

Barcelona City Council ICT Public Procurement Guide

The Open Digitisation Programme from Barcelona City Council's Office for Technology and Digital Innovation

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1 Context

1.1. Introduction

CONTRACTING AS A LEVER FOR TRANSFORMING THE ECONOMIC AND SOCIAL MODEL

Municipal contracting represents a highly significant injection of resources into the economy. Barcelona City Council has an annual contracting budget of some 600 million euros in goods and services (almost 25% of the municipal budget), a figure that surpasses 1 billion euros when taking the municipal group as a whole. These figures make the City Council one of the driving forces behind economic activity in the city.

Public procurement by the authorities thus becomes one of the main tools for municipal economic policy and, hence, one of the key levers for promoting the transformation of the economic and social model in Barcelona.

The City Council seeks to harness these resources to **promote a new governance and management model for ICTs at the City Council**, as a driving force for this transformation, and make them an instrument for growing the economic fabric of the ICT sector and innovation in the city.

ICTS AND INNOVATION AS KEYS OF TRANSFORMATIONAL

The evolution of ICTs in general and the widespread use of the Internet specifically are transforming almost every sector of our society and economy (from manufacturing and transport to energy and healthcare services). Information and data have become one of the most valuable and precious goods. These are the main product of what we call the knowledge economy or digital economy. In this new context, companies are often more highly valued for their ideas and the information they control than for their material assets.

This new paradigm, in which the Internet stands out as a channel and tool for production, encourages the emergence of new intermediaries whose added value lies in organising this information and making it available to end users. Hence, we can find such surprising examples as:

- One of the largest private transport companies in the world ... has no vehicles of its own (Uber).
- The largest accommodation vendor in the world ... owns no property (Airbnb).
- One of the most popular telephony companies ... owns no telecommunications infrastructure (Skype).

- The most popular media ... creates no content (Facebook).

- One of the largest audio-visual content screening companies in the world ... owns no cinema or television channel (Netflix).

Undoubtedly, these are all fine examples of how **the use of ICTs – and especially digital services – has become a driving force for transformation in services and the associated sectors of the economy.**

It is in this context that cities like Barcelona are facing the need to transform the way they do things and find new strategies based on technology and innovation **in order to achieve more balanced and sustainable economic growth that can help municipal authorities to act with efficiency and social justice.**

TRANSITION TOWARDS TECHNOLOGICAL SOVEREIGNTY

On 6 October 2016, the Technology and Digital Innovation Commissioner presented the **2017–2020 Digital Barcelona Plan: transition towards technological sovereignty**, which seeks “to overcome the challenges for the city and its people through more democratic use of technology. To foster technological and digital innovation for a more open government as a tool for the development of a plural economy capable of encouraging this social and environmental transformation, and favouring citizen empowerment”.

The plan, which is based around three key areas, demonstrates the will of Barcelona to lead a transition towards technological sovereignty – owned by the government and general public – capable of allowing them to participate in decisions and influence the priorities and strategies for the use of technology in the city:

- **Government and city:** open and efficient

government. Technology for transformation and public innovation via the following:

- Digital transformation and innovation in the public sector.

- Providing public and open data infrastructure to develop innovative applications based on data.

- **Social companies and entities: development of the digital socio-economic fabric and the local innovation ecosystem**, for the following purposes:

- To promote and strengthen the local economic ecosystem and fabric, fostering a plural economy with social return.

- To facilitate access by SMEs to public procurement and foster the creation of quality jobs.

- **Citizens: empowering the public:**

- To provide an extensive offer of personalised digital education and training for the various groups in order to facilitate an active and participatory democracy.

- To foster quality employment and allow digital sovereignty for the general public of Barcelona.

Barcelona wishes to harness the opportunities offered by technology and innovation based on ICTs to improve the services provided by the City Council to the city, placing a focus on citizens’ wellbeing.

The commitment is to focus on the real challenges expressed by citizens and concentrate efforts on providing up-to-date public services of the highest quality as a way to encourage a more sustainable and collaborative economy, foster talent in the local economic fabric and empower the general public.

1.2. Why this guide?

This guide provides **a general overview of the municipal strategy for the procurement of technology and technology services** in order to enable an understanding of the various strategic measures and contractual clauses that allow the City Council's approach to be implemented in this field.

RECIPIENTS OF THE GUIDE

This guide has been drafted for **managers of the various municipal departments and bodies, public service executives and managers, municipal technicians, City Council ICT suppliers, the general public and anyone with an interest in the procurement or provision of technology services**. It offers detailed information on the why, what and how of ICT contracting, including explanations on the content of specific measures and their application. Specifically, this guide is intended for the following persons:

- The managers of the various municipal departments and bodies, and public service executives and managers involved in the planning and implementation of contracting procedures (public buyers) so they can have a general overview of the City Council's strategy in the field of ICT.
- Municipal technicians responsible for launching a contracting procedure, for whom this text serves as a guide to facilitate the implementation of the various measures.
- ICT companies that are currently municipal vendors or wish to become a municipal vendor in order for them to know which aspects they need to follow when providing their services and during the contracting process.
- Finally, publication of this guide is an exercise in transparency with the general public as it enables people to gain increased knowledge, monitor and control the measures being taken by the City Council to achieve the targets set.

CREATING AND IMPLEMENTING THE GUIDE

This guide **stems from a joint effort by various City Council departments and the IMI in conjunction with the business sector**.

• **Contributions to the content were made by:**

- Experts and technicians at the IMI on various ICT issues mentioned in this guide.
- Experts and technicians from the Administration Department, Legal Services and Intervention Department of the IMI regarding the legal suitability and validity of the approaches, proposed measures and clauses.

• **Support and advice was provided** by the Contracting Coordination Department of Barcelona City Council.

• Furthermore, **various work sessions were held with the companies and vendors of ICT services** to the City Council in order to enrich the process.

To implement the measures and approaches contained in this guide, **the following steps are being taken:**

- A website will be created to provide relevant information about the transformation process and municipal strategy in terms of public procurement.
- The City Council is working to launch a marketplace: a space for dialogue and interaction between vendors, citizens and the City Council that will enable access to all the information on open contracting procedures and future tender processes, and will include information and indicators on the results from execution of contracts that have already finished (among other things). The aim is two-fold: to raise the profile and increase the transparency of contracting processes; and to facilitate contact between companies in order to foster partnerships, innovation

projects and knowledge of best practices in the field of supplying ICT services to the public authorities.

• Finally, in order to implement all these changes, a series of organisational changes will take place that allow this strategy to be implemented effectively.

1.3. Framework of reference: sustainable public procurement

Public authorities can use their contracts as effective instruments in the fight against social exclusion, to create quality jobs, promote gender equality and help preserve the environment.

Consideration No. 2 of **Directive 2014/24/EU on public procurement, approved by the European Parliament and the Council**, states: “**Public procurement plays a key role in the Europe 2020 Strategy** as one of the market-based instruments to be used **to achieve smart, sustainable and inclusive growth** while ensuring the most efficient use of public funds, facilitating the participation of small and medium-sized enterprises in public procurement, and **enabling procurers to make better use of public procurement in support of common societal goals**”.

It is against this backdrop that **Barcelona City Council**, with the desire to draw up a new contracting strategy, **is adopting a series of measures aimed at implementing a sustainable contracting strategy** capable of encouraging an overall improvement in working and environmental conditions in local productive sectors, thereby promoting the common good.

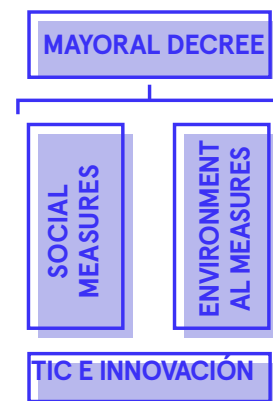
The municipal strategy is based around three lines of action:

• **A set of social measures.** Social, inclusion, gender equality and social justice measures to encourage the contracting of works, supplies and services from companies and professionals that execute public contracts under a business model based on decent wages, stable jobs with occupational health protection and ethical conduct.

• **A set of environmental measures.** These incorporate the technical instructions for applying sustainability criteria in 12 specific fields of activity and a list of possible environmental criteria for those fields beyond the scope of the technical instructions.

• **A set of cross-departmental measures linked to technology and innovation.** This third line comprises a set of measures aimed at the following:

- Increasing the technological sovereignty of the City Council.
- Providing a public and open data infrastructure capable of guaranteeing privacy for the public and increasing the transparency of the municipal authorities.
- Incorporating new methodologies that enable the development of innovative and efficient digital services focused on the needs of the people.



These measures will have a knock-on effect on the other two lines of action (social and environmental) given that good management of innovation and technology is key to the development of better social policies (social housing, reduction of poverty or creating future jobs) and better environmental policies, as well as for enhancing their effect.

A good example of this desire is Barcelona City Council's membership of the Electronics Watch (<http://electronicswatch.org/ca>) project for responsible public procurement and employment rights in the electronics industry. This membership has also led to the inclusion of certain clauses in procurement contracts for electronic equipment in order to respect employment rights and safety regulations in the global supply chains for ICT products.

This strategy was adopted following **the publication of a mayoral decree on sustainable public procurement by Barcelona City Council (S1/D/2017-1271, of 24 April)**, the first article of which states a desire to promote public procurement that incorporates social, environmental, ethical and innovation measu-

res into the cause and purpose of municipal public measures:

- that guarantee the employment, social and citizenship rights of the people who execute the public contracts and the recipients or users thereof;
- that foster a circular and sustainable local economy;
- and that promote economic activity by small- and medium-sized enterprises, local micro-enterprises and, especially, social companies.

The decree incorporates the Guide on Social Public Procurement and the Guide on Environmental Public Procurement in order to raise the profile of and expedite the incorporation of social and environmental measures and clauses in future specifications, and foresees the possible incorporation of measures or instructions in other areas.

This guide seeks to define the measures linked to this third line of action (ICT and innovation).

1.4. Concept of ICT contracting and procurement for innovation

TECHNOLOGY CONTRACTING

The term ICT contracting is used to refer to any process for the purchase, maintenance or improvement of any element associated with the following areas:

- **Communication networks and infrastructures.** Including all those infrastructures that allow communication between two terminals or computers.
- **Hardware or physical element for the communication and processing of information (terminals).** Terminals act as points of access to the Information Society and are therefore of extreme importance, represen-

ting one of the elements that has evolved the most and continues to evolve: new terminals constantly emerge to harness the digitalisation of information and the growing availability of infrastructure for the exchange of this digital information. Various technological innovations have contributed to this situation and encouraged a conducive environment, because innovation in terminals goes hand-in-hand with innovation in services (given that the terminal is usually the element that limits access).

- **Software.** This is the set of computer programs, procedures and documentation that perform certain tasks within a computer.

- **Digital services.** A digital service is understood to be any service made available to users via the Internet or via any adaptation or application of the protocols, platforms or technologies used for the Internet or any other public or private network, and through which equivalent online services are provided to accompany their offline counterparts. They are essentially automatic and non-viable in the absence of information technology.

PUBLIC PROCUREMENT FOR INNOVATION

The City Council wishes to take advantage of the benefits of procurement for innovation and has defined a strategy involving the introduction of a series of measures to ensure its procurement activities foster innovation for the purpose of guaranteeing and increasing wellbeing for the people who live in this region. Innovation partnerships are a new way to enter into contracts and dialogue with the market in order to meet certain needs that cannot be resolved during standard contracting processes.

This new approach to public procurement stands as a fundamental tool for obtaining solutions that better meet the real demands of society and help companies be more competitive. The City Council stands as a driving force for innovation in the market.

It therefore seeks to stimulate the creation of new markets, new products, new production methods and new organisation or supply systems. The goal is to move away from public procurement that is highly detailed in terms of the technical specifications – often awarded according to best-price criteria – towards procurement that works through defining challenges and innovative sustainable solutions – often involving multiple players. This new approach will enable the emergence of innovative ideas and solutions that increase efficiency.

For more details, please see the Guide on Procurement for Innovation published by Barcelona City Council.

SCOPE OF APPLICATION OF ICT SERVICES

In terms of technology, the scope of application of this guide mainly consists of the following:

- **Acquisition of ICT software and solutions:** purchase of ICT applications and solutions, as well as licences for their use.

- **Development of services and applications:** development, maintenance and evolution of efficient and productive ICT solutions for the public and for municipal employees.

ICT infrastructures: deployment, oversight and control of ICT applications, services and systems for the City Council, including the administration of tasks related to the operation of infrastructures and applications.

SCOPE OF APPLICATION OF PROCUREMENT FOR INNOVATION

Barcelona provides a broad definition of the promotion of innovation in its strategy:

- It understands public procurement for innovation (PPI) as public procurement that harnesses innovative solutions (products, technologies and processes) emerging in the procurement process to encourage a greater impact on sustainable and inclusive growth in society.

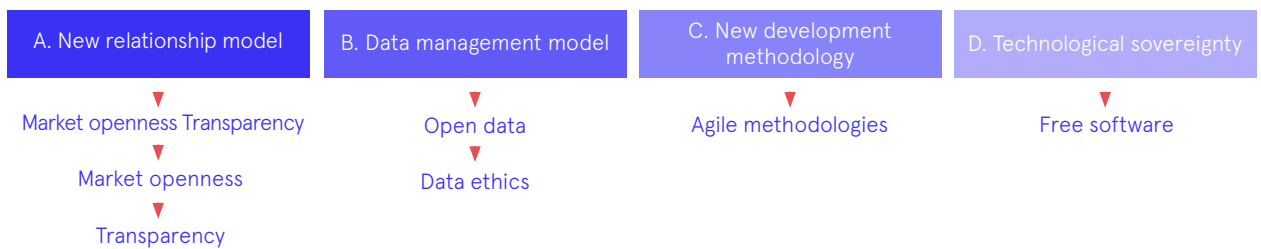
- For the same purpose, Barcelona also promotes the inclusion of innovation in its standard procurement; in other words, the procurement of any product or service with an aspect of innovation.

For more details, please see the Guide on Procurement for Innovation published by Barcelona City Council.

Measures and their application to procurement

2.1 Measures to be applied in ICT service procurement

The **measures** that must be applied in the new ICT service procurement model **are based around four actions lines:**



NEW RELATIONSHIP MODEL

The traditional vision of public authority action is based on the exercise of authority according to legitimacy under the law and the legal system. Hence, administrative procedure (and, therefore, public procurement) has been conceived as a closed and extremely regulated process. This concept has led to an administration model that often acts in an interventionist and authoritarian manner (in the sense of acting under unilateral procedures and from a position of strength).

In terms of public procurement, **this unilateral nature has led to the following results:**

- **Acquisition of not very innovative products and services** far from the cutting edge of the market due to the need to define all the requirements and features of the service or product prior to acquisition or selection.

- **Long and complex procedures** with a heavy administrative burden (and, therefore, significant costs for vendors) that have become an obstacle to accessing public procurement processes for small companies.

- Highly detailed and regulated contracts that are extremely rigid, which offer very little margin for adaptation to possible changes in circumstances or context during the contract term.

However, this paradigm is changing. The main lines of action being promoted by the City Council to build this new relationship and contracting framework are explained below.

PRELIMINARY MARKET CONSULTATIONS

The current legal framework includes the option to launch a dialogue between the contracting authorities and the market prior to launching a contracting process. The goal is to know and investigate the solutions being offered by the market to meet the needs that are the object of the contract.

Participation of market players during the contract preparation stage presents a series of advantages over the traditional contracting method. Specifically, the following:

- It gives the market a **better and more in-depth understanding of the needs of the public authorities** and therefore enables the solutions proposed to be better adjusted in terms of price and quality to what the public authorities require.

- It allows **the latest innovations in the market**, the latest open standards and latest free software to be included, which may be unknown to the public authorities, especially in highly dynamic sectors such as the field of information systems and technology.

- This is a contracting model with **more collaboration between the parties**, which facilitates closer ties between the public authorities and the reality of the market.

MARKET OPENNESS

A more open and transparent relationship with the ICT sector, with simpler, more efficient and more accessible procurement processes to lighten the bureaucratic burden and reduce the cost of accessing public procurement processes.

For example, make use of tender formats such as those based on framework agreements or electronic auctions, which enable the public procurement procedure to be simplified, in order to make them more accessible and less costly for bidders.

The negotiation-based tender procedure also enables essential direct contact between companies and the contracting authority, thereby guaranteeing equal treat-

ment, to define and adapt the offers from the market to municipal needs.

Complex procedures can prevent access to public procurement by SMEs and small vendors that lack the resources needed to tackle traditional documentation and procedural requirements.

For this reason, correct tender planning is important so as to make it easier for all potentially interested parties to prepare competitive bids, as well as plan their resources and have time to make the necessary investments.

The goal of minimising these barriers is to broaden the range of vendors that work with the IMI, thereby opening up public procurement to the ecosystem of local companies and professionals with talent, helping it to strengthen and grow.

TRANSPARENCY

Facilitating access by vendors and the public to accurate and up-to-date information on the ICT contracts of the City Council, **raising the profile of public procurement processes** and **increasing transparency** has highly positive effects on the openness and accessibility of these procedures:

- The public can know how its money is being spent and under which criteria, as well as the results and objectives achieved under the contracts already completed.

- Vendors can use a single point to access all the information associated with municipal contracting (planning, contracting, criteria and evaluation measures, strategic position of the City Council, etc.) in order to make it more accessible and facilitate their resource planning.

EXPECTED BENEFITS

The goal of this new relationship model is to **encourage more participatory, accessible, agile and flexible contracting procedures, with the following objectives:**

- **Reduce the administrative deadlines and costs associated with tender procedu-**

res, making them more accessible to new suppliers, especially local small- and medium-sized enterprises, which make up the core of the economic fabric.

- **Make public procurement processes more visible and increase transparency**, in order to make them more accessible and inform the public about how public resources are invested and under which criteria, as well as about the results and objectives achieved. **Facilitate and foster the procurement of innovative products and services, in line with the strategic objectives of the City Council in terms of ICT** (technological sovereignty, use of open standards, etc.) and incorporating the latest solutions in the market.

DATA MANAGEMENT MODEL

DATA SECURITY AND ETHICS

The volume of data generated nowadays offers a series of unbeatable opportunities but also poses new security-related challenges and risks. The City Council must ensure the security of data of the public and the city by protecting confidentiality and integrity, and guarantee quality by adding the appropriate mechanisms.

One of the challenges emerging from this new model is the balance between openness policies and the use of data and citizens privacy. The publication of data must always ensure that citizens privacy is maintained intact, even when various data sources overlap.

The data life-cycle must ensure that every stage is developed with ethical respect for the citizens; from how data are generated, stored and shared to the procedures and purposes for which they are used.

OPEN DATA

The openness of public sector data (open public data) is a movement being promoted by public authorities in order to make the best use of available public resources and current technological capabilities, presenting the information generated or kept by public bodies

and enabling access and re-use for the benefit of any interested person or entity.

This potentially high-value public information can relate to any topic or refer to any issue (pictographic documents, statistical data, study or analysis results, information on public services, etc.). Companies, researchers, other public institutions or the general public can make use of the information resources for any purpose, maximising the economic and social possibilities offered by this project: fostering management transparency, improving citizen services, generating business activities and social impact, and seeking efficiency of government.

For example, sharing data associated with mobility can facilitate the creation of smarter public transport networks, leading to reduced congestion, improved mobility for all and lower energy costs.

In a democratic city, residents must be able to use the shared knowledge base and add to it. Furthermore, active participation by the public can help resolve the challenges faced by the city.

EXPECTED BENEFITS FROM THE NEW DATA MANAGEMENT MODEL

The goal of this new data management model is **to enhance the value of the city's public information data and infrastructure, and guarantee** (as an essential requirement) privacy and responsible use of the data associated with the public and the use of municipal public services.

A new management model for the data resulting from the operation of services, applications and the exercise of municipal powers.

The goal is to provide a public and open data infrastructure for the development of innovative data-driven applications aimed at **better access to public services and improved quality of life while guaranteeing data sovereignty for the public.**

NEW DEVELOPMENT METHODOLOGY

New tools and technologies enable the end of the traditional life-cycle of system development structured as a series of highly specific stages of limited scope: definition of requirements, functional design, technical design, construction, testing, user testing, production and maintenance.

This translates into a highly significant reduction in time between requirements and roll-out (production). Generally-speaking, agile methodologies harness this reduction to **build applications more efficiently, more securely, more attractively and in a manner more focused on the needs of the end user.**

EXPECTED BENEFITS FROM THE USE OF AGILE METHODOLOGIES

The use of agile methodologies brings a series of advantages over traditional methodologies, especially in the field of digital service provision. Specifically, the following:

- More focus on end users, given that they are involved in the entire design, construction and maintenance process for applications and services.
- More flexibility and greater value. Increased flexibility in the execution conditions and encourage greater alignment between requirements and real needs.
- Facilitate and foster the procurement of innovative products and services that incorporate the latest solutions in the market.
- Shorten development times. Implement ongoing improvement. Systemise ongoing improvement based on short review and adaptation cycles.
- Transform the organisational culture. Place emphasis on collaboration and transparency.

TECHNOLOGICAL SOVEREIGNTY

The current way ICT service are provided that is mostly based on outsourcing and the use

of proprietary software has led to a certain degree of ICT vendor lock-in at Barcelona City Council. This dependency has certain undesired effects on the cost of procuring and using information systems, and the public authorities' ability to maintain and evolve them. In order to reverse this situation, a series of steps are being taken:

- **Foster the priority use of free software, and open architectures and standards** in order to help reduce dependency and vendor lock-in, moving towards technological sovereignty for the City Council. Furthermore, efforts are being made to promote and intensify the creation of solutions in a collaborative fashion with user communities and other public authorities.

This technological sovereignty – promoted with open standards – must also be a tool for the common good, generating a new economy, enriching the local ICT sector and facilitating knowledge exchange between different cities.

- **Define new contractual frameworks that take into account the required education and training of municipal technicians** involved in the software design and development projects in order to minimise dependency on third parties for the management of municipal services.

EXPECTED BENEFITS

The goal is to establish a preferential use of free software, and open architecture and standards, as well as to provide the City Council with the profiles and capabilities needed to regain knowledge of the ICT services associated with city management and control of digital services. The aim of this is to acquire technological sovereignty capable of leaving this knowledge as a legacy for the city itself. Other benefits include:

- Facilitating the re-use of systems and solutions, and improving efficiency in the contracting of information products and services.
- Reducing the costs associated with providing and procuring ICT services and products in the medium and long term.

- Guaranteeing interoperability between public authorities and between the various digital services of the City Council.

- Not forcing the public to use technology solutions from specific vendors.

- Guaranteeing technological sovereignty and independence from specific vendors

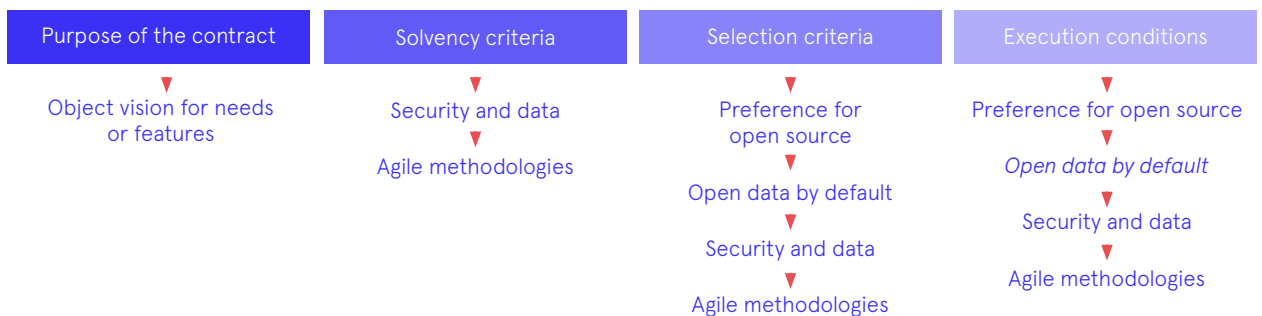
(avoiding vendor lock-in), and the ability to establish proprietary and transparent policies in terms of updates, security and incident management.

- Improving the ability to adapt and expand the digital systems of the City Council as needs evolve, and guaranteeing long-term sustainability.

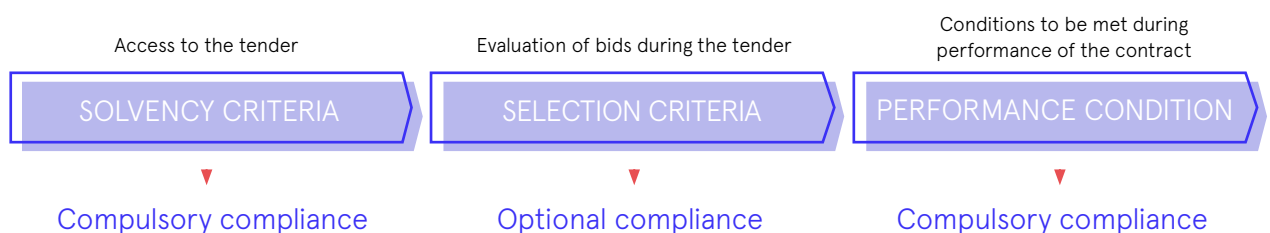
2.2 Applicability of the measures to ICT procurement

To facilitate the applicability of the strategic measures by the City Council and the IMI described in this guide to future ICT service contracts, the annex contains a series of

criteria or conditions that can be added to specifications (technical and administrative) based on the scope and purpose of the contract:



The incorporation of these elements into a public procurement process can be done in a number of ways, as briefly explained below.



Incorporation as solvency criteria

To facilitate participation by as many vendors as possible in the tender process, the criteria should be proportionate (not excessively restrictive).

The goal is to ensure that participating companies have the economic and technical solvency to provide sufficient guarantees regarding their ability to execute the contract.

Incorporation as selection criteria

Incorporation as selection criteria enables the value of those offers or solutions that best comply with the municipal strategy to

be highlighted. It should therefore be considered that the elements incorporated as selection criteria are optional, given that they are evaluation factors.

Incorporation as condition for performance

Incorporation as a condition for performance establishes an obligation for the successful bidder in the performance of the work object of the contract. Therefore, its inclusion in this block aims to ensure that the work is carried out under the conditions and guarantees required by the municipal strategy on ICT services.

3 Applicable regulations

In terms of public procurement:

- Directive 2014/24/EU on public procurement establishes the compulsory nature of electronic tendering in the third quarter of 2018, and regard to the use of electronic media for the communication and exchange of information (October 2017 for procurement centres).
- Spanish Royal Legislative Decree 3/2011, of 14 November, approving the consolidated text of the Spanish Public Sector Contracts Law.
- Spanish Law 39/2015 on common administrative procedure establishes, among other things, the compulsory nature of using electronic files and processing them electronically.
- Spanish Law 19/2014, of 29 December, on transparency, access to public information and good governance, establishes the active disclosure obligations that must be met by local council authorities, which include those relating to contracts and agreements.
- Mayoral Decree (S1/D/2017-1271, of 24 April), on sustainable public procurement by Barcelona City Council.
- Spanish Royal Decree 4/2010 (national interoperability framework) establishes, among other things, an obligation to comply with open standards and re-use code if it exists.
- Royal Decree 5/2010 (national security framework).

Glossary

This glossary includes a list of the key terms used in the documents that form the strategy towards technological sovereignty set out in the Digital Barcelona Plan 2017-2020. They have been defined using simple but clear vocabulary to ensure that everyone with access to the glossary can understand the meaning and significance of these terms regardless of their level of technical knowledge. The goal is to facilitate use and understanding of this guide.

FRAMEWORK AGREEMENT

An instrument used for the technical rationalisation of public procurement aimed at simplifying the contracting procedures while also reducing the costs associated with these procedures. It may imply significant advantages for both the public authorities and bidders, such as savings (of time and resources) in the administrative management of the contracting process or immediately providing a pool of bidders whose technical and economic solvency has been accredited.

A framework agreement enables a series of common terms or conditions to be established in a single process that are valid for multiple contracts arising while the framework agreement is in effect. Hence, any secondary contracting processes stemming from the framework agreement are quicker and easier.

Even so, it should be remembered that it can also lead to negative effects on competition given that, as a result of the official approval process, a certain degree of market closure may take place and collusion between officially

approved companies may be made easier. A limited term and scope of the framework agreement, as well as the definition of certain specific criteria for awarding secondary contracting processes, allow these adverse effects to be reduced.

OPEN SOURCE

The term *open source* defines any software that is published or distributed under an open licence.

The Open Source Initiative (OSI) is a highly prestigious non-profit organisation that has become an international benchmark working to set standards, train people and promote the advantages and importance of using open source.

According to the OSI, for software to be considered open software it must be published under a licence that meets ten conditions:

1. Free redistribution: it must be possible to give away or freely sell the software.

2. Source code: this must be included, public and freely available.

3. Allow amendments or derived works: the redistribution of amendments must be allowed.

4. Integrity of the author's source code: the licences may require that amendments be redistributed as patches only, leaving the original source code unchanged.

5. No discrimination against persons or groups: nobody can be excluded.

6. No discrimination against activity, line of business or endeavour: commercial user cannot be excluded.

7. Distribution of licence: the same rights must be applied to all those who receive the program, and the licence must remain intact when distributing or modifying the software.

8. The licence must not be specific to a product: the program cannot be licenced solely as part of a larger distribution.

9. The licence must not restrict other software: the licence cannot force any other software that is distributed with the open software to also be open source.

10. The licence must be technology-neutral: there can be no requirement to accept the licence by means of a mouse click or any other means specific to the support medium of the software.

A distinction must therefore be made between products such as free or open source software that give users the freedom to use it or improve it by providing access to the source code and allowing modification and free distribution from products that simply provide access to the source code but do not allow its modification or distribution.

Therefore, not all the products that offer the source code are necessarily open source or

free given that, although transparent, they do not allow its modification or distribution.

In this regard, it is important to note that – for all legal and contractual purposes – open source is the same as free software. The two movements differ in terms of their policy, philosophy and ethics.

Hence, in this guide, we will use the term open source as synonymous with *free software*.

COLLUSION BETWEEN COMPANIES

In the field of public procurement, this is an agreement in which two or more companies decide to act in a concerted fashion with regard to the terms and conditions for providing services or selling products under a tender process in order to minimise or even eliminate competition from the other companies taking part in the process.

The lack of real competition between possible bidders leads to an artificial increase in prices and worse service conditions, with the corresponding adverse effects on the public and the optimisation of public resources. Such practices may be especially common in certain contracting procedures, such as those taking place under the framework agreements. Given that there is a limited number of officially approved companies, it is easier for such concerted action to take place and a falsification of competition to arise in any subsequent secondary contracting processes.

PRELIMINARY MARKET CONSULTATIONS

A series of measures aimed at maintaining a dialogue between the contracting authorities and the market prior to launching a contracting process. The purpose of this practice is to facilitate a better understanding of the needs of vendors, to study and assess the broadest possible range of solutions that exist in the market, and to suitably define the characteristics of the tender.

These processes are especially recommended when the services to be contracted are particularly complex (and, therefore, so is the solution) or require innovative solutions.

SOLVENCY CRITERIA

A set of economic, organisational and technical criteria that accredit the capability of a bidding company and determine its viability for providing a certain product or performing a service.

VENDOR LOCK-IN

In the field of ICTs, a situation in which the vendor of a given technology product or service is in a situation of power over the buyer given that, once the product is implemented or service provided, the customer is not able to switch product or vendor due to the cost in time and money that the change may imply or due to a lack of viable alternatives.

This situation may arise from various factors, such as:

a) Use of proprietary software only accessible to the vendor that can therefore only be evolved or maintained under guarantee by the same vendor.

b) Lack of technical training of the customer or organisation that does not allow the service to be taken over using internal resources once it has been developed.

ELECTRONICS WATCH

Public sector institutions are large-scale consumers of ICT hardware, such as laptop and desktop computers, printers, screens and storage media, and often purchase these products under long-term contracts. This can therefore create market opportunities for companies that commit to respecting labour law and safety guidelines in global supply chains, making them responsible for any breach.

Electronics Watch is an independent watchdog that helps public sector buyers fulfil their responsibility to protect the labour rights of workers in their global electronics supply chains.

OPEN STANDARD

An open standard is one that meets both of the following conditions:

a) It is public and its use is available for free or at a cost that does not prevent accessibility.

b) Its use and application do not depend on the payment for an intellectual or industrial property right.

As regards those standards not included in the catalogue legally established as “open”, the IMI adopts the following definition:

• **Free to use and free of charge.** Any intellectual and industrial property rights required for implementing the standard (including “essential” patents) must be made available to everyone irrevocably and for free (royalty-free). Reversible agreements on royalties and variable price formulae are not acceptable, as they can create problems for free and open source software and for innovation. In principle, they will not be used unless their use is justified by law. Clear authorisation must exist to allow the use of intellectual or industrial property rights in free or open source software projects. Furthermore, the rights in the text of the standard must allow it to be reproduced and redistributed without restriction or need to sign an agreement.

• **Non-discrimination.** The standard must not establish technical or legal clauses that limit its use by certain groups or to a specific purpose.

• **Complete information.** The information available is sufficiently complete for multiple implementations of the standard, within a commercial competition framework, so that these implementations are interoperable. The components, interfaces, extensions and protocols must meet the same conditions as the standard in order to prevent, in practice, the market being dominated by applications or solutions that implement restricted versions of the standard.

• **Open collaboration.** Development of the standard must take place within a transparent process of consensus, open to effective participation by all stakeholders. Preferably, governance of the standard is the responsibility of a non-profit organisation. Under no circumstances will standards that are dominated by one organisation or group be accepted. Standards that are actively and permanently maintained are preferred.

MARKETPLACE

A technology platform that will facilitate relations in the field of public procurement between service or product vendors and buyers, in this case the municipal authorities.

The purpose of this platform is as follows:

- To become a point of reference and access to all the information associated with municipal public procurement (information on the municipal procurement strategy, the planning of future procedures, ongoing procedures, tender results, etc.).
- To facilitate the procurement of ICT goods and services for all municipal bodies and entities via an electronic market, with the ultimate goal of completing a transaction under the best possible conditions.
- To facilitate communication between the public authorities and its vendors.
- Furthermore, the platform seeks to offer information to the public, make public procurement processes more visible and increase transparency.

AGILE METHODOLOGIES

A set of methodologies used in the field of software development and maintenance based on iterative short-term (typically lasting from one to four weeks) processes that lead to the initial delivery of a partial but operational product and various consecutive versions with increasingly complete features.

Through constant iterations, these methodologies seek to provide value from the very beginning of a project, as well as enable continuous development of the product. Their goal is to introduce improvements and ongoing product evolution until a final result of excellence is achieved that fully responds to all user requirements.

Such iterative strategies allow risks to be minimised because each iteration is viewed as a miniature project and includes all the necessary stages: planning, requirement analysis,

design, coding, user testing and documentation. Thus, any implementation problems, adaptation to requirements and risks in a project come to light earlier and the corrective measures are less costly and more immediate than in a traditional development project (in which they tend to come to light during the final stage of the project, following months of evolution).

Furthermore, agile methodologies are focused on user satisfaction because they require active user participation in the project during both conceptualisation and development (via validation of the partial deliveries). This ensures that the final product responds to the needs of the user and meets user expectations.

NEW ECONOMY

Also known as the *knowledge economy* or *digital economy*, it is dominated by the use of information and especially the data (becoming one of the most valuable and precious goods) generated through the use of digital services and technology or communication products.

Within this new context, in which the Internet stands out as the main production channel and tool, companies are valued for their ideas, information or capacity to do more with less. On the one hand, business can be done with the whole world and, on the other, the level of interactivity offered by the Internet allows products to be adapted to consumer tastes at great speed. However, the avalanche of information and possibilities offered by the Internet leads to the emergence of new intermediaries, those known as infomediaries, which bring added value by organising information for users.

OPEN DATA¹

Within the scope of the public sector, this refers to the data sets made available to the public for reuse and republication with the main goal being to make maximum use of available public resources by presenting the information generated or kept by public authorities and enabling access and re-use for the benefit of any interested person or entity.

¹ Spanish Law 37/2007 on the re-use of public sector information.

This potentially high-value public information can relate to any topic or refer to any issue (pictographic documents, statistical data, study or analysis results, information on public services, etc.). Companies, researchers, other public institutions or the general public can make use of the information resources for any purpose.

The goal is to maximise the economic and social possibilities offered by the data that is stored: foster management transparency, improve citizen services and generate business activities and social impact while always in search of efficient governance.

INDUSTRIAL PROPERTY²

A set of exclusive rights that correspond to one person or entity over an invention or other immaterial creation produced by that person (patents, brands or industrial designs) which may be susceptible to use by third parties.

Industrial property grants a series of exclusive rights that allow the person holding them to decide who can use them and how.

These rights are granted via a procedure undertaken by the competent body (in Spain, the Spanish Patent and Trademark Office) and they are protected throughout the territory in which the body has power.

INTELLECTUAL PROPERTY³

Intellectual property comprises the set of personal and property rights that correspond to the authors and other owners over the works they create (in the case of ICT, software developments and features).

DATA SOVEREIGNTY

The decision-making and self-management powers of an individual or legal entity over the information thereon held by a third party, making the former also responsible for the use and consumption thereof.

TECHNOLOGICAL SOVEREIGNTY

Technological sovereignty implies a high level of decision-making and self-management powers for an organisation or entity (in this case, the City Council) over the technology used in a certain field, as well as the ability to maintain and evolve the same according to its principles and needs.

This approach contrasts with the traditional ICT service supply dynamic, which has partly been based on the use of licensed proprietary software.

These dynamics have led to a dependency on technology vendors.

FREWARE

A type of software that is distributed for free but has a usage licence that prohibits other users from modifying or, in some cases, freely using its code. The user has no access to the source code.

FREE SOFTWARE

Software that can be used, studied and modified without restriction and that can be copied and redistributed, either in a modified or unmodified version with no restriction or with certain minimum restrictions to ensure that the future recipients also have these rights. This should not be confused with freeware. Generally-speaking, it can be said that a program is free when it allows the four freedoms defined by the Free Software Foundation:

- The freedom to run the program as you wish for any purpose (freedom 0).
- The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbour (freedom 2).

² Patents and models: Spanish Law 24/2015, of 24 July, on patents. Hallmarks: Spanish Law 17/2001, of 7 December, on brands. Industrial designs: Spanish Law 20/2003, of 7 July, on the legal protection of industrial design. Semiconductor topographies: Spanish Law 11/1988, of 3 May, on the legal protection of semiconductor product topographies.

³ In accordance with the provisions of Spanish Royal Legislative Decree 1/1996, of 12 April, approving the consolidated text of the Spanish Law on intellectual property.

- The freedom to distribute copies of your modified versions to others. By doing this you can give the whole community a chance to benefit from your changes (freedom 3). As is the case for freedom 1, access to the source code is a precondition for this.

In this guide, the term free software is used as a synonym of open source.

PROPRIETARY SOFTWARE

Proprietary software is any software distributed under licence that is not free or open source, and that does not allow free modification or adaptation and redistribution by another user. Generally-speaking, the source code is not available to third parties.

ELECTRONIC AUCTION

Iterative negotiation process for bid selection that includes an automatic electronic bid evaluation device based on price and other variables with no intervention by the contracting authority in the evaluation of auction variables. The process requires a first evaluation of the bids submitted by vendors, which are then invited to attend the auction so they can offer improvements in the evaluation variables (price or other variables).

This is not a contracting procedure but rather an instrument or tool applicable to various contracting procedures, provided that the nature of the service or product subject to procurement makes this possible under the provisions of the Spanish Law on public sector contracts.



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