

Future STEAM Cities



Continuity Plan for Aveiro Tech City

URBACT



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Contents

SECTION 1: Context and local needs	3
1.1 Policy context for STEAM for the city	3
1.2 Needs analysis in the territorial context	6
SECTION 2: From UIA “Aveiro STEAM City” to “Future STEAM Cities” Journey	7
2.1 Testing Actions	7
2.2 What we learn	7
SECTION 3: Investment Proposition / Aveiro Tech City Continuity Plan.....	8
3.1 Value Proposition	8
3.2 Investment Narrative	8
3.3 Investment Directions	9
3.4 Main Objectives and Areas of Intervention	10
3.5 Areas of Intervention and SMART Objectives	11
3.6 The Action Plan	12
3.1 Overall project schedule.....	18
3.2 Risk analysis.....	20
SECTION 4: The Budget.....	21
4.1 Project costs	21
SECTION 5: The Governance and Monitoring	24
5.1 Project Governance Arrangements	24
5.2 The Approach to Monitoring and evaluation.....	24
ANNEX: Activities Sheet	26

SECTION 1: Context and local needs

1.1 Policy context for STEAM for the city

Aveiro is considered a digital cluster and has consolidated a leading position as a digital innovation hub, catalysed by the UIA-funded **Aveiro STEAM City** (2019-2022), which deployed 5G and IoT infrastructure and embedded STEAM into education and workforce strategies. This pioneering initiative served as the backbone for the **creation of the Aveiro Tech City strategy**, which is the overarching framework advocated in this Continuity Plan.

In fact, the work developed in Aveiro STEAM City, through a **collaborative process** between different stakeholders (Municipality, University, Instituto de Telecomunicações, Inovaria - ICT and innovative companies association and Altice Labs - private company from Altice Group that have their R&D Center headquarters, based in Aveiro), allowed to **explore and discuss new governance and frameworks models** that resulted, in 2022, in Aveiro Tech City's Collaboration Protocol, signed by 14 public and private entities, willing to **develop our local economy and society based on technological innovation and knowledge**.

Based on this premise, Aveiro Tech City emerges to help companies to rethink the resources they need to innovate, grow and establish means to attract a new range of talent to the new digital opportunities in a STEAM approach and aims to transform the city in a living lab capable to help local government to collect and share relevant information about new exciting ways to manage the city and where new companies, projects and services can be developed, trialed and implemented, thus **assuming technology, innovation and digital transformation as a vehicle to build a sustainable city**.

From UIA experience*, Aveiro Tech City was structured in 4 axes of intervention and several actions, as shown above, which were the starting point from our Continuity Plan, further detailed in Section 3.

		1 st AXIS EDUCATION	2 nd AXIS TRAINING	3 rd AXIS TECH, SERVICES & APPS	4 th AXIS CHALLENGES
		Implement innovative STEAM (Science, Technology, Engineering, Arts and Math) Education programmes at schools in all levels of education, empowering teachers as agents of change, capable of encouraging and leading their students into STEAM fields.	Support our companies to create, attract and retain talent that supports the digital transformation and economic growth of our ecosystem, while promoting collaborative work between our scientific community and culture and creative sector.	Transform the City in a living lab that supports companies and R&D Centres to test and develop innovative and disruptive projects in IoT and Smart Cities fields, in order to improve services to our citizens or visitors.	Involve companies, R&D Centres and citizens in the process of Digital Transformation of our City, making them active agents in the solutions of our community challenges.
Aveiro Tech City 1.0	Aveiro STEAM City	- Tech Labs - UBBU - Code Literacy - Code Hero 	- Labour Observatory - Coding Bootcamp - Criatech Artistic Residences  - MTF Labs 	- Aveiro Living Lab - Urban Data Platform - Use Cases / Pilots  - Aveiro Tech City Hub	- Aveiro 5G Challenges  - Aveiro Urban Challenges
		- Escola Ciência Viva - STEAM Artistic Residences - Entrepreneurship Contests - Future STEAM Cities  - European Network	- Microcredentials - Open Days @ Companies	- Aveiro Digital Twin - Technological Free Zone - Aveiro Municipal Card	- Participatory Budget - Aveiro Tech Week

*UIA Experience:

-  Activities our tested but faced several constrains (participants involvement, technical and human resources needed, amount of budget required).
-  Activities can be review or integrated in others: Use Cases/Pilots in Living Lab and Aveiro 5G Challenges in Aveiro Urban Challenges.
-  Achieved with "Future STEAM Cities" URBACT innovation network.

Considering this, Aveiro Tech City is directly related to a **multi-level policy response** to become a reference in digital innovation and smart cities.

LOCAL LEVEL

Aveiro's Technological Free Zone (ZLT)

<https://diariodarepublica.pt/dr/detalhe/portaria/119-2025-911349177>

Approved by the Portuguese Government in 2025, Aveiro's Technological Free Zone (ZLT) emerged from Aveiro Tech City Living Lab experience and is dedicated to experimentation and testing, in an operational environment, of communication and electronics technologies and systems, in a consortium led by the University of Aveiro, which includes the Municipality of Aveiro. Aveiro Tech City contributes as:

- Enabling Technological Infrastructure
Aveiro Tech City provides the technological basis that allows testing emerging technologies, in a real-world environment, of communication and electronics technologies and systems.
- Experimentation, Testing and Innovation Ecosystem
Aveiro Tech City ensures critical knowledge to develop and test solutions and accelerates the introduction of technological innovation in real-world conditions, impacting the economy and urban services.

Aveiro's Strategic Education Plan (PEE)

<https://www.cm-aveiro.pt/servicos/educacao/plano-estrategico-educativo-do-municipio-de-aveiro>

- Skills Development / Training for the Future of Work
Aveiro Tech City promotes training to teachers and students in science, technology, engineering, arts, and mathematics.
- School-University-Business Linkage
Aveiro Tech City promotes a collaborative ecosystem where students engage with real-world projects, research, and innovation.
- Innovative Educational Projects
Aveiro Tech City encourages interdisciplinary projects and activities with hackathons and real challenges/competitions.

REGIONAL LEVEL

Integrated Territorial Development Strategy for Aveiro's Region 2030 (EIDT)

<https://www.regiaoaveiro.pt/areas-de-acao-e-projetos/desenvolvimento-regional-e-economia/desenvolvimento-regional/estrategia-integrada-de-desenvolvimento-regional-da-regiao-de-aveiro-2030>

Defines priorities for Aveiro's Region smart, sustainable and inclusive development. Aveiro Tech City contributes directly to these objectives:

- [*Digital Transition and Smart Territories*](#)
- [*Innovation and Knowledge Economy*](#)
- [*Competitiveness and Investment Attraction*](#)
- [*Human Capital and Qualification*](#)

Regional Programme - Centro 2030 (C2030)

<https://centro2030.pt/>

Centro 2030 aims to promote economic competitiveness, environmental sustainability and the enhancement of the territory and its people, within the framework of the European Union's Cohesion Policy. Aveiro Tech City contributes directly to these objectives:

- [*Innovation, digitalization and businesses \(Centro +Competitivo\)*](#)
- [*Digital Transition \(Centro +Inteligente\)*](#)
- [*Sustainability and Mobility \(Centro +Verde\)*](#)
- [*Citizen-Friendly City Center \(Centro +Coeso\)*](#)
- [*Education, skills and inclusion \(Centro +Social\)*](#)

NATIONAL LEVEL

National Strategy for Smart Territories (ENTI)

<https://territoriosinteligentes.gov.pt/>

Portugal Digital - Action Plan for Digital Transition in Portugal (PD)

<https://portugal.gov.pt/gc22/area-de-governo/economia-transicao-digital/portugal-digital>

- [*Smart and data-driven governance \(ENTI\) / Digitalization of Public Administration \(PD\)*](#)
Aveiro Tech City promotes the use of urban data platforms and real-time data to support city management and decision-making -> improves the efficiency of public services and promotes a more accessible and digital administration.
- [*Advanced Technological Infrastructures \(ENTI\) & \(PD\)*](#)
Aveiro was one of the first cities in Portugal with a 5G network connectivity and sensor infrastructure, involving municipality, R&D centres and private companies -> creates essential technical conditions to accelerate digital transformation and the adoption of digital solutions.
- [*Open Innovation and collaboration ecosystem \(ENTI\) / Digital Transformation of Companies \(PD\)*](#)
Aveiro Tech City creates an environment favorable to experimentation and innovation (living labs) that connected startup, SMEs, R&D Centers to test and develop, in real context and real data, new products and services -> accelerates the digitalization, modernization and competitiveness of companies.

- Skills development (ENTI) / Capacity Building and Digital Inclusion (PD)
Aveiro Tech City promotes STEAM Education at schools and digital literacy training among citizens > strengthens the digital skills of population and prepares qualified human resources.
- Sustainability and Quality of Life (ENTI) & (PD)
Aveiro Tech City Use Cases/Pilots include solutions for smart mobility, energy efficiency and environmental monitoring -> improves urban sustainability and the well-being of citizens.

EUROPEAN LEVEL

- Digital Education Action Plan (2021-2027) - promoting STEAM education, teacher training and digital literacy.
- Cohesion Policy 2021-2027 (ESF+/ERDF) - supporting education, training, and infrastructure investments.
- Horizon Europe missions - funding research and innovation in smart cities, digital twins, and sustainability.
- Next Generation EU investments - supporting micro-credentials, workforce upskilling, and digital inclusion.
- Agenda 2030 and the European Green Deal - ensuring that digital transformation contributes to sustainability, resilience, and social cohesion.

Even considering the new 2028-2034 European QFP - Multiannual Financial Framework - Aveiro Tech City is related with EU political priorities:

- Investing in People, supporting quality employment, skills and social inclusion.
- Foster education.
- Competitiveness, research and innovation.

1.2 Needs analysis in the territorial context

Despite Aveiro Tech City strategy and experience, structural needs persist:

- Digital inclusion gaps: Lower digital literacy among non-traditional learners (families, unemployed citizens, seniors) and uneven STEAM competencies outside the school ecosystem.
- Skills-to-jobs alignment: Demand for full-stack developers, data specialists, and IoT technicians outpaces local training throughput; employers require adaptable, work-ready talent.
- Innovation infrastructure utilisation: Growing data assets (urban platform, sensing) underexploited for public service optimisation and community benefit.
- Ecosystem continuity: Post-project sustainability requires resilient governance and diversified funding, despite being integrated into local strategies.

As a learning and co-creating process, these structural needs were obtained by monitoring and evaluating several outputs and outcomes, which helped the decision-making in the adaptation, rethinking and improving our methodologies and processes of our Continuity Plan, further detailed in Section 3.

In addition, considering the scope of Future STEAM Cities and URBACT scope, some activities were also test at the local level, further detailed in Section 2.

SECTION 2: From UIA “Aveiro STEAM City” to “Future STEAM Cities” Journey

2.1 Testing Actions

From our ULG meetings, and considering the scope and URBACT budget, we decided to test actions that would address our 1st structural challenge related to digital inclusion gaps: Lower digital literacy among non-traditional learners (families, unemployed, seniors) and uneven STEAM competencies outside the school ecosystem.

With this testing actions we intended to introduce STEAM competences into a wider community, outside school context, and test if families, unemployed or seniors could use and interact with STEAM tools and exercises (usually apply to students in schools) and if they could learn, in a creative way, new digital competences.

In this sense, we implemented two community-based STEAM workshops, in the Municipality’s Citizens House:

- **Stop Motion workshop** for families, develop in two days: 28th of February and 7th of March.
- **Introductory coding workshop** for adults (+40 years old and including unemployment), develop in three days: 30th of March, 6th and 13th of June.

2.2 What we learn

From this experience, and our evaluation through questionnaires and participant’s feedback and informal discussions, we identified what worked and what didn’t, or what we can improve, to assess engagement and learning outcomes, namely:

- Practical and informal learning formats increased engagement and make skills development easier and more dynamic.
- The tools and resources provide, encourages creativity and a diversity of solutions/exercises.
- Participants acknowledge that they have gained more knowledge about digital tools and have expressed interest in obtaining further training in this area.
- The workshops duration was short for the curiosity and interest of participants, which leads to rethinking about increasing the training duration.

Based on these testing actions, we learn that:

- Informal STEAM education dynamics are highly effective in developing digital skills and competences, fostering more capable communities.
- These approaches are highly versatile and can be tailor and apply to different audiences, themes and settings, while maintaining strong learning outcomes.
- Is possible to improve digital inclusion and lifelong STEAM learning, prioritising the scaling of community-based workshops and training programmes for diverse target groups.

This learning and testing actions process allowed us to obtain a clear guidance to our Continuity Plan:

- Sustainable Community Education: Institutionalize STEAM workshops for adults and families as permanent, funded programs to address digital inclusion and promote lifelong learning in non-formal settings. Scale the tested, adaptable STEAM methodologies across community venues.

SECTION 3: Investment Proposition / Aveiro Tech City Continuity Plan

3.1 Value Proposition

Based on these premises, Aveiro Tech City **vision** stands for:

Enhance and elevate Aveiro as a technology hub and smart city, favorable to the development and testing of new products and services, capable of attracting talent and supporting digital transformation of the community, through digital education and training programs and collaborative responses to urban challenges and use technology as a means to improve the quality of life of all citizens.

3.2 Investment Narrative

In one sentence:

Aveiro is building the next chapter of Aveiro Tech City: a citywide learning and testing ecosystem where learning and technology create better urban life.

In one paragraph:

Aveiro believes that technology becomes truly valuable when people can learn from it, use it and turn it into better opportunities for everyday life. After years of building a strong Tech City strategy, the city is ready to make its technological and STEAM capacity more accessible, permanent and useful across the whole city. This means connecting children and teachers, adults and community groups, companies and public services through practical learning, experimentation and collaboration. Aveiro is not simply continuing past projects; it is building the conditions for more people to take part in the city's digital future.

Digitization, connectivity, and data are a new form of capital, often surpassing the traditional concept of material and financial resources. A sensor-equipped city can offer new levels of communication and certainly favors the development of new initiatives and innovation in digital and technology areas.

Aveiro can and should continue its commitment and strong involvement promoting innovation and redesigning public services, based on citizens' needs and helping companies to rethink the resources they need to innovate, grow and establish means to attract a new range of talent to the new digital opportunities in a STEAM approach.

By integrating technology into current business models, supported by education and training processes and an advance infrastructure, Aveiro is able to use the digitization path to launch itself into sustainable development and became a city of opportunities and innovation, where is possible to experience

advanced solutions in a creative, collaborative and sustainable environment, among local administration, businesses, citizens and institutions.

A city that takes advantage of the urban context to transform the city in a living lab capable to help local government to collect data and share relevant information about new exciting ways to manage the city and where new companies, projects and services can be develop, trial and implement, assuming technology and digital transformation as a vehicle to build a sustainable city.

3.3 Investment Directions

WHERE LEARNING AND TECHNOLOGY CREATE BETTER URBAN LIFE

Aveiro already knows what it means to invest in technology.

The city has built digital infrastructure, developed STEAM education programmes, supported company collaboration and positioned itself as a recognised Tech City. It has shown that a medium-sized European city can take digital transformation seriously and turn it into a local development strategy.

FROM TECHNOLOGICAL STRENGTH TO SHARED URBAN CAPACITY

Strong foundations do not automatically guarantee long-term impact. Digital infrastructure needs to be used. STEAM methodologies need to be kept alive. Partnerships need coordination. Companies need skilled people. Public services need better tools. Communities need confidence to participate in a digital society.

Aveiro's next step is therefore to transform existing capacity into something wider: a shared urban capacity for learning, testing and improving city life. The city is not abandoning its Tech City identity. It is giving it a stronger public purpose.

LEARNING AS INFRASTRUCTURE AND TESTING ENVIRONMENT

Aveiro's work shows that learning should be treated as part of the city's infrastructure.

Sensors, data platforms, 5G, laboratories and digital tools only become meaningful when people have the knowledge, confidence and opportunities to use them. This is why STEAM matters in Aveiro: it connects people with technology through creativity, problem-solving, experimentation and real-life challenges.

Also, Aveiro's testing actions during Future STEAM Cities (community workshops) reveal an important direction for the City: how community spaces can become entry points into the digital transition. They help Aveiro understand how technology can become less distant, less intimidating and more useful for wider groups.

In Aveiro, learning is not separate from innovation. It is what makes innovation usable.

ECOSYSTEM ENGAGEMENT

Aveiro's investment narrative is strong because it connects stakeholders that are often addressed separately. It involves and connects companies, public services and communities in the same ecosystems. Companies need skills, talent and real-world experimentation. Public services need better tools, better data and practical ways to improve how the city works. Schools and teachers need support to connect learning with real-life challenges. Universities and research partners need environments where knowledge can be applied and evaluated. Citizens and communities need accessible ways to understand, use and benefit from the digital transition.

The value of Aveiro's next stage lies in bringing these needs together.

The city can become a place where people learn, companies test, public services improve and communities participate.

AVEIRO TECH CITY, CONTINUITY PLAN

Aveiro does not need to prove that it can run successful activities. The city has already done that.

The challenge now is to make the strongest parts of this work permanent, coordinated and investment-ready. Individual workshops need pathways to become recurring programmes. Successful partnerships need clearer roles and long-term commitments. Technical assets need to be translated into visible public value. Broad innovation language needs to become concrete investment components: programmes, spaces, systems, staff capacity, equipment, evaluation and governance.

Funding matters, but it is only one part of the picture. The real investment is in a permanent city capacity: the capacity to learn, test, adapt and improve.

3.4 Main Objectives and Areas of Intervention

Aveiro Tech City vision and investment narrative leads to four main objectives, translate into **four areas of intervention** and achievable through several SMART objectives, detailed in 3.5. Chapter:

MAIN OBJECTIVES

Foster interest in STEAM

(Science, Technology, Engineering, Arts and Mathematics) through innovative and interdisciplinary pedagogical approaches, enhancing critical and problem solving thinking, collaborative work and creativity, **in 1) school context**, from preschool to secondary education, training students and teachers to be agents of change **and 2) community context** (youngsters, families,

Support local

companies to create, attract and retain talent by 1) understanding and **address training needs** of local companies regarding their digital transformation and economic growth and 2) **provide skills to citizens** require by current and future job market.

Transform the city in a

living lab that supports companies and R&D Centres to test and develop innovative and disruptive projects in IoT and Smart Cities fields, in order to improve services to our citizens or visitors.

Involve companies, R&D

Centres and citizens in the process of digital transformation of our city, making them **active agents in the solutions** of our community challenges.

unemployment, seniors),
providing them skills to future
labour work.

AREAS OF INTERVENTION

1st
EDUCATION

2nd
TRAINING

3rd
**TECH, SERVICES AND
APPS**

4th
CHALLENGES

3.5 Areas of Intervention and SMART Objectives

Based on our value proposition, main objectives and areas of intervention, Aveiro Tech City assumes the following specific and SMART objectives.

1st Education

Aims to foster interest in STEAM areas through innovative and interdisciplinary pedagogical approaches that cross different areas of knowledge, capable of enhancing critical and problem solving thinking, collaborative work and creativity, in 1) **school context**, among children and young people, from preschool to secondary education, training students and teachers to be agents of change and better preparing them for future labour work and among 2) **community** (youngsters, families, unemployment, seniors), outside school context, providing them training in digital skills.

[Link to vision: Create and stimulate talent / Support digital transformation](#)

- Objective 1 Increase teachers' digital literacy by 20%, per year, by providing training and mentoring in the classroom context using digital and technological tools.
- Objective 2 Increase community (youngsters, families, seniors or unemployment) digital literacy by 20%, by the year 2030, by providing training, using digital and technological tools.
- Objective 3 Increase problem-solving and critical thinking skills in students by 20%, by the year 2030, by providing entrepreneurial competences.

2nd Training

Seeks to understand and 1) **address training needs** of local companies regarding their digital transformation and economic growth and 2) **provide skills to citizens** require by current and future job market.

[Link to vision: Create and stimulate talent / Support digital transformation](#)

- Objective 4 Ensure a 70% employability rate for people in technology companies in Aveiro, by providing tailored training according to companies' digital needs, by the year 2030.

3rd Tech, Services and Apps

Strives to transform the city in a living lab that supports companies and R&D Centres to test and develop innovative and disruptive projects in IoT and Smart Cities fields, in order to improve services to our citizens or visitors.

[Link to vision: Technological and Innovation Hub / Create and stimulate talent / Support digital transformation](#)

- Objetive 5 Increase our living lab infrastructure in 20%, investing in sensing equipment and developing predictive platforms (digital twin), by the year 2030.
- Objetive 6 Increase by 15% the data collection in our urban platform, promoting collaborative communication and technological transformation between different stakeholders and services providers, by the year 2030.

4th Challenges

Aims to involve companies, R&D Centres and citizens in the process of digital transformation of our city, making them active agents in the solutions of our community challenges.

[Link to vision: Technological and Innovation Hub / Create and stimulate talent / Support digital transformation](#)

- Objetive 7 Support the develop and test of 30 new and disruptive products and services regarding IOT and smart cities, promoted by SMEs, Startup or I&D Centers, providing training, mentorship and access to our living lab infrastructure, by the year 2030.
- Objetive 8 Ensure that ≥75% of solutions tested in the municipality result from participatory processes (citizens, businesses, academia).
- Objetive 9 Promote contact between more than 10.000 people, per year, and the innovations and initiatives developed within the scope of Aveiro Tech City, by organizing each year Aveiro Tech Week.

3.6 The Action Plan

This section includes a brief description of activities proposed to achieve Aveiro Tech City strategic and SMART objectives, being further detailed in Annex, their ownership, partnerships, outputs, outcomes and links to time frames and phasing.

		1 st AXIS EDUCATION	2 nd AXIS TRAINING	3 rd AXIS TECH, SERVICES & APPS	4 th AXIS CHALLENGES
Aveiro Tech City 2.0 – Continuity Plan	new	@ Schools 1. Tech Labs ✓ 2. UBBU - Code Literacy ✓ Code Hero ✗	1. Labour Observatory ✓ 2. Coding Bootcamp ✓ Criatech Artistic Residences ✗ MTF Labs ✗	1. Aveiro Living Lab ✓ 2. Urban Data Platform ✓ Use Cases / Pilots ⚙️ 3. Aveiro Tech City Hub ✓	Aveiro 5G Challenges ⚙️ 1. Aveiro Urban Challenges ✓
	Aveiro Tech City 1.0				
	UJA- Aveiro STEAM City	3. Escola Ciência Viva ✓ 4. STEAM Artistic Residences ✓ 5. Entrepreneurship Contests ✓ • Future STEAM Cities ■ European Network <i>Tested under URBACT</i>	3. Microcredentials ✓ 4. Open Days @ Companies ✓	4. Aveiro Digital Twin ▲ 5. Technological Free Zone ■ 6. Aveiro Municipal Card ▲	2. Participatory Budget ✓ 3. Aveiro Tech Week ✓
		@ Community new 6. Tardes STEAM na Casa ■ 7. Vem aprender a Programar ■ 8. Literacia+ ■ 9. STEAM Workshops ■ <i>Tested under URBACT</i>		7. Intelligent Crisis Control Room new Room new	

✓ Done ■ Implemented ▲ Initiated ✗ Quit ⚙️ Reintegrated

1st Education

@ Schools

Action	1.1. Tech Labs
Short Description Done	Provide all primary to secondary schools , with equipment and experimentation spaces with 3D printers, robotic and electrical circuits' kits, among others and provide training to teachers and training in a classroom context.

Action	1.2. UBBU - Code Literacy
Short Description Done	Code literacy training, using an online platform (UBBU), dedicated to primary schools and students to promote basic knowledge in computing science, logic thinking and problem solving capacities, with approximately 100 different contents, developed in accordance with students' curriculum. In addition, we develop specific content and exercises related to Aveiro heritage (aligning digital with cultural sphere).

Action	1.3. Escola Ciência Viva
Short Description Done	Provide all primary schools (4 th grade) students an immersive educational programme during one week - outside school context (in our Science Center) - that applies Modern Science Museology resources, combining hands-on work and experimental education in science.

Action	1.4. STEAM Artistic Residences
Short Description Done	Contest that aims to explore the A of Arts in the STEAM educational process (and use our Tech Labs equipments @ schools), through the involvement of artists, teachers and students from Basic schoolss , in different countries, in the same creative process.

Action	1.5. Entrepreneurial Contests
Short Description Done	Promote entrepreneurial skills in students (problem solving, team work, critical thinking...), according to their level of education: • <u>"Your Idea Counts" Contest</u> - Dedicate to Secondary and Vocational Schools students where they can create and present businesses projects, as a team. • <u>"An idea, a project, an action" Contest</u> - Dedicate to Basic Schools students where they can co-create, design and implement concrete actions to respond to their school or surrounding/local needs.

@ Community

Action	1.6. Tardes STEAM na Casa
Short Description Implemented	Leisure activity, outside school context , dedicated to introduce STEAM equipments and activities among youngsters from primary to basic schools .

Action	1.7. Vem Aprender a Programar
Short Description Implemented	Leisure activity, outside school context , dedicated to introduce coding literacy among youngsters from primary to basic schools to promote preliminary knowledge in computer science, logical thinking, and problem-solving skills.

Action	1.8. Literacia+
Short Description Implemented	Modular training programme aimed at citizens aged 60 and over in order to promote digital inclusion and active, autonomous, and participatory aging, enhancing the use of technology and digital media as drivers of fair access to public services.

Action	1.9. STEAM Workshops
Short Description Implemented	Modular training programme aimed at families and unemployment in order to promote digital inclusion and enhancing the use of STEAM equipments and activities.

2nd Training

Action	2.1. Labour Observatory
Short Description Done	Predictive and IA platform that aims to identify training needs and gaps in local companies through the development of digital skills, creative areas, and ICT (Information, Communication and Electronics Technologies), helping human resources to integrate regional job market.

Action	2.2. Coding Bootcamp
Short Description Done	Intensive training programme (14 training in classroom context and 14 weeks in a real local context) dedicated to java and java-script that intend to form Full-Stack Developers, according to local companies' digital needs, and aimed at unemployment or professionals seeking new career opportunities.

Action	2.3. Microcredentials
Short Description Done	Small-volume courses (< 12 ECTS credits), based on labour market needs and flexibly to include unemployment or professionals seeking new career opportunities.

3rd Tech, Services and Apps

Action	3.1. Aveiro Living Lab
Short Description Done	Infrastructure composed of an advanced communications/latest generation fibre technology that collects mobility data and provides information, in real time context, to support decision-making and test innovative solutions , on IoT and Smart Cities. We intend to expand this infrastructure to close/sensorize the main traffic entrances and exits of the city center.

Action	3.2. Urban Data Platform
Short Description Done	Platform that collects information from several IOT devices installed in the city and aggregates them with other data, and transform it into useful information to help political decision maker . We intend to expand the number of verticals/indicators integrated into the urban platform, especially in terms of municipal services (public transport, bike sharing, library, school lunch management, urban waste, etc.).

Action	3.3. Aveiro Tech City Hub
Short Description Done	Experimentation space, through digital equipment, where visitors can: . Learn about our development strategy regarding Aveiro Tech City. . Visualize the municipality's social, economic and industrial development in the last few years. . Access our main competitive advantages and our innovative and entrepreneurial character. . Consult some of the most important public investments made or planned for the future.

Action	3.4. Aveiro Digital Twin
Short Description Initiated	Predictive software, based on advanced communications (living lab) that provides awareness about mobility data, in real time context, to support decision-making and public preparedness.

Action	3.5. Technological Free Zone
Short Description Implemented	Controlled area that allows to test, under real conditions, innovative technologies such as 5G and IoT networks, autonomous vehicles, artificial intelligence, cybersecurity and new connectivity solutions. With land, estuary, and maritime coverage, the infrastructure offers unique conditions for the development of disruptive technological solutions, promoting connections between research, industry, and public administration .

Action	3.6. Aveiro Municipal Card
Short Description Initiated	Single municipal card (manual + digital) that integrates public services such as transports (including bike sharing system), school meals, library and even access to a local commerce marketplace.

Action	3.7. Intelligent Crisis Control Room
Short Description Initiated	Crisis Control Room for real-time decision support, where is possible for visualization, simulation, and coordination of multi-agent operational operations , according to the principles of privacy by design and management of municipal response processes according to the ITIL standard.

4th Challenges

Action	4.1. Aveiro Urban Challenges
Short Description Done	Open innovation and co-creation competition through which Municipality identifies real problems regarding public management (mobility, environment, energy, inclusion, public services, etc.) and invites startups, SMEs and R&D centers to test and implement innovative solutions in a real-world context, taking advantage of the Living Lab, the Urban Platform, the Digital Twin, and the Technological Free Zone.

Action	4.2. Participatory Budget
Short Description Done	Civic participation initiative that allows citizens to directly influence how part of the municipal budget is used. However, its key feature is “direct action”, which means that citizens not only propose and vote on projects, but they also actively participate in their implementation. In this way, citizens become both decision-makers and active contributors to local development.

Action	4.3. Aveiro Tech Week
Short Description Done	Seven days event with conferences, workshops, hackathons, technology demonstrations and gaming activities, that bring together companies, research units, entrepreneurs, creatives and the general public to discuss and experience the future of cities.

Additionally, is present the correlation between each activity and Aveiro Tech City’s SMART objectives.

3.1 Overall project schedule

This section should include an overview of the project phasing and timescales (including for the thematic work blocks).

Area of Intervention / Action	2027				2028				2029				2030			
	1 st T	2 nd T	3 rd T	4 th T	1 st T	2 nd T	3 rd T	4 th T	1 st T	2 nd T	3 rd T	4 th T	1 st T	2 nd T	3 rd T	4 th T
1 st Education																
@ Schools																
1.1. Tech Labs	X	X		X	X	X		X	X	X		X	X	X		X
1.2. Code Literacy	X	X		X	X	X		X	X	X		X	X	X		X
1.3. Escola Ciência Viva	X	X		X	X	X		X	X	X		X	X	X		X
1.4. STEAM Artistic Residences	X	X		X	X	X		X	X	X		X	X	X		X
1.5. Entrepreneurial Contests	X	X		X	X	X		X	X	X		X	X	X		X
@ Community																
1.6. Tardes STEAM na Casa	X		X	X	X		X	X	X		X	X	X		X	X
1.7. Vem Aprender a Programar	X	X		X	X	X		X	X	X		X	X	X		X
1.8. Literacia+		X		X		X		X		X		X		X		X
1.9. STEAM Workshops		X		X		X		X		X		X		X		X
2 nd Training																
2.1. Labour Observatory	X	X		X	X	X		X	X	X		X	X	X		X
2.2. Coding Bootcamp	X	X		X	X	X		X	X	X		X	X	X		X
2.3. Microcredentials	X	X		X	X	X		X	X	X		X	X	X		X
2.4. Open Days @ Companies				X				X				X				X
3 rd Tech, Services and Apps																
3.1. Aveiro Living Lab	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.2. Urban Data Platform	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.3. Aveiro Tech City Hub	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

3.4. Aveiro Digital Twin	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.5. Technological Free Zone	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.6. Aveiro Municipal Card	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.7. Intelligent Crisis Control Room	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4th Challenges																
4.1. Aveiro Urban Challenges		X	X	X		X	X	X		X	X	X		X	X	X
4.2. Participatory Budget		X		X						X		X				
4.3. Aveiro Tech Week				X				X				X				X

3.2 Risk analysis

Monitoring project activities and results is essential to ensure that defined objectives are achieved and to identify any deviations or risks at an early stage. It provides reliable information to support informed decision-making, optimize resource allocation, and improve overall project performance.

Furthermore, monitoring enhances accountability, transparency, and learning, enabling organizations to assess the effectiveness and impact of their interventions and to make timely adjustments when necessary.

Ultimately, it contributes to greater efficiency, quality and sustainability of project outcomes.

Below is presented each Aveiro Tech City activity risk classification and the entity responsible for controlling these risks, according to the main risks and mitigating measures detail in Annex.

Area of Intervention / Action	Risks Classification	Risk Control
1st Education		
<i>@ Schools</i>		
1.1. Tech Labs	Medium	Municipality of Aveiro + University of Aveiro
1.2. Code Literacy	Medium	Municipality of Aveiro
1.3. Escola Ciência Viva	Low	Municipality of Aveiro + University of Aveiro
1.4. STEAM Artistic Residences	Medium	Municipality of Aveiro
1.5. Entrepreneurial Contests	Low	Municipality of Aveiro
<i>@ Community</i>		
1.6. Tardes STEAM na Casa	Low	Municipality of Aveiro
1.7. Vem Aprender a Programar	Low	Municipality of Aveiro
1.8. Literacia+	Low	Municipality of Aveiro
1.9. STEAM Workshops	Low	Municipality of Aveiro
2nd Training		
2.1. Labour Observatory	High	Municipality of Aveiro + Inovaria
2.2. Coding Bootcamp	Medium	Municipality of Aveiro + Inovaria
2.3. Microcredentials	Medium	University of Aveiro
2.4. Open Days @ Companies	Low	Municipality of Aveiro
3rd Tech, Services and Apps		
3.1. Aveiro Living Lab	High	Instituto de Telecomunicações
3.2. Urban Data Platform	High	Municipality of Aveiro + Altice Labs
3.3. Aveiro Tech City Hub	Low	University of Aveiro
3.4. Aveiro Digital Twin	Medium	Instituto de Telecomunicações
3.5. Technological Free Zone	Medium	University of Aveiro
3.6. Aveiro Municipal Card	Medium	Municipality of Aveiro
3.7. Intelligent Crisis Control Room	Medium	Municipality of Aveiro
4th Challenges		
4.1. Aveiro Urban Challenges	Medium	Municipality of Aveiro + Instituto de Telecomunicações
4.2. Participatory Budget	Low	Municipality of Aveiro
4.3. Aveiro Tech Week	Low	Municipality of Aveiro

SECTION 4: The Budget

4.1 Project costs

This section includes the total investment amount required to implement the project, for each area of intervention and identifies the funding split, divide into:

Funding	
1st Education	
<i>@ Schools</i>	
1.1. Tech Labs	Own Capital / National or European Funding
1.2. Code Literacy	Own Capital / National or European Funding
1.3. Escola Ciência Viva	Own Capital / National or European Funding
1.4. STEAM Artistic Residences	Own Capital / National or European Funding
1.5. Entrepreneurial Contests	Own Capital
<i>@ Community</i>	
1.6. Tardes STEAM na Casa	Own Capital / National Funding
1.7. Vem Aprender a Programar	Own Capital / National Funding
1.8. Literacia+	Own Capital / National Funding
1.9. STEAM Workshops	Own Capital / National Funding
2nd Training	
2.1. Labour Observatory	Own Capital / National or European Funding
2.2. Coding Bootcamp	Own Capital / National or European Funding
2.3. Microcredentials	Own Capital / National or European Funding
2.4. Open Days @ Companies	Own Capital
3rd Tech, Services and Apps	
3.1. Aveiro Living Lab	Own Capital / National or European Funding
3.2. Urban Data Platform	Own Capital / National or European Funding
3.3. Aveiro Tech City Hub	Own Capital
3.4. Aveiro Digital Twin	Own Capital / National or European Funding
3.5. Technological Free Zone	Own Capital / National or European Funding
3.6. Aveiro Municipal Card	Own Capital / National Funding
3.7. Intelligent Crisis Control Room	Own Capital / National or European Funding
4th Challenges	
4.1. Aveiro Urban Challenges	Own Capital / National or European Funding
4.2. Participatory Budget	Own Capital
4.3. Aveiro Tech Week	Own Capital

Area of Intervention / Action	Category	Description	Investment	Unit	2027	2028	2029	2030	TOTAL
1st Education					628 020,00 €	640 580,40 €	653 392,01 €	666 459,85 €	2 590 925,22 €
<i>@ Schools</i>					<i>619 020,00 €</i>	<i>631 400,40 €</i>	<i>644 028,41 €</i>	<i>656 908,98 €</i>	<i>2 551 357,78 €</i>
1.1. Tech Labs	Services	Training to teachers and classroom context	170 000,00 €	Anual	170 000,00 €	173 400,00 €	176 868,00 €	180 405,36 €	700 673,36 €
	Equipment	Upgrade/renewal	20 000,00 €	Anual	20 000,00 €	20 400,00 €	20 808,00 €	21 224,16 €	82 432,16 €
	Staff	20% flat rate	38 000,00 €	Anual	38 000,00 €	38 760,00 €	39 535,20 €	40 325,90 €	156 621,10 €
1.2. Code Literacy	Services	Training to teachers and classroom context	50 000,00 €	Anual	50 000,00 €	51 000,00 €	52 020,00 €	53 060,40 €	206 080,40 €
	Equipment	Upgrade/renewal	20 000,00 €	Anual	20 000,00 €	20 400,00 €	20 808,00 €	21 224,16 €	82 432,16 €
	Staff	20% flat rate	14 000,00 €	Anual	14 000,00 €	14 280,00 €	14 565,60 €	14 856,91 €	57 702,51 €
1.3. Escola Ciência Viva	Services	Immersive Programme	30 000,00 €	Anual	30 000,00 €	30 600,00 €	31 212,00 €	31 836,24 €	123 648,24 €
	Services	Transportation (of students)	5 000,00 €	Anual	5 000,00 €	5 100,00 €	5 202,00 €	5 306,04 €	20 608,04 €
	Staff	20% flat rat	7 000,00 €	Anual	7 000,00 €	7 140,00 €	7 282,80 €	7 428,46 €	28 851,26 €
1.4. STEAM Artistic Residences	Third Party - Prizes	Artits	8 000,00 €	Anual	8 000,00 €	8 160,00 €	8 323,20 €	8 489,66 €	32 972,86 €
	Third Party - Prizes	Schools	5 000,00 €	Anual	5 000,00 €	5 100,00 €	5 202,00 €	5 306,04 €	20 608,04 €
	Travel & Accommodation	Municipality + Artists + Teachers	10 000,00 €	Anual	10 000,00 €	10 200,00 €	10 404,00 €	10 612,08 €	41 216,08 €
	Services	Sound, Transportation (of students), etc	5 000,00 €	Anual	5 000,00 €	5 100,00 €	5 202,00 €	5 306,04 €	20 608,04 €
	Staff	20% flat rate	5 600,00 €	Anual	5 600,00 €	5 712,00 €	5 826,24 €	5 942,76 €	23 081,00 €
1.5. Entrepreneurial Contests	Third Party - Prizes	Schools	25 000,00 €	Anual	25 000,00 €	25 500,00 €	26 010,00 €	26 530,20 €	103 040,20 €
	Third Party - Prizes	Students	1 000,00 €	Anual	1 000,00 €	1 020,00 €	1 040,40 €	1 061,21 €	4 121,61 €
	Third Party - Prizes	Teachers	350,00 €	Anual	350,00 €	357,00 €	364,14 €	371,42 €	1 442,56 €
	Services	Training to teachers and classroom context	156 500,00 €	Anual	156 500,00 €	159 630,00 €	162 822,60 €	166 079,05 €	645 031,65 €
	Services	Transportation (of students), Catering	10 000,00 €	Anual	10 000,00 €	10 200,00 €	10 404,00 €	10 612,08 €	41 216,08 €
	Staff	20% flat rate	38 570,00 €	Anual	38 570,00 €	39 341,40 €	40 128,23 €	40 930,79 €	158 970,42 €
<i>@ Community</i>					<i>9 000,00 €</i>	<i>9 180,00 €</i>	<i>9 363,60 €</i>	<i>9 550,87 €</i>	<i>39 567,44 €</i>
1.6. Tardes STEAM na Casa	Services	Training to Municipality Team	1 000,00 €	Anual	1 000,00 €	1 020,00 €	1 040,40 €	1 061,21 €	4 121,61 €
	Equipment	Upgrade/renewal	2 000,00 €	Anual	2 000,00 €	2 040,00 €	2 080,80 €	2 122,42 €	8 243,22 €
	Staff	20% flat rate	600,00 €	Anual	600,00 €	612,00 €	624,24 €	636,72 €	2 472,96 €
1.7. Vem Aprender a Programar	Services	Training to Municipality Team	1 000,00 €	Anual	1 000,00 €	1 020,00 €	1 040,40 €	1 061,21 €	4 121,61 €
	Staff	20% flat rate	200,00 €	Anual	200,00 €	204,00 €	208,08 €	212,24 €	824,32 €
1.8. Literacia+	Services	Training to Municipality Team	1 000,00 €	Anual	1 000,00 €	1 020,00 €	1 040,40 €	1 061,21 €	4 121,61 €
	Staff	20% flat rate	200,00 €	Anual	200,00 €	204,00 €	208,08 €	212,24 €	824,32 €
1.9. STEAM Workshops	Services	Training to Municipality Team	1 000,00 €	Anual	1 000,00 €	1 020,00 €	1 040,40 €	1 061,21 €	4 121,61 €
	Equipment	Upgrade/renewal	2 000,00 €	Anual	2 000,00 €	2 040,00 €	2 080,80 €	2 122,42 €	8 243,22 €
	Staff	20% flat rate	600,00 €	Anual	600,00 €	612,00 €	624,24 €	636,72 €	2 472,96 €

Area of Intervention / Action	Category	Description	Investment	Unit	2027	2028	2029	2030	TOTAL
2nd Training					325 200,00 €	331 704,00 €	338 338,08 €	345 104,84 €	1 340 346,92 €
2.1. Labour Observatory	Software	Upgrade/renewal	10 000,00 €	Anual	10 000,00 €	10 200,00 €	10 404,00 €	10 612,08 €	41 216,08 €
	Staff	20% flat rate	2 000,00 €	Anual	2 000,00 €	2 040,00 €	2 080,80 €	2 122,42 €	8 243,22 €
2.2. Coding Bootcamp	Services	Training and Scouting	90 000,00 €	Anual	90 000,00 €	91 800,00 €	93 636,00 €	95 508,72 €	370 944,72 €
	Staff	20% flat rate	18 000,00 €	Anual	18 000,00 €	18 360,00 €	18 727,20 €	19 101,74 €	74 188,94 €
2.3. Microcredentials	Services	Training and Scouting	165 000,00 €	Anual	165 000,00 €	168 300,00 €	171 666,00 €	175 099,32 €	680 065,32 €
	Staff	20% flat rate	33 000,00 €	Anual	33 000,00 €	33 660,00 €	34 333,20 €	35 019,86 €	136 013,06 €
2.4. Open Days @ Companies	Services	Transportation (of students), Catering	6 000,00 €	Anual	6 000,00 €	6 120,00 €	6 242,40 €	6 367,25 €	24 729,65 €
	Staff	20% flat rate	1 200,00 €	Anual	1 200,00 €	1 224,00 €	1 248,48 €	1 273,45 €	4 945,93 €
3rd Tech, Services and Apps					1 797 920,00 €	659 017,92 €	1 059 411,08 €	749 290,24 €	4 265 639,24 €
3.1. Aveiro Living Lab	Services	Expansion - Construction works	200 000,00 €	Biannual	200 000,00 €	- €	208 000,00 €		408 000,00 €
	Software	Upgrade/renewal	10 000,00 €	Anual	10 000,00 €	10 200,00 €	10 404,00 €	10 612,08 €	41 216,08 €
	Equipment	Upgrade/renewal	50 000,00 €	Biannual	50 000,00 €	51 000,00 €	52 020,00 €	53 060,40 €	206 080,40 €
	Staff	20% flat rate	52 000,00 €	Anual	52 000,00 €	12 240,00 €	54 084,80 €	12 734,50 €	131 059,30 €
3.2. Urban Data Platform	Software	Upgrade/renewal - Technologic Integrations	50 000,00 €	Biannual	50 000,00 €	- €	52 000,00 €		102 000,00 €
	Equipment	Upgrade/renewal	15 000,00 €	Anual	15 000,00 €	15 300,00 €	15 606,00 €	15 918,12 €	61 824,12 €
	Staff	20% flat rate	13 000,00 €	Anual	13 000,00 €	5 508,00 €	24 338,16 €	5 730,52 €	48 576,68 €
3.3. Aveiro Tech City Hub	Software	Upgrade/renewal	20 000,00 €	Anual	20 000,00 €	20 400,00 €	20 808,00 €	21 224,16 €	82 432,16 €
	Staff	20% flat rate	4 000,00 €	Anual	6 600,00 €	8 241,60 €	12 150,43 €	8 574,56 €	35 566,59 €
3.4. Aveiro Digital Twin	Software	Upgrade/renewal - Technologic Integrations	50 000,00 €	Biannual	50 000,00 €		52 000,00 €	53 040,00 €	155 040,00 €
	Staff	20% flat rate	10 000,00 €	Anual	11 320,00 €	5 728,32 €	16 991,69 €	16 567,74 €	50 607,75 €
3.5. Technological Free Zone	Services	Training to startups and companies	50 000,00 €	Anual	50 000,00 €	51 000,00 €	52 020,00 €	53 060,40 €	206 080,40 €
	Third Party - Prizes	Open Innovation Challenges	150 000,00 €	Anual	150 000,00 €	153 000,00 €	156 060,00 €	159 181,20 €	618 241,20 €
	Staff	20% flat rate	40 000,00 €	Anual	40 000,00 €	40 800,00 €	41 616,00 €	42 448,32 €	164 864,32 €
3.6. Aveiro Municipal Card	Services	Platform Creation	400 000,00 €	One time	400 000,00 €	- €	- €	- €	400 000,00 €
	Software	Upgrade/renewal - Technologic Integrations	50 000,00 €	Anual	50 000,00 €	51 000,00 €	52 020,00 €	53 060,40 €	206 080,40 €
	Staff	20% flat rate	90 000,00 €	Anual	90 000,00 €	91 800,00 €	93 636,00 €	95 508,72 €	370 944,72 €
3.7. Intelligent Crisis Control Room	Services	Platform Creation	400 000,00 €	One time	400 000,00 €	- €	- €	- €	400 000,00 €
	Software	Upgrade/renewal - Technologic Integrations	50 000,00 €	Anual	50 000,00 €	51 000,00 €	52 020,00 €	53 060,40 €	206 080,40 €
	Staff	20% flat rate	90 000,00 €	Anual	90 000,00 €	91 800,00 €	93 636,00 €	95 508,72 €	370 944,72 €
4th Challenges					924 000,00 €	769 080,00 €	961 261,60 €	980 486,83 €	3 634 828,43 €
4.1. Aveiro Urban Challenges	Services	Training to startups and companies	50 000,00 €	Anual	50 000,00 €	51 000,00 €	52 020,00 €	53 060,40 €	206 080,40 €
	Third Party - Prizes	Open Innovation Challenges	150 000,00 €	Anual	150 000,00 €	153 000,00 €	156 060,00 €	159 181,20 €	618 241,20 €
	Staff	20% flat rate	40 000,00 €	Anual	40 000,00 €	40 800,00 €	41 616,00 €	42 448,32 €	164 864,32 €
4.2. Participatory Budget	Services	Training to citizens, biannual	20 000,00 €	Biannual	20 000,00 €		20 800,00 €	21 216,00 €	62 016,00 €
	Services	Projects Implementation, biannual	150 000,00 €	Biannual	150 000,00 €		156 000,00 €	159 120,00 €	465 120,00 €
	Staff	20% flat rate	34 000,00 €	Anual	34 000,00 €	34 680,00 €	35 373,60 €	36 081,07 €	140 134,67 €
4.3. Aveiro Tech Week	Services	Several	400 000,00 €	Anual	400 000,00 €	408 000,00 €	416 160,00 €	424 483,20 €	1 648 643,20 €
	Staff	20% flat rate	80 000,00 €	Anual	80 000,00 €	81 600,00 €	83 232,00 €	84 896,64 €	329 728,64 €
TOTAL					3 675 140,00 €	2 400 382,32 €	3 012 402,77 €	2 741 341,77 €	11 829 266,85 €

SECTION 5: The Governance and Monitoring

5.1 Project Governance Arrangements

Based on previous experience of **Aveiro STEAM City's governance model**, led by the Municipality of Aveiro, assumes **three levels of management**:

- **Strategic Coordination Unit**, composed by the municipality and the University of Aveiro in a permanent and close collaboration, has the function to define or redefine the strategic and operational objectives of Aveiro Tech City and meets twice a year. This strategic unit is supported by:
- **Executive Council**, represented by all partners, meets quarterly and supports the strategic coordination unit by monitoring the execution of the activity plan of Aveiro Tech City.
- **Project Management Team** has the duty to guarantee the monitoring, execution and evaluation of the results of the different activities under implementation, guaranteeing the integration of several R&D projects that support the development and maintenance of this initiative. This team meets at least quarterly.

In terms of governance, there is also the **Partners Council**, aimed at companies that meet Aveiro Tech City objectives and following conditions:

- Have headquarters or office in Aveiro.
- Have a strong focus on R&D&I (Research, Development & Innovation) and thus contribute to the national and international affirmation of Aveiro, as a highly innovative territory.

Aveiro Tech City intends to leverage the level of impact of the initiatives and activities developed within the Aveiro STEAM City, since this project was the nerve center of the strategy. Therefore, it is not possible to dissociate Aveiro Tech City from Aveiro STEAM City and, in fact, the work developed and the cooperation between partners, allowed us to explore and discuss new governance and frameworks models that boost breakthrough innovation, while ensuring the mainstreaming of these practices into the ordinary urban development process.

The legacy of these active and collaborative process, created the foundations and knowledge so that we could consolidate Aveiro Tech City's strategy and our contributions to the community (from private and public sector, academia, schools to citizens) and, with that, our strategy extended to more partners and entities that actively seek to cooperate with us.

Nowadays, Aveiro Tech City **integrates 15 public and private entities** (5 new more than the initial protocol), that now includes: Municipality of Aveiro, University of Aveiro, Altice Labs, Instituto de Telecomunicações, Inova-ria, Bosch, Nokia, The Navigator Company, Oli, Veolia, Transdev, Cluster TICE.PT, Cluster Sustainable Habitat, AIDA-Chamber of Commerce and Industry and Creative Science Park, that assume to cooperate, actively work and align their efforts in order to:

- Stimulate the competitiveness and attractiveness of Aveiro.
- Transpose research into reality.
- Accelerate the process of digital transformation in Aveiro' community.
- Promote citizens' digital skills and boost innovation in education.
- Promote a collaborative culture and develop projects in co-creation.
- Ensure compliance with the highest ethical standards in the implementation of technological solutions for the cities of the future, namely regarding the privacy and security of data and people.
- Ensure the quality of life of our citizens and the sustainable development Aveiro.

5.2 The Approach to Monitoring and evaluation

In this section we describe broadly **how, when and who we will monitor Aveiro Tech City** activities and evaluate outputs and outcomes/results, being detailed information presented in Annex.

How

In general, for each activity, we will evaluate outputs and outcomes/results through this **instruments**:

- Registrations (in activities), which will give us quantitative data about participants enrolment.
- Surveys that will give us qualitative information about participants insights and awareness about the impact of these activities.
- Focus group which will help us to obtain also qualitative feedback about challenges faced and future opportunities.

When

Depending to each activity schedule and outcome, we foresee three main moments to collect data:

- Registrations (in activities) - *Immediately obtain after application ends.*
- Surveys:
 - Sent after each activity end -> Report present one month after survey deadline.
 - Sent one year after activity end (in some cases) -> Report present one month after survey deadline.
- Focus group:
 - Happens after each activity end -> Report presented, jointly with survey report, one month after survey deadline.

Who

The ownership of each activity is responsible to implement the several monitoring methods and to share it with the Municipality of Aveiro, who will collect all information and elaborate an annual report to **Executive Council** and **Strategic Coordination Unit**.

ANNEX: Activities Sheet

@ Schools

Action	1.1. Tech Labs
Short Description	Provide all primary to secondary schools , with equipment and experimentation spaces with 3D printers, robotic and electrical circuits' kits, among others and provide training to teachers and training in a classroom context.
Links to Objectives	O1 - Increase teachers' digital literacy by 20%, per year, by providing training and mentoring in the classroom context using digital and technological tools. O3 - Increase problem-solving and critical thinking skills in students by 20%, by the year 2030, by providing entrepreneurial competences.
Ownership	Municipality of Aveiro.
Stakeholders	University of Aveiro, through Fábrica Centro de Ciência Viva (Science Center) that works in the field of "Technological and Scientific Culture".
Finance & Resources	€170.000 - Services - Training to teachers and training in a classroom context, per year. €20.000 - Equipment - Upgrade/renewal, per year. €38.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Guarantee until 2027 under National Funding
Outputs	• Update Tech Labs equipment's from 41 Tech Labs. • Involve 45 teachers and 1200 students, per year. • Provide 30h training to teachers and 150h of classroom training, per year. <i>Baseline: 41 Tech Labs + 33 teachers and 1000 students involve + 30h training to teachers + 130h of classroom training, per year</i>
Outcomes/Results	O1 - Increase teachers' digital literacy by 20%, per year. O3 - Increase problem-solving and critical thinking skills in students by 20%, by the year. • Teachers empowering to integrate STEAM methodologies into regular curricula and use technology as a pedagogical tool and cultural shift towards experiential learning. • Improve educational and vocational pathways by increasing student's interest in scientific and technological fields and "learning by doing". • Enhance student's abilities in problem-solving, collaborative work and autonomous learning. • Early exposure to digital and technological literacy reducing digital knowledge among students from different socio-economic backgrounds. • Long-term impact on the local innovation ecosystem, creating strong students foundations. <i>Baseline: 20%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with teachers and students, after each school year. • Surveys will give us quantitative data and collect teachers and students awareness about the knowledge acquired and how this increased their digital literacy. • Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks	• Excessive dependence on individual teacher motivation and involvement of other municipal departments besides education. • Limited integration into the formal curriculum, since this activity is perceive as "extra-curricular". • Sustainability and maintenance of equipment.
Mitigating Measures	• Creation of communities of practice among educators and higher involvement of municipal educational department.

	• Alignment with national curriculum objectives and involvement of school leadership. • Define structured maintenance plans and create partnerships with universities and technology companies.
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Action	1.2. UBBU - Code Literacy
Short Description	Code literacy training, using an online platform (UBBU), dedicated to primary schools and students to promote basic knowledge in computing science, logic thinking and problem solving capacities, with approximately 100 different contents, developed in accordance with students' curriculum. In addition, we develop specific content and exercises related to Aveiro heritage (aligning digital with cultural sphere).
Links to Objectives	O1 - Increase teachers' digital literacy by 20%, per year, by providing training and mentoring in the classroom context using digital and technological tools. O3 - Increase problem-solving and critical thinking skills in students by 20%, by the year 2030, by providing entrepreneurial competences.
Ownership	Municipality of Aveiro
Stakeholders	Service Provider - Code Academy
Finance & Resources	€50.000 - Services - Training to teachers and training in a classroom context, per year. €10.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	• Involve 60 teachers and 1200 students, per year. • Provide 30h training to teachers and 150h of classroom training, per year. <i>Baseline: 50 teachers and 1000 students involve + 30h training to teachers + 200h of classroom training, per year.</i>
Outcomes/Results	O1 - Increase teachers' digital literacy by 20%, per year. O3 - Increase problem-solving and critical thinking skills in students by 20%, by the year. • Teachers empowering to integrate STEAM methodologies into regular curricula and use technology as a pedagogical tool and cultural shift towards experiential learning. • Improve educational and vocational pathways by increasing student's interest in scientific and technological fields and "learning by doing". • Enhance student's abilities in problem-solving, collaborative work and autonomous learning. • Early exposure to digital and technological literacy reducing digital knowledge among students from different socio-economic backgrounds. • Long-term impact on the local innovation ecosystem, creating strong students foundations. <i>Baseline: 20%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with teachers and students, after each school year. • Surveys will give us quantitative data and collect teachers and students awareness about the knowledge acquired and how this increased their digital literacy. • Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks Medium	• Excessive dependence on individual teacher motivation and involvement of other municipal departments besides education. • Limited integration into the formal curriculum, since this activity is perceived as "extra-curricular".
Mitigating Measures	• Creation of communities of practice among educators and higher involvement of municipal educational department. • Alignment with national curriculum objectives and involvement of school leadership.

Action	1.3. Escola Ciência Viva
Short Description	Provide all primary schools (4 th grade) students an immersive educational programme during one week - outside school context (in our Science Center) - that applies Modern Science Museology resources, combining hands-on work and experimental education in science.
Links to Objectives	O3 - Increase problem-solving and critical thinking skill levels in students by 20%, by the year 2030, by providing entrepreneurial competences.
Ownership	Municipality of Aveiro.
Stakeholders	University of Aveiro, through Fábrica Centro de Ciência Viva (Science Center) that works in the field of "Technological and Scientific Culture".
Finance & Resources	€30.000 - Services - Immersive Programme, per year. €5.000 - Services - Transportation (of students), per year. €7.000 - Staff - 20% flat rate, per year.
Readiness	Done and guarantee until 2027 under National Funding
Outputs	• Provide immersive programme to all 4th grade students. • Involve 35 teachers and 700 students, per year. <i>Baseline: 30 teachers and 650 teachers involve</i>
Outcomes/Results	O3 - Increase problem-solving and critical thinking skill levels in students by 20%, by the year. • Improve educational and vocational pathways by increasing student's interest in scientific and technological fields and "learning by doing". • Enhance student's abilities in problem-solving, collaborative work and autonomous learning. • Early exposure to digital and technological literacy reducing digital knowledge among students from different socio-economic backgrounds. • Long-term impact on the local innovation ecosystem, creating strong students foundations. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with students, after each school year. • Surveys will give us quantitative data and collect students awareness about the knowledge acquired and how this increased their digital literacy. • Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks Low	• Limited integration into the formal curriculum, since this activity is perceive as "extra-curricular". • Limited long-term impact as one-off experience, with no training in classroom context (follow-up).
Mitigating Measures	• Alignment with national curriculum objectives and involvement of school leadership. • Create preparatory and follow-up/training activities with teachers.

Action	1.4. STEAM Artistic Residences
Short Description	Contest that aims to explore the A of Arts in the STEAM educational process (and use our Tech Labs equipments @ schools), through the involvement of artists, teachers and students from Basic schoolss , in different countries, in the same creative process.
Links to Objectives	O1 - Increase teachers' digital literacy by 20%, per year, by providing training and mentoring in the classroom context using digital and technological tools. O3 - Increase problem-solving and critical thinking skill levels in students by 20%, by the year 2030, by providing entrepreneurial competences.
Ownership	Municipality of Aveiro.

Stakeholders	University of Aveiro, through Fábrica Centro de Ciência Viva (Science Center) that works in the field of “Technological and Scientific Culture”.
Finance & Resources	€8.000 - Prizes - Artist, per year. €5.000 - Prizes - School, per year. €10.000 - Travel & Accommodation, per year. €5.000 - Services - Sound, Transportation (of students), etc, per year. €7.000 - Staff - 20% flat rate, per year.
Readiness	Done and guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	Co-create 2 project, involving 2 artists and 2 schools. <i>Baseline: 1 project, 1 artist and 1 school.</i>
Outcomes/Results	O1 - Increase teachers’ digital literacy by 20%, per year. O3 - Increase problem-solving and critical thinking skill levels in students by 20%, by the year. - Promote cross-disciplinary innovation (Art × Technology × Science), supporting the creation of new ideas, concepts and prototypes. - Strengthen creative and digital skills: Participants develop digital creation skills and experimental and exploratory mindsets. - Talent attraction and retention of young creatives, digital artists and cultural and creative professionals, contribution to positioning Aveiro as a city open to creative experimentation. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with teachers and students, after each school year. - Surveys will give us quantitative data and collect teachers and students awareness about the knowledge acquired and how this increased their digital literacy. - Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks Medium	- Difficulty in measuring impact since cultural and creative projects are often qualitative and long-term. - Limited public engagement (low visibility or understanding by citizens). - Excessive dependence on individual teacher motivation and involvement of other municipal departments besides education. - Limited integration into the formal curriculum, since this activity is perceived as “extra-curricular”.
Mitigating Measures	- Documentation of processes, learning and spill-over effects. - Integrate final products in public presentations (local festivals, schools and community events). - Creation of communities of practice among educators and higher involvement of municipal educational department. - Alignment with national curriculum objectives and involvement of school leadership.

Action	1.5. Entrepreneurial Contests
Short Description	Promote entrepreneurial skills in students (problem solving, team work, critical thinking...), according to their level of education: <u>“Your Idea Counts” Contest</u> - Dedicate to Secondary and Vocational Schools students where they can create and present businesses projects, as a team. <u>“An idea, a project, an action” Contest</u> - Dedicate to Basic Schools students where they can co-create, design and implement concrete actions to respond to their school or surrounding/local needs.
Links to Objectives	O3 - Increase problem-solving and critical thinking skill levels in students by 20%, by the year 2030, by providing entrepreneurial competences.
Ownership	Municipality of Aveiro.

Stakeholders	Services Providers
Finance & Resources	€20.000 - Prizes - School, per year €1.500 - Prizes - Students and Teacher, per year €40.000€ - Services - Training to teachers and training in a classroom context, per year. €600 - Services - Other Training (Bootcamp), per year. €6.500 - Services - Transportation (of students), per year. €3.000 - Services - Catering, per year. €5.000 - Services - Sound, etc, per year.
Readiness	Done and guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	- Involve 200 teachers and 2350 students, per year. - Provide 50h training to teachers and 50h of classroom training, per year. <i>Baseline: 170 teachers and 2350 students involve + 50h training to teachers + 50h of classroom training, per year.</i>
Outcomes/Results	O3 - Increase problem-solving and critical thinking skill levels in students by 20%, by the year. - Connection to the territory and community by promoting projects based on local needs: also promotes greater student awareness of social, economic, and environmental challenges. - Strengthen creative skills: Participants develop experimental and exploratory mindsets. - Talent attraction and retention of young creatives, contribution to positioning Aveiro as a city open to creative experimentation. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with teachers and students, after each school year. - Surveys will give us quantitative data and collect students awareness about the knowledge acquired and how this increased their problem-solving and critical thinking skills. - Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks Low	- Excessive dependence on individual teacher motivation and involvement of other municipal departments besides education. - Limited integration into the formal curriculum, since this activity is perceived as “extra-curricular”.
Mitigating Measures	- Creation of communities of practice among educators and higher involvement of municipal educational department. - Alignment with national curriculum objectives and involvement of school leadership.

@ Community

Action	1.6. Tardes STEAM na Casa
Short Description	Leisure activity, outside school context , dedicated to introduce STEAM equipments and activities among youngsters from primary to basic schools .
Links to Objectives	O2 - Increase community (youngsters, families, seniors or unemployment) digital literacy by 20%, by the year 2030, by providing training, using digital and technological tools.
Ownership	Municipality of Aveiro.
Stakeholders	University of Aveiro, through Fábrica Centro de Ciência Viva (Science Center) that works in the field of “Technological and Scientific Culture”.
Finance & Resources	€5.000€ - Equipments - Upgrade/renewal, per year. €1.000 - Services - Other (design, communication), per year. €600 - Staff - 20% flat rate, per year.
Readiness	Implemented and guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	Involve 120 participants, per year.

	<i>Baseline: 90 participants, per year.</i>
Outcomes/Results	O2 - Increase community' digital literacy by 20%, per year. • Improve educational and vocational pathways by increasing student's interest in scientific and technological fields and "learning by doing". • Enhance student's abilities in problem-solving, collaborative work and autonomous learning. • Early exposure to digital and technological literacy reducing digital knowledge among students from different socio-economic backgrounds. • Long-term impact on the local innovation ecosystem, creating strong students foundations. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with participants, after each edition. • Surveys will give us quantitative data and collect participants awareness about the knowledge acquired and how this increased their digital literacy. • Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks Low	• Limited depth of learning outcomes since activities remain superficial or purely recreational due to its short duration and informal nature.
Mitigating Measures	• Define clear educational objectives for each session and connect them whit other STEAM programmes (bootcamp, microcredentials, etc)

Action	1.7. Vem Aprender a Programar
Short Description	Leisure activity, outside school context , dedicated to introduce coding literacy among youngsters from primary to basic schools to promote preliminary knowledge in computer science, logical thinking, and problem-solving skills.
Links to Objectives	O2 - Increase community (youngsters, families, seniors or unemployment) digital literacy by 20%, by the year 2030, by providing training, using digital and technological tools.
Ownership	Municipality of Aveiro.
Stakeholders	-
Finance & Resources	€1.000 - Services - Other (design, communication), per year. €200 - Staff - 20% flat rate, per year.
Readiness	Implemented and guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	• Involve 48 participants, per year (24 from primary and 24 from basic schools). • Provide 4 leisure's, per year (2 for primary and 2 for basic students). <i>Baseline: 24 participants, per year and 2 leisures.</i>
Outcomes/Results	O2 - Increase community' digital literacy by 20%, per year. • Improve educational and vocational pathways by increasing student's interest in scientific and technological fields and "learning by doing". • Enhance student's abilities in problem-solving, collaborative work and autonomous learning. • Early exposure to digital and technological literacy reducing digital knowledge among students from different socio-economic backgrounds. • Long-term impact on the local innovation ecosystem, creating strong students foundations. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with participants, after each edition. • Surveys will give us quantitative data and collect participants awareness about the knowledge acquired and how this increased their digital literacy. • Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.

Main Risks Low	Limited depth of learning outcomes since activities remain superficial or purely recreational due to its short duration and informal nature.
Mitigating Measures	Define clear educational objectives for each session and connect them whit other STEAM programmes (bootcamp, microcredentials, etc).

Action	1.8. Literacia+
Short Description	Modular training programme aimed at citizens aged 60 and over in order to promote digital inclusion and active, autonomous, and participatory aging, enhancing the use of technology and digital media as drivers of fair access to public services.
Links to Objectives	O2 - Increase community (youngsters, families, seniors or unemployment) digital literacy by 20%, by the year 2030, by providing training, using digital and technological tools.
Ownership	Municipality of Aveiro.
Stakeholders	-
Finance & Resources	€1.000 - Services - Other (design, communication), per year. €200 - Staff - 20% flat rate, per year.
Readiness	Implemented and guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	- Involve 70 participants, per year. - Provide 70h training, per year. <i>Baseline: 50 participants, per year and 70h training</i>
Outcomes/Results	O2 - Increase community' digital literacy by 20%, per year. - Increased community engagement and perception of digital literacy as accessible, enjoyable and relevant, with greater involvement of families and citizens of different age groups. - Reduce psychologic barriers often associated with digital literacy by promoting informal and inclusive learning environments. - Promote social inclusion and equal access to digital literacy with activities open to diverse socio-economic groups and citizens with different educational backgrounds, contribution to reduce inequalities in access to science and technology and democratizing STEAM culture at city level. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with participants, after each edition. - Surveys will give us quantitative data and collect participants awareness about the knowledge acquired and how this increased their digital literacy. - Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks Low	Limited depth of learning outcomes since activities remain superficial or purely recreational due to its short duration and informal nature.
Mitigating Measures	Define clear educational objectives for each session and connect them whit other STEAM programmes (bootcamp, microcredentials, etc).

Action	1.9. STEAM Workshops
Short Description	Modular training programme aimed at families and unemployment in order to promote digital inclusion and enhancing the use of STEAM equipments and activities.
Links to Objectives	O2 - Increase community (youngsters, families, seniors or unemployment) digital literacy by 20%, by the year 2030, by providing training, using digital and technological tools.
Ownership	Municipality of Aveiro.
Stakeholders	University of Aveiro, through Fábrica Centro de Ciência Viva (Science Center) that works in the field of "Technological and Scientific Culture".

Finance & Resources	€2.000 - Services - Other (design, communication), per year. €600 - Staff - 20% flat rate, per year.
Readiness	Implemented and Tested under URBACT + Needs Funding
Outputs	- Involve 60 participants, per year. - Provide 20h training, per year. <i>Baseline: 40 participants, 10h training, per year.</i>
Outcomes/Results	O2 - Increase community' digital literacy by 20%, per year. - Increased community engagement and perception of STEAM as accessible, enjoyable and relevant, with greater involvement of families and citizens of different age groups. - Reduce psychologic barriers often associated with science and technology by promoting informal and inclusive learning environments. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys and focus groups with participants, after each edition. - Surveys will give us quantitative data and collect participants awareness about the knowledge acquired and how this increased their digital literacy. - Focus group will help us to obtain more qualitative feedback about challenges faced and future opportunities.
Main Risks	Limited depth of learning outcomes since activities remain superficial or purely recreational due to its short duration and informal nature.
Mitigating Measures	Define clear educational objectives for each session and connect them whit other STEAM programmes (bootcamp, microcredentials, etc)

2nd Training

Action	2.1. Labour Observatory
Short Description	Predictive and IA platform that aims to identify training needs and gaps in local companies through the development of digital skills, creative areas, and ICT (Information, Communication and Electronics Technologies), helping human resources to integrate regional job market.
Links to Objectives	O4 - Ensure a 70% employability rate for people in technology companies in Aveiro, by providing tailored training according to companies' digital needs, by the year 2030.
Ownership	University of Aveiro
Stakeholders	Municipality of Aveiro + CIRA (Intermunicipal Community of the Aveiro region) + Inovaria (ICT and innovative companies association) + AIDA CCI (Chamber of Commerce and Industry of Aveiro's District) + Aveiro Region Science Park
Finance & Resources	€10.000 - Software - Upgrade/Renewal, per year. €2000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Needs Funding
Outputs	- Apply 150 surveys with companies and professionals, per year (can be related with 2.4. Open Days activity). - Create a monthly report and continuously data update, based on surveys and predictive/IA tools. <i>Baseline: 100 surveys</i>
Outcomes/Results	O4 - Ensure a 70% employability rate for people - Better alignment between education and the market: Reducing skills mismatches and providing training tailored to the real needs of companies. - Increased employability: Higher placement rates in digital/technological sectors. - Strengthening business competitiveness: Companies with better access to qualified talent.

	• Data-driven governance system: Public decisions supported by up-to-date data on jobs and skills trends. • Ecosystem revitalization: Greater coordination between municipalities, training entities, and companies. • Creation of a permanent logic of co-creation of skills. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), Surveys to companies.
Main Risks High	• Rapid evolution of labor needs and failure to update continuously data due to lack of real-time data collection or low participation from companies.
Mitigating Measures	• Automation of data collection and promote incentives for business participation (by involving business associations and demonstrate direct value - access to talent, customized training).

Action	2.2. Coding Bootcamp
Short Description	Intensive training programme (14 training in classroom context and 14 weeks in a real local context) dedicated to java and java-script that intend to form Full-Stack Developers, according to local companies' digital needs, and aimed at unemployment or professionals seeking new career opportunities.
Links to Objectives	O4 - Ensure a 70% employability rate for people in technology companies in Aveiro, by providing tailored training according to companies' digital needs, by the year 2030.
Ownership	Municipality of Aveiro
Stakeholders	CIRA (Intermunicipal Community of the Aveiro region) + Inovaria (ICT and innovative companies association) + AIDA CCI (Chamber of Commerce and Industry of Aveiro's District).
Finance & Resources	€90.000 - Services - Training and Scouting, twice per year. €18.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Needs Funding
Outputs	• Two editions, per year / 40 trainees, per year. <i>Baseline: two editions and 40 trainees, per year.</i>
Outcomes/Results	O4 - Ensure a 70% employability rate for people • Immediate employability by aligning education and job market needs. • Attracting and retaining qualified talent: Recruiting participants from other regions. • Strengthening business competitiveness: Companies with better access to qualified talent. <i>Baseline: 70% employment rate in regional/local companies.</i>
Monitoring/Evaluation	Registrations (enrolment in activities), job scouting, surveys to trainees and companies, sent after each edition ends and one year after.
Main Risks Medium	• Rapid evolution of labour needs which can lead to train profiles that doesn't match the actual demand. • Difficulty in recruiting potential participants due to the existence of other training opportunities. • Dropout during the program and insufficient talent retention considering high demands and career change.
Mitigating Measures	• Continuous curriculum updates and co-design with companies and enterprises associations. • National campaigns and scholarship support for participants. • Rigorous selection processes and ongoing mentoring.

Action	2.3. Microcredentials
Short Description	Small-volume courses (< 12 ECTS credits), based on labour market needs and flexibly to include unemployment or professionals seeking new career opportunities.

Links to Objectives	O4 - Ensure a 70% employability rate for people in technology companies in Aveiro, by providing tailored training according to companies' digital needs, by the year 2030.
Ownership	University of Aveiro
Stakeholders	Municipality of Aveiro + CIRA (Intermunicipal Community of the Aveiro region) + Inovaria (ICT and innovative companies association) + AIDA CCI (Chamber of Commerce and Industry of Aveiro's District).
Finance & Resources	€165.000 - Services – Training Classes, per year. €33.000 - Staff - 20% flat rate, per year.
Readiness	Done and guarantee until 2026 under National Funding + Needs Funding
Outputs	Provide upskilling train to >300 participants, per year. <i>Baseline: 200 training, per year</i>
Outcomes/Results	O4 - Ensure a 70% employability rate for people - Immediate employability by aligning education and job market needs. - Attracting and retaining qualified talent: Recruiting participants from other regions. - Strengthening business competitiveness: Companies with better access to qualified talent. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), job scouting, surveys to trainees and companies, sent after each edition ends and one year after.
Main Risks Medium	- Rapid evolution of labour needs which can lead to train profiles that doesn't match the actual demand. - Difficulty in recruiting potential participants due to the existence of other training opportunities. - Dropout during the program and insufficient talent retention considering high demands and career change.
Mitigating Measures	- Continuous curriculum updates and co-design with companies and enterprises associations. - National campaigns and scholarship support for participants. - Rigorous selection processes and ongoing mentoring.

Action	2.4. Open Days @ Companies
Short Description	Guided visits from academic students to the most relevant companies of Aveiro with the purpose to strengthen the relationship and connection between future talent (students) and local labor forces (their activities, business strategies, challenges and qualified jobs they offer), complementing the theoretical and practical content with the learning process of university students.
Links to Objectives	O4 - Ensure a 70% employability rate for people in technology companies in Aveiro, by providing tailored training according to companies' digital needs, by the year 2030.
Ownership	Municipality of Aveiro
Stakeholders	University of Aveiro + CIRA (Intermunicipal Community of the Aveiro region) + Inovaria (ICT and innovative companies association) + AIDA CCI (Chamber of Commerce and Industry of Aveiro's District).
Finance & Resources	€1.000 - Services - Transportation (of students), per year. €5.000 - Services - Catering, per year. €1.200 - Staff - 20% flat rate, per year.
Readiness	Done and guarantee until 2026 under Municipality Budget + Needs Funding
Outputs	Involve 90 university students, per year. <i>Baseline: 70 training, per year</i>
Outcomes/Results	O4 - Ensure a 70% employability rate for people - Immediate employability by aligning education and job market needs. - Attracting and retaining qualified talent: Recruiting participants.

	Strengthening business competitiveness: Companies with better access to qualified talent. <i>Baseline: 0%</i>
Monitoring/Evaluation	Registrations (enrolment in activities), surveys to students and companies, sent after each edition ends and one year after. Surveys in two periods will allow us to know how this activity contributed to student's job integration in regional/local companies.
Main Risks Low	Difficulty in guarantee academic participants.
Mitigating Measures	Demonstrate direct value to students: access to future job offers.

3rd Tech, Services and Apps

Action	3.1. Aveiro Living Lab
Short Description	Infrastructure composed of an advanced communications/latest generation fibre technology that collects mobility data and provides information, in real time context, to support decision-making and test innovative solutions , on IoT and Smart Cities. We intend to expand this infrastructure to close/sensorize the main traffic entrances and exits of the city center.
Links to Objectives	O5 - Increase our living lab infrastructure in 20%, investing in sensing equipment and developing predictive platforms (digital twin), by the year 2030. O7 - Support the develop and test of 30 new and disruptive products and services regarding IOT and smart cities, promoted by SMEs, Startup or I&D Centers, providing training, mentorship and access to our living lab infrastructure, by the year 2030.
Ownership	Instituto de Telecomunicações (IT)
Stakeholders	Municipality of Aveiro + University of Aveiro
Finance & Resources	€200.000 - Services - Construction works, per year. €10.000 - Software - Upgrade/renewal, per year. €50.000 - Equipment - Upgrade/renewal, per year. €52.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Needs Funding (expansion)
Outputs	Increase 20% of living lab infrastructure.
Outcomes/Results	- Data-driven governance system: Public decisions supported by up-to-date data. - Accelerating open innovation by promoting experimentation spaces (living labs) and reducing the time between prototype-test-implementation. - Attracting investment and talent: Recruiting deep tech startups, R&D projects and strengthening the city's international reputation.
Monitoring/Evaluation	Observation & Surveys to startups, companies and R&D Centers that use the infrastructure, after each utilization.
Main Risks High	- Rapid technological evolution: infrastructure obsolescence, data fragmentation and interoperability due to the existence of multiple sources and technologies. - High installation and maintenance costs. - Organizational resistance to innovation: low adoption of outputs by municipal services.
Mitigating Measures	- Define open standards and promote an interoperable, modular, and scalable architecture and its continuous updating. - Define monetization models (services, partnerships) for the use of the living lab. - Promote internal training and involve services from the beginning.

Action	3.2. Urban Data Platform
Short Description	Platform that collects information from several IOT devices installed in the city and aggregates them with other data, and transform it into useful information to help political decision maker . We intend to expand the number of verticals/indicators integrated into the urban platform, especially in terms of municipal services (public transport, bike sharing, library, school lunch management, urban waste, etc.).
Links to Objectives	O6 - Increase by 15% the data collection in our urban platform, promoting collaborative communication and technological transformation between different stakeholders and services providers, by the year 2030.
Ownership	Altice Labs (ALB)
Stakeholders	Municipality of Aveiro + Instituto de Telecomunicações
Finance & Resources	€50.000 - Services - Technologic Integrations, per year €15.000 - Equipment - Upgrade/renewal, per year. €13.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Needs Funding (expansion)
Outputs	Integrate one new public service, per year, in the urban platform. System architecture and data integration framework
Outcomes/Results	- Data-driven governance system: Public decisions supported by up-to-date. - Improve operational efficiency of the municipality.
Monitoring/Evaluation	Observation - number of verticals integrated
Main Risks	- Rapid technological evolution: infrastructure obsolescence, data fragmentation and interoperability due to the existence of multiple sources and technologies. - Organizational resistance to innovation: low adoption of outputs by municipal services.
Mitigating Measures	- Define open standards and promote an interoperable, modular, and scalable architecture and its continuous updating. - Promote internal training and involve services from the beginning.

Action	3.3. Aveiro Tech City Hub
Short Description	Experimentation space, through digital equipment, where visitors can: - Learn about our development strategy regarding Aveiro Tech City. - Visualize the municipality's social, economic and industrial development in the last few years. - Access our main competitive advantages and our innovative and entrepreneurial character. - Consult some of the most important public investments made or planned for the future.
Links to Objectives	O9 - Promote contact between more than 10.000 people, per year, and the innovations and initiatives developed within the scope of Aveiro Tech City, by organizing each year Aveiro Tech Week.
Ownership	Municipality of Aveiro
Stakeholders	CIRA (Intermunicipal Community of the Aveiro region) + Inovaria (ICT and innovative companies association) + AIDA CCI (Chamber of Commerce and Industry of Aveiro's District) + Aveiro Region Science Park + Services Providers
Finance & Resources	€20.000 - Equipment - Upgrade/renewal, per year. €4.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project
Outputs	Integrate new data information, each year, related with territorial competitiveness (employment, exportation, etc) Number of external companies that get in touch with this equipments
Outcomes/Results	Share data information to several audiences, specially investors.
Monitoring/Evaluation	Observation - number of information updated

Main Risks Low	• Rapid technological evolution: infrastructure obsolescence, data fragmentation and interoperability due to the existence of multiple sources and technologies. • Economic data information usually spread or hard to collect.
Mitigating Measures	Promote companies and municipality direct and shared channel to collect data.

Action	3.4. Aveiro Digital Twin
Short Description	Predictive software, based on advanced communications (living lab) that provides awareness about mobility data, in real time context, to support decision-making and public preparedness.
Links to Objectives	O5 - Increase our living lab infrastructure in 20%, investing in sensing equipment and developing predictive platforms (digital twin), by the year 2030. O7 - Support the develop and test of 30 new and disruptive products and services regarding IOT and smart cities, promoted by SMEs, Startup or I&D Centers, providing training, mentorship and access to our living lab infrastructure, by the year 2030.
Ownership	Instituto de Telecomunicações
Stakeholders	Municipality of Aveiro + University of Aveiro
Finance & Resources	€50.000 - Services - Technologic Integrations, per year €10.000 - Staff - 20% flat rate, per year.
Readiness	Initiated + Needs funding
Outputs	Creation of a 3D/4D digital model of the urban territory with integration of static data (GIS, cadastral data, urban planning) and dynamic data (IoT, sensors, mobility).
Outcomes/Results	• Data-driven governance system: Public decisions supported by up-to-date. • Improve operational efficiency of the municipality.
Monitoring/Evaluation	Observation
Main Risks Medium	• High technical complexity: multiple data sources + complex technologies. • Data quality and consistency: incorrect or unreliable simulations. • Low adoption by decision-makers: tool not used in practice due to change resistance.
Mitigating Measures	• Promote phased development and modular architecture. • Define data governance policies and promote continuous data validation. • Provide training, capacity building and integration into decision-making processes.

Action	3.5. Technological Free Zone
Short Description	Controlled area that allows to test, under real conditions, innovative technologies such as 5G and IoT networks, autonomous vehicles, artificial intelligence, cybersecurity and new connectivity solutions. With land, estuary, and maritime coverage, the infrastructure offers unique conditions for the development of disruptive technological solutions, promoting connections between research, industry, and public administration .
Links to Objectives	O5 - Increase our living lab infrastructure in 20%, investing in sensing equipment and developing predictive platforms (digital twin), by the year 2030. O7 - Support the develop and test of 30 new and disruptive products and services regarding IOT and smart cities, promoted by SMEs, Startup or I&D Centers, providing training, mentorship and access to our living lab infrastructure, by the year 2030.
Ownership	University of Aveiro
Stakeholders	Municipality of Aveiro + Instituto de Telecomunicações
Finance & Resources	€50.000 - Services - Training to startups and companies, per year €150.000 - Open Innovation Challenges, per year. €40.000 - Staff - 20% flat rate, per year.

Readiness	Implemented + Needs Funding
Outputs	Implement the ZLT governance model and accelerate the legal protocols for experimentation (regulatory sandbox).
Outcomes/Results	- Accelerating open innovation by promoting experimentation spaces (living labs) and reducing the time between prototype-test-implementation. - Attracting investment and talent: Recruiting deep tech startups, R&D projects and strengthening the city's international reputation.
Monitoring/Evaluation	Observation
Main Risks Medium	- Regulatory and legal complexities that can result in legal blocks or implementation delays. - Lack of scalability in testing: tested solutions do not reach the market. - High operational costs: difficulty in maintaining ZLT in the long term.
Mitigating Measures	- Early involvement of regulators and definition of clear legal framework (formal sandbox). - Clear link to scale-up phases and involvement of investors and the municipality. - Establishment of public-private partnerships and monetization of access and services.

Action	3.6. Aveiro Municipal Card
Short Description	Single municipal card (manual + digital) that integrates public services such as transports (including bike sharing system), school meals, library and even access to a local commerce marketplace.
Links to Objectives	O6 - Increase by 15% the data collection in our urban platform, promoting collaborative communication and technological transformation between different stakeholders and services providers, by the year 2030.
Ownership	Municipality of Aveiro
Stakeholders	+ Services Providers
Finance & Resources	€400.000 - Services - New Platform, per year €50.000 - Software - Technological Integrations, per year. €90.000 - Staff - 20% flat rate, per year.
Readiness	
Outputs	
Outcomes/Results	
Monitoring/Evaluation	
Main Risks Medium	
Mitigating Measures	

Action	3.7. Intelligent Crisis Control Room
Short Description	Crisis Control Room for real-time decision support, where is possible for visualization, simulation, and coordination of multi-agent operational operations , according to the principles of privacy by design and management of municipal response processes according to the ITIL standard.
Links to Objectives	O6 - Increase by 15% the data collection in our urban platform, promoting collaborative communication and technological transformation between different stakeholders and services providers, by the year 2030.
Ownership	Municipality of Aveiro
Stakeholders	Instituto de Telecomunicações + Altice Labs
Finance & Resources	€400.000 - Services - New Platform, per year €50.000 - Software - Technological Integrations, per year. €90.000 - Staff - 20% flat rate, per year.

Readiness	Innitiated + Needs funding
Outputs	
Outcomes/Results	
Monitoring/Evaluation	
Main Risks	
Medium	

4th Challenges

Action	4.1. Aveiro Urban Challenges
Short Description	Open innovation and co-creation competition through which Municipality identifies real problems regarding public management (mobility, environment, energy, inclusion, public services, etc.) and invites startups, SMEs and R&D centers to test and implement innovative solutions in a real-world context, taking advantage of the Living Lab, the Urban Platform, the Digital Twin, and the Technological Free Zone.
Links to Objectives	O7 - Support the develop and test of 30 new and disruptive products and services regarding IOT and smart cities, promoted by SMEs, Startup or I&D Centers, providing training, mentorship and access to our living lab infrastructure, by the year 2030. O8 - Ensure that ≥75% of solutions tested in the municipality result from participatory processes (citizens, businesses, and academia).
Ownership	Municipality of Aveiro
Stakeholders	Instituto de Telecomunicações + University of Aveiro + Altice Labs
Finance & Resources	€50.000 - Services - Training to startups and companies, per year. €150.000 - Third Party - Prizes Open Innovation Challenges, per year. €40.000 - Staff - 20% flat rate, per year.
Readiness	Done under UIA Project + Needs Funding
Outputs	1 edition, per year, +50 startups applied, 6 startups awarded
Outcomes/Results	- Accelerating open innovation by promoting experimentation spaces and reducing the time between prototype-test-implementation. - Attracting investment and talent: Recruiting deep tech startups, R&D projects and strengthening the city's international reputation.
Monitoring/Evaluation	
Main Risks	- Solutions poorly aligned with real needs: "technological" innovation without urban impact due to poorly defined challenges. - Low participation or diversity of candidates. - Internal resistance within the public administration leading to difficulty in integrating innovative solutions.
Mitigating Measures	- Clear definition of problems and prior involvement of municipal services and citizens. - International dissemination and clear incentives (financial and mentoring). - Promote internal training and involve services from the beginning.