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BUENAS PRÁCTICAS

Actuaciones Cofinanciadas

High-tech 3D INCUBATOR (Cataluña).
INCYDE foundation

**Programa Operativo
de Cataluña**

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GOOD PRACTISES OF CO-FINANCED ACTION PRESENTED BY THE INCYDE FOUNDATION HIGH-TECH 3D INCUBATOR (CATALUÑA)

The INCYDE Foundation participates in the 2014-2020 ERDF Operational Programme of Spain as a fund management body, with the execution of the High-Tech Incubators project for the promotion of innovation and the transfer of technology to small, medium, and micro-enterprises as well as entrepreneurs. The High-Tech Incubators project involves an initial development of infrastructure distributed throughout the national territory. The sectors on which the High-Tech Incubators will be based must be coordinated with the Research and Innovation Smart Specialisation Strategy (RIS3) of each region. The High-Tech incubators are conceived as a project focused and centred on the transfer of technology from the institutions responsible for R+D+i both in Spain and internationally, onto the market. To this end, it is essential to have a network of partners that will provide the necessary services so that the incubated business start-ups (whether newly created or not) receive said R+D+i to apply it to their business models.



As a proposal for good practices, the Incyde Foundation presents: the **3D Incubator, the first European high-tech 3D printing incubator** that houses the most promising start-ups employing these disruptive additive manufacturing technologies.

Its objective is to promote the growth of these projects by creating a unique space for the incubation of start-ups, SMEs, and micro-enterprises related to these 4.0 economy technologies. The 3D Incubator is an initiative led by the Consorci de la Zona Franca de Barcelona and the Leitat Foundation that has **received an investment of 2,977,200.02 Euro (50% of which is ERDF aid: 1,488,600.01 Euro)**.

With more than 1,000 m² of surface area after the expansion carried out at the end of 2020, the 3D Incubator is the first incubator focused exclusively and specifically on 3D printing in Europe. The space has the standard incubation areas: co-working zones, offices, training and meeting rooms, as well as common areas (like a terrace and kitchen), and a **complete laboratory with the latest technology in 3D printing** and post-processing: 7 different technologies for 3D printing using plastics and resins (4 state-of-the-art 3D industrial printers and 6 mini-printers), machines for surface treatments and cleaning up printed parts, scanner and metrology and quality control equipment, and design software. All of this makes up one of the most powerful 3D printing laboratories in Europe that allows incubated start-ups to carry out their production in our facilities with all the guarantees.

With three and a half years having passed since its official inauguration, we consider the High-Tech 3D Incubator to be a good practise for the following reasons:

1. HIGH LEVEL OF DISSEMINATION AMONG THE BENEFICIARIES AND THE GENERAL PUBLIC

One of the elements of the 3D Incubator that sets it apart is the effort made in the field of dissemination and communication to the general public. The initiative has been widely publicised by all kinds of media including, among others, press, television, and social media.

The High-Tech 3D Incubator has actively participated in **activities, conferences, congresses, and talks**. As a result of the pandemic caused by the international spread of COVID-19, many fairs were cancelled and organisers opted for **virtual** participation in events, conferences, and webinars.

However, and despite the complications associated with the new health, safety, and prevention regulations, there was an attempt to maintain an “**open door**” policy for the 3D Incubator, dedicated to informing participants of all kinds of the activities carried out through visits. These visits have been so successful that, since its inauguration, visits have been handled not only locally and nationally, but also internationally with the participation of visitors from countries such as Morocco, Chile, the Netherlands, the UK, Colombia, the USA, Poland, Germany, and Ireland, among others.

The dissemination activities are divided:

- a) Compliance with the advertising requirements associated with ERDF financing:
Any person or company that has benefited from the creation of the incubator and/or the provision of its services has been made aware that the start-up was supported by ERDF funds. In order to ensure this level of dissemination, the incubator management team has carried out multiple actions, which are summarized below:
 - **Physical elements, posters, and use of logos on equipment:** The management team has ensured that all the equipment purchased, the communication of the projects, and the specifications and materials laid out for the bidding for services, operations, and supplies have the proper publicity information about the ERDF Funds. Some examples are shown below:
 - **Working poster and permanent poster:** It has been positioned in such a way that it is visible as soon as you enter the incubator, thereby ensuring that the origin of the financing is highly visible.



- **Equipment and facilities:** All the incubator's equipment and facilities make reference to the ERDF funds as the origin of their co-financing.

- **Website:** www.incubator3d.org

- **Official presentation** (available on the [website](#))

- b) General public: The 3D Incubator takes great effort to make its activities known **to the general public and, thanks to the participation of television networks, visits to the incubator, fairs, and thousands of mentions in the press, we can say that millions of people already know the 3D Incubator.** Throughout these first three and a half years of its existence, the Incubator has disclosed the impact of its ERDF funding on multiple occasions. Thanks to the support for entrepreneurship in 3D printing and the activity carried out for our incubated companies, and because of this ERDF financing, we have **success stories that have had a direct impact on the quality of life of the general public.**
- c) From the point of view of communication, by way of example, the following actions stand out:
- The High-Tech Incubator has appeared repeatedly on **television broadcasts** both nationally and regionally, with **hundreds of thousands of viewers** among the different broadcasts.
 - The incubator has participated in multiple fairs: the fairs that have had thousands of visitors have served not only to make the incubator itself known, but also the incubated companies have made their products and developments known through their own stands.
 - The more than **2,650 in-person visits** to the incubator have served to inform the general public and agents such as universities, clusters, unions, companies, schools, and public institutions. Standing out are the visits of the **President of the Spanish Government, the Spanish Minister of Science and Innovation, His Majesty the King of Spain, the Mayor of Barcelona, the Generalitat's Minister of Business**, consular representatives, and international missions.
 - **Press and population in general:** In addition to television promotions, the impact on the press has been truly outstanding, with more than **2,100 hits** in the media (articles and press appearances with direct reference to the 3D Incubator.)
 - **Press and media activities:** Since its inauguration, the 3D Incubator has achieved great visibility in the media. These results have been possible thanks to the wide interest that the initiative has aroused in the general public, and also thanks to its important and constant work dedicated to publicising the project and its vision of the future. Among the different activities carried out, the following should be highlighted:



→ LA VANGUARDIA, 11 February 2019



→ EL PAÍS, 3 May 2019

- **Participation in conferences, congresses, and general fairs:** The 3D Incubator has participated in more than fifty activities (conferences, events, fairs) among which are the International Logistics Exhibition, the Mediterranean Week Innovation Forum, and the first and third editions of the BNEW conference. In addition, during the state of emergency, it has accepted the invitation of different virtual meetings in which to present the initiative.
- **Visits to the 3D Incubator:** Since its inauguration, there has been an intense rhythm of dissemination to the general public. For example, the facilities have received nearly **2,650 visitors** since they opened their doors, to whom its operation has been explained in detail. These visitors were given a tour of the facilities, they have been shown how the different technological equipment operates, and the origin of the financing and the impacts of 3D printing were explained to them.
- **Website and Social Media:** The website had an original goal of more than 1,000 visits during the duration of the project. In reality, this objective was far exceeded in the first month since the inauguration of the initiative. Today, the website offers a first point of contact for the initiative with the general public, companies, and other stakeholders. Additionally, from the website, you can access highly relevant content such as the services provided, the start-ups supported, informative videos, kits, press materials, etc. Regarding social media, the 3D Incubator already has nearly 800 followers on [Twitter](#), 1,922 on [LinkedIn](#), and more than 943 on [Instagram](#).

2. OUR ACTIONS INCORPORATE INNOVATIVE ELEMENTS



The 3D Incubator is the **first initiative of its kind in Europe:** today, there are no other projects aimed at incubating companies exclusively from the 3D printing sector. In addition, it provides one of the most advanced 3D printing laboratories in Europe, which allows incubated start-ups to enjoy professional support and manufacture their products in the incubator's own facilities.

On the other hand, the 3D Incubator has also innovated in terms of its incubation methods. To date, it allows three options that adapt to the needs of incubated start-ups: a private office for those who need high levels of privacy, a co-working space for those who prefer to work out in the open, and, the most innovative, the virtual incubator.

Finally, it is worth highlighting the innovation that comes from having a specialised Design team for Additive Manufacturing among the Incubator's staff, which means that the services provided to the incubated start-ups go beyond advising and mentoring, which are the most common services in other incubators.



3. ADAPTATION OF THE RESULTS OBTAINED TO THE ESTABLISHED OBJECTIVES

Today, it can be said with certainty that the incubator is exceeding all the objectives it has set.

For example:

- More than **800 applications** from different companies and entrepreneurs have been received and evaluated (including international applications).
- The companies incubated over two years have created more than **90 new jobs**.
- More than **3,100 technological services**, advising, marketing support services, promotion of investment, training activities, networking sessions, etc. have been provided. All of them have surpassed the objectives originally set.
- In terms of communication, the extensive media coverage has made it possible to reach a wide audience with more than **2,500 hits** in 2022 alone.
- Regarding the internationalisation of the initiative, in addition to the **requests received from international incubators**, there are **initiatives to replicate the Incubator model** in Colombia and Andorra.

Meanwhile, in terms of qualitative objectives, noteworthy aspects are:

- The contribution of **specialised personnel for the daily management and invigoration** of the High-Tech 3D Incubator.
- The support for the provision of advanced innovation services and technological services from which companies will benefit, with **more than 3,100 services provided to date**.
- The facilitation, through existing networks, of access to financing sources for the benefit of incubated companies and projects linked to the organisation of contact events with investors.
- **The promotion of the 3D Incubator's integration in the national and international ecosystem of Industry 4.0**, advanced manufacturing (3DP/AM). This has been achieved with its participation in events for the sector and by signing a collaboration agreement with the digital innovation hub in additive manufacturing, the IAM 3D HUB.
- Carrying out, **in collaboration with the rest of the promoters**, all the activities necessary to promote, disseminate, and ensure the success of the start-up, as stated in the first point of this document.

- Expansion of the facilities: **co-working** space, **meeting rooms**, **post-processing** laboratory, and acquisition of **new, state-of-the-art equipment** for both 3D printing and surface treatments.
- **Promoting the training of new professional profiles** among students or unemployed people **through the Singulars programme** and training for more than 60 students of the over-300-hour course on 3D printing taught by PIMEC, in collaboration with Leitat, and with financial support from the **Employment Service of Catalonia (SOC**, for the Catalan acronym). Of these participants, about 70% are currently working in the 3D printing sector.
- Establishing itself as a reference entity in the sector with its **presence at the AM Medical Summit**, at the **Advanced Factories Fair**, and the celebration of a design contest for 3D-printed applications together with one of the technological leaders of the sector, **Formlabs**.

4. CONTRIBUTION TO THE RESOLUTION OF A PROBLEM OR WEAKNESS DETECTED IN THE TERRITORIAL SCOPE OF IMPLEMENTATION

The **digital transformation of industry** is creating enormous opportunities for Europe, generating a true revolution in both the European and national economies. However, these opportunities bring with them certain challenges that our industries will have to face. Specifically, we face the challenge of ensuring that all industrial sectors make the best use of new technologies and manage their transition towards higher value-added products and processes, commonly known as “Industry 4.0”.

Contribution of the IAT 3D Incubator:

- Promotion of the necessary **digital skills** among the workers of our companies and among future workers who are currently being trained to join the labour market.
- Transformation of incubated start-ups through rapid **evolution from concept to marketable product**.
- **Reduction of the environmental impact** in the development process of new products (reduction of the logistics chain and near-zero loss in 3D production materials)
- Attraction of **international talent**: Through its state-of-the-art services and equipment, the incubator has attracted companies and entrepreneurs both nationally and internationally.

The 3D Incubator has contributed to the resolution of these **needs**:

- ✓ Offering a unique space with laboratories and advanced equipment.
- ✓ Offering advanced technological services to business start-ups directly.
- ✓ Providing advanced, in-house technological equipment.
- ✓ Working with specialised operators in production and post-production spaces that are available to the incubated start-ups.
- ✓ Collaborating with complementary initiatives such as the **IAM3DHUB** Digital Innovation Hub, or the **RIS3** community focused on 3DP/AM Advanced Manufacturing.
- ✓ Carrying out activities that improve the competitiveness of companies in strategic sectors (RIS3 policy).

5. HIGH DEGREE OF COVERAGE ON THE POPULATION BEING ADDRESSED

One of the main advantages of additive manufacturing/3D printing is the transversality of its application; as such, **the population to which our activity is directed is wide and, thanks to our media efforts, the initiative has been made known to millions of Spaniards.** As an example of how widespread our impact on the population we are targeting is, we can discuss the different sectors in which the start-ups we incubate work. To this day, the 3D Incubator has supported to over 100 companies, has been visited by more than 800 people and its incubated start ups have created over 40 new jobs.

- **Healthcare:** The medical sector is one of the sectors in which 3D printing applications are most quickly being adopted. The main advantage that this segment benefits from is the possibility of customising all the printed pieces so that they perfectly fit the physiognomy of the patients.
- **Mobility:** With possibilities of achieving forms that were impossible before, with only traditional manufacturing techniques, 3D printing lightens the weight of mobility solution components while either maintaining or improving the performance of said components. This can lead to a significant reduction in fuel consumption by these mobility solutions. Hence, fields such as the automotive, aeronautics, and railway sectors are also leading in the promotion of these technologies.
- **Consumer goods:** There is a wide range of advantages offered by 3D printing that can be applied to consumer goods, which is why the start-ups that work from the 3D Incubator have selected these technologies for different reasons.
- **Consulting and engineering:** These are start-ups with a value-added offer that consists of optimising designs to achieve the best possible performance from the technologies that the incubator employs.
- **Logistics:** One of the sectors that will suffer the most impact from the generalisation of 3D printing technologies will be logistics. Transportation needs will be reduced thanks to km 0 production and the proximity of the factories to the final consumer. For this reason, one of the incubated companies is analysing which clients it makes sense to offer production from the Incubator instead of shipping the product from third-party countries.

6. CONSIDERATION OF THE HORIZONTAL CRITERIA OF EQUAL OPPORTUNITIES AND NON-DISCRIMINATION, AS WELL AS SOCIAL RESPONSIBILITY AND ENVIRONMENTAL SUSTAINABILITY

Equal opportunities and non-discrimination: the project has published on its website a call for start-ups that show interest in participating in our incubation programme. In this call, the application processes, the variables to be evaluated, and the process of acceptance of incubated start-ups are perfectly defined. With the publication of this information, which is accessible and clear for any interested party, in addition to the transparency lent to the process, we intend to highlight equal opportunities and non-discrimination for any proposal we receive.



Social responsibility and environmental sustainability:¹

The principles of responsibility and sustainability are an integral part of the 3D Incubator. As an example, although it was not originally included in the planning, the initiative has been added to the **Sustainable Development Goals (SDG)**.

Limited use of raw materials and recovery of any surplus: The incubator’s advanced technological equipment allows us to use exactly the amount of raw material needed for production; any excess raw material is recovered and reused for the production of future elements.

At-source production logistics impact: One of the key advantages of additive manufacturing and, therefore, of the entrepreneurial start-ups that the 3D Incubator supports, is the ability to produce at the source; simply using the design of an object, we have the possibility of carrying out production anywhere in the world. In this way, we can significantly reduce not only logistics costs, but also the impact on CO₂ production.

More than 80 visits have been made in the first three and a half years of the incubator’s operation by entities related to the social sphere, including educational centres (schools and universities), social associations, foundations, cultural centres, etc.

7. SYNERGIES WITH OTHER PUBLIC INTERVENTION POLICIES OR INSTRUMENTS.

The High-Tech 3D Incubator was conceived from its inception as an element with a clear fit and **coherence within the RIS3Cat territorial innovation policy, the Smart Specialization Strategy for Catalonia.**

The 3D Incubator project has a direct impact on all the RIS3Cat axes; more specifically:

Axis 1. Leading areas in the sector: As a Transversal Facilitating Technology, the actions of the 3D Incubator apply to all the 7 areas of the sector that must lead the transformation of the Catalan economy towards its 2020 objectives.

Axis 2. Emerging activities: It is based on the generation of new opportunities through collaboration with knowledge generators, business entities, and the development of synergies between related areas in the sector.

Axis 3. Transversal facilitating technologies: The incubator has a direct impact on IT, advanced materials and advanced manufacturing technologies, and, to a lesser extent, on nanotechnology (application of materials), biotechnology (printing tissues, cells, and prosthetics), and photonics.

Axis 4. Innovative environment: The incubator works through its services in the areas of public policies dedicated to promoting the Digital Agenda, reinforcing activities and initiatives to support entrepreneurship (providing **technological services and marketing activities**), expanding collaboration in training and talent (carrying out training activities and

¹Image of the 3D Incubator lockers. The 3D Incubator supports and works towards the Sustainable Development Goals (SDGs)

conferences), and, of course, carrying out supporting activities for non-technological innovation (via the services and other supporting activities provided by the incubator).

NEWS: The **Next Generation EU Recovery Plan** establishes that **digitalisation** must be one of the main axes in mobilising these resources; the incubator and its activities are fully within the framework promoted towards an industry 4.0 system and the digitalisation of small and medium-sized enterprises.



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