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## **D1.5 Interim evaluation report**

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### Abstract

This brief report summarises feedback and suggestions emerged from consultations with an Advisory Board, providing a ‘snapshot picture’ of Gaming Horizons at a key moment in the project lifecycle. The report examines the project’s positioning as a critical, constructive voice in the broader European R&D context (i.e. its scope and effectiveness as a ‘sister project’). The engagement with the AB highlighted three themes that require further reflection within the project: a) what do we mean by ethics and RRI? b) the importance of not being critical ‘for critique’s sake’ and c) the need for a deeper examination of the reasons behind the serious/applied vs leisure separation. These areas are described as ‘areas of tension’ that the project must acknowledge and, where possible, resolve.

**1. Introduction**

Gaming Horizon is a ‘Sister Project’. In the H2020 ICT programme of work<sup>1</sup> the definition ‘Sister Project’ is used to describe smaller projects that operate alongside the core programme, adopting a Social Science and Humanities (SSH) perspective to reflect and challenge research and development in a specific area, in order to produce alternative framings – different ways of approaching a certain topic – informed by Responsible Research and Innovation (RRI) criteria.

Gaming Horizons’ nature as a sister project relies on the establishment of a critical yet productive dialogue with ‘state of the art’ expertise in gaming and gamification research. This important criterion has informed our methodology, our stakeholder engagement approach, and the decision to involve an Advisory Board of highly qualified individuals to provide advice and help us achieve our goals.

The aim of this brief report is to provide an interim evaluation - a ‘snapshot picture’ of the project at a key moment in its lifecycle – which documents our engagement with the Advisory Board and the insights that emerged. This report examines the project’s positioning as a critical, constructive voice in the broader European R&D context (i.e. its scope and effectiveness as a sister project) and it draws upon consultations with the Advisory Board, including targeted feedback from members in relation to the project’s progress against its initial objectives.

Current members of Gaming Horizon’s Advisory Board are as follows:

Table 1 Gaming Horizons' Advisory Board

Paul Howard Jones	Professor of Neuroscience and Education – Paul’s particular area of interest is applying our understanding of cognition and
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<sup>1</sup> [http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016\\_2017/main/h2020-wp1617-leit-ict\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-leit-ict_en.pdf)

	<p>neuroscience to enhance child and adult learning. His research explores the benefits offered to education by emerging technologies, aided by a critical consideration of underlying cognitive processes.</p>
<p>Phoenix Perry</p>	<p>Phoenix Perry creates physical games and user experiences. Her work looks for opportunities to bring people together to raise awareness of our collective interconnectivity. A consummate advocate for women in game development, she founded Code Liberation Foundation. This organization teaches women to program games for free. Since starting in 2012, this project has reached over 2000 women in the New York area between the ages of 16 to 60. Fostering professional growth and mentoring new leaders in the field, she strives to infuse the industry with new voices.</p>
<p>Wim Westera</p>	<p>Dr. Wim Westera is a physicist and educational technologist. He leads a group of some 70 instructional designers, media developers and IT developers at the Educational Technology Expertise Centre of the Open University of the Netherlands. His group develops and applies new educational methods, models and technologies in distance education and blended settings.</p>
<p>Maja Pivec</p>	<p>Maja Pivec, Ph.D, is professor of Game Based Learning and Learning with Multimedia at the University of Applied Sciences FH JOANNEUM in Graz, Austria. For her research</p>

	<p>achievements Maja Pivec received in the year 2001 Herta Firnberg Award (Austria) in the field of computer science. She is co-ordinator, scientific leader or partner in several EU or national founded projects. She is editor and co-editor of three book publications in the area of innovative learning approaches. Her research work is published and presented at more than 90 international conferences and publications.</p>
<p>Sylvester Arnab</p>	<p>Dr. Sylvester Arnab is a Senior Research Fellow, Co-Leading research at the Disruptive Media Learning Lab (DMLL) at the University of Coventry, building on his R&amp;D experience at the Serious Games Institute, UK. Sylvester has been involved in a number of EU-funded gamification projects such as the Games and Learning Alliance (GALA, galanoe.eu) and Pegaso – Fit for Future</p>
<p>Kam Star</p>	<p>Kam Star is a digital media entrepreneur, researcher, investor and award winning games developer. Creating his first computer game in 1986, he studied Architecture and is deeply passionate about innovation in play, influence and collective intelligence. Kam designs and develops playful solutions for delivering engaging experiences that make a lasting impression or use the power of the crowd to transform topics. He has produced gaming projects for the European Commission, BBC, AVIVA, Eden Project, UNESCO, McKinsey, EPSRC, NESTA, MoD, NHS, TSB, Wellcome Trust and many more.</p>

We engaged with the Advisory Board between January 2017 and July 2017. We carried out two online meetings, and we held separate individual discussions with them on how to achieve our objectives and maximise impact. The first online meeting took place on 21st Feb 2017. During this meeting we discussed the project's vision, objectives and methods, and outlined roles and responsibilities for the AB more in detail. We also had a collaborative exchange in which we asked AB members to identify potential respondents for our interview study.

The second meeting took place on Wednesday 17th May 2017. In that context, we discussed progress on the main tasks and how to refine the methodological framework. We also discussed planning for the stakeholder event on the 19th of July, which was attended by AB members. This event was the first opportunity to meet face to face and to engage in more extensive consultations, in collaboration with other participants. A third online meeting is scheduled for 3rd October 2017.

Feedback from the AB members was collected during the official meetings mentioned above, as well as through informal conversations with individual members and in the context of in-depth research interviews, which will also be drawn upon in subsequent phases of the project. The main themes that emerged can be summarised as 'areas of tension' that the project must acknowledge and, where possible, resolve.

## **2. Tension 1: what do we mean by ethics and RRI?**

There was consensus among our advisors about the importance of ethical discussions in the current H2020 Research & Development context, especially in the context of Information and Communication Technologies. These discussions are seen as timely and the role of videogames in society is considered as central to the debate. However, discussing ethics and social responsibility also highlighted the need for more clarity in

how these terms are used in the project (and indeed beyond the project) – a confusion we also encountered in our interviews involving a larger group of stakeholders.

The meaning of ethics and social responsibility in research and innovation is, in fact, far from obvious. The main tension we noted in our engagement with the Advisory Board and with the broader stakeholder community is between ethics as matter of compliance, as opposed to ethics as a component of a value-based framework that can inform design and development from the outset. One of the AB members termed ethics as a ‘hot topic’ and described ‘ethical considerations’ thus:

It’s actually a hot topic on the agenda internally. We are all – we have to comply. I think it’s all over the European Union or maybe even only in the Netherlands. We have to comply with an ethical manifest as a researcher, which is about the integrities, the professional requirement, actually. I wouldn’t say there’s a lot of explicit discussion on it but I think it’s fair to say that in the Netherlands, it’s a very liberal and tolerant – it has been, maybe it has become a little less lately, but at the academic level, there is a large awareness of, let’s say, equality, gender equality, non-discrimination and things like that.

Another AB member described the importance of ethics and social responsibility in game-related research and development along similar lines:

Yes, definitely, especially when we are working with children in schools. We had to make sure that we had to adhere to the ethics process that we have at the university. So we had to go through the ethics approval before we engaged with them. Even if we want to engage with the teachers and engage with any other stakeholders, we have to make sure that we have the ethics approval in place, which is from the university.

As a project, we are beginning to engage - internally and as part of our dissemination – with the various perspectives on ethics and RRI, reflecting on their implications for our objectives and prospective outputs. The view of Ethics and RRI as

compliance, for instance, applies mostly to research processes rather than the objectives and questions that drive the research itself. At its most basic, this perspective refers to the need for research and development activities to be carried out in an ethical fashion complying, for instance, with informed consent protocols, respecting participants' right to privacy and ensuring that research teams have a degree of gender balance.

Conversely, the notion of ethics and RRI as parts of an underlying design philosophy assumes that the ideation and development of technologies might take place along more ethical lines, to explicitly pursue goals shaped by social values and principles - for instance inclusion, equal representation of gender and race, and so forth. This notion also calls for a more open debate about the visibility of non-economic goals and impact criteria in publicly funded R&D projects, in line with the traditional non-for-profit stance whereby the pursuit of the social good is not always aligned with the profit-oriented nature of most commercial technology companies and start-ups.

Both perspectives on ethics and RRI are important for Gaming Horizons, but the project is more interested in the latter. Therefore, more work is needed to clarify our position and key messages. We are confident that, as the project enters its participatory research phase and the development of scenarios outlining 'alternative framings for gaming' begins, these aspects will become increasingly clearer and more explicit.

### **3. Tension 2: the importance of not being critical 'for critique's sake'**

The second area of tension stems directly from the conceptual and methodological approach we are adopting for the key project activities. We are drawing on the social sciences and the humanities, mobilising a methodological toolkit that allows, an indeed demands, a critical examination of the issues at hand. Such critical approach could, according to some Advisory Board members, be problematic when engaging with

developers or researchers who, to quote targeted feedback from one member, ‘may feel being put under pressure’ when confronted with discussions around ethics and social responsibility. This may be related to the difficulty of finding a common vocabulary in an intensely interdisciplinary area of socio-technical innovation like games research and development – a characteristic shared, in fact, by most topics featured in the H2020 ICT programme (health technology, to name one).

While researchers from a social science background may be accustomed to methods that call into question the attitudes, values and ideologies that underpin individual and collective behaviours, developers or scientists with a technical background and with a focus on solving or ‘fixing’ problems may find these methods uninteresting or irrelevant to the challenges they face. When discussing the typical disciplinary composition of teams involved in researching and designing applied games, one of the AB members noted that, in his team:

Roughly, 50 per cent is social sciences and 50 per cent has a technical background. Even on the very simple level, you see misunderstandings. People don’t quite understand what they’re talking about.

For Gaming Horizons, such a state of affairs is a compelling validation of our key premise: the importance of bridging communities and discourses around the role of gaming (and technology more broadly) in society, through dialogue and stakeholder engagement. In this sense, the social-scientific commitment to critique needs probably to be better positioned within the project, not as a threat that may lead to defensiveness and to damaging antagonism, but as an essential aspect of democratic engagement around the social and cultural purpose of technology. We are taking steps in that direction.

#### **4. Tension 3: the serious/applied vs leisure separation**

The third area of tension is the extent to which the two parallel domains of gaming, entertainment and serious/applied, can and should be connected. One of Gaming Horizons' key assumptions is that the distinction between serious and entertainment games is blurring. Aspects that until now seemed to concern only the digital entertainment industry are now relevant for the 'serious' gamification industry as well, and vice versa. Therefore, it is both important and productive for the still young European gamification industry to show an awareness of design trends and cultural debates that have profoundly affected the mainstream and independent game development cultures over the past few years. Likewise, it is important and productive for those with a genuine interest in games for learning to ask hard questions about institutional sexism, minority representation, and exploitative game mechanics.

In our discussions with the Advisory Board, it became clear that the distinction between entertainment and serious/applied needs to be understood better, before it can be challenged. The serious/applied vs. leisure separation is, in fact, based on a complex milieu of theoretical and practical considerations, which are not always easily discernible, but which need to be grasped in order to move the discussion forward. On several occasions, AB members reminded us about the different nature of objectives that inform the design and the evaluation of applied games; objectives which are often incompatible with the priorities of developers in the mainstream gaming industry. One AB member made the following comment during an interview:

(our games) need not necessarily motivate or entertain because at a higher education level, in contrast with maybe primary education and secondary schools, the motivation should come from the students and the content themselves. It doesn't mean that we create awkward games. Actually, we have games that people

love because they sometimes can hardly stop because of the interesting content we offer.

Working to reproduce ‘fun’ and ‘flow’<sup>2</sup> during gameplay may even militate against the need to encourage reflection, deep learning and, generally, the sort of applied outcomes that dominate in serious games. At the same time, our discussions with AB members (and indeed with other stakeholders) point to the emergence of new design approaches - in particular in the independent game development space – which are challenging established game-related notions (such as fun and flow), while often pursuing serious themes and concerns, although in a more cultural and ‘artistic’ vein: grief, diversity, identity, political issues and so forth. As the project moves forward, it will be essential to tease out in unambiguous terms the implications of this tension. For instance, our discussions (as well as our empirical work) are highlighting the existence of a codified, taken-for-granted body of knowledge around game design – one that prioritises mechanics and over-designed forms of engagement whereby behaviours are externally rewarded and achievements and progression are structured. This codified knowledge seems to shape, to a significant extent, the dominant views around game development in the serious and applied domain, where there is still little awareness of alternative game design languages which are trying to push the mainstream gaming industry beyond these, still immensely useful but also rather restrictive, categories.

In our discussions with the AB, and in particular during the more engaged interactions at our key face-to-face event in Brussels (on 19th July 2017), we began to explore these alternative design approaches. We discussed, for example, the stripped-

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<sup>2</sup> A mental state of intense engagement in an activity, typically associated with gameplay in the leisure industry: see

[http://www.gamasutra.com/view/feature/166972/cognitive\\_flow\\_the\\_psychology\\_of\\_.php](http://www.gamasutra.com/view/feature/166972/cognitive_flow_the_psychology_of_.php)

down game mechanics featured in environmental narrative games, the so-called ‘walking simulators’<sup>3</sup>, where the absence of typical game-like elements (challenges to overcome, structured progression and extrinsic rewards) affords a more contemplative and free-form exploration of ‘serious’ themes. The role of narrative-oriented approaches is also emerging as an important theme in our in-depth interviews with experts and stakeholders, and is definitely something we will explore further. As the project moves forward, we will begin to develop ‘scenarios’ that will outline alternative framings for the social and cultural role of games, viewed less as tools for social engineering, and more as complex experiences that encourage reflexivity and social responsibility. As put by one AB member:

we would like to encourage people to discover their ethic purpose (...)So I think in terms of creating games for health, games for change and games for raising awareness on environmental issues, I think we need to look at the mechanics of what allows people to discover their own purpose in their own surroundings and environment and community.

## **5. Concluding remarks**

Gaming Horizons is at a key point in its lifecycle. The project is based on two phases, which we called ‘informed challenge’ and ‘expansion through stakeholder engagement’. During the informed challenge phase, we examined the state of the art in empirical research (Deliverable 2.1- published), as well as the assumptions and implicit biases in the current research and innovation agenda, focusing on the broad H2020 programme, and then on the specific area of gaming (Deliverable 2.2 - published). We also carried

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<sup>3</sup> <https://www.theguardian.com/technology/2016/apr/06/dear-esther-original-walking-simulator-playstation-4-xbox-one>

out 60 in-depth interviews with researchers, developers, policy makers, educators and young people (Deliverable 2.3 – forthcoming). As the first phase draws to a close, the project is about to begin the process of intense stakeholder consultations at the heart of the second phase.

We called this phase ‘cultural expansion’ to highlight our emphasis on broadening the cultural scope of what games are capable of achieving. As we transition into this more future-facing part of the project, we intend to build on the points raised during our engagement with the Advisory Board. Over the next six months, we will produce suggestions and recommendations in the form of scenarios, which will be published as ‘live’ online outputs. Our work on the scenarios will take into account the criticalities summarised in this brief report, and we will strive to develop a balanced set of outputs where the three tensions are acknowledged and used in a productive fashion to strengthen our claims and recommendations.