



ICT-ART CONNECT in the Horizon 2020 ICT Programme: Preliminary Reflections on Realising the Potential

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**Final Report on the Roundtable Discussion
held at the European Parliament, Brussels,
November 11, 2013**



1. Introduction

Art stirs the emotions: it can inspire people, give meaning to life, raise a smile, draw a tear, stimulate thoughts, question the given, bring individuals together, and more. Mostly however, art is seen as that which people engage with in their leisure time. Now there is an interest in bringing art into the workplace for the serious business of research and technology development (RTD), with the purpose of enhancing creativity and stimulating innovation through the use of one of Europe's unique features – its culture. However, this is more than an exercise in stimulating creativity, but also one of developing a new S&T method that better fits with the social and economic challenges of the 21st century. Hence it is a cross-cutting issue for DG CONNECT.

The specific context addressed is ICT. This means both ICT as it relates to activities within DG CONNECT as an ICT research policy, strategy and funding body, and also ICT within the DG's constituency in industry and research communities, where RTD as well as commercial deployment takes place. Most actors here are very deeply connected to and immersed in technology, and most people will be largely well beyond comfort zones in addressing art. This report is therefore the beginning of a journey towards understanding what art can do for ICT RTD, how to develop the approach in the context of the ICT Programme, and what the critical success factors are likely to be. The concept of utilising art in ICT RTD has become known as ICT-ART CONNECT.

Addressed here in this short report are some initial reflections and observations which result from, not just the roundtable discussions that took place on 11 November 2013 in the European Parliament, but also six days of deep immersion in the world of ICT-ART CONNECT, involving also one-to-one discussions with many of the artists involved.

Of these six days, the first three consisted of the ICT 2013 event in Vilnius, where ICT-ART CONNECT was on show in the exhibition and in the networking session. The second three days comprised the 2013 ICT-ART CONNECT event held in Brussels immediately following ICT 2013. This consisted of a two day workshop held at the iMal Centre for Digital Cultures and Technology, an ICT/dance interactive performance, and two ICT-ART exhibitions: one at Harland Levey Projects Gallery and the other at the BOZAR. The event culminated in a number of sessions at the European Parliament on Monday 11 November, with the participation of members of the European parliament: Maria Da Graça Carvalho MEP; Amelia Andersdotter MEP; Morten Løkkegaard MEP. The European Parliament sessions also included the (90 minute) roundtable discussion mentioned above, which was chaired by Robert Madelin, Director General, DG CONNECT.

The European Parliament sessions also had another dimension: President Barroso's initiative New Narratives for Europe; specifically ICT-ART CONNECT being deployed to facilitate a bottom-up approach to engage citizens in an activity that in its first phase largely only involved intellectuals and artists in a top-down way.

2. Understanding Art and Artists in the Context of ICT-ART CONNECT

To begin, it is worthwhile mentioning something about art in the context ICT-ART CONNECT: what type of art is being considered? This is best described as contemporary art that makes extensive use of ICT, which of course could also include classical art reinvented in the context of digital media. This contemporary art encompasses music, dance, and the visual,

and most often involves participation of an audience or viewer, and could also take in literature, again reinvented by using digital technology to link with performing arts and the visual, but in ways that have hitherto not been possible. The point is that ICT is key component of this contemporary art, which, like art down the ages, draws inspirations from all aspects of life. Hence words such as humanity, spirituality, compassion, empathy, dignity, choice, and so forth, were heard over the weekend of the ICT-ART CONNECT event. These are generally not words encountered much, or given great emphasis in, ICT RTD projects, where people tend to be considered as users, and there is talk of human-centeredness, but without deep reflection on, and understanding of, what it means to be human.

Within this (interactive) contemporary art, the highly creative nature of artists can be seen at work; artists, it can be said, on the whole, do not accept boundaries – most often they seek to push boundaries. This creativity is one of the reasons for the interest in using art in the ICT Programme.

What can also be seen in this contemporary art is, art influencing ICT and also ICT influencing art. This is an important distinction, because it represents two different interests, but it is possible that both will need to be addressed: this may not a case of either one or the other, but both together, to achieve a synergy, and the reasons for this need to be further explored and reflected upon – matters may be more complex than they at first appear! And some of the reasons for this follow:

First there is the matter of how to use art in the ICT Programme. Four different modes of operation can be conceptualised:

- Art to support dissemination of research project results;
- Art as a tool for public engagement to help people to better understand already existing ICT or new research results (and also science and other technologies);
- Art to enable the development of ICT for artistic practice (for artists and also *art for all*); and
- Art deployed as a means of developing other ICTs that have no direct connection with artistic practice (e.g. Internet of Things).

The first two activities in the above list tend to fall within the scope of organisational remits, and their relevance to the ICT Programme is not central in the context of the core interest of developing a new S&T method to be deployed in RTD projects. However, it should be noted that techniques used for public engagement in terms of helping people to understand that which exists, can also be redeployed upstream in the RTD process, as a way of, for example, citizens participating in RTD projects (e.g. to tap into further ideas and creativity). It should also be noted that some artists would question the first two activities, for they could be seen as using art for propaganda, or helping people to accept technologies that are being imposed on society.

The activities that are core to aim of developing a new S&T method for the ICT Programme fall within the third and fourth items on the above list.

Initially it may seem that the third point is not what ICT-ART CONNECT should be about, at least in the short to medium term, in Horizon 2020. This matter needs to be discussed, as it strongly relates to the question: why would artists want to become involved in the ICT Programme? To answer this question one must begin to understand artists and their interests.

Artists are highly creative people for sure, but also often highly individualistic, and some are engaged in questioning science and technology; these artists confront the notion of

technological determinism, which was raised as an issue at the roundtable discussion. Technological determinism holds that technology has to be the way it is, because it is neutral, and is *out there waiting to be discovered*. Thus, technology can be no other way than that which emerges and is not at all influenced by beliefs and values.

It can be argued that technological determinism inhibits creativity in ICT. Some would say that this mindset leads to technologies that seemingly appeal to all, but in fact deeply to nobody, and also makes Europe vulnerable to competitor nations such as China, who may not share this deterministic view. So, artists looking to challenge determinism and to open minds to technological choice, would want to be engaging in projects that lead to different technologies. And the way that they do this is through the development of their artistic practice, leading to new additions to their portfolio of work, which may include, new ICT for art.

Hence the answer to the question posed above, about why artists would want to become involved, is straightforward: to advance and develop their art and their artistic practice and, as an example, to move beyond critique, to shaping technologies that people can relate to at a deeper human level.

Here also in part, is an answer to the question raised at the roundtable discussion: how to assess artistic excellence as well as technological excellence of research project proposals and, ultimately, their deliverables. There needs to be both artistic and technological results, which can be delivered by addressing both.

Also to be noted is that many of the artists participating in ICT-ART CONNECT are not just artists – they are also ICT experts. The word polymath was mentioned several times during the ICT-ART CONNECT weekend. A polymath is a person excelling in more than one field – this is a very apt description for some of the artists participating in ICT-ART CONNECT. Therefore artists should not be seen as creativity consultants or creativity enablers in ICT RTD projects; they are also ICT researchers and developers and they expect to participate in projects as such, as well as in the role of artists.

Then there is the matter of the process that lies at the heart of ICT-ART CONNECT. One of the elements of methodology is juxtaposition: putting things that are very dissimilar together, and then seeing what emerges. This of course is not new, both in general terms, and specifically in the context of ICT-ART CONNECT, but it is new for DG CONNECT and the ICT Programme, and for most of its constituency. Also, juxtaposition may seem straightforward, and there are examples which make it look easy – often it is neither! The challenge will be to make this process easier so that it can be widely deployed.

Addressing art to enable the development of ICT for artistic practice and art deployed as a means of developing other ICTs should also be seen as a methodological issue: it is part of the process that leads to the outcomes that DG CONNECT is seeking.

3. New Narratives for Europe

A few words about New Narratives for Europe, and the potential for ICT-ART CONNECT to engage with citizens to bring a bottom-up approach into this initiative: the projects conducted as part of the weekend workshop held at iMal certainly point to the potential for ICT-ART CONNECT to deliver this citizen engagement. As with all such things however, the critical issue will be to involve the right people, and to recognise that this may be an opportunity for going beyond public engagement (the second item on the list of operational modes) to considering an exercise which is also an observation of process and methods. In effect, an

opportunity for DG CONNECT to develop greater understanding and capability in the field of ICT-ART CONNECT. There may also be some specific ICTs among the portfolio of mature FP7 research or pilot projects that could be deployed in support of the initiative.

4. Critical Success Factors

At this early stage in the development of ICT-ART CONNECT, being definitive about the elements that will determine success and failure is difficult. Here, therefore, are some preliminary pointers for further consideration (which are not presented in any order of priority or importance), many of which are interrelated. Some of these elements are relevant to the matter of scaling from a few people engaging in ICT-ART CONNECT, to the many participating:

Identifying and Involving Relevant Stakeholder

There is already a community of practice so it would be valuable to tap into this expertise to guide the development of ICT-ART CONNECT within DG CONNECT. This will help to position artists as part of DG CONNECT's constituency, will facilitate inclusion, and, importantly, help DG CONNECT to develop its strategy. Having *artists in residence* is one way to involve more artists in DG CONNECT at this early stage. There are also other stakeholders that need to be considered: ICT professionals are an obvious group to include. But there may be more, in particular there are innovation researchers, some of whom speak about the need to *innovate the innovation process*, and also internet innovators, some of whom are highly critical of the ICT mind-set, which they believe is inappropriate to internet innovation.

Addressing both ICT and Art

A key issue for artists is the justification for their participation. Just taking from this community without giving back is not a recipe for success. This ultimately will probably have implications for the ICT workprogramme content and wording if ICT-ART CONNECT is taken forward into funded research projects.

Developing a Strategic Vision

One of the major reasons for involving artists has been presented as enhancing creativity using a unique European asset – culture. But it is also about developing S&T methods, and this is cross cutting in terms of the ICT Programme, but also in terms of other research DGs. But there is also the matter of whether this is the beginning of something that might be termed a distinctive *European approach to ...*. The sentence needs to be completed with appropriate words. RTD is one of these for sure, but what about other upstream activities like long-term visioning, policy development, etc. that might be in need of a different approach.

S&T Method Development

Self-evidently, with S&T method being a central issue, then it naturally follows that matters of process, S&T method development, and supporting tools, need to feature as part of any funded research projects, and be among the deliverables from these projects.

Relationship with the Digital Science Agenda

S&T method also has a relevance to the digital science agenda, in the sense that it is a cross-cutting issue and also that ICT-ART CONNECT is likely to suggest research in terms of the digital tools needed to make the research process more effective and efficient. Grounding ICT-ART CONNECT in the Digital Science agenda may be the key to enabling its placement within the ICT Programme and its wider acceptance in DG CONNECT.

Demonstrating the Benefits

Given that ICT and art have had previous encounters at a national level, it is clearly necessary to document what has been done, to position these projects within an appropriate conceptual framework, and to capture the benefits that have been obtained in terms of tangible results. This should be done with a view to demonstrating that there are clear benefits to be gained.

Understanding the Difficulties

Related to the above is also development of understandings from these previous collaborations about the challenges and difficulties encountered, and the processes and methods used. ICT meets art can be looked at as the meeting of two cultures, with the potential for a clash of two cultures, hence any future involvement by DG CONNECT should be built on lessons learned and the avoidance of mistakes already made.

Thinking about Implementation Issues Relevant to ICT RTD Projects

ICT-ART CONNECT, with a focus on new S&T methods, may point towards different work plan structures and project management approaches than those often encountered in collaborative European ICT RTD projects, and may well also raise some issues about how to evaluate proposals. The often encountered phrase found in ESRs “the management approach is standard, but appropriate” is unlikely to be an appropriate comment. Identifying such issues at an early stage and how to deal with them will enable a easier transition to any future project funding phase.

Identifying Relevant Application Fields

Is ICT-ART CONNECT relevant to all ICT RTD projects, or just a sub-category? This is a question that needs to be answered. Important also, is to identify which areas can benefit most, and to focus on these when piloting ICT-ART CONNECT in the ICT Programme.

Obtaining Buy-in and Commitment from ICT Stakeholders

Obtaining buy-in and commitment from stakeholders, both those internal to DG CONNECT and those external to the DG, will be important and probably needs to be addressed as an ongoing activity over a number of years.

Transferring ICT-ART CONNECT to the ICT Community

Take-up beyond those who become involved during early stages of the development of ICT-ART CONNECT is a self-evident need. This probably entails more than *show and tell* activities, but also developments in the education of ICT professionals. However, to do this there is a need to provide a theoretical foundation to ICT-ART CONNECT, which is something that can be addressed as part of any projects that may be funded. This can be looked at as moving beyond two cultures towards the creation of a new type of ICT professional. Perhaps the polymath is the wrong model here and a more appropriate one is

someone who has transcended disciplinary biases and boundaries, and become a trans-disciplinary person.

5. Conclusions and Recommendations

ICT-ART CONNECT promises a different approach to ICT RTD, but will need nurturing. Self-evidently matters of process, method and supporting tool are central, as is developing a new type of ICT professional. However, first come matters such as establishing relevance and importance, obtaining stakeholder support and commitment, and also enhancement of understanding, which also means identifying the obstacles that will need to be overcome, which are more than just ICT-ART CONNECT competing for a share of constrained budgets in difficult times. Positioning ICT-ART CONNECT in the broader context of the questioning and challenging of taken for granted approaches to RTD and innovation may also be a worthwhile endeavour to undertake.

These are early days, and steps taken at this stage may be crucial to determining future success, which include having ICT-ART CONNECT accepted within the ICT community. To aid further development, some initial recommendations to be addressed in 2014 are offered in light of the discussion and the potential critical success factors:

- Set-up a small external advisory group of experienced ICT-ART CONNECT practitioners and other relevant stakeholders to help inform the development of DG CONNECT's vision and strategy;
- Organise an internal DG CONNECT workshop with ICT-ART CONNECT practitioners to explain ICT-ART CONNECT and to demonstrate how the approach can improve ICT RTD. This could be part of an *artists in residence* activity;
- Support an annual event to help to explain ICT-ART CONNECT to the ICT Community and also to help build the ICT-ART CONNECT community;
- The proposed ICT-ART CONNECT study to be undertaken in 2014 is an opportunity to focus on addressing some key issues. Have all these been identified? Establishing what has been done already, what benefits were achieved, what processes/methods were used and what difficulties were encountered and how these were overcome are some of the relevant matters. So is identifying critical success factors. Scaling up to the level of an accepted and widely used approach is also another potential issue that could be addressed by the study.
- Use the advisory group and the results of the proposed ICT-ART CONNECT study to identify suitable application domains for a possible pilot initiative;
- Understand more about what ICT-ART CONNECT is about and how to embed what may seem to some, to be quite radical, in the ICT research and development community;
- Facilitate the participation of DG CONNECT in new activities in the New Narratives for Europe initiative as a learning exercise to help develop increased understandings and capabilities.
- Consider how ICT-ART CONNECT can be positioned within the context of Digital Science so that it becomes clearly identified as a realisation of the themes relevant to Digital Science (e.g. a radical transformation of the nature of science and innovation).

- Position ICT-ART CONNECT in the framework of previous work by the European Commission on *innovating S&T method and the innovation process* (e.g. the 2004 ISTAG report on [Experience and Application Research](#), and the 2012 SCAR report on [Agricultural Knowledge and Innovation Systems in Transition](#). Perhaps to be considered is the matter of whether there are bigger messages to be conveyed?