Post-Human Architect Certification Framework (PR4)

Introduction

PHA Certification Framework is developed with reference to the European Qualifications Framework https://europa.eu/europass/en/europass-tools/european-qualifications-framework and National Qualification Frameworks with the aim to specify PHA learning outcomes on the basis of PHA Competences framework (R1), PHA methodology and training (R2) and PHA educational games (R3).

European Qualifications Framework (EQF) is an 8-level, learning outcomes-based framework for all types of qualifications that serves as a translation tool between different national qualifications frameworks. This framework helps improve transparency, comparability and portability of people's qualifications and makes it possible to compare qualifications from different countries and institutions.

The EQF covers all types and all levels of qualifications and the use of learning outcomes makes it clear what a person knows, understands and is able to do. The level increases according to the level of proficiency, level 1 is the lowest and 8 the highest level. Most importantly the EQF is closely linked to national qualifications frameworks, this way it can provide a comprehensive map of all types and levels of qualifications in Europe, which are increasingly accessible through qualification databases.

In addition to the EU Member States another 11 countries work towards implementing the EQF, namely Iceland, Liechtenstein and Norway (European Economic Area countries), Albania, North Macedonia, Montenegro, Serbia and Türkiye (candidate countries), Bosnia & Herzegovina, Kosovo (potential candidates) and Switzerland.

8 EQF levels

Each of the 8 levels of the EQF is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any qualifications system.

The learning outcomes are defined in terms of:

Knowledge: in the context of EQF, knowledge is described as theoretical and/or factual.

Skills: In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).

Responsibility and autonomy: In the context of the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility.

Description of each level is available here https://europa.eu/europass/en/description-eight-eqf-levels

Suggested EQF level for the PHA Certification Framework is 3, 4 or 5 with the following respective levels of knowledge, skills and responsibility & autonomy:

Level	Knolwedge	Skills	Responsibility and autonomy
3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems
4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
5	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others

We suggest as the most appropriate EQF level 4, taking into account the complexity of the topic of post-human architecture and previous project results, that is the competence framework, the training and the educational games. The decision on the EQF level will guide the development of the questions for the online assessment tool in the following activity of PR4.

PHA Competence Framework

Within the first project result a PHA Competence Framework was developed, based on a best practice collection and focus group results in all partner countries, that is describing the needed competences for a profile of a post-human architect. The objective of the competence framework was to create a self-assessment grid that can both be applied in training and self-learning. The framework includes definition and descriptors for each competence defined and further elaborating on the necessary *knowledge, skills and attiudes* relevant for this competence. This is also the basis for describing PHA learning outcomes in the following sections of this document.

The top 10 competencies for post-human architecture are as follows:

1. **Community engagement** (active listening, engagement, awareness and understanding of community values)
2. **Embody sustainability values** (natural processes and protection, economic sustainability, circular economy, recycling and consumption)
3. **Active leadership for sustainability** (self-sufficiency, collaboration and facilitation skills, openness and lobbying for change)
4. **Ecology** (knowledge on ecosystems, biology and biological diversity, circular economy, inter-speciesism, harmful materials (chemistry) and the non-human perspective)
5. **Cultural sensitivity** (history, storytelling, anthropology, community identity and culture)
6. **Embracing complexity in sustainability** (cross sectoral and multidisciplinary approaches, interactive approaches, political insight, problem solving attitude, stakeholder engagement, system and transversal thinking)
7. **Technology literacy** (technology, application of technology for sustainability)
8. **Design thinking** (aesthetic skills/attitudes, design thinking method, human oriented egocentric design approaches)
9. **Foresight – envisioning sustainable futures** (creativity, futuristic or visionary perspective, social innovation, mindset and solution orientation)
10. **Inclusion** (bottom-up approaches, emotional intelligence, empathy, equality, ethics, ethnography/observations skills, humility (humble), respectful, flexible and awareness of social needs and values)

PHA Training

The purpose of the PHA Training as the second project result is to develop the trainees' skills, both hard skills - e.g., knowledge on sustainability - and soft skills - e.g., cultural sensitivity -, in order to unlock their capabilities in taking on an ecosystemic approach when "reading" a space and rethinking that space in a creative and sustainable way. It is intended for VET trainers, especially the ones working in decentralized areas, engaged in sectors like science, architecture, planning, arts, design, rural development, anthropology, sustainability - and their learners. In the PHA training handbook one can find a complete course guide made of a series of activities that lead trainees to the development of a regeneration idea for a specific ecosystem.

The PHA training involves the following key steps and their goals that are described in detail in the PHA training handbook on how to conduct them, the time-frame and useful tips:
1. **From human centred to post-human**: fostering knowledge on the concept of ecosystem
2. **Keyword assignment**: fostering the ability to have a disruptive approach to the surrounding environment (ecosystem)
3. **Exploration**: fostering the ability to actively listen and understand the surrounding environment (ecosystem)
4. **Mapping**: fostering the ability to organize data and to create links between various information
5. **Advocacy**: fostering the ability to empathize with an ecosystem
6. **Regenerating a place**: fostering the ability to take on a futuristic and visionary perspective - envisioning futures
7. **Sustainability steps**: fostering knowledge on sustainability
8. **Pitching the idea**: fostering the ability to identify the strengths and weaknesses of an idea

PHA Educational games

The third project result includes the development of two innovative educational games to foster further the competences of post-human architect defined in the PHA competence framework. One of the games is called Cards against the apocalypse and the other is Holistica.
Cards Against the Apocalypse is a cooperative card game for 3 players. Together, you will be the architects of an underground shelter. Your goal will be to create the entire ecosystem for all the living species in a dangerous environment. You have 7 turns to create an ecosystem that will last forever. **Holistica** is all about teaching people how to build a society with sustainability in mind. For each building being raised, something else will be affected. It is intended for 1 - 4 players. The main concept for this game is to teach players the consequences of human centric behavior and how it may affect nature. It is there to give you the groundwork. Then it's up to you how to approach and develop it further.
The **Cards Against the Apocalypse** game trains the following competencies (as described in the PHA competence framework):

- Sustainability values
- Ecology
- Technology literacy
- Foresight – Envisioning sustainable futures
- Inclusion

The **Holistica** game trains the following competencies (as described in the PHA competence framework):

- Embody sustainability values
- Active Leadership for sustainability
- Ecology
- Embracing complexity in sustainability
- Foresight – Envisioning sustainable futures
- Inclusion

The identified competencies in the PHA Competence Framework, the goals in the PHA Training and addressed skills/competences in the PHA Educational games will guide the development of the questions for the online assessment tool in the following activity of PR4, referring also to the defined Certification Framework.

PHA learning outcomes

In the table below you can find the specified PHA learning outcomes for each of the identified 10 PHA competencies and all levels of learning oucomes – knowledge, skills and responsibility and autonomy (attitude). According to the scope of implemented steps in the PHA Training and PHA Educational games, the educator can set/choose the most appropriate learning outcomes among the listed.

Competence	Knolwedge – learners will be able to:	Skills – learners will be able to:	Responsibility and autonomy (attitude) – learners will be able to:
Community engagement	Illustrate community character and history

Identify personal and community values | Carry out active listening - concentrate and pick up information and insights from a conversation

Summarize what they hear and discover in their engagement

Generalize meaning from their engagement and listening | Demonstrate interest in people and what they have to say |
| *Embody sustainability values* | Explain main views on sustainability (human-centred, technology-centred and nature-centred)

Clarify ethics and justice for the wellbeing of current and future generations depended on nature wellbeing | Execute objectively articulation and negotiation of sustainability values and principles

Implement equity and justice as criteria for environment preservation and sustainable use of natural resources

Evaluate own impact on nature and design steps for individual contribution to sustainability | Carry out sustainable actions and behaviour

Demonstrate respect to interest of future generations |
| *Active leadership for sustainability* | Illustrate interdisciplinary and intercultural nature of sustainability problems and divergent views

Identify policies and political responsibility related to nature wellbeing | Identify social, political and economical stakeholders related to sustainability

Synthesise interdisciplinary data and information on sustainability | Demonstrate commitment in looking at sustainability challenges from different angles

Argue political accountability for sustainability |

	Recognize how and who to work with to create a vision for a sustainable future

Select preventive actions or inactions to protect wellbeing of all life forms | Design transparent, inclusive and community driven processes | Execute engaging with others to challenge status quo

Relate to confidence in one's ability to anticipate and influence sustainable changes |
| *Ecoliteracy* | Describe natural systems that make life on earth possible

Explain ecological and social crises we face and their interdependencies

Explain how nature sustains life and learn from it | Explore the far reaching implications of our modern society, actions, like use of fossil fuels, on climate change

Forecast and anticipate environmental crises of our current and future actions | Value emphaty for all forms of life

Argue sustainability as a community practice |
| *Cultural sensitiveness* | Compare global and cultural norms, diversity, and historical and ethnic background

Question the implications and effects of dominant culture (own) on their perspective, racism, stereotyping, discrimination, and xenophobia | Test cultural self-assessment to understand how one's actions affect others and what is accepted in social interactions in different cultures

Execute intercultural communications and engagement with people from different backgrounds, cultures, minority, and marginalised groups | Demonstrate tolerance and empathy towards differences in cultures |
| *Embracing complexity in sustainability* | Recognize that every human action has environmental, social, cultural, and economic impact

Discuss just, fair and inclusive sustainability actions from different stakeholder perspectives | Describe sustainability as a holistic concept for environmental, economic, social, and cultural issues

Analyse arguments, ideas, actions, and scenarios to determine their credibility | Defend trust in science even when not completely understanding scientific claims

Demonstrate empathy and engagement in framing and understanding |

		Implement transdisciplinary approaches in framing challenges	potential sustainability challenges
Technology literacy	Explain what technology is, how it is created and how it is shaped by society Describe functionality, processes and ethical concerns related to digital content and technology	Evaluate technological information, processes and context Use and maintain technological products and systems Diagnose and troubleshoot operating systems and understand designing principles behind them	Demonstrate openness and self-reliance in their relationship with technology Demonstrate patience and optimism in relation to technology, both in relation to challenges and potential in current and future usage
Design thinking facilitation	Describe the Design thinking process, importance, and interactions of each step, empathise, define, ideate, prototype and test	Carry out empathy, listening and analysing of the current and potential stakeholders and users to develop solutions that fits their needs, values, behaviour, and expectations Effectively use Design thinking tools like journey maps, integrative thinking, brain writing/-storming, mind-maps and prototyping Execute interviewing and active listening and designing surveys	Demonstrate openness, active listening, and engagement in the creative process Demonstrate trusting the Design Thinking process Demonstrate being inclusive and trust in the ability of participants to contribute
Foresight in envisioning sustainable future	Describe the difference between expected, preferred, and alternative sustainable futures Argue that consequences of human actions on the	Envisage alternative futures for sustainability, grounded in science, creativity, and sustainability Consider local circumstances in	Support awareness of the influence of actions on oneself and community Demonstrate aborting unsustainable practices and trying alternative solutions

	environment are often complex, unpredictable, and uncertain Recognize the interdisciplinary nature of sustainability challenges and necessary disciplinary professions and divergent views needed to initiate systemic change	dealing with sustainability issues Synthesise information and data on sustainability from different disciplines	Execute commitment to consider sustainability challenges from different angles and perspectives
Inclusiveness	Recognize different cultures and cultural norms and the importance of cultural understanding and inclusion Discuss the meaning of inclusion and its application in communication between cultures and with marginalised groups Recall systemic inequities and system oppression, including mental models	Use open ended questions to explore different cultures and perspectives, reframing and building up understanding and insight Question your own point of view to consider how someone else might think or feel about something Understand and change systems and structures that work against inclusion	Demonstrate openness and respect to a variety of ideas, personal styles, and practices Support building meaningful connections with people that are different from you, challenging our expectations Demonstrate courage to change your mind, challenge yourself and your personal biases

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