HUNGRY ECOCITIES

A S+T+ARTS RESIDENCIES PROJECT

Hungry EcoCities
S+T+ARTS Residencies

Deliverable 4.1 – HTE and PPE mentoring plan

Version 1.0

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Table of Content

1. Abstract

This deliverable presents an overview of the individual monitoring plans/ innovation monitoring plans that have been submitted in September 2023 as start of the Humanizing Technology Experiments. It builds upon the HEC-Matchmaking methodology (D1.3) and in this deliverable explains the set-up of the residency and explains the services that will be provided by the Hungry EcoCities project.

2 – Humanizing Technology Experiments

The main objective of creating the Individual Mentoring Plans (or Innovation Monitoring Plans, how we can also refer to) is to define, execute and scale up the results of the art-driven experiments in both fellowship programs within the project: HTEs and PPEs, selected through the open calls in WP3. The IMP serves as an anchor point and accumulator of the shared ambitions and goals as defined by the core team of the experiment project. It is also the reference document to which the team and the consortium can refer to monitor the progress and make explicit the way of collaboration. The IMP is a first part of the larger overarching methodology, which we will describe more in detail below.

Before the official start of the residency, we defined a common working methodology that will be followed by all creative studios (CRA, SOS and EatThis). It follows an innovation model and divides 9-month residency into three types of work: first “discover” focusing on ideas exploration, followed by “prototype” and “demonstrate” phase. Each of phases allow of wider discussions, but result in narrowing down and selecting steps forward.

After the open call, all artists attended an online kickoff introduced their assigned mentos and explained working methodology with key dates. Kickoff in creative studios is ongoing. At the end of first phase, it was decided to organize a in person knowledge sharing event.

2.1 Residency set-up

Methodology: Explore – Prototype – Demonstrate

Hungry Ecocities HTE Residency is following a cross-cutting approach. It aims to go beyond abstract models of design thinking, and rather follow a “learning by doing” process, looking always for practical feedbacks. This methodology can in part be traced back to the Double Diamond scheme and the Agile iterative process of development, testing and refinement of ideas.

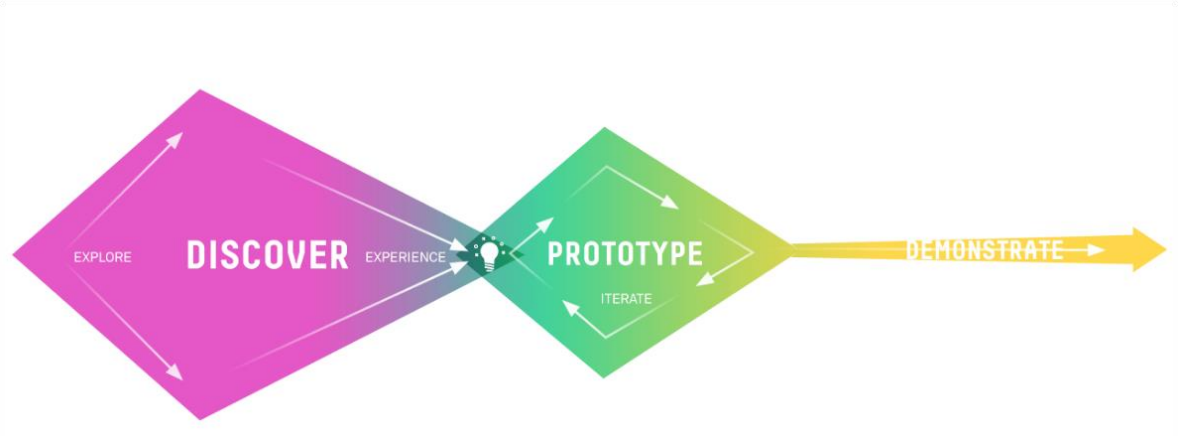


Figure 1: Residency phases

The methodology starts with the **“Discover”** phase, trying to unveil the opportunities that a project might offer beyond the initial vision & requirements. Many ideas are on the plate. The artist in residence may shift through them with the support of his/ her mentors. At the end of this phase, residents are asked to assess how original a new idea is and how well it can be developed. It is proposed to conclude the phase with an in-person knowledge sharing event (see below).

In the following **“Prototype”** phase, the residents test the concept ideas in different scenarios producing low-fi prototypes, both digital and physical. This phase is a crucial point as it makes ideas tangible to test the practicality of the current design & innovation, and possibly investigate how the larger audience think and feel about it.

During the **"Demonstrate"** phase, additional design refinements are implemented to reach a prototype. Throughout this stage, there will be both successful and unsuccessful experiments. Nevertheless, our primary objective is to comprehensively document the process, as the focus lies not only on the final result but also on the learning journey itself.

Meetings: Innovation and knowledge transfer at the core

Building on the work of sociologist and Stanford University professor Mark Granovetter, who is perhaps best known for his theory that “weak ties” — looser relationships outside of our core network of friends, family, and colleagues — are crucial bridges between social groups that encourage societal diversity, innovation, and creativity, MIT Senseable City team looked into how remote work affects innovation. Examination of communications among 2,384 MIT faculty and postdocs showed an evident disintegration of “weak ties” when international become purely digital. In other words, **digital networks cannot replace in-person interactions** - ideas often occur in random encounters and coffee breaks. This has been key when establishing Hungry Ecocities' residency settings.

Each studio has defined its preferred ways of working, promoting access to their facilities and endorsing in-person meetings whenever possible. During the residency, we are planning three in-person meetings to facilitate innovation and the exchange of knowledge. The initial meeting will take place at the creative studio with its respective artist, while the second gathering will accommodate all consortium members: creative studios, universities, art-driven innovation mentors and artists in Turin. The event will serve as a hands-on feedbacks session to finalize concepts and move to prototyping phase. Imagined as: ***“Two intense, pro-active days, where all artists and HEC-members actively share knowledge, reflect on each other's developments and contribute insights/ network to strengthen the projects.”*** It is also evaluated whether to partially open the event to the public. The residency will conclude with a demonstrator event hosted at each studio.

2.2. Mentoring plan structure

The mentoring plan structure within Hungry EcoCities' HTE and PPE experiments is multi-faceted and plays a crucial role in stimulating cross-over and collaboration among the core team members. Certainly, within the project framework of Hungry EcoCities' HTE and PPE experiments, various ambitions steer the direction of the project, each contributing to its multifaceted vision. These ambitions revolve around the use of technology, artistic outcomes, the studio vision, the scientific contributions, the innovation potential and the overarching ambitions and goals of the project (contribution to the food value chain).

Each HTE and PPE experiment is guided by a team of mentors from the HEC consortium, this group is called the “core-team”. Each initial core-team is composed of 1 Studio mentor, 1 Technical mentor and 1 Art-driven innovation mentor, which jointly act as co-producer of the experiment.

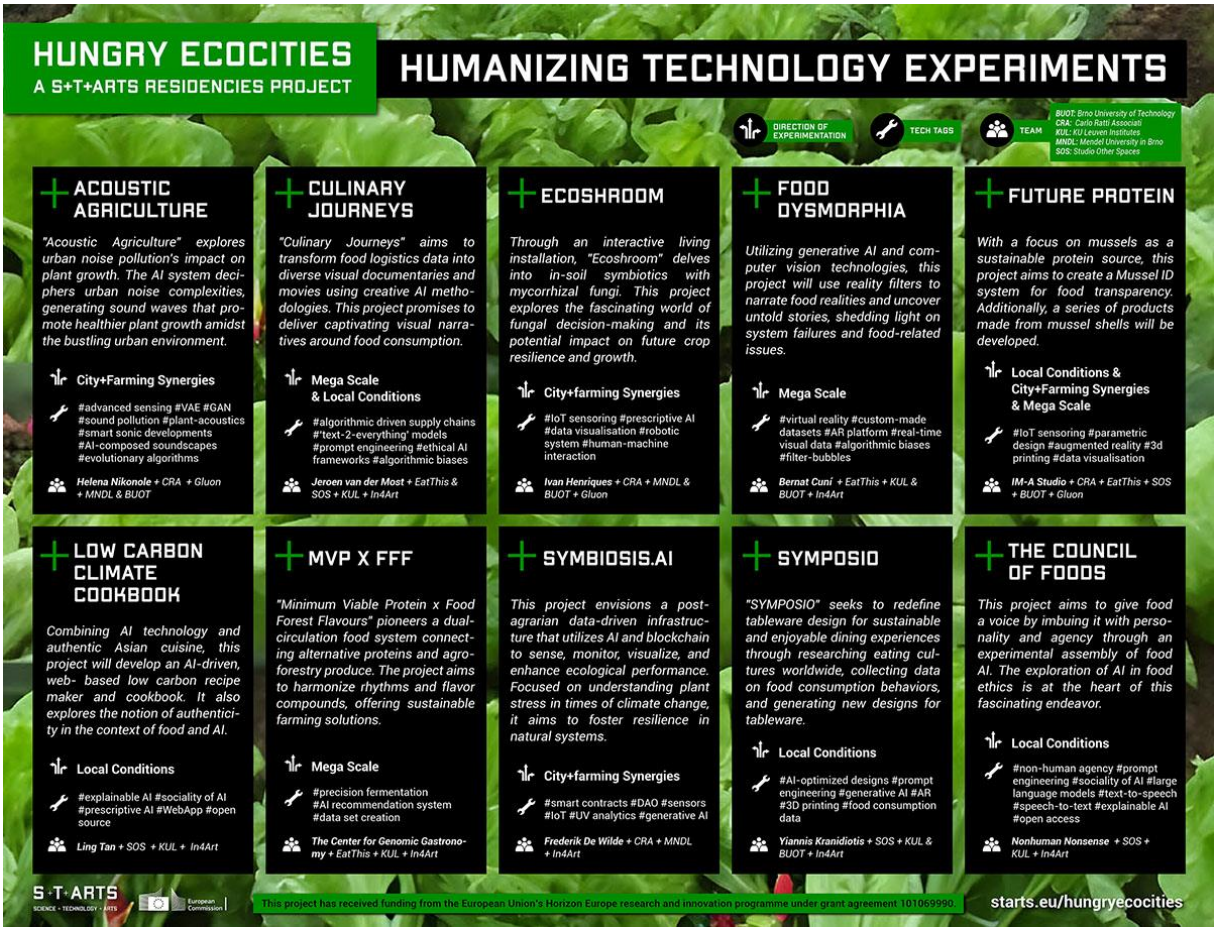


Figure 2: overview of the core teams and selected HTE experiments.

Once the experiment is underway, the alignment of the ambitions of the core-team becomes critical for the successful execution of the HTE & PPE experiments. A good mentoring plan paves the way for proactive, beneficial collaboration and spill-over potential during (and after) the experiments. To address this, we have developed the Individual Mentoring Plan (IMP), of which a first iteration has been submitted in M13.

2.2.1 The IMP

Within the framework of Hungry EcoCities, the IMP represents a commitment to viewing the HTE experiment core team (see figure 2) as equal partners on a level playing field. As a result, the IMP is reinterpreted as the Innovation Monitoring Plan, emphasizing the pursuit of innovation while respecting the artistic approach. The IMP facilitates matchmaking, outlining the team's objectives, Key Performance Indicators (KPIs), processes, and required skills or knowledge necessary for this phase of the experiment. A shared vision and goal are crucial for the group's identity and effective functioning. To establish this, the core team was tasked, at the beginning of the collaboration process, with defining their Key Performance Indicators (KPIs). These KPIs serve as measurable benchmarks for the core team's ambitions within Hungry EcoCities. They are categorized into technical, artistic, and communication goals, aiding the team in monitoring strategic, tactical, and operational achievements throughout the experiment. The entire core team collectively shoulders the responsibility for achieving these KPIs.

During the collaborative phase of the experiment, the core team employs a flexible approach, fostering continuous collaboration and exploration while allowing for adjustments and creative freedom. This process involves regular individual meetings to monitor progress and collective sessions for peer

learning. The program comprises several milestones, including the submission of the Individual Mentoring Plan (IMP) of which a first iteration was submitted in M13 (further detailed in section 2.3 this deliverable). Through the guidance and expertise of the Studio mentor, Technical mentor, and Art-driven innovation mentor, the project aims to harness a synergistic approach, leveraging each mentor's diverse skill sets and perspectives to propel the project towards its common goals. This multi-faceted mentoring approach serves as a catalyst for nurturing a dynamic environment conducive to innovation, collaboration, and the holistic development of Hungry EcoCities' HTE and PPE experiments.

2.2.2 Meeting structure

The mentoring plan structure, comprising diverse types of meetings, creates a dynamic and supportive environment for core team members within the HTE and PPE experiments. This approach encourages innovation, nurtures artistic expression, and ensures that the core team functions as a cohesive unit, driving the projects towards success.

Online meeting structure

Our online meeting structure is strategically designed to ensure continuous collaboration and knowledge exchange among core-team members. The structure comprises a combination of 1-to-1 meetings and monthly core team sessions. These online meetings are integral to our mentoring plan, providing a space for individualized guidance and the collective advancement of the project objectives. By integrating a robust online meeting framework, we aim to stimulate agility in our collaborative processes, thereby maximizing our diverse team's collective expertise and innovative potential.

Overview:

1. **1-to-1 Meetings:** One of the key components of the mentoring plan is the regular one-on-one meetings that the artists hold with their art-driven innovation mentor from In4Art and Gluon. These meetings serve as a dedicated space for the artists to receive personalized guidance and support based on their individual needs. Through one-to-one meetings, ADI mentors can closely monitor the progress of individual artists, ensuring that they stay on track and achieve their goals. This personalized guidance helps in addressing challenges promptly and tailoring support to each individual needs. Acting as the primary liaison between the artist and the diverse mentors, the ADI mentor is instrumental in ensuring matchmaking throughout the process and stimulates continuous learning and insight documentation to prepare for the final phase.
2. **Core-team meetings:** In addition to one-to-one meetings, plenary meetings are organized to bring the entire core-team together on a monthly basis. Core-team meetings within the Hungry EcoCities framework serve as pivotal gatherings where the core-team convenes to discuss their insights, progress, and collaborative endeavors. These meetings are meticulously designed with several key aims in mind:
    - **Aligning visions and goals:** These meetings serve as checkpoints for ensuring alignment with the respective studios' project objectives and vision. By collectively reviewing progress and discussing key performance indicators (KPIs), the core team can realign their efforts if necessary, ensuring that the projects remain on course to meet their intended goals and ambitions.
    - **Stimulating collective intelligence**: plenary meetings provide a unique platform for diverse individuals with varying backgrounds and expertise to come together. The primary goal is to foster cross-pollination of ideas, allowing for the exchanging insights and perspectives from different domains. This collective intelligence leads to the emergence of innovative concepts and solutions that might not have surfaced within the confines of individual projects and enriches the overall project outcomes.

    To support these meetings, we follow these principles:

- **Encouraging open dialogue**: open and transparent communication is at the core of the plenary team meetings. They offer a safe space for participants to openly voice their thoughts, concerns, and ideas. By sharing their progress and challenges, the core team members can receive valuable feedback and support from their peers. This open dialogue nurtures a sense of trust among team members, further strengthening the collaborative spirit.
- **Strengthening team cohesion**: meetings contribute significantly to building a sense of unity and cohesion within the core team. Participants develop a deeper understanding of each other's roles, strengths, and contributions, fostering a spirit of collaboration and mutual support. This unity extends beyond the meetings, positively impacting day-to-day interactions within the team.

Physical meeting structure:

In addition to the online meetings, our mentoring plan incorporates a strategic framework for physical meetings. The inclusion of physical meetings within our mentoring plan plays a pivotal role in fostering a sense of shared ambitions, strengthening interpersonal relationships, and facilitating continuous cross-over. Strategically placed at key moments within the experiment's timeline, they are essential touchpoints for deepening "inter-experiment" collaboration, refining project objectives, and showcasing (intermediary and final) project outcomes. In total a minimum of 3 physical and mandatory meetings are foreseen within the duration of the experiment:

1. **Kick-Off event at the Studios:** The project journey started with a physical Kick-Off event at the three studios, serving as a focal point for establishing a shared vision and ambitions for the core-team. This meeting aimed to provide a comprehensive overview of the project's objectives, milestones, and deliverables, while facilitating direct engagement and relationship-building among the core team members. The organization of the different kick-off events was meticulously tailored to align with the distinct working methodologies and preferences of each studio, fostering a collaborative environment that resonated with their core values and operational focus. Notably, the kick-off event at CRA in Turin (from 12-14 September 2023) was designed with a strong emphasis on getting a better understanding of the overall studio operations, stimulating internal collaboration and fostering integration within the studio. On the other hand, the kick-off event at EatThis in Rotterdam was strategically curated to make connections with the expansive network of company stakeholder within the domain of food that EatThis offers. Next to that, the aim was to understand and experience the approach and vision of the work Stephan Petermann did in collaboration with Rem Koolhaas. In contrast to the collective and physical approach adopted by CRA and EatThis, SOS organized individual virtual kick-off sessions, demonstrating their commitment to personalized engagement and focused interaction. By facilitating in-depth one-on-one online sessions, the kick-off initiative at SOS aimed to establish a direct and tailored connection with each artist, allowing for a deeper exploration of their unique perspectives, aspirations, and creative methodologies. With a forward-looking strategy, SOS plans to further nurture these initial connections and, upon identifying individual needs and project alignments, intends to invite artists to their premises in Berlin at a later stage. By customizing the kick-off event set-up in accordance with the unique working ethos of each studio, we fostered an environment that not only honored their preferred ways of collaboration but also amplified the collective potential and strengths inherent within each studio's distinctive approach.

Figure 3 - 4: Pictures from the kick-off event in The Netherlands. Visits to Controlled Environment Agriculture facilities in Westland (Rotterdam), NL

Figure 5-8: Some pictures from the Kick-Off event at CRA, Turin. Visiting the CRA Make facilities and CRA studio.

2. **Networking Event at Turin:** The forthcoming networking event in Turin, scheduled for 28-29 November 2023, represents a key milestone in the collaborative process, offering an opportunity for the consortium members, creative studios, and artists to meet in person for the very first time. Initially the event is imagined as: “Two intense, pro-active days, where all artists and HEC-members actively share knowledge, reflect on each other's developments and contribute insights/ network to strengthen the projects.” The event serves as a platform for knowledge sharing, deepening potential “inter-experiment” collaboration and gathering valuable insights for refining the project's direction and outcomes. The event also marks the end of the “Explore phase” of the residency, with artists having concluded their ideation and exploration processes. During the event the artists will present their insights, learnings and concrete ideas to be developed in the next phase. As we transition from this milestone, the focus shifts towards the beginning of the prototyping phase, thereby setting the stage for the practical realization of our collective aspirations. The event will take place at the Talent Garden, a co-working space in Turin designed by CRA.

Figure 9: Talent Garden Turin designed by CRA

3. **Demonstration Event at the Studios:** The demonstration event at the studios, scheduled at the end of the residency in May 2024, constitutes a hands-on showcase of the experiment's tangible outcomes, featuring live demonstrations of the outcomes (prototypes, digital applications, …). This final event aims to provide an engaging experience for a diverse audience and an opportunity to work on the innovation diffusion.

2.2.2 HTE support services

Defining the required support services offered to the HTE experiments by the HEC-partners are integral part of the mentoring. In the IMP each HTE experiment has defined what services and expertise they anticipate needing and this gives the backbone to the mentoring. The HEC consortium partners offer three kinds of support services to the artists throughout the residency:

- Prototyping facilities at the studios
- Access to labs of the universities
- Network

Prototyping facilities: The prototyping facilities of the studios and the laboratories of the technological partners, provide a unique opportunity for the artists to delve deeper into the practical implementation of the experiments. By facilitating direct access to state-of-the-art equipment and expertise, these physical work sessions at the premises of the studios and the university partners aim to equip the artists with the required practical skills and equipment needed.

CRA will offer the following support services:

- Access to workshops and fabrication spaces: CRA Make is a prototyping facility in Turin equipped with advanced machinery such as 3D printers, CNC machines, and robotic arms for rapid prototyping and experimentation with various materials and construction techniques;
- Access to expertise and knowledge within the studio team.

SOS will offer the following support services:

- Access to expertise and knowledge within the studio team;
- Studio guest room;
- Access to network.

EatThis will offer the following support services:

- Access to network of companies in the network of EatThis

MENDL will offer the following support services:

- Access to research infrastructure
- Provide laboratory consumables for the experiments
- Consultancy in plant biotechnology, microbiology and agrictulture
- Support in development of physical prototypes

KU Leuven will offer the following support services:

- Access to the scientific expertise of the participating researchers
- Access to and feedback on relevant algorithms by the participating researchers
- Further contacts within the Leuven.AI network
- Access to AR/VR labs

BUoT will offer the following support services:

- Access and help with the use of all the equipment in IoT prototyping laboratory and a workshop at the Faculty of Information Technology, BUoT, Brno, Czechia. The IoT lab is equipped with measurement devices and samples of wireless sensors and embedded platforms to develop low-power or battery-based IoT solution.
- Access to expertise and knowledge of the members of the Knowledge Technology Research Group (KnoT) that deals with applied machine learning, embedded intelligence, and big data processing.
- Support for the development of virtual reality and extended reality solutions, access to several VR/AR-sets, 3D monitors, light-field sets, etc.; consultation in computer photography and generative models for image/video.

Network: The mentoring plan emphasizes the importance of an extensive network that extends beyond the consortium partners. Recognizing the multidimensional nature of the HTE and PPE experiments, the HEC partners (and particularly the studios) are poised to provide a diverse and expansive network comprising experts, practitioners, and innovators from various fields. This network plays a pivotal role in addressing the gaps in expertise that may not be covered by the consortium partners alone. This approach ensures that the project is equipped with a rich pool of resources and perspectives, enabling a comprehensive exploration of the interdisciplinary dimensions inherent in the development of responsible innovations for the food domain.

2.2.3 Mentoring

Each HTE and PPE experiment is guided by a team of mentors from the Studios and other consortium members, this group is called the “core-team”. Each core-team is composed of 1 Studio mentor, 1 Technical mentor and 1 Art-driven innovation mentor. Each core-team is coordinated by the Art-driven innovation managers from In4Art and Gluon.

The HEC mentoring team is in charge of the following:

- Identify specific mentoring and knowledge needs (artistic, technical, business)
- Identify and measure potential risks that could affect performance and quality of results, pursuing the set goals (KPIs) in the IMP.
- List any constraints from the consortium (time constraints to meet/work, lack of knowledge to perform some activity, etc.)
- Register any problems affecting the communication and the relationship between the beneficiaries and the project partners.
- Log meeting minutes with keynotes from meetings held to facilitate knowledge sharing and documentation.

- The HEC partners will have peer-to-peer meetings to assess the above tasks to benefit matchmaking throughout the process.
- Assess and score the deliverables presented by the beneficiaries.

The artist is responsible for the following:

- Execute the experiment plan.
- Pursue the set goals (KPIs) in the IMP.
- Create the deliverables and experiment outcomes.
- Participate in meetings, both online and on-site.
- Communicate deviations or delays in due time.
- Comply with the Sub Grant Agreement obligations.

2.3 Structure of the IMP

The Individual Mentoring Plan (IMP) is the main tool to facilitate continuous collaboration and cross-overs while allowing for pivoting/meandering and exploration freedom simultaneously. The main monitoring points are described in the IMP and therefore gives the backbone to the mentoring.

The first part of this two-part document focuses on the experiment process:

- Name of the Artists (and optionally other partners from the studio involved)
- Executive summary of the project
- Table of KPIs: technical-, artistic- and communication KPIs
- Core Team THE
- Dissemination/communication of HTEs work
- Meeting schedule of the Core Team
- Payment schedule
- Project budget
- Background and foreground IP and licensing
- Ethical checklist
- Expected deliverables
- Project GANTT chart

The second part of this document focuses on the evaluation procedure of the requested deliverables. In annex the following

The initial blueprint for the IMP template was drafted by In4Art in collaboration with CRA and FundingBox. The completion of the IMPs was carried out by the beneficiaries, with the support of the core-team, of which a first iteration has been submitted in M13. Despite being formally endorsed and attached to the SubGrant Agreement, the IMPs are intended to function as dynamic, evolving documents throughout the duration of the experiments.

2.3.1 Executive summary & table of KPIs

The content of the IMPs is based on the approved project proposals of the beneficiaries. For each HTE, starting from the information already included in the proposal, the core-team has been asked to define the Key Performance Indicators, also known as KPIs. The KPIs are the quantified ambitions of the core team. An ambition is an aspiration goal for the experiments and their translated impact, defined in specific, measurable and realistic terms. Within the IMP the 3 different types of KPIs are identified:

- **Technical KPIs:** these KPIs encompass a list of actions that serve as benchmarks for evaluating the technical efficacy and progress. Key elements include, but are not limited to, the identification and collection of relevant datasets, the identification and use of advanced digital technologies, and the execution of physical experiments.

- **Artistic KPIs:** these KPIs encompass the artistic outputs to be generated during the residency. In this section it is described how the technical KPIs will be transformed into tangible outcomes to evoke thought-provoking dialogues within diverse stakeholder groups.

- **Communication KPIs:** the communication KPIs describe the engagement in disseminating the results of the residencies in the form of talks, workshops, exhibitions, communication campaigns etc. It aims to contribute to the dissemination of the residency results and the overall Hungry EcoCities' message tailored to the needs and interest of both local and global communities.

The Key Performance Indicators (KPIs) serve to clearly define the objectives of the core team, outline the steps to be taken, and identify the necessary skills and knowledge required for the entire process, thereby enabling effective communication with collaborators and contributors at every stage. By establishing these KPIs, the team can systematically monitor strategic, tactical, and operational goals throughout the art-driven experiment process. It is the collective responsibility of the entire core team to take ownership and work towards achieving these KPIs. Detailed KPI data for each of the 10 HTEs is presented in Annexes of this deliverable..

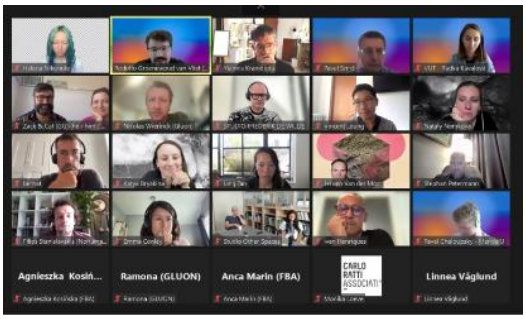
2.3.2 Mentoring & meeting schedule

Each HTE and PPE experiment is guided by a team of mentors from the HEC consortium, this group is called the "core-team". The Humanizing Technology Experiments were allocated the following mentors:

Project name	Artist	Technical mentor(s)	ADI mentor	Studio mentor(s)
Ecoshroom	Ivan henriques	Pavel Chaloupsky Mendel University	Nicolas Wierinck, Gluon	Monika Loeve, CRA
Acoustic Agriculture	Helena Nikonole	Pavel Chaloupsky Mendel University	Nicolas Wierinck, Gluon	Monika Loeve, CRA
Future Protein	IM-A Studio	Pavel Smrz BUoT	Nicolas Wierinck, Gluon	Stephan Petermann NTWK
Symbiosis.AI	Frederik De Wilde	Pavel Chaloupsky Mendel University	Rodolfo Groenewoud van Vliet, In4Art	Monika Loeve, CRA
The Council of Foods	Nonehuma n Nonesense	Jeffrey David Turk KUleuven	Lija Groenewoud van Vliet, In4Art	Eva Mikkelsen SOS
Low Carbon Climate Cookbook	Ling Tan	Robin De Croon KULeuven	Lija Groenewoud van Vliet, In4Art	Eva Mikkelsen SOS
Symposio	Yannis Kranidiotis	Pavel Smrz BUoT	Lija Groenewoud van Vliet, In4Art	Eva Mikkelsen SOS
Culinary Journeys	Jeroen van der Most	Robert Boute KULeuven	Lija Groenewoud van Vliet, In4Art	Stephan Petermann, NTWK
MVP x FFF	The Center for Genomic	Pavel Smrz BUoT	Lija Groenewoud van Vliet, In4Art	Stephan Petermann, NTWK

Project name	Artist	Technical mentor(s)	ADI mentor	Studio mentor(s)
	Gastronomy			
Food Dysmorphia	Bernat Cuni	Pavel Smrz BUoT; Alberto Simeone KULeuven	Lija Groenewoud van Vliet, In4Art	Stephan Petermann, NTWK

To approve the IMPs, we have changed the procedure slightly from the GA. The reason for this is to make it more efficient and logic in the collaboration. All HTE teams had a kick-off meeting to discuss the Individual Mentoring Plan and get to know their assigned mentors from the HEC consortium. The online meeting took place on the 4th of September 2023 coordinated by In4Art and was attended by the 10 artists, the mentors from the HEC consortium and FundingBox. The event started with a presentation of the HEC consortium partners and the 10 selected Humanizing Technology Experiments by Rodolfo Groenewoud van Vliet (In4Art) aimed at giving insight at the different projects. This presentation was followed by a presentation on the Individual Mentoring Plan by Lija Groenewoud van Vliet (In4Art) and Anca Marin (FundingBox). Following, Monika Loeve (CRA) presented the overall set-up of the residency and timeline.



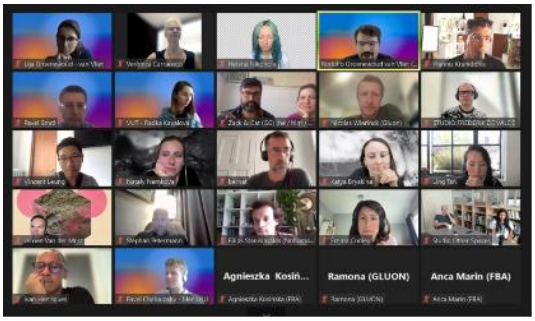


Figure 10-11: Screenshots from the kick-off meeting

This has led to a first IMP version, which was shared mid Sept. Based on that, we followed up with one-on-one meetings with the art-driven innovation mentor, studio and technology partner to finish the IMPs. The art-driven innovation mentor gathers the final input and does the final check with the artist and uploaded the final IMP to Project Place, where the approval was requested from the selection committee, consisting of BUoT, FBA, In4Art and the host studio. Considering the continuous involvement of the mentors in the completion of the IMP, it was decided that the selection committee would vote directly on the IMP, whose content was validated by the mentors, prior to sharing it with the committee. Thus, the approval of the payment was done by accepting the IMP in its totality as opposed to the scoring system described in Annex 1 of the Sub Grant Agreements.

2.3.3 Expected deliverables & payment schedule

In alignment with the structure and duration of the residency, the selected artists are tasked with producing a series of deliverables within specific timeframes. Notably, D1, along with D3.1, D3.2, D4.1, D4.2, and D4.3, are linked to the scheduled payments of the lump sum. These deliverables are strategically designed to mark key milestones and significant progress points throughout the duration of the residency. Each deliverable corresponds to critical phases of the process, ranging from initial conceptualization and ideation to the development and execution of tangible artistic outputs. By closely aligning these deliverables with the lump sum payment structure, the residency aims to ensure a transparent and mutually beneficial framework that motivates artists to meet defined objectives and achieve specific artistic targets within the specified timeframes.

Deliverable	Type	Public
D1 Individual Mentoring Plan/Innovation Monitoring plan	Report	NO
D2 Presentation at HEC Joint Meeting	Presentation	YES
D3.1 Presentation of Prototype	Presentation slides/plan	NO
D3.2 HTE demonstration document of prototype	Report	NO
D4.1 Video Demonstrator of prototype	Video	YES
D4.2 Life demonstration at studio	Presentation	YES
D4.3 HTE documentation	Report	YES
D5 Experiment learnings	Questionnaire	YES

2.3.4 Project budget

Complementing the KPIs the project budget is structured to encompass various key components essential for the successful execution of the residency. It serves as a comprehensive financial roadmap, delineating the distribution of resources for vital aspects such as personnel costs, travel costs, materials and goods, subcontracting and overhead. The budget is strategically designed to ensure the effective utilization of resources across the different phases of the residency.

2.3.5 Background and foreground IP and licencing

The section on background and foreground IP of the IMP is aimed at listing the collective intellectual contributions from all core team members throughout the experiment duration. The background IP comprises existing intellectual assets, knowledge, and technologies brought into the residency by the artists and the core-team members. On the other hand, the foreground IP encompasses the novel intellectual outputs, innovations, and creative works generated during the residency, including collaborative research findings, artistic creations, and technological advancements. This comprehensive approach to IP management is devised to foster a collaborative environment that respects and acknowledges the intellectual contributions of all team members, encourages open communication, and facilitates the fair and equitable distribution of intellectual property rights. By ensuring transparency and clarity in the management of background and foreground IP, the residency seeks to promote a conducive environment for the responsible and ethical handling of intellectual assets while fostering a culture of innovation and knowledge sharing among all stakeholders.

Reflection and Lessons learned

We have identified some key overlapping themes and trends that can be observed across the 10 HTEs:

- **Integration of technology in agriculture:** Several projects emphasize the use of AI and sensing technologies to enhance various aspects of agriculture. Whether it's through analyzing plant acoustics, studying the impact of mycorrhizal fungi on crop growth, or utilizing AI to optimize food production and minimize environmental impact, these projects highlight the role of technology in improving efficiency and sustainability in agricultural practices.
- **Sustainable food production and environmental impact:** Many of the projects focus on sustainable food production and reducing the environmental impact of various processes within

the food industry. Whether it's through vertical gardens that mitigate noise pollution, AI-driven low carbon cookbooks, or the use of shellfish farming to filter water and collect CO2, there is a strong emphasis on applying technology to create more environmentally friendly and sustainable food production systems.

- **Empowerment through knowledge and awareness:** A common theme among the projects is the empowerment of consumers and communities through knowledge and awareness. By using AI to reveal hidden aspects of the food industry, such as externalized costs, or by creating platforms that educate people about the impact of their food choices on the environment, these projects aim to foster informed decision-making and deeper engagement with food-related issues. Many projects also aim to create engaging experiences, exhibitions, and interactive platforms that encourage public participation, knowledge dissemination, and dialogue on sustainable food practices. These initiatives foster a sense of responsibility and engagement within communities to promote a more sustainable food future.
- **Cultural and social engagement with food:** Several projects seek to engage with food from a cultural and social perspective. Whether it's through exploring authentic Asian cuisine, redefining tableware design for diverse dining experiences, or creating interactive platforms where food "speaks" to consumers, these projects aim to bridge cultural gaps and create meaningful connections between people and their food.

From the 10 identified EU ambitions on FOOD 2030, the HTE projects will contribute to seven. It various from empowering communities, to reach circularity, to protect climate, to improve nutrition towards improve nutrition. The seven ambitions are:

- **Food Systems and Data**
- **Healthy, Sustainable and Personalised Nutrition**
- **Alternative Proteins and Dietary Shift**
- **Food Waste and Resource Efficiency**
- **Urban Food Systems Transformation**
- **Foods from Oceans**
- **The Microbiome World**

AI and technology play a central role in all projects, from utilizing AI for the generation of visual content to leveraging machine learning for data analysis in agriculture. The integration of AI in these projects not only facilitates research and development but also enables more efficient, data-driven decision-making processes. We have identified 4 different clusters for AI developments: Evolutionary AI, AI image generation, Prescriptive AI and AI personas / digital identity.

All projects reflect on (parts) of the food value chain. We will be plotting the projects along the value chain and throughout the project, reflect and work towards contribution to the future food value chain.

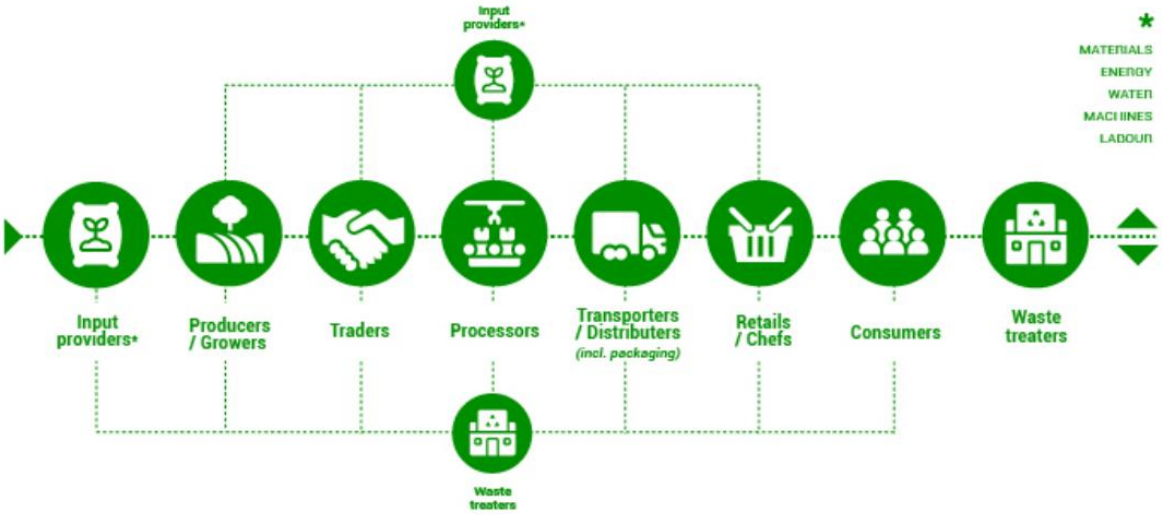


Figure 12: Reference Food Chain Hungry Ecocities

During the forthcoming networking event in Turin, we will update these overviews and get better linkages on how the projects contribute to the visions of the studios and the larger EU Food2030 ambitions.

Partners Hungry EcoCities

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Annexes

In this annex part, the summary of the IMPs is given. It is subtracted from the IMPs that each core-team compiled for the Humanizing Technology Experiments and focusses on the project summary, the set-goals and KPIs. This shows what the different team will be working on during the residency period.

1. IMP Summary: Acoustic Agriculture
2. IMP Summary: Culinary Journeys
3. IMP Summary: Ecoshroom
4. IMP Summary: Food Dysmorphia
5. IMP Summary: Future Protein
6. IMP Summary: Low Carbon Climate Cookbook
7. IMP Summary: MVP x FFF
8. IMP Summary: Symbiosis.AI
9. IMP Summary: Symposio
10. IMP Summary: The Council of Foods