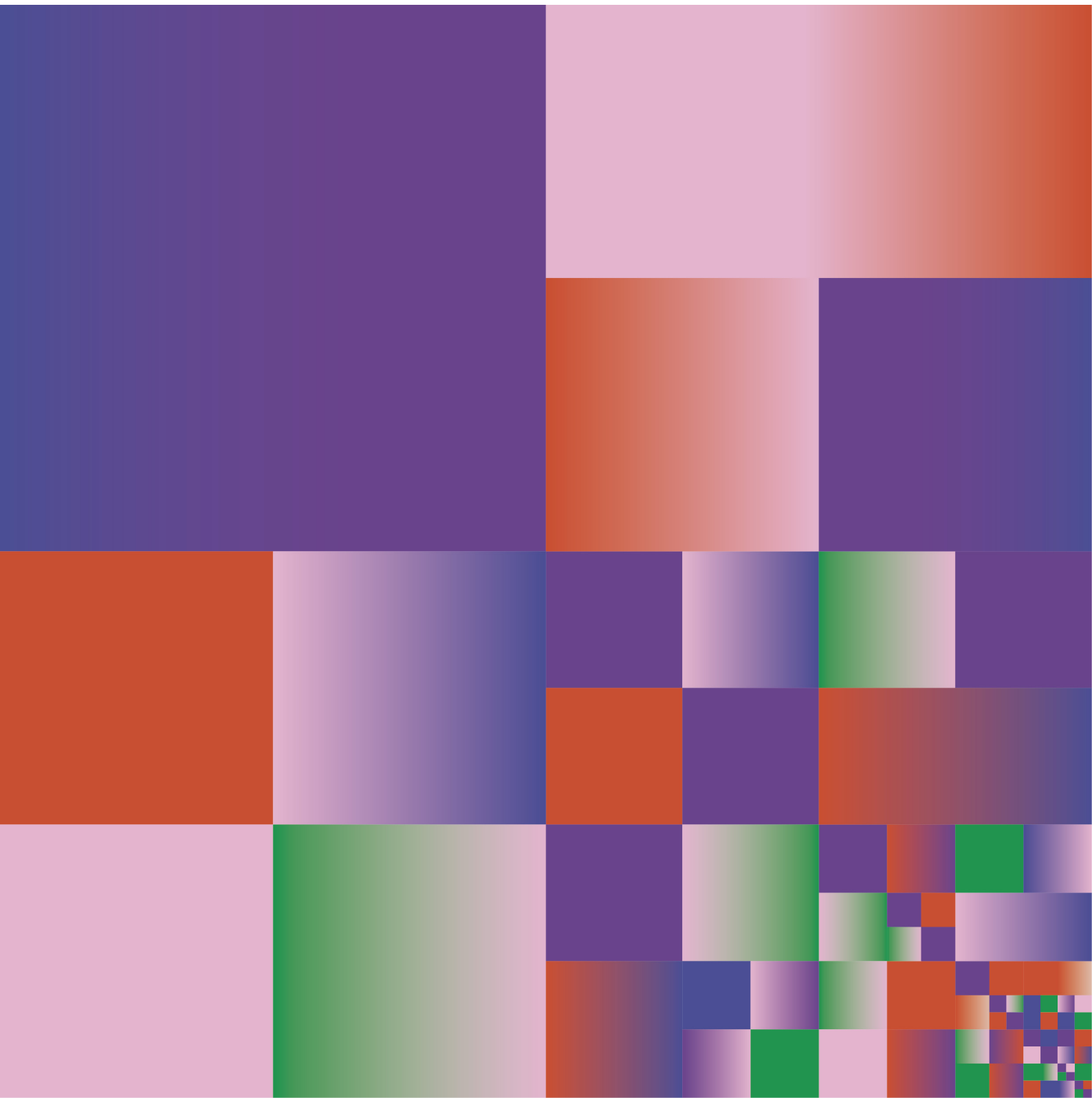




Ajuntament
de Barcelona

Government Measure. Boosting Urban Innovation in Barcelona.

October 2021





Strategy for the promotion of urban innovation in the city of Barcelona from the Commissioner for Digital Innovation, e-Government and Good Governance.

This government measure has been prepared and drawn up by BIT Habitat Foundation.

Due to the cross-cutting nature of its content, the team at BIT Habitat has worked on it together with the foundations' governing bodies, which represent civil society, academia, the business community and the city's public administration.

Its Executive Committee includes the following municipal areas: Economy, Resources and Economic Promotion (Barcelona Activa); Urban Planning; Democratic Innovation; Innovation and Digital Transition; Social Innovation; Mobility and Infrastructures, and Fira de Barcelona. The Department for the Coordination of Administrative Procurement, and the Department for Internal Communication, Development and Staff Assistance Services have also joined the initiative.

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00. Introduction

We are living at a time characterised by profound transformations. One could say this is the best possible time to live in –a time of scientific and technological advances–, but it is also a time of scepticism and hopelessness in which the social progress of democratic societies is being called into question.

Whether or not this is the best possible time to live in also depends –even if only partly– on how cities evolve. Our cities can be places of progress and fairness in a changing world or become settings of increasing inequality, environmental pollution and social fragmentation.

The profound transformation we are going through will have a lasting impact on the coming decades. The cities of the future will be based on how we respond to the new challenges facing us. The future of Barcelona is still unwritten, and innovation can help us build a fairer and thriving city.

Why is innovation necessary?

The world is undergoing constant change, and the Covid-19 crisis has further accelerated this process, generating exceptional uncertainty on a global scale and affecting cities in particular. Everything is in a process of transformation, from international supply chains to social and political values, and we find ourselves in a new scenario where the questions have changed and we are forced to innovate in our responses. Social needs are changing, and we must come up with new policies and a new range of public services that meet the new demands of citizens.

In view of this, cities must be prepared to handle change. The problems of this world in the process of deglobalisation and fragmentation are reaching cities, just like the integration and globalisation process did over twenty years ago. And we need innovative solutions. By transforming our city, we are helping transform the world. And in this process no policy is too small, no innovation too irrelevant.

Why Barcelona?

Barcelona has a long history of innovation based on a creative, critical, inquisitive and collective way of dealing with the city's challenges. Barcelona is currently a leader in urban innovation and, as such, has the right conditions to make a quantitative and qualitative leap in this field.

Barcelona is calling for innovation for the good of the city. Innovation isn't just about scientific and technological research and development: it must pervade all public policies in order to meet the social, economic and environmental challenges we are facing. In order to achieve this, we must take joint, collective and participatory action, fostering interaction and open dialogue between the various disciplines and actors involved.

Innovation must be carried out responsibly and with the aim of transforming, in order to create actual, tangible and long-lasting impacts. Innovation in Barcelona is the right way to collectively address the complex challenges facing the city and its metropolitan area.

Why have we created a government measure?

This is the time to give a new boost to innovation in Barcelona, agreeing on the definition of this term, its purposes and its intended beneficiaries, scaling up and further extending the solutions that work, and establishing coordination and collaboration mechanisms to jointly develop solutions for the city as it is today as well as for the generations that will live in it in the future. We must also make it easier for more people, associations and businesses to become involved in innovation processes and minimise their possible negative effects on inequality and exclusion, always ensuring that no one is left behind.

This government measure formalises and shapes the strategy of promoting innovation in the city as a means of leverage for transformation and acceleration to improve people's quality of life, fight climate change and foster urban resilience.

To do so, the measure establishes four main lines of action:

- **Internal innovation within the City Council**, promoting change in the administration's innovation culture
- **Innovation with the entire ecosystem**, driving innovation with the city and its people
- **Innovation in public management**, structuring methodologies and coordinating new tools to drive innovation
- **Speeding up innovation processes**, promoting the city as a natural space for experimenting

The municipal government is thus seeking to use innovation to drive the city's social, economic and technological transformation and use it as a tool to consolidate Barcelona as a European and world leader.

Laia Bonet Rull

Deputy Mayor for the 2030 Agenda, Digital Transition,
Sports and Territorial and Metropolitan Coordination

01. Context

Barcelona, an innovative city

Barcelona has a long history as an innovative city of international renown. It is the fourth most innovative city in Europe¹, and the sixth in terms of innovative activity and number of start-ups². It is also considered the world's fourth most attractive city for foreign R&D investment³.

This is because of its rich innovation ecosystem. On the one hand, its active, informed and critical citizens are involved in, and lead the processes of change aimed at making constant urban improvement, either by trusting the democratic institutions that govern them or by steering them in a specific direction.

And, on the other, it has a dynamic and enterprising private sector and a set of consolidated world-renowned and respected knowledge and research institutions.

The role of a receptive and responsible local government is also worth noting. In order to ensure a cross-cutting approach to innovation, the municipal government has people tasked with promoting it in different areas and departments, aligning goals and sharing tools.

Barcelona's innovation strategy is the perfect starting point for taking a step forward and structuring a strategy for the promotion of innovation in the city.

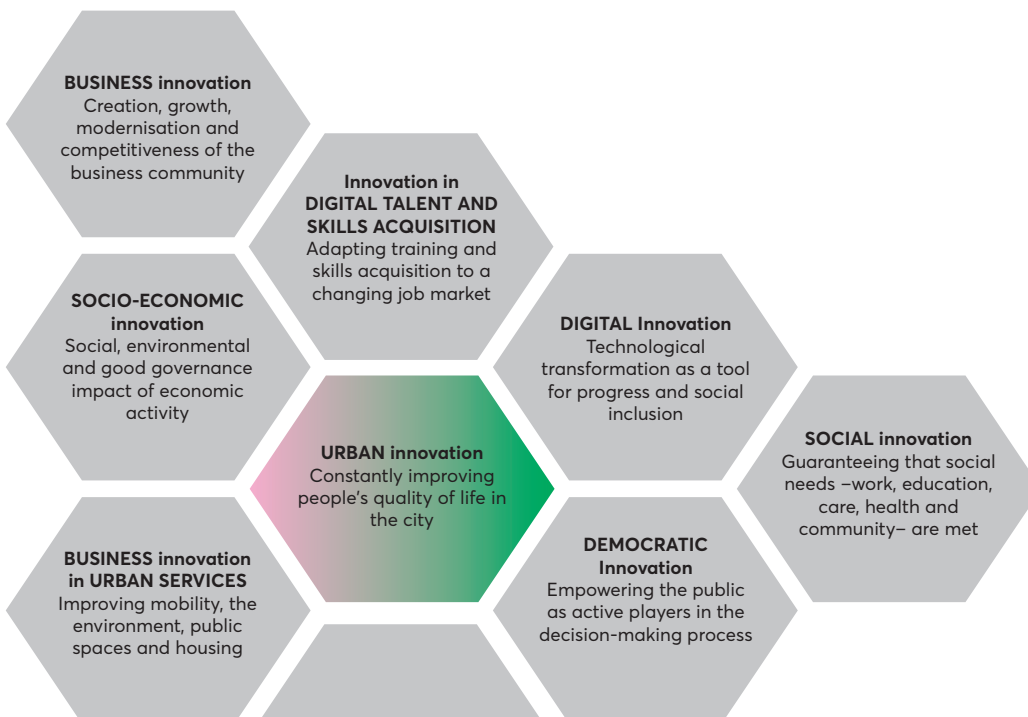


Figure 1: Barcelona City Council's innovation promotion structure, in which the various priority areas are identified.

¹ Nature Science City Index, 2020.

² Mobile World Capital, 2019.

³ Global Cities Investment Monitor, KPMG, 2019.

Barcelona's innovation path can be seen in its ability not only to conceive and design ambitious, cutting-edge strategies, plans and programmes but also to experiment with them and carry them out dynamically and ambitiously.

Barcelona's features and the way the city does things have been reflected in various areas of local governance, causing the city's approach to promoting urban innovation to be in constant evolution.

A PLANNED AND DYNAMIC CITY

The Cerdà Plan, which dates back to the 19th century, is part and parcel of Barcelona's current urban form, but its transformation and opening up to the sea for the 1992 Olympic Games are also an essential part of the city. In terms of more recent changes, the development of the city's innovation district, 22@ Barcelona, is particularly worth noting as the regeneration of an old industrial area that has become a world leader in urban regeneration, achieving a balance between economic growth and the social needs of the area. In the last few years, in accordance with its innovative spirit, Barcelona has continued not only to design but also to deploy and carry out daring and ground-breaking projects, plans and policies in relation to urban planning and management. Of the most recent, the following are particularly noteworthy:

- ▲ **Tactical inclusive repopulation groupings (ATRI)**, a strategy to analyse how the available public housing stock can be increased by means of small housing developments that can be completed quickly and economically by transforming and upgrading buildings that still retain some construction potential.
- ▲ **Use of empty homes**, a project to attract private housing to house people in a situations of social exclusion. Any refurbishment works that may be needed are paid for by the programme and carried out by social associations in the city working on the social and labour market integration of groups at risk.
- ▲ **Tactical urban planning** actions in public spaces to adapt the city to its changing circumstances with quick, low-cost transformations that are further consolidated based on how people respond to them.
- ▲ Grants for the deployment of **energy efficiency** systems in buildings, such as solar power systems, or solutions to combat energy poverty, such as the **energy advice points (PAE)**, a service that provides information and support, and carries out any interventions needed to enable people to exercise their energy rights.
- ▲ Lab spaces to give businesses, universities, research centres and other interested organisations the chance to experiment with new technologies and check their proposed solutions before going to market. This testing is carried out in real scenarios, reducing projects' development time. The project for adding a **photovoltaic road surface** to establish the feasibility of applying this solution to Barcelona's streets, squares and access roads is particularly worth noting.
- ▲ The **Pla de barris programme (Neighbourhood Plan)**, which has an allocated budget to reverse inequalities between the different neighbourhoods in the city and carries out specific actions for the improvement of citizens' collective life while promoting social innovation practices and citizen action to improve and strengthen the neighbourhoods' social capital.
- ▲ **Boosting the 22@ district** with an urban regeneration proposal to create a mixed-city fabric of high environmental quality that improves residents' daily lives and production activities while ensuring that the area's dynamism and economic potential remain unaltered. The 22@ Office will be launched alongside the reactivation of the plan. It will provide a help and advice point for both businesses and members of the public with the aim of publicising the urban regeneration process and supporting the economic development of the area.

A SUSTAINABLE AND RESILIENT CITY

Scientific evidence has warned us of the effects of climate change worldwide, indicating that the Mediterranean area will be particularly affected. At the same time, people have become more aware of the need to live in healthier and more environmentally friendly environments. These two factors have driven Barcelona to take urgent and serious steps to foster a greener, more resilient and sustainable city. The goals of these measures include, among others, the preservation of biodiversity, the reduction of CO2 emissions and increased water savings. These highly innovative measures make it possible to speed up the cross-cutting changes needed to improve quality of life in the city.

Some of the most relevant actions and projects include:

- ▲ The **Barcelona Climate Emergency Declaration** of 15 January 2020, whose main milestones are carbon neutrality by 2050 and a 50% reduction in greenhouse gases by 2030.
- ▲ The development of the **Climate Plan**, which not only lays down the City Council's specific undertakings in this field but also works on four large areas to mitigate emissions, increase resilience against the effects of climate change, guarantee climate justice-related rights for the most vulnerable and encourage action by citizens working in this field. This takes the form, among other things, of the creation of a set of climate shelters.
- ▲ The programme **"Terrats vius i cobertes verdes" (Living Roof Terraces and Green Roofs)**, which drives actions to re-energise roofs, roof terraces and interior courtyards to maximise their performance from a social, energy and environmental point of view.
- ▲ Pedestrianising, transforming and naturalising streets in **green hubs** (such as Carrer de Cristóbal de Moura), and linking them to biodiversity shelters to preserve and help protect native plant and animal species.



Mobility is another key point when it comes to building a resilient and sustainable city. This is why Barcelona manages urban mobility as part of a complex overall system that forms the city model itself and defines its design, logic and operation in order to achieve accessible, fair, healthy and sustainable urban mobility conceived for people.

Some of the most recent mobility-related innovative projects are:

- ▲ The establishment of **superblocks**, urban spaces with specific boundaries in which pedestrians are given priority over vehicles, with less traffic and the recovery of public spaces for leisure and recreational purposes
- ▲ The modernisation and greening of the **bus fleet** with green purchasing criteria, such as buying hydrogen-powered electric fuel cell buses.
- ▲ Expanding the **bicycle lane network** and gradually adding pedestrian areas, with the pavement and road surface on the same level.
- ▲ The **Low Emission Zone** in the Barcelona ring road area, covering more than 95 km², which gradually restricts the circulation of the most polluting vehicles to protect air quality and the right to live in a healthy city.

THE DIGITAL, SMART AND INCLUSIVE CITY

Barcelona has embraced the paradigm of smart city since the early prototypes were first created by launching technological urban design solutions to optimise the management of the city's efficiency, functionality and energy savings.

Barcelona was one of the first cities to put in place:

- ▲ A free and accessible **Wi-Fi network** in the city's public spaces.
- ▲ A network of energy-saving **sensors** that, among other things, measure the quality of environmental vectors as well as noise and air quality.

In addition to applying digital technologies in urban infrastructures, we are currently working on using new technologies for the benefit of the public. The most recent projects are particularly worth noting:

- ▲ Social robotics programmes such as the **Intelligent Robotic Assistant (ARI)**, to improve quality of life for the elderly through the use of technology.
- ▲ Using **artificial intelligence** to control capacity in public spaces, such as beaches or markets.
- ▲ Expanding the fibre-optic **Wi-Fi network** to all public spaces, and deploying **5G** technology.
- ▲ Creating **mobile apps** to make public services better and easier to access and use: "**Barcelona a la butxaca**" (Barcelona in your pocket, which includes all the digitalised municipal services); **SMOU**, which encompasses some mobility services to make travel easier; and the **Barcelona + Sostenible Map**, which highlights the actions and initiatives carried out to increase sustainability in the city.
- ▲ **Citizen science** initiatives, projects designed by the world of academia in which members of the public help collect data and co-design measurement tools.

The fight against the digital divide and the open and ethical use of technology, as well as the projects that drive social, community and democratic innovation, have been present throughout the last few decades:

- ▲ The **citizen post box** as an e-government tool for the collection and management of citizens' comments and complaints in real time.
- ▲ The open-source digital citizen participation platform **Decidim Barcelona**, which enables members of the public, organisations and public institutions to organise themselves democratically at every level and carry out actions ranging from citizen initiative and consultation processes to participatory budgets.
- ▲ The public **Fab Lab Network**, which includes digital manufacturing tools to learn about the uses and opportunities provided by such technologies in an open, creative and collaborative way.
- ▲ The **Citizen Help and Information Office's personalized online system**, which provides the public with personal online assistance to supplement its the usual face-to-face services this Office provides.
- ▲ The **Open Data Barcelona** website, an online setting where citizens can access all the digital information generated or safeguarded by public bodies so it can be accessed and reused for the common good and for the benefit of any interested people and organisations.
- ▲ The **B-MINCOME** pilot project, which aims to assess the efficiency and effectiveness of combining a grant in the form of municipal inclusion support with active social and employment policies against poverty and inequality.
- ▲ The **Connectem Barcelona** pilot project, which is driven by the City Council with the active support of 30 organisations including entities and businesses and seeks to reduce the digital divide by providing Internet access, devices and skills acquisition training to 400 vulnerable homes in the city.
- ▲ The **Cibernàrium Antennas**, which can be found in the city's municipal libraries and other places in the city, provide a wide range of short introductory and advanced training materials to learn to use the Internet and new technologies. They help thousands of people at risk of digital exclusion every year.



A CITY OF KNOWLEDGE

Barcelona is the fifteenth largest city in the world in terms of scientific academic output⁴. With regard to authoring articles in high-quality research journals, Barcelona is eighth in Europe for scientific activity⁵.

In particular, health has always been a high priority for the city. The companies, research centres, professionals and hospitals in the healthcare ecosystem have placed Barcelona at the cutting edge of public health, biotechnology and the pharmaceutical industry. Some examples of this include the Barcelona Public Health Agency, which works in partnership with the medical and healthcare services to monitor risks and ensure the health of the general public, and the Barcelona Institute for Biomedical Research, a leading research centre that focuses on crucial matters relating to human health and disease.

Some of the most noteworthy recent initiatives are:

- ▲ The **Barcelona Health Hub**, established at the Sant Pau Modernista Complex since 2018, includes over 250 relevant stakeholders between start-ups, professionals, institutions, investors and large corporations, and aims to accelerate the digital transformation of the health sector.
- ▲ The **Barcelona Institute of Science and Technology**, a new complex for research and innovation in biomedicine, biodiversity and planetary well-being, which will be housed in the old Fish Market in the Ciutadella park. Here, biomedicine researchers will study high-impact diseases, such as viruses or cancer, and their relationship with the environment.
- ▲ The **Barcelona Art, Science and Technology Hub (Artech Hub)**, whose aim is to turn the city into a global research, training, dissemination, transfer and production hub in which the intersections between art, science and technology can be explored and developed in order to reinforce the digital transformation of society.

A CITY OF TALENT

The business community and Barcelona's public authorities are committed to socio-economic innovation, the attraction and retention of talent, the provision of support to start-ups and the launch of new businesses.

The following initiatives are particularly significant in this regard:

- ▲ The launch of **Barcelona Innovation Coast**, a new public-private platform created to boost urban innovation around Barcelona's coastal area and help diversify the city's economy.
- ▲ The recovery of the **Olympic Port** and the promotion of the **blue economy**, encouraging new uses to foster entrepreneurship, the practice of sport, gastronomy and dissemination, training and knowledge activities relating to the sea and maritime activities.
- ▲ The **transformation of the old Post Office building** to become the centre of the digital economy, with the aim of turning Via Laietana into an innovation hub by attracting technology start-ups.
- ▲ The refurbishment and transformation of **Ca l'Alíer**, a former industrial factory, into the Barcelona Urban Innovation Centre as a result of a public-private agreement between the technology multinational company Cisco, whose co-innovation centre is located here, and Barcelona City Council, which has turned this space into a public facility.
- ▲ The **IT Academy**, an innovative state-funded school for junior programmers that is open to all kinds of people, regardless of their academic backgrounds. The aim is to meet the growing demand for digital talent from the city's companies.

A GLOBAL CITY

Barcelona is a dynamic, cosmopolitan and enterprising city, and its infrastructures have connected it to the world. It has an airport, a port and a high-speed train network, all of which have been instrumental in its hosting of major international competitions and events.

Some highlights that position Barcelona as a global city are:

- ▲ The **Mobile World Congress and the Smart City Expo World Congress**, the most prestigious international mobile technology and smart city congresses respectively, as well as other smaller international events, such as the IoT Solutions World Congress, the Integrated Systems Europe (ISE) fair, Alimentaria Foodtech and the Boat Show, among others.
- ▲ In the field of leisure and culture and also enjoying international recognition are **Sónar** and **Primavera Sound**, two music festivals that every year attract not only the most prestigious artists but also many professionals from the music industry.
- ▲ In addition to these major events and congresses, there is also a local programme with free and open events for the entire city. These include, among others, **Smart City Week**, **Mobile Week** and **Primavera a la Ciutat**, which connect and get closer to the city's residents.

⁴ Ranking of Knowledge Cities, Polytechnic University of Catalonia, 2018.

⁵ Top 200 Science Cities, Nature Index, 2018.



AN ENTREPRENEURIAL CITY

Barcelona boasts an innovative and enterprising economic community.

The local economic development agency, Barcelona Activa, spends over €50 million per year on increasing the city's economic competitiveness by promoting high-quality employment, driving entrepreneurship and supporting a plural, diverse and sustainable business network.

Of the city's entrepreneurial initiatives, the following are particularly worth mentioning:

- ▲ The **network of public business incubators**, which provide support for those entrepreneurial projects with the most innovative and market growth potential and help them grow.
- ▲ The **business funding service**, whose main aim is to find public and private funding vehicles for business innovation.
- ▲ The lines of action to support the **social and solidarity economy and socio-economic innovation**.
- ▲ The **UX Lab**, a business innovation and prototyping service that seeks to facilitate product and service innovation processes for new and small businesses.
- ▲ The **"Pla Barcelona Fàcil" (Barcelona Easy Plan)**, whose aim is to boost Barcelona's image as a business and business initiative-friendly city.
- ▲ The **new hubs of economic activity** and business innovation, such as Palo Alto or the Olympic Stadium, among others, which connect with the city's residents.
- ▲ The **"Centre per la iniciativa emprendora" (Entrepreneurship Centre)**, Barcelona's central enterprise hub, which provides services, advice and specialist programmes to support entrepreneurship and innovation from day one.
- ▲ Support services and experimental **business innovation** projects to support the digital transformation process, particularly in the most traditional small businesses. Examples include Lab Comerç and the public-private initiative programme REconnectem, among others.

Barcelona currently has the right conditions to make a quantitative and qualitative leap with regards to innovation at a time when transformation is both wanted and needed.

This government measure formalises and gives structure to the mechanisms for promoting innovation in the city as a means of leverage for transformation and acceleration to improve people's quality of life.

Inclusive, responsible and transformative urban innovation to improve the city

Innovation identifies, deploys and adapts tools and solutions to improve people's quality of life and meet the world's greatest challenges in a way that is creative, critical, inquisitive and collective.

In order to enhance this innovative and long-lasting process, we must first incorporate innovations smartly, adapting new solutions and combining them with pre-existing solutions and ideas. In addition, we must also recognise and give form to those ideas, practices and initiatives that have been spontaneously developed and welcomed by the public and have a positive, actual and tangible impact on residents' quality of life.

The book "Innovación en políticas urbanas. Perspectivas, metodologías y casos" (Innovation in Urban Policy. Perspectives, Methodologies and Cases) discusses the different meanings that have been given to the concept of innovation⁶. Its authors define it as a concept and point out that in public sector innovation studies, innovation is usually described as "a process in which an idea, practice or object is created, developed or reinvented and perceived as new by the people or group that adopt(s) it"⁷. According to the book, other authors consider innovation to entail not just the existence of new ideas in an organisation but the fact that they have actually been developed. According to this, innovation is thus a new idea that is exploited, "put to work", with the intention of producing meaningful effects⁸ that will last over time. The need for innovation in the public sector stems primarily from the complex nature of new social problems and the uncertain and elusive nature of already-existing answers⁹.

Cities provide the necessary ingredients for innovation to thrive. Urban innovation is innovation in the urban environment, which takes the form of the three dimensions traditionally considered to make up a city: *urbs* (the built city); *civitas* (the citizens and communities) and *polis* (the city's government and organisation).

With the geographical concentration of people as their defining feature, metropolises have historically been places of social, cultural and economic exchange. Today, they still drive the greatest change, thanks to the speed at which information and ideas can travel within them, and the shape, complexity and diversity of their urban density foster places for meeting and debate.

However, although everyone seems to agree that cities are a natural setting for innovation, a distinction between them can clearly be made based on their likelihood of innovating. It is also worth noting that there are certain conditions that make a city more or less likely to produce innovation.

According to this, urban innovation depends on the type and form of the city, its entrepreneurial culture, institutional capacity and flexibility, social integration and permeability, environmental awareness, access to infrastructure and availability of resources.

Current social and economic dynamics put Mediterranean cities –close-knit and accessible densely populated cities with mixed uses– in the perfect position to innovate from a geographical point of view.

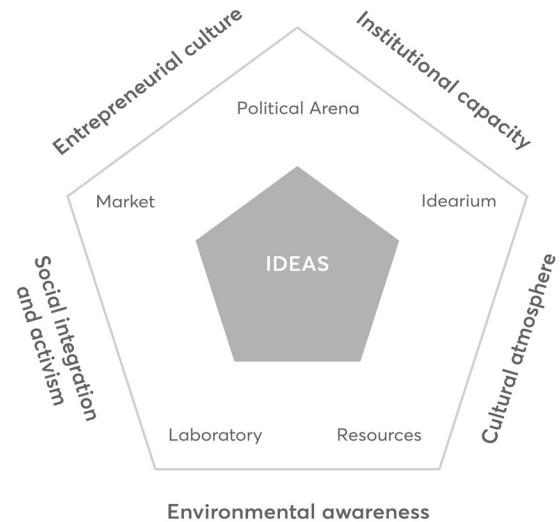


Figure 2. Conditions that make a city more or less innovation-friendly. Original source (G. Concilio; C. Li; P. Rausell and I. Tosoni, 2019)¹⁰.

Social composition is a defining feature of cities, which are characterised by complex and diverse communities.

This complexity and diversity of cities provides the perfect breeding ground for the interactions required for innovation, as this hinges on diversity and, often, on differences in people's perspectives, opinions and skills. Social diversity, whether it relates to gender, sexual orientation, ethnicity, culture, social class, religion or any other aspect, must become the main starting point for innovating in a way that is fair, inclusive, resilient and effective in the broadest possible way.

Current studies on innovation do not take the human factor into account, and there is a shortage of data to ascertain the role of women¹¹ and other groups in innovation processes. This leads to ignorance as to who, when, where and how innovation is carried out. In spite of this, the public administration has a duty to guarantee suitable conditions for the creation of socially and culturally diverse places and settings for innovation that reflect the city's richness and diversity and make it possible to rely on the variety of voices it includes both for innovating and for defining where and what innovation is aimed at. We must redistribute the opportunities for contributing to the city's production (by making it easier for more people, associations and businesses to become involved in innovative processes), and guarantee a fair and democratic redistribution of workloads and the results of their impacts (minimising any possible negative effects of innovation processes on inequality and exclusion).

⁶ C.J. Navarro, M. Parés, M. Martí-Costa, F. Díaz, A. Walliser, M.J. Rodríguez, O. Vázquez (2020). "Innovación en políticas urbanas. Perspectivas, metodologías y casos". Barcelona, Icaria Editorial.

⁷ Rogers, E. M. (2003). *Diffusion of Innovations*. New York: Simon & Schuster, p. 12.

⁸ Sørensen, E.; Torfing, J. (2011). "Enhancing Collaborative Innovation in the Public Sector". *Administration & Society*, p. 842-868.

⁹ Longo, F. (2012) "Innovación en gobernanza: Entornos colaborativos y liderazgos relacionales". *Ekonómiaz: Revista vasca de economía*, p.46-69.

¹⁰ G. Concilio i I. Tosoni (eds.), *Innovation Capacity and the City*, 2019. <https://link.springer.com/book/10.1007/978-3-030-00123-0>

¹¹ In the specific case of women, the report on Women and Innovation (2012) carried out by the Women, Science and Innovation Observatory (OMCI), which is affiliated to the Ministry of Science and Innovation, highlights the lack of data and the fact that. Most of the available data relate to technological innovation and the business sector, another area in which women are underrepresented. The report mentions that there is insufficient data to analyse other types of innovation (e.g. social, administration) with a higher percentage of women employed.



Innovation for the right to the city today and tomorrow

The right to the city is one of the goals of urban innovation, just like the right to be involved in the processes of designing and deploying new solutions should be.

The right to the city must be seen as the guarantee that people will be able to access not only the city's basic goods and services, such as housing, water, energy or public spaces, but also the collective and community (and therefore non-speculative) production of our cities. This right entails rethinking the city so that we are all in charge of its improvement and responsible for it¹².

Innovation must be aimed at achieving transformation and must be able to meet people's actual needs. Innovating linearly and in a single direction –downwards (top-down)– is no longer enough. We must manage the impact of innovation processes openly and in agreement, recognising and formalising the multi-directional and complex nature of innovative processes (descending, ascending and horizontal all at once) and always with the city's future in mind.

Finally, when talking about the right to the city in terms of physical and social spaces, we are also talking about the right to the future. Innovation must be based on short and long-term time horizons in order to collectively and generously build solutions aimed at our city today but also at the future generations.

¹² C.J. Navarro, M. Parés, M. Martí-Costa, F. Díaz, A. Walliser, M.J. Rodríguez, O. Vázquez, op. cit.

The responsibility of managing urban transformation

It is in this described context that the City Council aims to establish itself as an entrepreneurial institution, following Mariana Mazzucato's entrepreneurial state theory¹³. This means not just managing and facilitating innovative activity in the city but also sharing in the innovation processes' own risks, impacts and benefits.

An entrepreneurial city council must be able to lead by co-creating, transforming, disseminating and educating, taking on a more active and proactive role beyond that of mere spectator or funding party. It has to humbly accept that its own role, although necessary, is not enough for urban innovation processes to take place, and it must therefore accept that it must become part of a multi-stakeholder dynamic.

This role of leading innovation from the local government must be carried out in the form of flexible planning actions –such as this government measure– that set the direction, setting and time scope of a medium-term strategy. And this also entails creating the right conditions for innovation, fostering new processes and allowing experimentation.

In addition, innovation ecosystems must be given a qualitative definition, which must be based on symbiosis: i.e. they must be capable of existing together and benefiting from each other's interaction and cooperation dynamics. It is thus essential to foster public-private-community partnerships by designing agreements based on shared values and common city goals.

Public institutions play a key role in the promotion of innovation as, in addition to designing the regulatory framework in which it must thrive, they also manage and foster the mechanisms of innovation systems by laying down their foundations. These mechanisms will determine the value generated by innovation and ensure that the cost-benefit balance is ethical, fair and transparent.

This is why Barcelona City Council is committed not only to making the bureaucratic system more agile and flexible but also to going beyond this and launching and consolidating tools aimed solely at promoting innovation, whether they are financial in nature (investment funds) or in the form of co-innovation and co-leadership agreements between the public and private sectors and the community.

The City Council must become an entrepreneurial institution that not only manages and facilitates innovative activity but also shares in the innovation processes' own risks, impacts and benefits.

¹³ The Entrepreneurial State: debunking public vs. private sector myths. M. Mazzucato, 2013.



Complying with the 2030 Agenda and the sustainable development goals

Faced with the urgency of the great global challenges, in 2015 the international community outlined the 17 Sustainable Development Goals (SDGs), whose achievement is key to preserving the planet and ensuring that all human beings can live with dignity. These SDGs configure the 2030 Agenda, which was unanimously approved by all United Nations member states.

According to the 2030 Agenda, we must solve the 21st-century challenges with a fairer economic model that results in social cohesion and ensures the creation of wealth without damaging the climate or biodiversity. This means that we need to work differently, seeking new solutions. Innovation is key to achieving a sustainable world.

Barcelona has expressed its commitment to the 2030 Agenda in a unanimous statement of support from the City Council Plenary Meeting and in a government measure intended to bring municipal policies into line with the achievement of the 17 SDGs while seeking the complicity of the various stakeholders in the city and promoting Barcelona's leadership among the world's cities.

The pandemic has accelerated and magnified the challenges and problems identified in the 2030 Agenda, which affect the most vulnerable groups in a disproportionate manner. However, the Spanish and European recovery strategy through the Next Generation funds and the Green New Deal can reinforce the consensus strategy entailed in the SDGs to make the sustainability of life –of all lives– one of the main political priorities. This investment programme must be designed based on each region's environmental, social and economic needs. This is why cities in general, and Barcelona in particular, need to be at the centre of this recovery and transformation process.

BIT Habitat and the Barcelona Urban Innovation Platform: cross-cutting multi-stakeholder governance

BIT Habitat aims to promote the social, economic, technological and environmental aspects of urban innovation in Barcelona.

Starting off from a quadruple helix-based methodology with the involvement and collaboration of members of the civil society, universities and researchers, the business network and the public sector, with a significant international dimension, BIT Habitat addresses the challenges faced by cities. It drives initiatives to create a city that is more inclusive, safe, resilient and sustainable, as well as to improve its inhabitants' quality of life.

The foundation's working plan rests on four cornerstones:

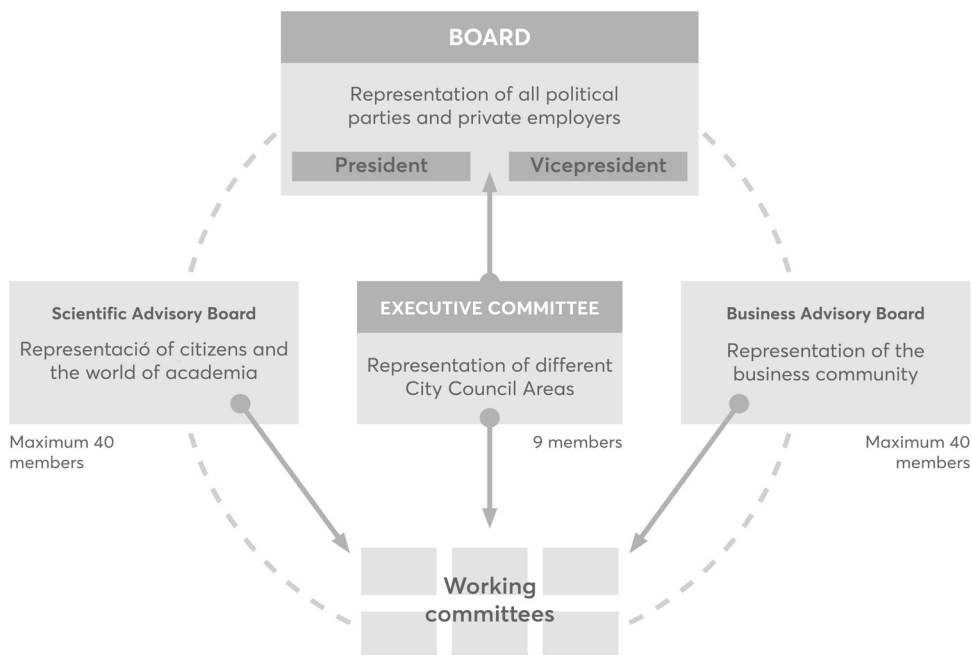
Co-creation: Co-designing and developing innovative solutions that transform and improve the city, resulting in an open, multidisciplinary and multi-stakeholder innovation ecosystem.

Transformation: Driving transformative actions capable of leading to actual, tangible changes in the city that have a lasting impact by means of projects and programmes resulting from collaborative, open and collective work.

Outreach: Informing and conversing with the public regarding the past, present and future of urban life, its management tools and the 2030 Agenda, and fostering civic thinking and collective intelligence in relation to the challenges cities face today.

Education: Promoting city culture among people of all ages to make sure they are familiar with the urban environment, live in it with awareness and become active, participative and critical actors in the city's transformation processes and dynamics.

BIT Habitat's governing bodies form what is known as the Barcelona Urban Innovation Platform (PIU), a place for dialogue, reflection and collective agreement involving all the members of the city's innovation ecosystem. The Platform features around 100 people from a variety of fields and disciplines whose role is to foster, support, accelerate, communicate, measure and assess innovation in the city, facilitating testing and working on reducing the barriers that hinder it.



Now more than ever, the members of the city's innovation ecosystem must work together to find solutions to complex problems and achieve a set of shared goals and visions with an increasingly less linear and more plural and interconnected approach.

The Barcelona Urban Innovation Platform is a place for reflection and dialogue between Barcelona City Council's departments and the actors of the innovation ecosystem.

The first agreement between the members of the PIU is set out in the document "Commitment to Boosting Innovation in Barcelona"¹⁴. This is a written statement that sets out the common and agreed narrative capturing the members' shared vision of what is understood by the term 'innovation', the purposes and people it should serve and the commitments made to promote it in the city.

BIT Habitat is based in Ca l'Alíer, a former factory located in the northern extension of the 22@ district. The facility has been consolidated as an Urban Innovation Centre, making it not just a meeting point and a place for housing urban innovation projects but also a catalyst for ideas, initiatives and activities.

¹⁴ Commitment to Boosting Innovation in Barcelona. BIT Habitat. 2021. https://ajuntament.barcelona.cat/digital/sites/default/files/commitment_to_boosting_innovation_in_barcelona_bithabitat.pdf

02. Why a government measure, and why now?

The Covid-19 pandemic has brought about unprecedented global uncertainty. This has had a particular impact on cities, which have seen their key characteristics –which are based on social proximity– threatened.

We are facing a new scenario, in which technology has become one of our main allies, as it strengthens our sense of belonging and allows for fast, efficient communication. However, the pandemic has at the same time highlighted inequalities regarding people, businesses and associations' technological knowledge and access. This has also exposed the key role of digital transformation in modern societies.

Furthermore, people are becoming increasingly aware of environmental issues, more critical of the prevailing lifestyles and more conscious about how technology affects our lives. All this has accelerated a change in our consumption model, not just with regards to resources, but also in relation to time and how we interact with each other.

The pandemic has accelerated public innovation processes and brought down barriers. Processing times have become shorter, and bureaucracy has quickly adapted to current needs. This is an opportunity to drive a change in both culture and habits to design new development models aimed at building a digital, green and inclusive future.

One of the most difficult barriers to innovation is people's resistance to change. The defining characteristic of 2020 and 2021 has been the need to bring about change in response to the exceptional circumstances caused by the social and health crisis. This is a unique time of change and transition for today's society worldwide. We have overcome resistance to change and must now use the momentum to ensure that the next steps are aimed at achieving ongoing and structural improvements. The time for innovation may be limited, and there is no time like the present to make it a reality.

Over the past months the city's government has not only proven that it is up to the task of addressing the complex emergency¹⁵ by responding with an agile, adaptive and democratic governance, but is also leading this change boldly and proactively to turn Barcelona into a healthier, fairer and more sustainable, competitive, connected and empowering city. The municipal government does this through a variety of programmes and policies, such as the Barcelona Green Deal, the urban and economic agenda for the next 10 years that deals with those challenges most sharply accelerated by the pandemic, such as the environmental and digital transitions.

The pandemic has accelerated public innovation processes and brought down barriers. This is an opportunity to drive a change in both culture and habits to design new development models aimed at building a digital, green and inclusive future.

¹⁵ According to the report [The Governance of complex emergencies: Covid-19. Actions, Organisational Adaptation and Innovation](#) from Barcelona City Council; a complex emergency is an emergency in which traditional types of management and governance are not particularly useful.



With the aim of supplementing and achieving integration, this measure identifies and provides a hierarchy, structure and legitimacy for the tools available for Barcelona City Council to speed up this change in order to innovate in its own services, processes and governance and accelerate innovation for and with the city.

03. Government measure

Goal 1: Promoting change in the administration's innovation culture

In order to bring about change and guide innovation in government, we must first focus on the people who drive it. Civil servants' skills and competencies and the way they work and organise themselves greatly affect the effectiveness of the public sector when it comes to innovation.

Public administration staff are increasingly outsourcing certain tasks. Tasks that don't fit within their daily routine are often outsourced due to a lack of technical knowledge, the right tools or time constraints. The technical team devotes most of its time to administrative work, wasting the chance to produce value internally, capitalise on the knowledge generated and increase and enrich its skills.

In fact, in a survey carried out in December 2020 by the Directorate of Internal Communications, Development and Staff Information Services, in which the managers and directors of Barcelona City Council were asked which value they most identified with their managerial work, only 22% mentioned innovation. Instead, they mentioned (in this order) other values such as agility, clarity and kindness.

Furthermore, in answer to the question "What do you most value about someone in your team?", only 3% of respondents considered whether people made innovative proposals to be important.

The results of this survey highlight that innovation is not currently perceived as a significant value in the public administration, neither in terms of its potential for improving internal organisation nor for its ability to transform the city.

This government measure is intended to change this by empowering civil servants so they can carry out innovative methods or projects and making the public administration an increasingly attractive workplace for talented people with a vocation for public service.

In order to achieve this, it is essential that the people in charge of the various administrative areas trigger and promote innovation. They need to be familiar with the current public innovation tools and methods and be actively engaged in the development and co-design of new tools to promote it.

In order to bring about change and guide innovation in government, we must first focus on the people who drive it.



Finally, we must take action to structure innovation in relation to organisation; i.e. formalising and balancing its role both horizontally — between areas— and vertically —by creating a new structure that becomes the main benchmark for innovation.

MEASURES

- 1.1: Consolidating BIT Habitat as the tool for the promotion of urban innovation.**
- 1.2: Design and deployment of a training programme to increase the innovation capacity of Barcelona City Council's staff.**
- 1.3: Creation and enhancement of the innovation officer role.**
- 1.4: Promoting participation in European projects.**

1.1: Consolidating BIT Habitat as the tool for the promotion of urban innovation

BIT Habitat will become consolidated as Barcelona's urban innovation promotion tool. Its role is to structure, coordinate and foster tools for the promotion of innovation at the City Council. In parallel to this, it works together with the city's innovation ecosystem by liaising between it and the City Council and providing a meeting point to foster coordination and the generation of synergies between projects.

As well as having a governance that naturally includes this ecosystem in its decision-making process, BIT Habitat manages the main tools and services that will enable innovation to become part of the public administration's daily tasks:

- Supporting the definition of city missions.
- Supporting the inclusion of innovation in public procurement processes.
- Innovation grant calls.
- Calls to respond to specific urban challenges.
- Public-private collaboration through the Urban Innovation Platform.
- Organisation of living laboratories in which all stakeholders can become involved in the design of solutions.
- Communicating with other cities and taking part in a variety of national and international working groups.

Ca l'Alíer, the seat of BIT Habitat's headquarters, has become established as an Urban Innovation Centre and the leading setting for the generation of debate about, and testing of, innovative solutions. Ca l'Alíer will have the following tools available to it¹⁶:

- A Fab Lab.
- An Urban Data Desk.
- An innovation laboratory.

INDICATORS	FREQUENCY
▲ Number of outreach activities carried out at Ca l'Alíer	Annual
▲ Number of people attending Ca l'Alíer activities	Annual
▲ Number of City Council areas involved in BIT Habitat projects	2021-2023
▲ Number of national or international networks in which BIT Habitat is involved	2021-2023
▲ Number of working groups with other entities and organisations in which BIT Habitat is involved	2021-2023

¹⁶ Detailed explanations of the tools can be found in Sections 4.1, 4.2 i 4.3 of the Measure.

1.2: Design and deployment of a training programme to increase the innovation capacity of Barcelona City Council's staff

An internal training programme enabling the public administration to gradually increase the number of qualified people willing to advocate for, and carry out, innovative projects and initiatives will be launched.

This programme, which is coordinated by BIT Habitat and the Directorate of Internal Communications, Development and Staff Information Services, will result in new spaces, tools and resources for individual and collective learning so that everyone at Barcelona City Council can become more adaptable to change and better able to meet the challenges faced by the public administration.

Staff members will be trained to, among other skills, use data correctly when making decisions; be familiar with, and use, all the necessary tools and methods to include innovation in public management; involve the public; seek and become more curious about new ideas and methods; and reproduce and prototype products or services.

INDICATORS	FREQUENCY
▲ Launch of a continuous in-house training programme to promote innovation-related skills (Yes/No)	2021-2023
▲ Number of City Council staff members who have had any in-house training on innovation	2021-2023
▲ Number of female City Council staff members who have had any in-house training on innovation	2021-2023
▲ Number of area managers and technical middle managers linked to innovation projects who are taking part in the training programme	2021-2023
▲ Number of hours of in-house training per year linked to the promotion of innovation-related skills	2021-2023
▲ Assessment of attendees' satisfaction with the training received	2021-2023
▲ Percentage of year-on-year variation in the City Council's innovation budget	2021-2023



1.3: Creation and enhancement of the innovation officer role

Innovation hasn't yet become a structural value at Barcelona City Council. There is a lack of mainstreaming and insufficient use of innovation-related learning and knowledge.

For this reason, the innovation officer role will be identified and created, with people who already belong to municipal teams tasked with leading innovation in their field. Innovation officers will be the benchmarks that will drive innovation up vertically within the organisation. They will liaise horizontally with other stakeholders through BIT Habitat.

BIT Habitat will help them use the most appropriate internal and external tools and resources for each project. It will also facilitate collaboration, through the Urban Innovation Platform, with the other stakeholders involved in transforming the city.

BIT Habitat will design a collaboration model between the various innovation officers that fosters the exchange of information on innovation projects and ideas between the various municipal areas.

INDICATORS

FREQUENCY

- ▲ Number of City Council areas and municipal companies with an innovation officer
- ▲ Percentage of female innovation officers in City Council areas and municipal companies

2021-2023
2021-2023



1.4: Promoting participation in European projects

Taking part in European projects is a clear and widely accepted way of establishing public-private-community relations and sharing the costs and benefits of innovation.

In addition to providing a vehicle for the receipt of financial aid from the EU, European projects are a great tool for innovating in the public sector. They provide a setting for collaboration with other cities, businesses, universities and civil society associations than would otherwise be hard to replicate, and they make it possible to explore new services and technologies in true citizen laboratories. Such projects are carried out in an international setting that promotes cultural exchange and the exchange of best practices and experiences from other cities, as well as making it possible to go beyond the usual discussion forums into more wide-ranging settings with new solutions and points of view. All this opens up opportunities for establishing partnerships and collaborations with other cities.

Participation in European projects will be promoted by supporting the municipal areas and their dependent bodies throughout the projects' life cycles. A European Office affiliated to the Directorate of International Relations will be created, and a support service for European projects will be launched within the Directorate of Internal Audit and External Resource Acquisition Services.

INDICATORS	FREQUENCY
▲ Number of projects submitted to calls for applications for European funding	2021-2023
▲ Number of projects selected / Number of projects submitted	2021-2023
▲ Percentage increase in European funding obtained by the City Council in its current programme compared to the previous one	2021-2023



Goal 2: Reactivating innovation with the city and its people

Investments in innovation must be carried out in a responsible and consistent manner. The projects and initiatives promoted must meet the real needs of the public. This is why it is key to include all the stakeholders involved, including the users and recipients of solutions, right from the start of the innovation process.

In order to succeed in this goal, we must create and formalise a place where this dialogue and these partnerships between all the stakeholders involved can take place, with a cross-cutting multi-stakeholder approach that ensures that the agreements reached will result in collective value and solve common city challenges.

The projects and initiatives promoted must meet the real needs of the public. To do this, it is key that people are included right from the start of the innovation process.

MEASURES

- 2.1: Involvement of the innovation ecosystem in the City Council's decision-making process through the Urban Innovation Platform.**
- 2.2: Support for the creation of public-private-community partnerships.**
- 2.3: Involving users in the final design of solutions and public services**

2.1: Involvement of the innovation ecosystem in the City Council's decision-making process through the Urban Innovation Platform

The Barcelona Urban Innovation Platform has been created as a platform for innovation in the city to structure, coordinate, increase and assess the impact of urban innovation processes and promote change in the administration's innovation culture.

Through exchange between its members and the prioritisation, planning and execution of specific cross-cutting projects, it aims to foster, support, accelerate, communicate, measure and assess innovation in the city, facilitating experimentation and aiming to reduce the barriers that hinder it.

Although innovative initiatives are currently promoted by all areas of Barcelona City Council, we must create cross-cutting multi-stakeholder working groups to make them easier to coordinate and ensure they are effective.

Thanks to the Urban Innovation Platform's support, the City Council's various areas will be able to:

- Present to the (Business and Scientific) advisory boards the strategic and cross-cutting projects that are relevant to the city, on behalf of the business community, the world of academia and the public, in order to obtain recommendations and comments from experts in the field.
- Request the creation of a working committee for specific subjects or fields of study, integrating the most appropriate Platform experts in each case, in order to carry out cross-cutting multi-stakeholder work.

In addition, members of the Urban Innovation Platform will be able to submit or propose projects that include a request for Barcelona City Council to answer a query or become involved in the project.

INDICATORS	FREQUENCY
▲ Number of municipal projects with PIU involvement	2021-2023
▲ Number of queries from the City Council to the PIU and the working committees	2021-2023
▲ Number of working committees created	2021-2023



2.2: Support for the creation of public-private-community partnerships

Public-private partnerships (PPP) and public-private-community partnerships (PPPC) make it possible to establish a relationship in which public, private and common resources are combined to achieve a goal that benefits both the private and public entities and the communities.

PPPs and PPPCs are tools for the improvement of people's quality of life through collaborations involving a combination of innovative private sector efforts, forward-looking policies created by the administration, the knowledge of non-profit organisations and the involvement of citizens themselves.

BIT Habitat will be the nexus between the government of the city and other stakeholders, facilitating and supporting the creation of partnerships that make it easier to carry out urban innovation projects.

INDICATORS	FREQUENCY
▲ Number of created and identified public-private-community partnerships that promote innovation projects	2021-2023
▲ Number of identified public-private-community partnerships that are in the process of talks and/or negotiations	2021-2023

2.3: Involving users in the final design of solutions and public services

In order to provide public services that match the public's real needs, we must address the design of solutions by putting users at their centre. This is precisely the aim of living labs, an interactive methodology that incorporates the quadruple helix in the definition and creation of innovative solutions to complex problems.

Living labs are open innovation ecosystems that focus on people. They are based on a systematic approach of co-creation with users that applies research and innovation processes to real-life environments and communities.

Ca l'Alíer's living lab programme is a testing environment in which users, the administration, researchers and businesses can co-create new services and products.

In addition to the living lab, and in order to ensure plural and diverse citizen involvement, BIT Habitat will continue to hold its annual innovation week with a variety of activities to test and reflect on the relationship between people, technology and the city.

In the sphere of education, BIT Habitat will launch a programme for primary and secondary schools to introduce the concept of the innovative city in classrooms and train a new generation of citizens that are more participatory, observant and critical of their environment.

INDICATORS	FREQUENCY
▲ Number of solutions developed/developed with users' involvement	Annual
▲ Number of attendees in co-creation and interaction sessions	Annual
▲ Number of female attendees in co-creation and interaction sessions	Annual
▲ Number of students involved in the innovative city education programme	Annual
▲ Number of schools involved in the innovative city education programme	Annual

Goal 3: Structuring methodologies and creating new tools to drive innovation

The City Council must become an entrepreneurial institution, something that entails not only managing and facilitating innovative activities in the city but also sharing in the risks, impacts and benefits of the processes themselves. An enterprising city council must be able to lead in the co-creation, transformation, dissemination and education of people, taking on a more active role beyond that of mere spectator or funding party.

The current public procurement system makes it difficult for the public administration to capitalise on its innovation investments. The various tools –bidding processes, grants, awards, agreements– are not enough to close the natural cycle of innovation processes: they merely involve concluding contracts, awarding grants or giving rewards for services and products that, once the public-private relationship (regardless of its legal form) has come to an end, are often no longer of use to the municipal strategy or the urban transformation of the local area and therefore no longer create public or collective value.

The administration is thus limited to funding the development of one of the TRL¹⁷ stages for a service or product without acquiring any rights to the technology developed, adopting it internally (the bidding process is not conducive to this) or sharing its value with the city.

We must therefore first identify, structure and update the tools for promoting and measuring the impacts of innovation, or create new ones if necessary, and make the bureaucracy more flexible wherever it is hindering progress. Secondly, we must guarantee a real distribution of the costs and benefits of innovation so that the City Council not only takes on the risk of innovation but can also gain a return that is proportionate to its effort and investment.

In order to ensure the distribution of the costs and benefits of innovation, we must identify, structure, update and create new tools to promote it and measure its impacts.

MEASURES

- 3.1: Steering innovation actions towards city missions.**
- 3.2: Fostering innovation in public procurement.**
- 3.3: Launching urban challenges.**
- 3.4: Systematisation of innovative public grants.**
- 3.5: Raising private capital for innovation.**
- 3.6: Developing a common impact assessment methodology.**

¹⁷ Technology Readiness Level (TRL) measures the state of development of a particular technology in the broadest possible sense (including devices, materials, components, software, work processes or others). There are nine technology readiness levels.



3.1: Steering innovation actions towards city missions

By steering the city's great challenges towards specific missions, we can set clear and specific goals to provide a framework for action and promote innovation. This approach focuses on the issues that need to be resolved rather than on the sectors or methods to be used for that purpose. Missions set the direction that solutions should be aimed at but without establishing in advance how to resolve problems¹⁸.

In order to achieve this, the City Council must take on an active role both with regards to the definition of missions in a plural and agreed manner and in terms of allocating the necessary resources. If the challenges and missions are shared, the effort will be carried out not only by the local government but also by the business network, the world of academia and the public, who will move in the same direction for a better achievement of the jointly defined city missions.

The definition of missions will be an open process involving the public and the city's innovation ecosystem with the active involvement of the Barcelona Urban Innovation Platform.

INDICATORS	FREQUENCY
▲ Definition of the city's missions (Yes/No)	2021-2023
▲ Involvement by the public and the city's innovation ecosystem in the definition of missions (Yes/No)	2021-2023

¹⁸ Mazzucato, M., & Dibb, G. (2019). Missions: a beginner's guide. UCL Institute for Innovation and Public Purpose.

3.2: Fostering innovation in public procurement

Innovative public procurement as envisaged in Act 9/2017 on public sector contracts is a new way of negotiating and entering into contracts with the market to meet those needs that cannot be met through ordinary procurement processes.

It is a culture and paradigm shift for the organisation that also stimulates the creation of new local markets, products, production methods, organisation or supply and provision of services.

While the City Council has its own Guide to Innovative Public Procurement¹⁹ since 2017, the Report on Sustainable Public Procurement²⁰, created in 2019, manifests that only 1,1% of the contracts are aligned with this model.

However, a comparison between 2018 and 2019 made in the same document also shows a marked increase in the inclusion of social, environmental and innovation measures (SEI measures) by both Barcelona City Council (+ 44%) and the four institutes under comparison –the Municipal Institute of Information Technology (IMI), the Municipal Institute of Education of Barcelona (IMEB), the Institute of Culture (ICUB) and the Municipal Institute of Social Services (IMSS) (with an average of 31%)– an increase of more than 60% in the case of many contracting bodies. Furthermore, in 2019 all the districts and directorates incorporated SEI measures in their bidding procedures. These were also included in 88.27% of the contracts analysed. Of these, 84.06% resulted in an award, which means that they accounted for 96.98% of the total amount awarded as at 31/12/2020. However, only 1.1% of these contracts contain specific innovation clauses.

These data show that there is a lot of room for improvement in this regard. We must therefore make a firm commitment to boost the number of public contracts involving innovative public procurement or containing innovation clauses.

A variety of actions aimed at publicising and disseminating these options will be carried out to support the actions of the Department for the Coordination of Administrative Procurement Services. In addition, a support service based at BIT Habitat to provide support in the process of identifying innovation aspects that may be applicable to the execution of the areas' procurement and expenditure will also be launched.

INDICATORS	FREQUENCY
▲ Number of bidding procedures containing SEI clauses	Annual
▲ Year-on-year variation in the percentage of contracts containing innovation clauses	Annual

¹⁹ Guide to Innovative Public Procurement. Barcelona City Council. 2017. http://www.ajsosteniblebcn.cat/guia-de-contractacio-publica-innova-dora-ca_84751.pdf

²⁰ Report on Sustainable Public Procurement. Barcelona City Council. 2019. https://ajuntament.barcelona.cat/contractaciopublica/sites/default/files/2019_memoria_contractacio_publica_sostenible_aj_bcn_i_grup_mpal.pdf



3.3: Launching urban challenges

An urban challenge is a way of approaching the resolution of specific complex needs and problems that require innovative solutions. Meeting a challenge starts with an open consultation involving the innovation ecosystem. This is an invitation to creativity that avoids specifically prescribing or requesting solutions. The challenge defines the desired impact without restricting how it is achieved.

BIT Habitat promotes, designs and adapts the format of urban challenges to the demands of any municipal area that chooses to use this method to test pilot projects and find solutions to any given need that requires the innovation ecosystem's involvement.

INDICATORS	FREQUENCY
▲ Total budget for the challenges launched by the City Council and BIT Habitat either separately or working together	2021-2023
▲ Number of challenges launched	2021-2023

3.4: Systematisation of innovative public grants

In 2020, at a time when collective innovation provided the answer to a global emergency, Barcelona City Council launched, through BIT Habitat and under the name "La Ciutat Proactiva" (The Proactive City), a line of grants for urban innovation projects whose positive results have led it to become an annual initiative.

The grants seek to promote urban innovation in an open, plural and multidisciplinary manner to find real solutions to the city's most immediate challenges.

"La Ciutat Proactiva" gives financial and technical support to projects that:

- Have a high impact; i.e. those that have a demonstrable, quantifiable and long-lasting impact;
- Work from the bottom up; i.e. those that are promoted by the innovation ecosystem by means of an open and non-prescriptive call;
- Can be carried out in the short term and will take no longer than twelve months to be executed;
- Are scalable and sustainable. In other words, projects that are financially and operationally sustainable for the duration of the project and after the end of the grant.

In spite of the grant's innovative nature, covering innovation mechanisms from the very design of the initiative to the assessment and follow-up of projects, grants currently help individual recipients (a single company or organisation) to develop or launch products or services. The benefit to the public sector is thus linked to the generation of public and collective value but with more rights over the solutions developed (whether such rights are for their adoption or scalability or for the generation of synergies with the ecosystem). In order to resolve this, Barcelona City Council is jointly leading a nationwide working group within the Red Innpulso network²¹ to review the tools and legal framework available to public administrations to subsidise innovation. The aims of this working group are to identify the common elements and criteria for the promotion of innovative public grants, to breathe new life into the local innovation ecosystem and to analyse the legal limits and draw up a forward-thinking legal proposal by drafting a new model of rules and a call for innovation-related grants.

BIT Habitat will apply and test the knowledge generated by this working group in the "La Ciutat Proactiva" call for urban innovation grants with the aim of sharing good practices with all the other organisations.

²¹ The Innpulso network is a project subsidised by the Ministry of Science and Innovation of Spain under which local administrations included in it seek to further define and implement innovative local policies.



INDICATORS

FREQUENCY

▲ Public innovation grant budget	Annual
▲ Inclusion of new regulatory elements in the innovation grant (Yes/No)	2021-2023
▲ Total amount of grants for projects under the "The Proactive City" call	Annual

3.5: Raising private capital for innovation

Steering public-private investment towards projects that are in line with previously established and agreed city missions requires us to define the financial instruments that will allow us to centralise capital and ensure its optimal management for all the parties involved.

This goal can be achieved through a variety of financial mechanisms:

- By creating a fund based on the same logic as venture capital: private investors co-finance the development of a newly emerging service or product and become the owners of any resulting assets.
- By designing a co-funding system that is directly linked to the "La Ciutat Proactiva" urban innovation grant call in order to meet the challenges outlined each year.
- By reaching agreements on corporate social responsibility if, on the one hand, the potential partner's or corporation's values as regards their commitment to the environment and cultural and social well-being are in line with city missions and, on the other, the actions linked to the agreement make it possible to achieve the expected impacts.
- The active search for private sponsorship for public innovation-related projects or initiatives so that the sponsoring company or organisation can improve its reputation or brand perception as its return for the investment.

INDICATORS	FREQUENCY
▲ Creation of funds (Yes/No)	2021-2025
▲ Number of private investment entities involved in innovative projects promoted by the City Council	2021-2025
▲ Amount of private capital, in euros, raised for innovation investment	2021-2025

3.6: Developing a common impact assessment methodology

Projects, plans and policies promoted by the various municipal areas must result in real, tangible and measurable impacts.

In order to achieve this, a list of indicators for easier monitoring of the implementation of the various innovation projects will be created. These indicators will harmonise and conform to the measurement metrics used to assess the results of each action both in relation to the goals of the 2030 Agenda and against each other.

This will make the assessment and comparison of the true impact of the municipal innovation-related programmes and projects, as well as the optimisation of public investment, more accurate and effective, ensuring that it is consistent with the social return achieved or the collective value created.

This is important not just for making public actions more transparent but also for ensuring the administration is constantly learning and improving.

This measure must be supplemented with sufficient information about citizen demands in order to calibrate actions and focus on the most critical needs.

INDICATORS	FREQUENCY
▲ Creation of a list of impact indicators (Yes/No)	2021-2023
▲ Number of projects assessed using the proposed methodology	2021-2023



Goal 4: Promoting the city as a natural testing ground

Barcelona is, and wants to continue to be, a pioneer in the adoption of new solutions and technologies to improve its residents' lives, but it is not willing to achieve this at any price. On the one hand, urban innovations need the city as a testing ground to check their usefulness, operation and creation of public value before being scaled up to products or services capable of being implemented and marketed. It is in the interest of the urban space (including the physical, social and political spheres) to volunteer as a testing ground to check whether the proposed solutions are useful and of interest to the city before scaling them up.

On the other hand, technology by its very nature is evolving much faster than the ability to create an appropriate regulatory framework to increase its likelihood of adoption by governments.

Barcelona City Council is working to ensure that both the development and use of technological innovations comply with the rules of ethics while guaranteeing the protection of citizens' digital rights.

At the same time, it is adopting and adapting technological innovations to make them as open, accessible and democratic as possible so that they may one day become a promotion vehicle for innovation itself.

It is in the urban space's (including the physical, social and political spheres) interest to volunteer as a testing bench to check whether the tested solutions are useful and of interest to the city.

MEASURES

- 4.1: Promoting digital manufacturing through the public Fab Lab Network and local facilities.**
- 4.2: Visualizing and interpreting data using the Urban Data Desk**
- 4.3: Creation and launch of the innovation laboratory**

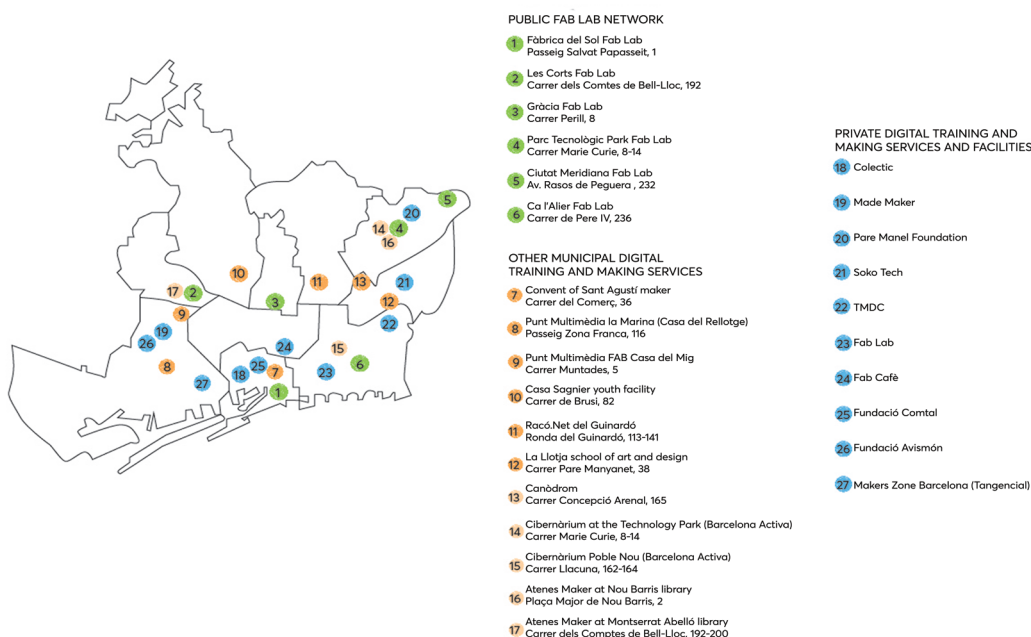
4.1: Promoting digital manufacturing through the public Fab Lab Network and local facilities

The public digital skills acquisition and inclusion services include a set of facilities known as "Ateneus de Fabricació" (Fab Labs), as well as some unique local facilities.

Fab labs are municipal facilities defined as settings for creation and training linked to new technologies and, in particular, to digital manufacturing, where individual members of the public, as well as associations, organisations, universities and businesses, can get involved in order to turn their ideas into physical products that are useful to society, but with sustainability, accessibility and social return always as key elements throughout the process.

The digital skills acquisition and inclusion services, particularly the Fab Labs, work under the principle of sharing and providing collective solutions to specific local problems, with great capacity for social innovation. Fab Labs are a tool that can transform resident's lives in practice as regards such basic issues as energy poverty, access to health, clothing and footwear, repairing objects and products, self-production of food, or artistic and cultural empowerment.

In order to consolidate the relationship between these local facilities and the territory and its communities, the Fab Labs' programme of activities will be expanded, and the proposals and initiatives of the other digital skills acquisition and inclusion services will be supported, with particular focus on expanding the digital manufacturing education programme and deploying the network with a new Fab Lab specialising in urban innovation at Ca l'Alier. The main aim of the Fab Lab Network (XAF) and other public services involved is to democratise digital manufacturing technologies by giving the city's residents fair access and skills acquisition training in the city's various districts.





INDICATORS

FREQUENCY

▲ Number of Fab Lab Network users	Annual
▲ Number of female Fab Lab Network users	Annual
▲ Number of schools that have implemented the Fab Lab Network educational programme	Annual
▲ Year-on-year variation in the number of schools that have implemented the Fab Lab Network educational programme	Annual
▲ Number of students who have followed the educational programme	Annual
▲ Number of social innovation projects promoted within the framework of the Fab Lab Network	2021-2023
▲ Number of outreach activities (within the framework of the family programme)	Annual

4.2: Visualizing and interpreting data using the Urban Data Desk

The Urban Data Desk (UDD) is an interactive urban and regional data viewer with several layers of georeferenced data to make it easier to access and manage urban data. It is a 6x4-metre horizontal screen controlled by four touch screens with access to city data managed and updated in real time by Barcelona City Council's Open Data Office. In addition, it is compatible with other open data servers. The UDD makes it possible to build different images of the city based on information on mobility, housing, public spaces, green infrastructure, flows and equipment, as well as by crossing or combining the above data. UDD platform has been designed as an open and scalable viewer to ensure that we can effectively adapt to the changing needs of data analysis.

The proposal envisages UDD viewing and interaction taking place on a local and physical scale in Ca l'Alie but also being accessible online.

On the one hand, the UDD seeks to provide citizens with an informative and educational tool to interpret the city by viewing data that can't simply be seen "on the street". And, on the other, it is a tool for aiding participation and decision-making, as it makes it possible to answer in an interactive manner questions on the physical, social, economic and environmental parameters that define the city. Interactions with the UDD are particularly aimed at multi-stakeholder urban co-design and co-interpretation and the multidisciplinary approach to the urban form.

A UDD use protocol will be designed and made available to every City Council area and the innovation ecosystem.

INDICATORS	FREQUENCY
▲ Full implementation of the UDD (Yes/No)	2021-2023
▲ Number of outreach and education actions that have used the UDD	Annual
▲ Number of participation and decision-making processes that have used the UDD	Annual

4.3: Creation and launch of the innovation laboratory

BIT Habitat, acting in partnership with the Municipal Institute of Information Technology (IMI), will promote the creation of the innovation laboratory. It will be housed in Ca l'Alier, and its scope of operation will be its surrounding area.

The Laboratory will be used to research, test and develop innovative urban services. It will be an open testing tool that will help accelerate the generation of urban improvement projects that need to be subjected to pilot testing in real environments to optimise and improve their operation.

Tests may be carried out both at Ca l'Alier (where most of the technological equipment will be housed) and on the street (by making the necessary equipment and components available).

It will be available for use by businesses, professionals, institutions and citizens after going through an assessment process and complying with a use protocol.

INDICATORS	FREQUENCY
▲ Implementation of the innovation laboratory (Yes/No)	2021-2023
▲ Number of collaboration agreements concluded to support the project	2021-2023
▲ Number of projects carried out at the innovation laboratory	2021-2023
▲ Percentage of innovation laboratory operating capacity used by the selected projects	2021-2023

04. Government measures and additional documents

- **Strategy for promoting the 2030 Agenda in Barcelona**

In view of the opportunity provided by the 2030 Agenda at local level, the City Council is setting out a strategy to achieve its goals. This government measure lays down the mechanisms to be used for this purpose:

- Strategic line 1. The 2030 Agenda at the City Council
- Strategic line 2. The 2030 Agenda in the city
- Strategic line 3. Barcelona 2030 international

- **Municipal algorithms and data strategy for an ethical promotion of artificial intelligence**

This municipal strategy is the first step towards developing the cornerstones for the application of emerging technologies, especially AI, at Barcelona City Council, helping to safeguard citizens' rights in the face of the automation of decisions that affect them.

- **Barcelona, city of talent**

This government measure aims to focus all municipal policies on those public and private initiatives that foster the generation, development, retention and attraction of talent, as the generator of sustainable economic activity with added value, and as a driving force for business innovation and competitiveness, for the creation of high-quality, inclusive employment that furthers social progress. Because a person's professional development cannot be separated from their life project, which is linked to the values of the city where it takes place.

- **A boost for 22@: Towards a Poblenou with a more productive, inclusive and sustainable 22@**

The aim of this government measure is to develop the 22@ Plan and shift Poblenou's neighbourhoods towards a more sustainable city model from an economic, social and environmental point of view. The main goals of the measure are:

- To improve the management and governance of 22@.
- To adjust the urban planning instruments to respond to the demands of the 22@ pact.
- To develop the district's economic, innovative and creative potential.
- To highlight Poblenou's culture and heritage.
- To promote unique projects that consolidate innovative and creative initiatives from the administration.



- **Social innovation 2021-2023: Transforming reality to improve the well-being of Barcelona's residents**

The government measure aims to prioritise and sort out a set of new or innovative projects that expand the functions of existing projects.

The main goals of the measure are:

- Improving our responses to social problems by increasing the quality, effectiveness and efficiency of municipal social policies.
- Facilitating the public's access to municipal social services by using digital and AI tools in public social policies.

- **BcnFemTech 2021-2023: gender equity in the ICT sector**

The government measure aims to achieve gender equity in the ICT sector.

The specific goals are as follows:

- Closing the digital gender gap by creating active employment policies and a skills acquisition training plan for women in the ICT sector.
- Giving visibility, recognition and support to women in Barcelona's ICT sector and co-creating joint actions.
- Inspiring and encouraging girls to pursue careers in technology from an early age.

- **Guide to innovative public contracting**

This guide sets out the principles and procedures for innovating at Barcelona City Council through procurement. It supplements the approved guidelines by introducing innovation linked to the development of economic, social and environmental sustainability and as a multiplying factor that helps create employment and economic growth and fosters social and environmental values while supporting those innovative companies that find solutions to the public's challenges.

- **Barcelona Green Deal**

Barcelona Green Deal is the city's urban and economic agenda for 2030, whose aim is to turn Barcelona, over the next ten years, into a more competitive, sustainable and fair city with the ability to meet challenges such as the green and digital transitions accelerated by the pandemic. The roadmap contains 38 measures, including urban transformations to revitalise or create strategic economic activity areas.

The strategic pillars are:

- Innovation, with the new boost for the 22@ district.
- Productivity, through the green reindustrialisation.
- People, by creating more superblocks and more sustainable buildings.
- Connectivity, by improving urban hubs and implementing 5G technology.



- **Barcelona Innovation Coast**

BIC is a new public-private platform that seeks to boost the urban innovation area around Barcelona's coastal area. It was created to help diversify the city's economy, providing more added value and creating quality jobs.

The City Council sees this project as an opportunity to establish Barcelona as southern Europe's innovation capital and as the mechanism for attracting and mobilising resources geared towards building a competitive and sustainable local economic development model.

- **Commitment to Boosting Innovation in Barcelona**

This document sets out the first agreement concluded by the members of the Urban Innovation Platform. A common and agreed narrative capturing the shared vision of what is understood by the term innovation, the purposes and people it should serve, and the commitments reached to promote it in the city.



05. Budget and monitoring indicators for the measure

Goals	Measures	Monitoring indicators	Frequency
<p>1. Promoting change in the administration's innovation culture</p> <p>Budget</p> <p>2021 1,193,194.36</p> <p>2022 1,143,194.36</p> <p>2023 1,143,194.36</p> <p>Total 3,479,583.08</p>	<p>1.1 Consolidating BIT Habitat as the tool for the promotion of urban innovation</p>	<ul style="list-style-type: none"> Number of outreach activities carried out at Ca l'Alier. Number of people attending Ca l'Alier activities. Number of City Council areas involved in BIT Habitat projects. Number of national or international networks in which BIT Habitat is involved. Number of working groups with other entities and organisations in which BIT Habitat is involved. 	<ul style="list-style-type: none"> Annual Annual 2021-2023 2021-2023 2021-2023
	<p>1.2 Design and deployment of a training programme to increase the innovation capacity of Barcelona City Council's staff</p>	<ul style="list-style-type: none"> Launch of a continuous in-house training programme to promote innovation-related skills (Yes/No). Number of City Council staff members who have had any in-house training on innovation. Number of female City Council staff members who have had any in-house training on innovation. Number of area managers and technical middle managers linked to innovation projects who are taking part in the training programme. Number of hours of in-house training per year linked to the promotion of innovation-related skills. Assessment of attendees' satisfaction with the training received. Year-on-year percentage change in the City Council's innovation budget. 	<ul style="list-style-type: none"> 2021-2023 2021-2023 2021-2023 2021-2023 2021-2023 2021-2023 2021-2023
	<p>1.3 Creation and enhancement of the innovation officer role</p>	<ul style="list-style-type: none"> Number of City Council areas and municipal companies with an innovation officer. Percentage of female innovation officers in City Council areas and municipal companies. 	<ul style="list-style-type: none"> 2021-2023 2021-2023
	<p>1.4 Promoting participation in European projects</p>	<ul style="list-style-type: none"> Number of projects submitted to calls for European funding. Number of projects selected / Number of projects submitted. Percentage increase in European funding obtained by the City Council in its current programme compared to the previous one. 	<ul style="list-style-type: none"> 2021-2023 2021-2023 2021-2023
	<p>2. Reactivating innovation with the city and its people</p> <p>Budget</p> <p>2021 €59,659.72</p> <p>2022 €57,159.72</p> <p>2023 €57,159.72</p> <p>Total €173,979.16</p>	<p>2.1 Involvement of the innovation ecosystem in the City Council's decision-making process through the Urban Innovation Platform</p>	<ul style="list-style-type: none"> Number of municipal projects with PIU involvement. Number of queries from the City Council to the PIU and the working committees. Number of working committees created.
	<p>2.2 Support for the creation of public-private-community partnerships</p>	<ul style="list-style-type: none"> Number of created and identified public-private-community partnerships that promote innovation projects. Number of identified public-private-community partnerships that are in the process of talks and/or negotiations. 	<ul style="list-style-type: none"> 2021-2023 2021-2023
	<p>2.3 Involving users in the final design of solutions and public services</p>	<ul style="list-style-type: none"> Number of solutions developed/developed with users' involvement. Number of attendees at co-creation and interaction sessions. Number of female attendees at co-creation and interaction sessions. Number of students involved in the education programme linked to the innovative city. Number of schools involved in the education programme linked to the innovative city. 	<ul style="list-style-type: none"> Annual Annual Annual Annual Annual

Goals	Measures	Monitoring indicators	Frequency
3. Structuring methodologies and creating new tools to drive innovation Budget 2021 €627,385.5 2022 €400,000 2023 €400,000 Total €1,427,385.50	3.1 Steering innovation actions towards city missions	<ul style="list-style-type: none"> • Definition of the city's missions (Yes/No). • Involvement by the public and the city's innovation ecosystem in the definition of missions (Yes/No). 	<ul style="list-style-type: none"> • 2021-2023 • 2021-2023
	3.2 Promoting innovation in public procurement	<ul style="list-style-type: none"> • Number of bidding procedures containing SEI clauses. • Year-on-year variation in the percentage of contracts containing innovation clauses. 	<ul style="list-style-type: none"> • Annual • Annual
	3.3 Launching urban challenges	<ul style="list-style-type: none"> • Total budget for the responses to challenges launched by the City Council and BIT Habitat either separately or working together. • Number of challenges launched. 	<ul style="list-style-type: none"> • 2021-2023 • 2021-2023
	3.4 Systematisation of innovative public grants	<ul style="list-style-type: none"> • Public innovation grant budget. • Inclusion of new regulatory elements in the innovation grant (Yes/No). • Total amount of grants for projects under the "The Proactive City" call. 	<ul style="list-style-type: none"> • Annual • 2021-2023 • Annual
	3.5 Raising private capital for innovation	<ul style="list-style-type: none"> • Creation of funds (Yes/No). • Number of private investment entities involved in innovative projects promoted by the City Council. • Amount of private capital, in euros, raised for innovation investment. 	<ul style="list-style-type: none"> • 2021-2025 • 2021-2025 • 2021-2025
	3.6 Developing a common impact assessment methodology	<ul style="list-style-type: none"> • Creation of a list of impact indicators (Yes/No). • Number of projects assessed using the proposed methodology. 	<ul style="list-style-type: none"> • 2021-2023 • 2021-2023
4. Promoting the city as a natural testing ground Budget 2021 €592,304.66 2022 €592,304.66 2023 €592,304.66 Total €1,776,913.98 Total €6,683,882.56	4.1 Promoting digital manufacturing through the public Fab Lab Network and local facilities	<ul style="list-style-type: none"> • Number of Fab Lab Network users. • Number of female Fab Lab Network users. • Number of schools that have implemented the Fab Lab Network educational programme. • Year-on-year variation in the number of schools that have implemented the Fab Lab Network educational programme. • Number of students who have followed the educational programme. • Number of social innovation projects promoted within the framework of the Fab Lab Network. • Number of outreach activities (within the framework of the family programme). 	<ul style="list-style-type: none"> • Annual • Annual • Annual • Annual • Annual • Annual • 2021-2023 • Annual
	Visualizing and interpreting data using the Urban Data Desk (UDD)	<ul style="list-style-type: none"> • Full implementation of the UDD (Yes/No). • Number of outreach and education actions that have used the UDD. • Number of participation and decision-making processes that have used the UDD. 	<ul style="list-style-type: none"> • 2021-2023 • Annual • Annual
	4.3 Creation and launch of the innovation laboratory	<ul style="list-style-type: none"> • Implementation of the innovation laboratory (Yes/No). • Number of collaboration agreements concluded to support the project. • Number of projects carried out at the innovation laboratory. • Percentage of innovation laboratory operating capacity used by the selected projects. 	<ul style="list-style-type: none"> • 2021-2023 • 2021-2023 • 2021-2023 • 2021-2023

