entity	Contracting entity	Supplier

Source: Bitkom (2022^[6]), *Product-Neutral Tendering of Desktop PCs: Guideline for Public IT Procurement*, <https://www.bitkom.org/sites/main/files/2023-09/ICT-Procurement-Product-Neutral-Tendering-of-Desktop-PCs-2022.pdf> (accessed on 12 October 2023).

An additional alternative for procuring entities, currently used in Colombia, is device as a service (DaaS). DaaS is a value proposition presented as an integrated set of solutions that combines supplying devices with layered related services in order to offer the final user an optimal experience. The client pays a periodic subscription to the service, which avoids high initial procurement costs. Other advantages include continuous updates and follow-up from the supplier.

For the supplier of computers, DaaS delivers the following advantages (ANDI, 2021^[13]):

- Opening the possibility of refurbishing, repairing and reutilising the equipment, which increases profit margins.
- Obtaining revenue for new services and more predictable revenue flows.
- Decreased costs for guarantees and supply costs through the reuse of equipment.

For procurement authorities, DaaS implies the following advantages:

- Decreased initial costs for using the devices, paying only through subscriptions for the use of complete and updated devices.
- Decreased costs for capital assets, allowing contracting entities to use better quality devices without incurring costly one-off investments.
- Avoiding the need to manage updates, repairs and maintenance, as these are the responsibility of the supplier.
- Higher flexibility and customisation required for the specific needs of the user.

However, as described in Box 2.1, the implementation of DaaS may imply important challenges, including regulatory frameworks that do not anticipate this alternative, lack of awareness by control authorities, data protection issues and the prevalence of price in awarding criteria, which may lead to procuring poor quality equipment, hindering the potential advantages of DaaS.

Recommendations

- The decision to purchase and/or lease computers in a procurement process should be based on evidence and cost-benefit analysis, according to each procedure's conditions and the market's capacities. Hence, the recommendation is to keep both options open so that contracting authorities can decide according to the prevailing situation and the needs to be addressed.
- Contracting authorities in Latin America could also run DaaS pilots to analyse its costs and benefits and identify the conditions under which this option is optimal. Above all, DaaS may facilitate keeping access to updated equipment, staged payment conditions and avoid disposal costs.

Developing user profiles and engaging users

An important challenge in the procurement of computers is reducing the requests for very specific computing equipment and accepting more standardised solutions. Indeed, the OECD heard about this problem in the three countries under analysis. Users may want to ensure that what is requested will do exactly what they need. Nonetheless, being too prescriptive entails risks and disadvantages. For example, customised computers will generally be more expensive than standard options and more difficult to reuse. Furthermore, providers that manage custom-made equipment will retain all of the information about it, creating lock-in risks and making it difficult and costly to migrate to different alternatives. Excessive customisation may then lead to supplier dependence (OECD, 2022^[5]).

The OECD found that ChileCompra's co-ordinated purchases, which are the main procedure used by government buyers to procure computers, involved standardising equipment and grouping it into ranges (*gamas*), from which buyers categorise their needs and submit them to the Budget Directorate (*Dirección de Presupuestos*, DIPRES). Such *gamas* provide some alternatives for users, without disregarding the benefits from standardisation. In Colombia, contracting entities identify the fiches of the products in the virtual catalogue that better meet their requirements, on the understanding that there may be minimal variations that do not impact performance and observing the principle of neutrality with respect to the available brands in the market.

Bitkom's guidelines recommend categorising user requirements into performance classes to ensure the procurement of computers is based on needs. Such performance classes can be based on usage scenarios in the public administration. Under this approach, user profiles describe which computers must be available at all times and determine the basis for specifying configurations (Table 4.4).

Table 4.4. Defining requirements based on user profiles

User profile	Typical applications	Classification
Office worker	i) E-mail; ii) Web browser; iii) Word processor; iv) PDF reader; v) Virus scanner; vi) Specialist applications (e.g. time tracking, directory enquiries); vii) Browser-based specialist applications; and viii) Video conferencing.	Standard system
Clerks and executives	i) E-mail; ii) Web browser; iii) Word processor; iv) Desktop publishing software; v) Spreadsheet software; vi) Presentation software; vii) Visualisation software; viii) Project planning software; ix) Desktop database; x) PDF reader; xi) Virus scanner; xii) Specialist applications (e.g. time tracking, directory enquiries); xiii) Browser-based specialist applications; xiv) Complex client-based/server-based specialist applications; xv) Graphics software.	High-performance system

Source: Bitkom (2022^[6]), *Product-Neutral Tendering of Desktop PCs: Guideline for Public IT Procurement*, <https://www.bitkom.org/sites/main/files/2023-09/ICT-Procurement-Product-Neutral-Tendering-of-Desktop-PCs-2022.pdf> (accessed on 12 October 2023).

With this information, procuring authorities can then define minimum technical requirements for purchasing computers. Table 4.5 provides an example.

Table 4.5. Definition of minimum technical requirements

Components	Standard system	High-performance system
Chassis	Small form factor (SFF)	Midi tower
Motherboard	Corresponding chassis	Corresponding chassis
CPU	x86 architecture (64 bit)	x86 architecture (64 bit)
Memory RAM	8 GB	16 GB
SSD	250 GB SATA	512 GB SATA
Graphics card	Onboard	Onboard or dedicated (Direct X12 support for Microsoft Windows users, otherwise OpenGL 4.4)
Network connection	RJ45 and possibly WLAN	RJ45 and possibly WLAN
Interfaces	2 digital display interfaces	2 digital display interfaces
	4 x USB 2.0	4 x USB 2.0
	2 x USB 3x	2 x USB 3x
	Audio	Audio

Source: Bitkom (2022^[6]), *Product-Neutral Tendering of Desktop PCs: Guideline for Public IT Procurement*, <https://www.bitkom.org/sites/main/files/2023-09/ICT-Procurement-Product-Neutral-Tendering-of-Desktop-PCs-2022.pdf> (accessed on 12 October 2023).

In the United States, as part of the National Association of State Procurement Officials (NASPO) ValuePoint initiative, the request for proposals (RFP) for the master agreement for computer equipment (i.e. desktops, laptops, tablets, servers and storage), carried out during 2021, was divided into three hardware product bands to account for user needs (Box 4.10).

Box 4.10. Hardware product bands in NASPO's RFP for the master agreement for computer equipment

- **Band 1: Personal computing devices – Windows operating systems: desktops, laptops, tablets.** Only products utilising Windows operating systems for these devices are allowed. Zero client computers, thin client computers, all-in-one PCs, workstations, notebooks and mobile thin client computers are included in this band. Ruggedised equipment may also be included in the Product and Service Schedule for this band. Responders do not need to manufacture all three types of devices to be considered for an award.
- **Band 2: Personal computing devices – Non-Windows operating systems: desktops, laptops, tablets.** Only products utilising operating systems that are not Windows operating systems for these devices are allowed. Zero client computers, thin client computers, all-in-one PCs, workstations, notebooks and mobile thin client computers are included in this band. Ruggedised equipment may also be included in the Product and Service Schedule for this band. Responders do not need to manufacture all three types of devices to be considered for an award.
- **Band 3: Servers and storage.** A server is a physical or virtual computer dedicated to running one or more services or applications (as a host) to serve the needs of the users of other computers on a network. This band also includes server appliances. Server appliances have their hardware and software preconfigured by the manufacturer. It also includes embedded networking components such as those found in blade chassis systems. Storage is hardware or a virtual appliance with the ability to store large amounts of data. This band includes SAN

(storage area network) switching, which is necessary for the proper functioning of the storage environment. All operating systems for these devices are allowed. Ruggedised equipment may also be included in the Product and Service Schedule for this band. Responders do not need to manufacture both types of devices to be considered for an award.

Source: NASPO ValuePoint (n.d.^[14]), *Computer Equipment, Peripherals & Related Services*, <https://www.naspovaluepoint.org/portfolio/computer-equipment-peripherals-related-services-2023-2028/#> (accessed on 18 December 2023).

The development of user profiles should be based on consultation and user engagement. This is important as, in the three countries analysed, users suggested the need for feedback loops to improve the procurement strategies for computers and better adapt them to their needs. Indeed, developing a good understanding of user needs is a critical step in the pre-tendering phase. End users are one of the most important considerations in achieving the intended procurement outcome. The procured computers should be easy to use and consistent with user experience and tasks. Establishing feedback loops can be the means to better understand user needs and support the development of user profiles. Box 4.11 describes good practices regarding user feedback loops in the United Kingdom.

Box 4.11. Incorporating user needs in the United Kingdom

In 2015, the technology transformation team in the United Kingdom Cabinet Office used Civil Service Live as an opportunity to understand the problem with government IT from the perspective of users across government. They ran a session called “Can Government IT be faster, smarter, better – and cheaper?”, designed to showcase changes being put in place for users. The teams used these sessions to ask civil servants from different locations and departments what they see as the problem with government IT. The issues reported were recurrent across the country, from desperately slow printers and computers to an inability to access the Internet and ageing mobile phone technology. Some people also mentioned that new IT systems had actually made their jobs harder, reflecting a failure to speak to users before design, procurement and implementation.

The recommendations for change directly supported some of the principles of agile IT procurement. Crucially, they said they wanted to be involved in the purchasing process from the beginning to avoid buying the wrong thing. They also expressed their confusion at the government signing long IT contracts, assuming it was for cost reasons and which caused bureaucratic delays. Finally, when IT equipment arrived, it was frequently outdated and less easy to use than personal laptops, smartphones, etc. Engaging users this way led to an effective technology transformation programme and several other departments followed the cabinet’s lead. Reflecting on the insights from these sessions, the technology transformation programme introduced faster, more modern and more adaptable solutions to user needs. More flexible contracts were introduced, making procurement more adaptable to rapidly evolving user needs.

Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

Co-design is another strategy used in OECD countries to consider user needs. It implies designing solutions with users, not just for them, as well as respecting, valuing and understanding their experiences and insights, sustaining meaningful discussions and experimenting. Co-design is based on interconnected principles and approaches, as illustrated in Figure 4.5.

Figure 4.5. Co-design principles and approaches

<p>Co-design:</p> <p>Designing things with users, not just for them</p> <p>Respecting, valuing and understanding users' lived experiences and insights</p> <p>Meaningful discussion, not just formal consultation</p> <p>Many experiments, rather than formal pilots</p>	<ol style="list-style-type: none"> 1. Define the outcome 2. Understand users 3. Test assumptions 4. Involve users 5. Observe actual behaviour 6. Deliver, test, learn, adapt
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Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

User feedback can be critical to advance towards better results. In Chile, for example, it could be useful to strengthen the model with the necessary technical capabilities to support agencies with a lower level of maturity in the design and implementation of elements related to purchasing and contracting in technological projects. It is also important to clarify the problems solved by the model and the impacts or externalities it generates, as well as ensure that there are no hidden costs currently being covered by each buyer, such as licensing or logistics costs. It was recommended, for instance, that ChileCompra deepen the analysis and, with the information it has already managed to collect from the different iterations of the bidding processes and with different users, determine the hidden costs that are being afforded by buyers in order to meet their needs. Specifically, it was recommended to analyse logistical costs, as especially buyers with a higher degree of decentralisation reported problems with this variable, and licensing costs, given that buyers reported that the licensing included with the equipment purchased does not cover their needs and leads to investing additional resources to complement what was procured through the co-ordinated purchase.

Recommendations

- When procuring computers, contracting authorities should apply user-centred processes. This implies understanding user needs and tasks, and standardising requirements along such characteristics. Co-design can also be a useful strategy to incorporate user needs.
- Permanent feedback loops should be set up for procurement authorities to understand user needs and for users to know the limitations and objectives of procurement authorities. Feedback should flow in both ways, leading to better governance in the procurement of computers.
- Contracting authorities can develop user profiles to advance standardisation while also incorporating the flexibility specific users need.

Strengthening and diversifying market engagement strategies

The OECD Recommendation of the Council on Public Procurement (2015^[8]) calls for adherents to engage in transparent and regular dialogues with suppliers and business associations to present public procurement objectives and to ensure a correct understanding of markets. Effective communication should be conducted to provide potential vendors with a better understanding of the country's needs and provide government buyers with information to develop more realistic and effective tender specifications by better understanding market capabilities. Such interactions should be subject to due fairness, transparency and integrity safeguards, which vary depending on whether an active procurement process is ongoing.

As illustrated in Chapter 3, market engagement is quite weak in the Latin American context. Integrity risks, scandals and bad experiences from the past have led to excessive controls that not only have proved ineffective in deterring corrupt behaviour but also limit the flexibility of procurement authorities to innovate and reach out to the market.

However, market engagement is a key activity in understanding the corresponding industries and tailoring procurement processes accordingly to promote competition and avoid situations such as vendor lock-in. For the specific case of the procurement of computer equipment, contracting authorities need to understand the composition, size and nature of the supply market and, quite importantly, keep up to date with new ideas, trends and emerging technologies that can deliver superior performance and improved outcomes.

Market engagement can be understood as a process that allows procurement entities, at all times of the contracting process, to (New Zealand Government, 2015^[15]):

- Communicate its needs and requirements to the supplier community.
- Discuss potential solutions openly and transparently.
- Promote innovation in the design and delivery of solutions.
- Understand market capacities and trends.

While market engagement certainly entails integrity risks that must be mitigated, if used appropriately, it can deliver multiple benefits such as: i) improving procurement planning and management; ii) better understanding the market; iii) increasing trust and credibility among suppliers, iv) breeding the conditions for the market to offer better solutions; v) allowing the market to understand the needs of the public sector; vi) getting feedback on requirements; vii) testing the feasibility of the needs to be addressed; viii) promoting competition; and ix) identifying opportunities for innovation. The bottom line is that the information collected through market engagement could help procurement authorities become smarter customers and design tailored processes according to objectives and market conditions.

Market engagement can happen during the procurement cycle (Table 4.6). However, in order to mitigate integrity risks, some basic rules should be followed (New Zealand Government, 2015^[15]):

- Engagement should take place openly, transparently and fairly.
- The same information should be provided to all suppliers.
- Equal access should be given to all suppliers and they should be treated equally.

Table 4.6. Market engagement strategies throughout the procurement cycle

Pre-tendering	Tendering	Post-tendering
<ul style="list-style-type: none"> • Annual procurement plan • Trade shows • Meet-the-buyer events • Requests for information/requests for proposals • “Show-and-tell” events to allow suppliers to present their solutions • Meeting with business/industry chambers • Pre-tender briefings to suppliers • Workshops with the supplier community 	<ul style="list-style-type: none"> • Briefing suppliers who submitted a bid • Question and answer sessions (including electronic sessions) 	<ul style="list-style-type: none"> • Contract award notices • Debriefing suppliers • Supplier management

Source: OECD (2021^[16]), *Public Procurement in the State of Mexico: Enhancing Efficiency and Competition*, <https://doi.org/10.1787/cc1da607-en> (accessed on 28 July 2023).

In Mexico, for example, the Protocol on the behaviour relative to public procurement, granting and extending licenses, permits, authorisations and concessions (*Protocolo de actuación en materia de contrataciones públicas, otorgamiento y prórroga de licencias, permisos, autorizaciones y concesiones*) mandates communication between individual suppliers and procurement officials to take place in written form and official places, with the presence of officials from the corresponding Control and Audit Body (*Órgano de Control y Fiscalización*, OCF) officials.

Other risks that market engagement may entail include unfairly advantaging one supplier, accusations of favouritism, failing to protect intellectual property rights; creating unreasonable expectations and breeding mistrust, among others.

The objectives of market engagement vary according to the stage of the procurement cycle in which it takes place. Table 4.7 provides examples. In the case of the computer industry, engagement at an early stage facilitates the planning of investments. One effective and controlled way to do this is by capturing supplier feedback on procurement issues (see Box 4.12 on techUK and Figure 4.6 on the steps of early market engagement).

Table 4.7. Objectives of market engagement by stage of the procurement cycle

Pre-tendering	Tendering	Post-tendering
Collecting information on: <ul style="list-style-type: none"> • Number of suppliers and size of the market • Key suppliers and market shares • Number of buyers and influence in the market • Level of competition intensity • Prices and pricing methods • Market trends • Availability of alternatives • Developments, innovations and emerging technologies 	Contracting authorities provide information on: <ul style="list-style-type: none"> • Needs and specification of requirements • Outcomes to be achieved • Allowing questions and answers • Identifying efficiencies in the design and delivery of the procured object • Opportunities to develop alternative solutions • Finetuning solutions to address needs 	<ul style="list-style-type: none"> • Educating the supplier community on how to participate successfully in the public market • Building trust among the supplier community • Promoting the participation of suppliers in future procurement processes

Source: New Zealand Government (2015^[15]), *Constructive Market Engagement: A Guide to Engaging Effectively with Suppliers*, New Zealand's Government Procurement Branch, Wellington.

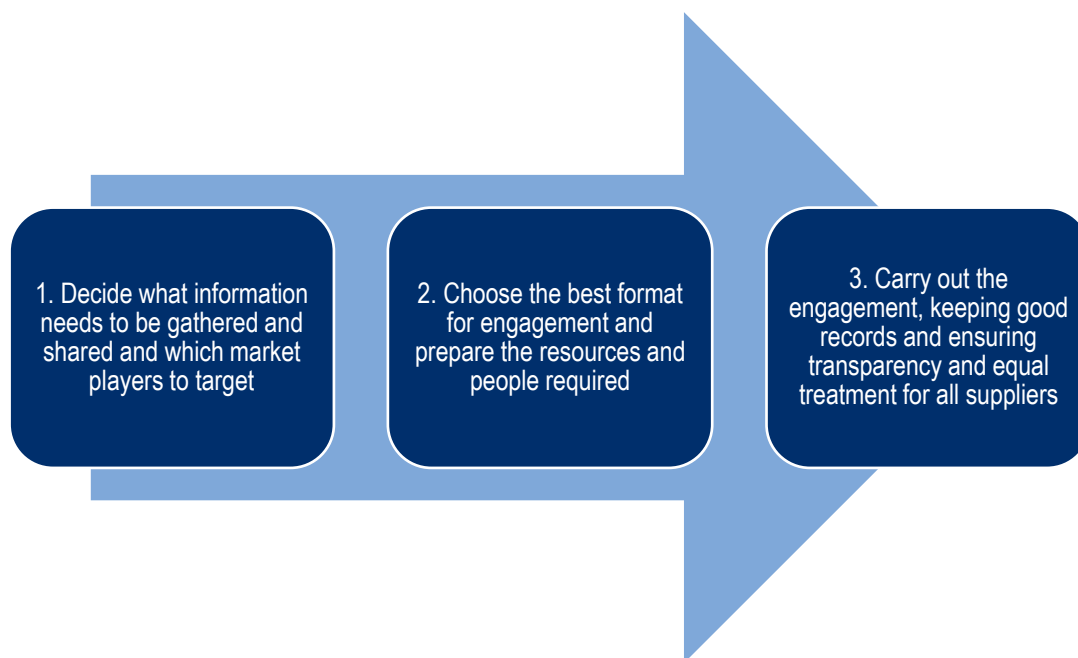
Box 4.12. Engaging suppliers at an early stage: techUK

TechUK is the trade association which brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. With over 800 members (the majority of which are SMEs) across the United Kingdom, techUK creates a network for innovation and collaboration across business, government and stakeholders to provide a better future. The fundamental principle of techUK's engagement is to support those working in the public procurement process and help develop policy with technical expertise. Their support includes innovative market engagement across central and local governments. This included the launch of the NHS Digital-techUK strategic partnership, a programme of concept viability sessions across government departments, the Public Services 2030 Network conference and a wide range of innovative market engagement sessions between the technology industry and local governments. Central government departments and the wider public

sector take a broader and strategic approach to communicating with the technology sector on planned procurement activities and take advantage of the market access provided by techUK.

Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

Figure 4.6. Steps for early market engagement



Source: OECD (2022^[5]), *Towards Agile ICT Procurement in the Slovak Republic: Good Practices and Recommendations*, <https://doi.org/10.1787/b0a5d50f-en> (accessed on 22 August 2023).

One example of a market engagement strategy that may be advanced is debriefing suppliers. In some contexts, it can be common for bidders to be disqualified for failing to comply with specific formalities (i.e. a missing signature, document, etc.). Debriefing suppliers in the post-tendering stage can be a way to educate them so that they can be better prepared the next time and not lose their motivation to participate in the public market (see Box 4.13 on the benefits of debriefing suppliers).

Box 4.13. The benefits of debriefing suppliers

Debriefing is beneficial to bidders because it:

- Helps them to rethink their approach in order to make future bids more successful.
- Offers targeted guidance to new or smaller companies to improve their chances of doing business in the public sector.
- Provides reassurance about the process and suppliers' contribution or role.
- Provides a better understanding of what differentiates public sector procurement from private procurement.

Debriefing may help contracting authorities by:

- Identifying ways to improve subsequent solicitation processes, including associated communications.
- Making sure best practices and guidance are updated to reflect any relevant issues that have been highlighted.
- Encouraging better bids from suppliers in the future.
- Getting a better understanding of how that segment of the market thinks, enhancing the organisation's market intelligence.
- Helping establish a reputation as a fair, open and ethical buyer with whom suppliers will want to do business in the future.
- Potentially reducing the number of challenges.

Source: OECD (2021^[16]), *Public Procurement in the State of Mexico: Enhancing Efficiency and Competition*, <https://doi.org/10.1787/cc1da607-en> (accessed on 28 July 2023).

Recommendations

- Procurement authorities in Latin America should promote the review of their respective regulatory frameworks to provide greater flexibility for market engagement while establishing proportionate measures to control the risks entailed by this activity.
- Procurement authorities in Latin America should devote greater investments in the pre-tender stage to better understand the computer market and communicate their needs. The information collected will be useful in making important decisions on the commercial model (i.e. purchasing or leasing), procurement method (i.e. framework agreement, co-ordinated purchasing, etc.) and the convenience of adopting new procurement methods (i.e. DPS), which will impact the attractiveness of tenders, competition for contracts and the price of acquisition.
- Procurement authorities in Latin America could also promote the practice of debriefing suppliers in the post-tendering stage as a way to educate the business community on how to participate effectively in the public procurement market and encourage greater bidder participation.

Strategic project management approach and pre-screening investments

The OECD Recommendation of the Council on Digital Government Strategies (2014^[11]) calls adherents to procure digital technologies based on the assessment of existing assets, including digital skills, job profiles, technologies, contracts and inter-agency agreements to increase efficiency, support innovation and best sustain objectives stated in the overall public sector modernisation agenda.

In order to advance the digital transformation of the public sector and provide more seamless services, governments face the challenge of ensuring consistency and coherence of digital investments, including the procurement of computer equipment. In this context, OECD countries have established project management approaches and approval (pre-screening) mechanisms, such as EvalTIC in Chile and POTIC in Mexico (see Chapter 1).

Such pre-screening processes refer to the analysis and selection of digital projects cleared for implementation by ensuring financial feasibility, adequate risk management and alignment with strategic governmental priorities. Furthermore, sound project approval processes ensure alignment with digital policies and a coherent adoption of technology in the public sector. In many Latin American countries, such

pre-screening analyses have had limited impact given that they are isolated from budgetary decisions. This is not the case of EvalTIC, which is attached to the annual budgetary process. Indeed, line ministries and agencies must submit their digital project proposals before the annual budget discussions, based on joint efforts by chief information officers, digital experts and financial managers (OECD/CAF, 2023^[7]).

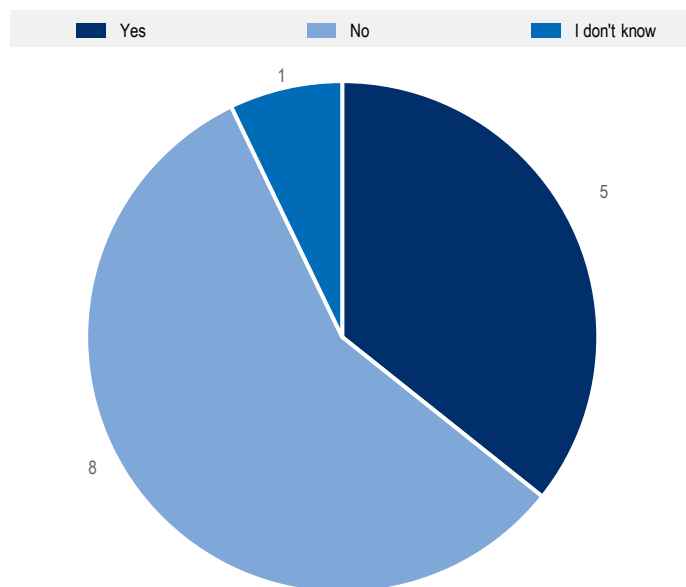
In fact, in Chile's computer procurement policy, the alliance between ChileCompra, DIPRES and the Digital Government Division (*División de Gobierno Digital*, DGD) has been fundamental. This has allowed guidelines from the procurement agency to respond to broader criteria that are part of the government's agenda and have fundamental normative support for the development of co-ordinated purchasing, as their use is included in the public sector budget law. This has supported the transition to Chile's policy in this area.

The implementation of EvalTIC has been particularly relevant, as it allowed for early monitoring of computer purchase needs, verifying whether they align with institutional policies and projects. EvalTIC has also made it possible to analyse the relevance of the requirements and validate possible biases or conditions that could negatively impact competition in the market and technological neutrality in computer purchases. In addition, it has been important to establish clear objectives that made possible to follow up on policy results with respect to price savings achieved in each co-ordinated process.

OECD best practices also suggest that a project management approach supports the successful implementation of digital investments by advancing coherent and standardised management. However, Latin American governments do not always have common approaches to managing digital projects in the public sector (Figure 4.7). Brazil, Peru and Uruguay provide good examples relative to the adoption of a project management approach for digital investments (Box 4.14).

Figure 4.7. Standardised project management for digital investments in Latin America

Is there a standardised model for data, digital and technology project management at the central/federal government level?



Note: The 14 participant countries in the survey are Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Jamaica, Mexico, Panama, Paraguay, Peru and Uruguay.

Source: OECD/CAF (2021^[17]), "Going Digital Government in LAC Survey", OECD, Paris.

Box 4.14. Project management in digital government investments in selected Latin American countries

Brazil

The Secretariat for Digital Government at the Ministry of Management and Innovation in Public Services elaborated in 2020 a portfolio project management methodology providing a set of good practices in the development and management of digital projects in the public sector.

Peru

The Secretariat for Digital Government of the Presidency of the Council of Ministers published in 2021 a dedicated guide for agile development of government digital services. Based on the guidelines for digital services and the experience of countries such as the United Kingdom, the Secretariat for Digital Government developed this guide with the recommended pillars, principles, phases and frameworks for the agile development of digital projects in the public sector.

Uruguay

The Agency for Electronic Government and the Information and Knowledge Society (*Agencia de Gobierno Electrónico y Sociedad de la Información y del Conocimiento*, AGESIC) developed a manual in 2019 to guide the design of digital government projects with recommendations, methods and tools that are publicly and freely available to support the development of digital transformation projects in the public sector. The document contains information and examples developed by consultants and officials working in AGESIC's Project Management Office to support the design and implementation of projects.

Source: OECD/CAF (2023^[7]), *Digital Government Review of Latin America and the Caribbean: Building Inclusive and Responsive Public Services*, <https://doi.org/10.1787/29f32e64-en> (accessed on 3 November 2023).

Recommendations

- Latin American countries could further leverage value proposition and approval processes for digital investments, including the procurement of computers, as a way to ensure alignment, co-ordination and compliance with digital government policies and standards.
- Pre-screening processes should always be linked to budgetary decisions to encourage compliance by line ministries.
- Procurement authorities in Latin America could advance coherent and standardise management of projects relative to the procurement of computers by adopting a project management approach.

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Good Practices for Procuring Computers and Laptops in Latin America

FOSTERING NEUTRALITY AND MARKET ENGAGEMENT

This report takes stock of current ICT procurement practices in Chile, Colombia, and Mexico, focusing on vendor neutrality and market engagement in the purchase of personal computers and laptops. It also provides recommendations for improving access, competition, and market knowledge for procurement agencies in Latin America, based on OECD good practices and relevant principles, such as the 2015 OECD Recommendation on Public Procurement.

