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Foreword to deliverable D4.3.2b

This deliverable proposes an update of the strategic vision of the European Culture and Technology Laboratory (ECT Lab+), by re-articulating the areas or fields of research which are to be considered within the Pan European Research Laboratory.

ECT Lab+ aims at becoming a transdisciplinary European laboratory of research. At the kernel of the European Culture and Technology Laboratory is the foregrounding of the complexity of technology within its milieu or culture. The positioning of fundamental questions in relation to technology and society are at the heart of the European University of Technology mission and vision statements.

The ECT Lab+ seeks to platform and support new modes of technodiversity and therefore promote a new understanding of technology. From the beginning of ECT Lab+, there has been a clear strategy to function as a means of building critical mass is AHSS disciplines within primarily technical or technological universities.

The purpose of this brief document is to update the strategic vision of the European Culture and Technology Laboratory (ECT Lab+) by, firstly, re-articulating the areas of research or fields of research which are to be considered within the Pan European Research Laboratory. This includes a delineation of the disciplines within the Laboratory but also the porous nature of interdisciplinary research. Secondly, this strategic vision 2022-2023 will continue to develop a research programme for the ECT Lab in the short, medium and long term. Thirdly, the strategic vision for the ECT Lab+ will continue to act as a beacon for the pan-European research institutes or laboratories within the European University of Technology. Fourthly, the strategic vision will set out a communication plan for 2023-2024 which incorporates its relation to Think Tank tasks in EUt+ and the EUt EXTRAS (SwafS 33 call) project.

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"The mechanistic world view, taking the play of physical particles as ultimate reality, found its expression in a civilization which glorifies physical technology that has led eventually to the catastrophes of our time. Possibly the model of the world as a great organization can help to reinforce the sense of reverence for the living which we have almost lost in the last sanguinary decades of human history."

Bertalanffy General System Theory.

Introduction

The European Culture and Technology Laboratory encourages and supports research in the following areas of Arts, Humanities and Social Sciences (AHSS) related to questions of *technē*, technics, techniques, and technology. The focus of research is on the philosophical and societal aspects inherent to technology. The ECT Lab+ encourages reflections on technology in the wider sense of technology as *technē*, beyond the simple reduction of technology to instruments or tools but technology as part of a system which includes the human systems. The ECT Lab encourages reflection on the relationship between European Culture and Technology: its overall historical development, its present challenges and its future development appropriate to humanity. This can be considered under two main

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thematic: firstly, the study of cultural aspects of technology, the social practices of technologies and secondly, the evolution of technology (organology).

The premise of the research programme is based upon the impacts of technology on society: impacts both positive and negative (pharmacology) on the construction of knowledge (epistemology) and impacts on cultural production (aesthetics). These questions of epistemology and aesthetics are coupled with questions of technics as practices, ethical practices in the world. Once technics are understood as forms of technical practices in the world, questions of ethics are not far behind. Ethics within the ECT Lab+ is envisaged equally as a form of practice in the world, hence the movement away from applied ethical frameworks to wider questions of virtue ethics (the good life). We hold that in order to develop sustainable, responsible technologies it is is necessary to develop an ethical framework which takes into account the speed and impact of technological innovation. Technology is here understood as an expanded *technē*, beyond technology simply conceived of as technical objects, but technology understood as technical systems and modes of mediation in the world. Technology not simply as applied sciences, instruments, or tools but technology as complex systems which include organic and inorganic systems.

As set out in the Memorandum of Understanding from Feb 2020 the ECT lab+ will carry out research in the following areas:

- The historical role of Arts, Humanities and Social Science in technology and technological development;
- Future European Policy development in relation to Technology (including digital and environmental technologies) up to the territorial scale;

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- Artistic research, critical design, and creative practices as tactics to inquire into technological affairs and concerns situated at the intersection of technology, science, culture, ecology, and the social.
- Architecture and urban planning as a generator/amplifier/identifier of culture and technology; architecture and urban planning as a milieu/support/engine for culture and technology; technologies of habitation (or habitat and technology).
- The impact of technological development on society, human and more than human actors and the development of prospective scenarios on these future impacts.
- The societal and human aspects of socio-technical questions.
- The development of an ecological epistemology in relation to technology.
- The relationship between social transitions and technological evolution.
- The development of Philosophy of Technology and the Philosophy of Technics.
- Ethical aspects of use, misuse and under-use of the technology.
- Social phenomenon surrounding dichotomy of technology and globalization.

1. Overview of the conceptual framework ECT Lab+:

Over the last 36 months, since the formalization of the ECT Lab+ these areas of research have focused on the development of common positions in response to the question ‘think human first’ within a technological university. This was accompanied by the questions of ‘thinking’, ‘human’ as opposed to post-human or transhuman discourses related to the use and development of computational technologies is

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the aligned question 'what is technology?'. The conceptualization of technology within the ECT Lab+ has been articulated through the drafting of collective position documents, the development of the ECT Lab+ annual conference (*Technē and the (Neg) Anthropocence*) and a series of discussions/seminars run by the ECT Lab+ with local partners in TU Dublin, CUT, UPCT, TUS and UTCN. These seminars included international speakers (for example Katherine Hayles) alongside local specialists. These questions have also come to the fore with a resurgence of philosophy of technology within universities of technology with the material turn through the work of Don Idhe and with science and technology studies (STS) in the US but also developments within Philosophy of Science and sociology of media with Karen Barad, Isabelle Stengers and Bruno Latour to name but a few. In addition, there has been development through the philosophy of Bernard Stiegler of the question of technology as a *pharmakon*, (both a cure and poison) enabling an expansion of the concept of *technē* and a claim that technology is not a simple object or tool in the world, but a complex meshed, and entangled relation. (Donna Haraway gives an ethico-feminist conceptualization of nature and tool).

Indeed, one could argue that there is general resurgence of interest in philosophy as the philosophical questions are being raised across society in relation the existential, ethical and metaphysical questions linked to climate change or the Anthropocene and the recent advances in AI. The complexity of the analysis needs to include, in terms of what Gilbert Simondon denotes as processes of individuation which take place in a milieu—an individual, collective and technical milieu. **It is the foregrounding of the complexity of technology within its milieu or culture which is at the kernel of the European Culture and Technology Laboratory**. The role of the ECT Lab+ is to enable the formation of these questions within the contexts of disciplines within the area of Arts, Humanities and Social Sciences. This includes the positive contribution of AHSS to technological innovation and development. In other

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words the ability to head off possible problems or consequences of technological innovation and to move beyond strictly functional approaches to technological innovation and design by looking at the history and evolution (organology) of technical objects and technologies.

2. Strategic Intent year 2023-2024

Since February 2020 the ECT Lab+ had been meeting, firstly, on a monthly basis throughout 2020 and has since the formal establishment of the EUt+ alliance, the ECT Lab+ has been meeting on a weekly basis. The first phase of the Lab (January 2020- June 2021) has built a strong community of practice by taking the time to get to know each other, both in terms of institutional cultures and activities and also in terms of research interests and profiles. Throughout the first few months' time was taken for each partner to present their activities on HSS within their university and also to outline how HSS was present either in stand-alone programmes or embedded within the natural sciences and engineering programmes. This was accompanied by individual meetings between the ECT Lab+ academic lead and individual partners to get a better understanding of how questions of philosophy and social sciences were being represented within the partner organization. It was clear that for some partners ECT Lab+ enabled critical mass to be gathered in the areas of HSS but in others it enabled the existing HSS activities to be expanded out to new experimental forms such as digital studies, software studies and critical media studies.

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A third phase began in June 2022 with the formalization of the structure of the ECT Lab+ and the growth of activity linked to the funded projects of the Lab. It terms of management it was more efficient to re-organise the ECT Lab+ and divide its activity into four subgroups, 1) ECT Lab+ conference, 2) PhD Subgroup, 3) Strategic Vision and 4) Technological Foresight Subgroup. These subgroups report back to a monthly overall meeting of the ECT Lab+. The members of the ECT Lab+ have also been formalized through the process of applying to become a Pan-European Research Institute and a formal application was written as part of the ERI application. This formal plan sets out the funding of PhD students, Post-Doctoral Candidates and Administrative support of the ECT Lab+.

In the first phase the group also succeeded in applying for KA203 funding in Ethics, Ecology and Technology (EthiCo) and to apply for COViD 19 response funding with a project on Mental health and public health guidance (PaMH) which scored high but was not funded. In the first phase, the structure of the meetings was flexible with an overall fixed agenda. However, in the second phase from June 2021 to December 2021, the structure and attendance of the ECT Lab+ meetings moved to be much more task driven activities. A number of subgroups were created to better enable the collective work, these were aligned to the three tasks which the members of the Lab are working on 1) The strategic vision for the ECT Lab+ 2) the development of technological foresight methodologies and analysis which is the subject of a separate deliverable (D54 - Technological Foresight - D 4.3.3.b) 3) the ECT Lab+ annual conference which is took place on the 9th and 10th December 2021 and again on 18th – 20th of January 2023 in TU Dublin and is the subject of a separate report (D50 - ECT Lab+ conferences - D4.3.1a.b.c).

In addition, a separate work group was set up to do horizon scanning on funding initiatives and also to build a cascading funding module. The agreement was the

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first set of EU applications under Horizon Europe and would be inclusive of collective applications, i.e that all eight partners of EUt+ would participate in the application. However, this led to some partners leading more obviously than others. This subgroup successfully applied for a KA220 Strategic Partnership funding AesTheTico which was awarded funding. Some of the group participated in additional KA220 applications, and to date LT4SUSTAIN was also successful, the main partners are TU Dublin and UTT. In addition, this subgroup prepared an MSCA Staff Exchange in March 2022 and EpisTeam which was not funded but scored high and was on the reserve list (update: EpisTeam was resubmitted and funded in 2023). There was a further KA203 application co-ordinated by UTCN which was unsuccessful. The ECT Lab+ is still looking at Horizon Europe Cluster 2 funding applications as these would be ideal for influencing policy within the European Commission. The ECT Lab+ had begun to investigate the development of MSCA COFUND in January 2023, however, the formal financial structure of the ECT Lab+ would need to be clarified before a MSCA COFUND could be envisaged. The formal funding for the ECT Lab+ was agreed in Cluj in March 2023 and a first meeting was held with the MSCA national contact points in Ireland. The plan for 2023 is to develop four further Erasmus Strategic Partnerships, one led by UTCN, RTU and two led by TU Dublin.

The strategic intent has been building the community of practice necessary to sustain a pan-European research institute focused on Philosophy and Social Sciences of Technology and to raise the visibility of the ECT Lab+ research results at local level and at a European level.

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3. Vision of the ECT Lab+

The difficulty of the positioning of the ECT Lab+ research programme within the European University of Technology, is that there needs to be a recognition that within a University, disciplines can be embedded in structures, termed as silos. This agricultural image captures the boundaries and lack of possibility of cross fertilization and these silos that can lead to technology development in vacuums. Within the ECT Lab+ it is necessary to establish a necessary transversality across disciplines to deal with what has been referred to as 'wicked problems' (Rittel and Webber 1973), that is highly complex multi-faceted issues that cannot be tackled relevantly by only one discipline. However, the risk is also to include a boundary to where that transversality would reach its limits. It has been argued (Latour, Stiegler, Idhe) that these silos contribute to the development of technologies which are not taking into account the socio-historic nature of the impact of technology. This can be seen as a technology paradox where the technological development leads to unintended negative consequences, (for example, the car and the development of urban structures). If, within the European University of Technology the AHSS disciplines are to contribute (see 'contributory research' Stiegler, Fitzpatrick, 2020) to the challenges of the 21st century, then they need to move beyond their own disciplines. The same is true of the natural sciences and the engineering sciences. They too need also to move beyond their own discipline boundaries. It has been long recognized (Lawrence, 2010) that this lack of interdisciplinary research has led to the development of technologies because of a perceived technological lack, demand driven technological development without querying where the demand is coming from as societal, industrial and technical need. The nature of the demand has sometimes been oversimplified and needs to be re-examined, technological innovation is also embedded within systems of economic, social and political need.

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The complex nature of contemporary technologies needs to be recognised within what the French philosopher Gilbert Simondon termed the processes of individuation: individual, social and technical individuation. The first step, hence, is a recognition that the siloed nature of university disciplines has contributed to the Krisis of the 21st Century (Husserl 1954). Krisis is understood here as a point of cross roads, a condition of possibility of change, a crisis which is one of biodiversity which has been well recognized by leading scientists across the world (See COP 26). But also there is argument to be development in relation to the forms of technology themselves which have tended towards an extractivist model, of monetary extraction or economic extraction. There is a need for more diverse forms of technology which are based on new questions of sustainability and circular economies or contributory economies (Stiegler, Morlant, 2020). A form of technodiversity is needed, where other forms of technologies can be developed. Finally, it can be argued that within our contemporary technological conditions that *noesis*, thinking or thought itself is being reduced to forms of decision making which are being led by machine learning or deep learning technologies, hence there is a need for more diversity of what is meant by thought, new forms of noodiversity (Stiegler).

The krisis is also interlinked. The study of biodiversity is also a study of the impact of technologies on the planet (plastics as an example), the development of research polymers has been carried out since the 1950s as a separate industrial, technological development through the disciplines in the biochemistry. This is in the context of ever-increasing measurability and calculability of the natural science which lacks other forms of thinking, other forms of knowledge (theoretical knowledge, know-how and *savoir vivre* (know-how to live), this is a lack of other forms of noeisis, a lack of noodiversity. Geology, biology, anthropology conceive of different layers (spheres) that include the emergence of the planet as geosphere,

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later as biosphere and then as a noosphere with the development of hominsation and complex nervous systems. Finally, there is a lack of technodiversity, other forms of technology (low tech) which are built on other forms of social interactions, other forms of culture and other forms of economy, therefore there is diversity of models of technology and technological development. **The ECT Lab+ seeks to platform and support new modes of technodiversity and therefore promote a new understanding of technology**.

The ECT Lab+ needs to function as a metastabilised structure where the ability to operate outside of institutional disciplinary boundaries is seen as a plus. Hence to establish a research programme for the ECT Lab+, there is a need to clearly define the objects of study, the methods and objectives. The programme will remain an ongoing discussion within the ECT Lab+, however, in order to construct the ECT Lab+ as an unprecedented research programme, the following needs to take place:

- Definition of the research programme, in the first instance, a hermeneutic process of the explanation of terms of the title 'European', 'Culture', 'Technology' and 'Laboratory'.
- Definition of a central clear, precise objective, hence a limitation of the object of research
- Definition of methodology (transdisciplinary methodologies, artistic research, design thinking, critical/speculative design)
- Definition of the evaluation criteria of actions put in place to reach or at least to approach the objective.

To **become a transdisciplinary European laboratory of research**, the research programme needs to identify a defined research methodology or cluster of methodologies which are both quantitative and qualitative (historical research, hermeneutic research, hermeneutic phenomenological research, action research,

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participatory action research, contributory research, digital studies, media ecological research etc.). ECT Lab+ seeks to foster a two-way learning between technology and culture (learning culture through technology and learning technology through culture), where technocratic opinions would connect with the anthropological, philosophical and social ones.

In the trajectory towards the formalization of the European Culture and Technology Lab as a Pan-European Research Institute, the ongoing development of the research programme and strategic visioning is necessary. This will imply trying to establish the research programme and its methodologies over the coming 12 months and at the same time continuing to develop an active community of practice in the disciplines included within the Lab and to continue to obtain external funding and national funding to ensure the feasibility of the research programme.

Transdisciplinary Practices

The methodology adopted within ECT Lab+ is one of transdisciplinarity across philosophy of technology, the social sciences and creative arts. Within ECT Lab+ there is an acceptance of a plurality of knowledge domains across the human and natural sciences but also through artistic research and related disciplines. These higher levels include: Media Studies, Software Studies, Media Archeology, Infrastructure Studies; Digital Studies, Science and Technology studies, Philosophy, (ethics, epistemology, ontology, aesthetics);Data Science, Critical Algorithmic Studies [could also be media studies]; Cognitive Science, including Neuroscience; Artistic Research, New Media, Decolonial Studies, Critical Design, Responsive Design/Architecture, Parametric Design and Digital Fabrication, Digital Humanities, Mathematical Modeling in Social Sciences.

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Targets 2022-2023

I. Establishing a community of Practice

The primary objective of 2021-2022 is the establishment of ECT Lab+ as a community of practice (Wenger, 1998) of researchers who are interested in and carry out research in the areas of Technology and Society. The disciplinary mix of the ECT Lab+ includes, Philosophy of Technology, Aesthetics, Ethics and Epistemology, Critical Media Studies, Social Science and Technology and Media Studies, Critical Software Studies and Digital Studies. The ECT Lab+ functions as a porous community of practice which crystallizes into specific thematics, (for example, ethics and sustainability studies) which has physical manifestation when necessary within existing university infrastructures. For example, in TU Dublin there is an office for visiting staff to use and visiting PhD students can use hot desks within the existing available space. So whilst the ECT Lab+ does not require physical infrastructure for its activities there is minimum requirement from each University Partner to allow the Lab to function in a physical environment. The virtual nature of the ECT Lab+ activity takes place through video conference meetings, streamed seminars and annual hybrid conference. The community of practice has both active research staff and PhD students and will in the near future also have Masters programs by research students.

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II. Pan European Research Laboratory

One major objective of 2021- 2023 is the establishment of the ECT Lab+ as a formal Pan -European Research Institute. The Pan European Research Institute is the formal structure for the European Culture and Technology Lab+. This entails the formal structures to the Pan European Research Institutes within the European University of Technology. The formal structures have been outlined in the MOA on Pan-European Research institutes which includes the formal setting up of the Lab, its membership and governance. The agreement was concluded in March 2023 and now the formal structures need to be put in place, (General Assembly, Institute Council and Academic Lead). Clarification in relation to the status will also be completed in relation to: external funding, research capacity, number of PhD students, number of Post Doctoral researchers etc. The ECT Lab+ will put in place a post-doctoral research and allocated PhDs students in 2023 and will set agreements about co-supervision and visiting professors.

III. Funding Target

The ECT Lab+ sets out to be sustainable in terms of external funding mechanisms, in particular through the Horizon European and Erasmus funding. The ECT Lab+ in 2020-2021 has already been successful in winning external grants with all partner universities of EUt+ in the applications. From the outset, it was decided that the first initiatives should be inclusive of all the ECT Lab+ members. The first area of research funding is the Erasmus Strategic Partnership funding as this funding is specifically targeting strategic partnership capacity building. The ECT Lab+ co-ordinated and submitted to the KA203 Strategic Partnership funding in 2020 under the title of the

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project EthiCo which is focusing on questions of Ethics and Ecology within Technological Education. The ECT Lab+ was successful in obtaining 480,000 euros of funding.

In 2021, there was a slight change to the strategic partnerships under Horizon Europe and the ECT Lab+ co-ordinated and applied for KA220 Strategic partnership funding under the title of the project AesTheThiCo which is exploring the relation between questions of Aesthetics and Ecology and sustainability. The project was successful and the Lab was awarded a further 380,000 euros of funding. This funding is being used as a cascading funding model where the senior researchers mentor and help less experienced researchers to obtain this type of funding, in order to enable further collaboration within the ECT Lab+ and to involve more colleagues.

The second strand of funding for the ECT Lab+ is the MSCA Doctoral network funding of 3.5 million euros. The ECT Lab+ is preparing a submission for Nov 2021 and then a MSCA RISE submission for March 2022. The ECT Lab+ is also exploring Horizon Europe funding opportunities within the Horizon Europe Programme. Under Cluster 2 in the Horizon Europe programme, there are a number of opportunities which could be explored in terms of developing more policy led research from SSH.The ECT Lab+ would be an ideal position to carry out such research as a cluster of Arts, Humanities and Social Sciences within a Technological University.

For the first period until 2023, the ECT Lab+ will also be actively engaging in the development of a European Think Tank on Technology and Society and will contribute to the thematics through, for example, the development of methodologies of hermeneutic responsible innovation. The ECT Lab+ will also actively engage in the development of EU funding applications to enable the research to undertake and to enable the necessary mobility of researchers and PhD students within EUt+. For example, the lab will target strategic partnership funding

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(KA203 and KA220) and will also target MSCA funding in particular MSCA Doctoral Networks (DNs) and Research Innovation and Staff exchanges (RISE) March 2023 and Horizon Europe Cluster 2 funding.

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Conclusion

In terms of conclusions, there has been a clear strategy from the beginning of ECT Lab+ to function as a means of building critical mass is AHSS disciplines within primarily technical or technological universities. Secondly, the positioning of fundamental questions in relation to technology and society are at the heart of the European University of Technology mission and vision statements. The discussions held in the ECT Lab+ about the tension within the phrase “think human first” have been very beneficial to the overall EUT initiative where, on the one hand, “think human first” could be considered as anthropocentric, where thinking human first is an exclusive sentence where the human is placed above nature and natural environment and to a certain extent this has enabled the excessive growth and exploitation of natural resources. The second meaning is by asking the humane questions about technology and technological development the humane impacts of technology need to be taken into consideration; these are the societal impacts of technology, epistemological, ethical, aesthetical consequences needs to be placed at the centre of all technological developments. The ECT Lab+ Strategic visioning subgroup has been meeting once to twice a month since the formalization of the EUT + alliance in November 2020.

Key Strategic lines of development:

1. The development of a Programme of Philosophy of Technology which includes:
    a. Epistemological impacts of digital technologies on disciplinary activity
    b. Ethical framework for technological education, this is a virtue ethics framework within the project EthiCo

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c. Aesthetics and Ecological framework within the AesTheTico project
d. Hermeneutic Responsible Innovation, using the technical practices within a descriptive analysis to develop a 'little ethics' of responsible innovation.

The next phase for the strategic visioning group will be a development one where the focus will shift to national and internal funding opportunities to help establish a community of practice of doctoral and post-doctoral students. In 2022, there is an opportunity to apply for MSCA RISE and to use this to fund mobility of researchers and staff across the members of the ECT Lab+ and also to disseminate the activity of the Lab more clearly to the member partners and to a wider public. This will be done through an open access journal and a dedicated website for the ECT Lab+.

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