



🛇 San Sebastián, Spain – Research Lab

Tabakalera – Centro Internacional de Cultura Contemporánea

Curating collaborations: Arts centers as platforms to articulate creative impact











#### I. Introduction and context

Tabakalera is the Arts Center in the former tobacco factory of San Sebastian, with a focus in Arts, Film and the intersection between them.

It is open to a wide and diverse audience and welcomes **700.000 visitors** per year, who have access to a rich cultural program that includes film programs in the **cinema**, **art exhibitions**, **performances**, **festivals** and a strong **educational program**.

At the same time, Tabakalera is also a **center for artistic production** with different programs to support creation through residencies, mentorship and training programs, commissions and others. It has three labs:

- 2deo, the lab for audiovisual creation, with a focus on film in collaboration with the San Sebastian Film Festival and the Elias Querejeta Film School, and the support of new audiovisual and digital storytellers in basque language.

- Medialab, a large infrastructure that gives a wide citizenship access to creation and gather communities that engage in creation projects in the field of science & technology as well as in the field of societal innovation

- Artists space, a complex with artists studios that hosts the artists in residency program.

Tabakalera acts at different levels on how an arts center can engage in creation: showcasing arts, but also supporting its creation and offering a platform to articulate the sector. Furthermore, its relationship with citizenship goes beyond offering access and participation, but also engaging in the field of citizen labs and societal innovation.

The center already acts as a dynamic interface between artistic creation, and a wide and diverse audience. We decided to add to this the cooperation with other sectors, in order to engage other forms of knowledge and collaboration.

The Basque Country, and more specifically, San Sebastian, has a very interesting concentration of scientific and technological centers carrying out highly specialized research. These researchers develop projects that address topics with a potentially high environmental and societal relevance that may contribute to shaping our future. Creatives may also play a role in shaping future scenarios, and sharing it with society can contribute to enabling citizens.

In Tabakalera we believe that artists can and should play a crucial role in generating knowledge and innovation - including in science and technology. In the face of today's increasingly complex challenges, responses must include diverse voices, such as those of artists and civil society or communities. Doing this successfully, it can also create new professional opportunities for creatives.

An Arts Center can act as a platform to boost new forms of collaboration to make that possible. Tabakalera already had some experience in curating experimental collaborations, and we built on them to launch our research as a CIRCE lab.

Tabakalera, as a CIRCE lab, proposed how an arts center can articulate a methodology of collaboration between creatives, communities of societal innovation and techno-scientific experts. To do so, we signed

agreements with four of the main research centers of our region: The Basque Culinary Center Innovation (BCCI), The Donostia International Physics Center (DIPC), TEKNIKER (the technological research center for the Basque Industry) and the Basque Center on Cognition, Brain and Language (BCBL).

We set up four interdisciplinary teams, one per institution, who each developed a creative and research project that addressed a topic of social and environmental relevance, and that resulted in an art installation.

We accompanied and documented the whole process in order to observe the methodology and required skills to replicate this co-creation process successfully.



On November 23rd, 2023, we opened a large exhibition showcasing the final art installations as well as the films presenting the making of and the CIRCE context.

In the following chapters, we will present the process and the methodology applied in the development of the pilot projects, as well as the insights gained from it.

#### II. What did we envision?

# Curating collaboration: can collaboration between artists and scientists enhance the impact of creatives in society and open new ways of funding?

In the introduction, we presented Tabakalera: an Arts Center that deals with the topic of creative impact, enhancing creativity and its impact in society, at different levels: presenting arts to an audience and thus giving access to cultural participation, promoting artistic production and developing initiatives in the field of societal innovation.

The center is already a dynamic interface between creatives and society and it can also be understood as a lab to reinforce these aspects. One of our mandates is to support the development of the creative sector, and we have explored ways of doing so by keeping the focus on creators and creative processes.

The support of creatives is mainly articulated through the three creation spaces of Tabakalera mentioned in the introduction: the audiovisual lab, the medialab and the artists' space. Here, we have different programs for creatives: artists in residency programs, mentorship programs, master classes, workshops and other training programs. On average, these programs support about 300 artists per year. Besides this offer, Tabakalera plays an important role in the creative economy of the regions, by contracting artists to participate in its program: in exhibitions, commissions, workshops, etc.

Nevertheless, further ways of funding the sector are necessary. The situation and working conditions of the different agents in the artistic field (artists, curators, mediators) is often precarious and the private funding or the commercial circuit for the arts is very limited. It is important to look for further spaces of action, and collaborations, especially with the technoscientific field, can be an opportunity to develop new perspectives.

San Sebastián is a **city of Science** that employs 22 researchers per 1.000 inhabitants in a context, the Basque Country, with a relevant industrial tissue.

Furthermore, this scientific and industrial tradition is connected to a **culture of collaboration**. A big part of the industry is articulated in small independent companies that cooperate through clusters in order to generate and share knowledge and innovation, and to compete together for larger contracts.



Linking this scientific and industrial tradition - which we also consider cultural - with artistic creation and presentation can be a unique opportunity to experiment new forms of cultural management with an impact on both sides.

In addition, we count on the engagement of communities and the possibility of a public outreach. These communities are diverse and cover a wide arch, and engage in different levels of participation, also in groups of societal innovation in the citizens' lab of Tabakalera.

Examples of these communities or "Open Groups" attached to Tabakalera can be found here: <u>https://lab.medialab.tabakalera.eus/en/groups/</u>

#### So, what if...?

What if we successfully launch collaborations between techno-scientific research centers, creatives and engaged citizens to address together key questions related to the rising challenges of technology and sustainability?

Could that help enable citizenship and create more awareness on the addressed topics?

Could such collaborations generate insights and innovations valuable enough for the techno-scientific sector to motivate them to engage in similar projects in the future?

#### Then what?

If these collaborations were successful, would it give artists and communities new access to resources, cutting edge knowledge and technology, empowering and enabling them?

Would it create new professional opportunities for creatives, cultural managers and curators in order to carry out collaborative projects?

Would it make our scientific and technological context more innovative and open to further collaboration?

When it comes to an arts-industry collaboration, could we move from sponsorship to a real partnership?

Would itt create awareness for the relevance of the participation of society and creatives in dealing with seemingly technological challenges?

#### And now: how to?

Through a facilitation and translation methodology that safeguards each participant's role and launches a collaborative research and creative process led by an artist. The process results in an art installation for a wider public that offers insights on the challenges addressed.

To do so, we had to identify external partners and earn their trust, to engage in projects, and propose them a methodology, that was the following:

#### The Methodology

- **1**.**Partners & topic:** Non cultural collaborators are approached in the first place in order to create trust and engage them for the future. There is a rich process of translation from their topics to topics that (a) can meet the interest of an artist and (b) have a relevance for an audience
- 2.Identifying the artists and/or curators: We have a mapping of our artistic context, but here two elements are fundamental: curatorial knowledge and artists who are ready to work in a collaborative manner (it is not about working in an applied manner, but collaboratively and production-oriented)
- **3.Launch the process:** Create a safe place of interaction and space for conversation through time
- **4.Communities:** to find and engage communities is the specific role of Tabakalera's Medialab, once the social relevance of the topic is identified, to achieve a dimension of social/societal innovation
- **5.Conceptual proposal:** Mediation is crucial in order to support processes of translation to manage expectations and avoid conflicts
- **6.Formal proposal:** Curatorial and production support to find the proper way of translating the idea into a (good) art work, in a feasible way
- 7.Presentation: Besides curatorial and production support, mediation for a proper presentation to a wide audience of the work and the ideas and knowledge around it. This requires also a previous work with the program team of Medialab and other areas in order to organize activities on the topics that are relevant to an audience or communities

#### The opportunity of the Circe Lab

Being a CIRCE Lab gave us the resources, network and framework to engage relevant partners and start an intensive eleven months-process to test the methodology and to answer the above mentioned questions.

Furthermore, it allowed us to put the focus on the core questions of CIRCE: *How can creative impact respond to today's challenge and inspire a fairer and more sustainable future* 

This means that, beyond the aspects that we considered crucial, such as collaboration in order to create new professional opportunities for the creative sector while enhancing the creative impact, we can put more emphasis on specific questions, more related to societal challenges. We decided to focus on the two vectors around which the major transformations of our time revolve: digital and environmental.

#### III. How did we do it?

#### 1. Establishing strategic partnerships

We invited **four research centers** to develop an artistic and research project with us that would result in an art installation. Each of the four projects would be a "case study", in which an interdisciplinary team (creative/artistic, scientific/technological) would work on a socially relevant topic. The case studies also served to test our hypotheses about the benefits of collaborations and to gain insights on methodologies and skills necessary to make collaborations successful.

In the first months of 2023, we had to identify, together with the scientists, topics that fulfilled three criteria: they needed to be of scientific interest, to show artistic potential, and to be socially and politically relevant. Most of the topics selected engaged critically with technology, care and sustainability. Once the topic was chosen, we identified artists to launch the research and concept phase together with the scientists and with us. The research process leads to the concept for an art installation.

So, for instance, **Tekniker**, the technological research center for the Basque industry proposed to work with their engineers on human-robot interaction, the notion of trust in this context, as well as inclusive robotics, and we invited artist Amaia Vicente to lead the project. Amaia Vicente works with exoskeletons and different notions of human robot interaction, with a focus on multiple sclerosis, with which she was diagnosed 20 years ago.

Dr. Manuela Ruzzoli, researcher at the **Basque Center on Cognition**, **Brain and Language (BCBL)** proposed a collaboration with an artist in order to expand her research on the cognitive conflict that is generated when our eyes see images that are contradictory to our brain. We invited digital artist Laura MM to work on this topic together with Dr. Ruzzoli and images generated by AI.

The **Basque Culinary Center Innovation (BCCI)**, the research center focused on culinary sciences, appointed researcher-chef Nahuel Pazos and Dr. Elena Romeo as our interlocutors. Dr. Romeo is the first person to achieve a phD in culinary sciences through a research on the reduction

of sugar. This had to be the subject of our research process, too, together with the research on how the stimulation of different senses has an impact on experiencing food - and how this can be used to eat healthier.

We decided to work with the **Donostia International Physics Center** (**DIPC**) on the challenges of the enormous production of digital data. Data and their storage has serious environmental consequences due to their energetic costs, the water they consume and the heat they generate. We created a team with Dr. Txomin Romero, director of the DIPC Supercomputing Center, and artist, architect and curator Marina Otero.

Artists and researchers worked together in an artistic and creative research process that led first to the core idea of the artistic installation and afterwards to the formal development of the artwork. This process was closely accompanied by Tabakalera's team, specially Ane Agirre, head of artistic residencies and exhibitions and Ibai Zabaleta, coordinator of the Medialab, as well as by Maria Ptqk, who was appointed curator of the exhibition.

Once the concept and the elements of the installation were defined, we opened a call to invite makers and citizens engaged in societal innovation to work on partial solutions to the projects. In our Summer Sessions in August 2023, we brought them together with the engineers, artists and researchers involved in the respective projects.

On November 23rd, 2023 we opened a large exhibition to present the four artistic installations resulting from the research processes. The title of the exhibition was Máquinas de Ingenio, and it showed studies on robotics, neuroscience, nutrition, data visualization and engineering dialogue with the languages of art and speculative design, resulting not in a sum of specialities but in a flow of connected practices, not in a work or final product but in an environment of encounter and reflection on contemporary technoscientific culture, its power and challenges.

Furthermore, we invited Samuel Huber and Iker Fidalgo to follow the process in order to elaborate a paper each on methodologies and skills.



Prototype 1: Exografías (Exographies)



Amaia Vicente in collaboration with Tekniker, the technological research center for the Basque industry, and Gogoa Mobility Robots.

The first of these new prototypes is Exografías by Amaia Vicente in collaboration with Tekniker and Gogoa, a manufacturer of mobility robots. It was remarkable here the engagement of an industrial partner. The project explores the use of exoskeletons, prostheses that serve to activate the body's motor functions in a controlled manner. These devices are used in neuro physical therapies, for example in patients with multiple sclerosis like the artist herself, who has been living with this diagnosis since 2002.

The exoskeletons work with pre-designed software, connected to sensors on the soles of the feet. In people diagnosed with multiple sclerosis, these signals are interpreted as "lack of strength" or "lack of balance", which generates a response in the form of algorithms that tell the exoskeleton "the right way to walk". The robot thus guides the patient's body based on a closed and previously established body pattern, unique for all people. The video, made using augmented reality

glasses, shows this process of interaction between the patient-artist and all the hardware and software equipment that brings the exoskeleton to life. In the long tradition of art that experiments with the limits between machine and organism, this work opens up questions about what is considered a "normal body" as well as the capacity of technology to influence the plasticity of the brain and learning processes.



Prototype 2: C. El punto justo del conflicto cognitivo (C. The right point of cognitive conflict)



Laura MM, in collaboration with the Basque Center on Cognition, Brain and Language (BCBL)

The interplay between technology, brain and learning is also at the heart of C. The Right Point of Cognitive Conflict, by Laura MM together with a research team from the Basque Center on Cognition, Brain and Language (BCBL). This prototype speculates on the infancy of C, an AI or artificial intelligence entity that, driven by the desire to be an artist, converts the signals created by users into a generative work of art. The starting point is an investigation into the brain's reactions to visual stimuli that, in neuroscience, are called "incongruent images". According to the study, the response to these images is similar to that in situations of cognitive conflict. The work uses artificial intelligence systems, such as generative software, to reflect on these technologies that are now in their first years of life and that users help to educate. Like any learning, AI learning is based on the copying and repetition of previous models, which raises questions about the perpetuation of stereotypes in programming languages.





#### **Prototype 3: Sugar Detox Clinic**



Elsa Yranzo in collaboration with the Basque Culinary Center Innovation (BCC Innovation)

The third prototype is Sugar Detox Clinic, a detox clinic to treat sugar addiction created by Elsa Yranzo and the sensory area of the Basque Culinary Center. Halfway between a parody of the therapy industry and the futuristic dystopia of a society controlled by sweetness, the clinic offers treatments based on "multimodal interactions" that explain that the perception of taste depends on the combined action of the five senses: taste and smell but also hearing, touch and sight.

For industry, this discovery makes it possible to design foods that, without losing taste, reduce the added sugars present in almost all ultraprocessed products, whether sweet or not. Diet as a control mechanism, sweets as a reward, sweets associated with childhood regression or compulsive behavior, fears linked to the body and health... Many factors inspire this clinic that takes the confusion between remedy and disease to the extreme, as it treats addiction with the product that probably best synthesizes our relationship with sugar: the jelly bean. Designed by the

Basque Culinary Center, the five gummies offered as a treatment are both a prototype of food innovation and a small work within the work.







#### **Prototype 4: Computational Compost**



Marina Otero in collaboration with the Donostia International Physics Center (DIPC)

The last of the prototypes developed in the CIRCE programme is the result of research by architect Marina Otero with the Donostia International Physics Center (DICP) which, under the title Computational Compost, addresses the environmental impact of data storage. Although the metaphor of the cloud leads us to believe that digital information is volatile, in reality it is supported by gigantic physical infrastructures that demand more and more energy, water and raw materials. The underlying question is how such infrastructures, which are already stretching existing resources to the limit, will be able to sustain the future deployment of artificial intelligence, the metaverse or the Internet of Things. In addition, Computational Computing questions the relationship between data storage and collective memory. If the growth of data centers is unfeasible on a finite planet, what part of this immense archive deserves to be considered as digital heritage and passed onto future generations? And how will we deal with the mourning of collective

memory lost in the promise of the cloud? Compost Computational explores these questions through two devices: a vermicomposting system that works with the energy produced by astronomical simulation software; and a film whose protagonist is the quipu MCHAP 0780, a pre-Columbian calculating machine and technological fossil that offers some clues to imagine another digital future.





## 3. Residencies for young creatives in the field of Art, Science and Technology

#### Residencies

The development of the four case studies were the core of the Tabakalera lab within the CIRCE initiative. Nevertheless, we decided to add to it a new artists in residency program for young creatives, funded by a special additional grant of the Basque Government. We decided to do so for two reasons. On the one hand, we need to detect and develop young, local talent in order to continue launching this kind of collaboration in the future. On the other side, it was important to us to launch research and creation processes that would not end up in a production and exhibition of the final pieces.

We launched an open call in collaboration with the Master's Degree in Contemporary Technological and Performative Art of the University of the Basque Country in Bilbao, and we selected five artists to do a residency of six weeks with us.

The very intense creative process of the artists ended with an open studios day, in which we invited different professionals for an interaction with the residents.



#### **CIRCE** encounter in Tabakalera

The CIRCE Community Summit took place in Tabakalera on the 29th and 30th of June. This encounter gathered the five CIRCE labs, the CIRCE fellows and the receivers of the impact funds, so that Tabakalera hosted around 100 creatives from all over Europe.

All these creatives had the opportunity to visit the Open Studio sessions on the last day of the residency for the young artists, on June 30th. This gave the artists in residency the chance to have an enriching and inspiring exchange with creatives of very different backgrounds, which was very appreciated by all parties.



#### 4. Tabakalera SummerLab

Tabakalera SummerLab is the annual summer encounter that focuses on societal innovation.

SummerLab is a temporary cooperative meeting space that triggers debate and creation around themes related to various fields such as critical thinking, techno-diversity, post-digital culture, citizen innovation and shared learning. Summerlab is actually an unconference, a space in which the participants and attendees themselves take on a more participatory and active role through work nodes, talks and actions where they propose a public programme.



SummerLab is primarily a meeting space and its spirit is to share experiences and knowledge around diverse communities of knowledge, which is why its operation as an intensive camp allows participants to cooperate, share and together work the around issues raised.

generating prototypes and weaving networks. It is also a place where realities mix and visions converge.

The 2023 edition of SummerLab was fully devoted to the topics of the CIRCE prototypes. Its aim was to contribute from the local communities to complete the prototypes with new possible community processes and results that can be integrated into the installations or new activities that can be included in the public programme linked to the exhibition. The idea was to take these themes and projects as an excuse to experiment with community processes.



Some results of the SummerLab were included in the prototypes and therefore in the final exhibition. One of the groups designed and produced together the Vermicompost device that was a central piece of Marina Otero's installation "Computational Compost". This vermicomposter obtained heat from the data processing and its worms created new compost.

The "Food Hack Lab" community developed the candy prototypes for Elsa Yranzo's installation "Sugar Detox Clinic".



A further important participating agent was Neural Interface Technologies (NIT), an open neurotechnology and citizen neuroscience group focused on the creation, design and development of open-source brain-computer

interface software and hardware with the purpose of creating projects that can help improve cognitive impairment, cognition and human consciousness. They participated in the installation developed between artist Laura MM and the BCBL in order to incorporate brain data into the artistic piece.



#### IV. What did we learn?

The process confirmed our initial hypothesis that an Arts Center can be a platform to boost unusual and innovative collaborative projects. The partnering non cultural institutions, which did not receive any additional funding and contributed with personnel and resources, have agreed to continue to participate in creative projects in the future. Participating artists and civil society actors also made a very positive evaluation of the projects.

The research centers that participated confirmed they are open to continue collaborating in artistic projects in the future, at different levels:

- Engaging in projects through their resources: personnel, infrastructure, research, technology
- Engaging through the above mentioned and also supporting the projects financially
- Joining in elaborating together proposals to participate in calls and access further fundings

By the end of the project, the techno-scientific networks in our region are more open and aware of the benefits of working with creatives and of the new professional opportunities which can arise from collaboration.

Furthermore, the exhibition that we opened to a general audience showing the prototypes that dealt with critical challenges of our time, such as the ecological and societal impact of technology, contributed to create awareness on these topics.

#### SOME INSIGHTS

#### The process and the roles:

The **process** is the key, as most of the relevant questions, knowledge and impacts are not enclosed in the final outcome, but generated as the project unfolds. Therefore, the role of the facilitator is crucial.

Clarifying **roles** and expectations is a fundamental condition for making collaboration and co-creation work.

Creating **free spaces for experimentation** are essential to allow unexpected results to happen. So, for instance, Amaia Vicente's project was initially going to be focused on robotics, but meeting the researcher Dr. Ane San Martín, a researcher on eye-machine interfaces, led to the unexpected and innovative result of connecting both areas, through the activation of the exoskeleton (and body) through the movement of the eyes.

**The Arts Center** (its team) enables connections, and acts as mediator and facilitator, taking the responsibility over the whole process, as well as clarifying roles, supervising budget and deadlines. The curator, also a key figure, accompanies the artists for the best possible outcome.

The techno-scientific partner proposes topics, engages in the process through personnel and resources and gives the artists access to its knowledge and technology.

The artist has to translate a topic that is scientifically, technologically and socially relevant into the core of an artwork and to develop it in conversation with the partners. The artist is the leader and has artistic autonomy, but needs to have specific skills in order to elaborate complex scientific and technological topics and to work in an interdisciplinary team.

The relationship between creative and scientific/technological partners is based on an equal exchange of knowledge under the leadership of the

artist, who is the owner of the final work. It is not a relationship of sponsorship or patronage of the arts and the artist is not there to find formal solutions but to open new questions and insights.

For the process, it is positive not only that the artist has enough flexibility to adapt in a context of collaboration, but also that she or he shows enough artistic maturity. Thus, the artist will be better skilled to take over the leadership of the process while not losing focus of the statement that she or he wants to make. It is also important that the topic of the project relates to the already existing research of the artist. Otherwise, the line between co-creation and illustration can blur.

When it comes to the research centers, a second collaboration works better than the first, due to the importance of mediation in order to understand the nature of collaborating with artists. It is not about science communication, illustration, or finding formal or visual solutions to a topic - this would be the "applied" version and more related to design. Artistic collaboration problematizes the topic in a new way.

Also, it is all about the individuals. The collaboration is beneficial for the organizations once they have identified the persons who are open to engage in such a process and work and think out of the box.

Once this successes, the projects bring new insights and open new perspectives on the topics of concern for the research centers, but it also brings new working methods, disruptive thinking, innovation and creativity into their teams.

#### IMPACT

#### Impact for the CCIs:

Thanks to the positive evaluation, the research centers are open to continuing the collaboration, which means for the CCIs:

- Different profiles from the creative sectors are needed, in the fields of cultural management, in mediation, in production, in curation, editing, design, and of course, artists

- Artists get new commissions and also access to a cutting-edge expertise and technology; they can work at the frontlines of knowledge production and innovation

- Within the CCI, a new funding model is established, which can help reduce dependency on public arts funding and contribute to more sustainability

- It contributes to a major presence of creatives in the public sphere and different spaces

#### Impact for the research centers:

- the process itself has impacts in form of innovation, through new ways of approaching topics, dealing with uncertainty, finding solutions, proposing future scenarios, disruptive thinking and thinking out of the box

- the public and social dimension: although we defend it is not about sponsorship or marketing, the public dimension of the collaboration should not be underestimated. The exhibition of the work to a wide audience, and presenting themselves in a cultural context is also interesting for the research centers.

#### Impact for society and communities:

- direct access and interaction with specialized researchers and their institutions

- direct access and interaction in an artist driven research process

#### **RESEARCH AROUND METHODOLOGY AND SKILLS.**

Two researchers have worked with us throughout this year: Samuel Huber has aimed to specify a work methodology for co-creation projects, while Iker Fidalgo has focused on identifying the skills that CCI professionals need to accompany interdisciplinary projects. Below you'll find a brief summary of the conclusions reached.

#### **Tabakalera Translation Process**

This is how Dr. Samuel Huber has named Tabakalera's work methodology for transdisciplinary projects. It is based on the main role that translation plays in the process of the projects, making possible understanding between professionals from different disciplines. The following **key insights** of Tabakalera's work methodology delve into this idea of translation:

- The main value of those kinds of collaboration projects lies in the **new perspectives generated** throughout **the process.** The final output works more as a motivating element that structures the process.

- Transdisciplinary collaborations need **guidance for an effective translation**, and not a mere transference, between different actors.

- Beyond the exhibition, Cultural Institutions like Tabakalera have a **key role as translators** between actors, in order to enable the connections that are needed in this kind of transdisciplinary projects.

Close monitoring and subsequent analysis of the developed pilot projects has allowed us to identify and specify the main **phases** of the transdisciplinary processes that involve the arts, science, and community. Below is a brief definition of those stages, as well as the **key contributions** that the facilitating cultural agent can make in each one of them (in italics).

#### - CURATION.

Choice of **the topic** for the project and the identification of **collaborators** who can work with them.

Identification of innovative and relevant topics and good actors who can work with them, and support role definition within projects to ensure efficient collaboration.

#### - CONCEPTUALISATION.

The artist explores the possibilities and develops the potential outcomes

of the topic, that will be shared with the other actors to receive inputs & feedback.

An effective translation of the perspectives by all the involved actors, with the key aim of reducing uncertainty and enabling a broad work approach.

#### - CONCRETISATION.

Once the concept has been agreed on, the perspectives of all contributors are translated to achieve common ground, and a space is created where all actors can enroll in their specialization to turn the concept into artifacts.

Translating materialities to move from thinking to doing and collectively create a common ground that sparks new perspectives.

#### INTEGRATION.

Through a variety of activities, the material output of the project is leveraged to integrate the learnings forms the process into organizations and the public.

Generation of resonance through exposure and public activities, ensuring that debate, learning and opening possibilities are created.

#### **Future Skills in CCI**

Dr. Iker Fidalgo has completed a second investigation that aimed to identify the skills needed by artists, curators and cultural managers to accompany these interdisciplinary projects.

The research has been developed in two complementary areas: a bibliographic research on the state of the art, and the monitoring of the pilot projects and the subsequent interviews carried out with the cultural agents who participate in them.

The skills that stand out in this research work are mainly related to:

- Working in the **symbolic field**, creating stories and highlighting the social and cultural relevance of the projects.

- Working on **open processes** based on experimentation and not necessarily on results.

- Managing **uncertainty** as a complement to intuition for decision making.

- Understanding **cultural processes as spaces of innovation** and contribution to the society to which they belong.

- Assuming **responsibilities and leadership** in projects.

- **Communication** of the projects, adapting the message to the variety of layers that make up the potential audience.

- **Digital environment**, both for issues in the field of communication, dissemination of ideas and projects, creation of spaces for interaction between agents, or much deeper and complex issues such as data analysis, artificial intelligence, augmented reality...

- Handling **business issues** such as financing, entrepreneurship and management.

- **Constant training** capacity in the use of new tools and resources.
- Adaptation to working with teams from **different disciplines**.

## V Final statement, European Dimension and CIRCE principles

In the final chapter, we want to propose some insights and ideas in a wider context, articulated through the elements at the core of CIRCE - from the perspective of an arts center:

- policies that support the creative sector
- strengthen their impact
- crisis and uncertainty
- the European dimension

In a changing world, marked by rapid technological advances and ecological challenges, the inclusion of artists and societal innovation in innovation processes is crucial. Complex, critical challenges need to be approached from different perspectives, and artists should be present wherever knowledge and futures are generated. The creative sector has furthermore proved to have a special capability to deal with situations of uncertainty.

We have seen in our projects that engaging in artists-led projects can be beneficial to organizations from other fields. Artists have had a positive impact on the organizations and their teams, as they introduced them to other ways of approaching challenges, dealing with uncertainty, and opening new horizons. Also being part of an exhibition in an arts center contributes to making this collaboration attractive. Proof of this satisfactory experience is that they contributed with ressources, personnel, technology, and in some cases, money, to the projects and that they want to continue doing so also in the coming years.

Intersectoral collaborations therefore trigger an impact of creatives in other fields, and they also open alternative ways to fund the creative sector.

#### In order to have an impact, we first need a strong sector

The last, various crises have had a strong impact on the already precarious cultural and creative sector. Also the weakening in different European countries of the public sector, subsidies and grants, on which many creatives count on to keep their artistic practice alive, contributed to this. Artists can play a role - and generate an impact, but we need policies that create more spaces for them to develop professionally, and decrease the professional instability that affects many in the sector.

#### Insights for cultural policy makers:

Policies that support artistic practice, artists' studios, residencies, commissions and training are essential for a healthy sector. These can be articulated through arts centers.

### Creating conditions to achieve an impact and therefore, access to additional fundings

Artists can act as agents for innovation in such key fields as the environmental and technological challenges. Besides having a context in which practitioners can sustain a professional activity, we also need the proper conditions for the exchange between sectors, that include a proper methodology in which roles are clarified, infrastructures to develop the projects, and programs to fund them.

#### Insights for policy makers:

Cultural infrastructures such as arts centers can offer the conditions for successful intersectoral collaborations if they decide to focus on this line of work and get the necessary fundings. This could be done by launching calls and accompanying the projects.

Besides collaborative projects launched from cultural institutions, it would be also desirable to see the roles and possible contributions of creatives and agents of societal innovations in the calls and programs launched from the technological, research or industrial areas. Thus, not only new territories would be gained for the creatives, but also, they would have a

space to be part of the searching for shared answers to the climatic and technological challenges.

In these programs and calls, not only the intersectoral collaboration can be addressed, but also the topics to be developed in the process. Thus, it would be interesting to specify in the calls that the focus would be set on intersectoral collaboration addressing questions related to the technological and environmental transition.

#### Insights for policy makers:

Lobbying and mediation is important to create awareness about the potential of the creative sectors in other fields, and, more importantly, to include collaborative projects and a space for creatives in the cross sectorial calls, like Horizon and others, or specific intersectorial calls that include creatives

When it comes to the aspect of crisis mentioned by the Circe statement, there are two elements to highlight: on the one hand, the capacity of artists to deal with uncertainty, and how this impacts the process shared with scientists and technologists - maybe offering them a new approach to it, and on the other hand the addressed topic themselves - technology and sustainability - that are fundamental in the different crises.

#### **European dimension**

The proposal for intersectoral, participatory projects, to trigger the potential impact of creatives in other fields, in order to contribute to a more human technology and a more sustainable Europe, is aligned with the agenda of European policies. Also, it is replicable everywhere where research centers and arts centers can be found that support artistic research and productions.

These elements are already present in European schemes but it would be desirable to strengthen them, not only in cultural policies, but also in adjacent fields, for example by reinforcing and facilitating a creative, humanistic and participatory dimension in the Horizon research funding schemes, especially those focused on sustainability and technology.

Besides, participation and the inclusion of creatives to address technoecological challenges also resonate with the principles of New European Bauhaus: Together/Sustainable/Beautiful.

Creating frameworks of collaboration, sharing governance with artistic and societal actors, and enabling diverse voices and communities, does not only contribute to the sustainability of the CCIs, it also creates a Europe more aligned with its core principles.

