i-Game

Building a community for the co-creation of games with high impact on innovation, sustainability, social cohesion, and growth

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Impact Monitoring Dashboard

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Abstract	

The i-Game project aims to develop an accessible open-source game development platform that facilitates the co-creation of games by diverse stakeholders within the cultural and creative sectors. This initiative focuses on enhancing innovation, sustainability, and social cohesion through collaborative efforts. The project's impact framework, co-developed with consortium members, is designed to capture a wide range of social, economic, and cultural impacts. Utilising Microsoft Power BI, an advanced impact monitoring dashboard has been established to provide an interactive, data-driven and near-real-time dashboard tracking and visualising the social, economic, cultural and environmental impact generated by the project. Data collection will be both qualitative and quantitative, ensuring comprehensive and high-quality analysis. The framework and dashboard are adaptive, allowing for continuous refinement to accurately reflect the project's dynamic nature. This structured approach is poised to generate meaningful, measurable, and sustainable impacts, aligning with global sustainability goals and advancing the game development, cultural, and social innovation sectors.

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Executive summary

The i-Game project, funded by Horizon Europe, aims to create a collaborative game design platform that fosters innovation, sustainability, social cohesion, and growth. By integrating video game technology into cultural and creative sectors, i-Game aspires to make significant impacts across various domains, including knowledge exchange, network development, community relationships, economic development, learning and capacity building, social inclusiveness, and technological development.

The project's impact framework has been co-developed with the participation of all consortium members, ensuring it is comprehensive and reflective of diverse expertise and perspectives. This collaborative approach has resulted in a dynamic and adaptive framework that captures the multifaceted impacts of the i-Game initiative. Key components of the framework include outcome areas, specific project outcomes, and relevant key performance indicators (KPIs) mapped to stakeholders and aligned with the United Nations Sustainable Development Goals (SDGs). Two key approaches utilised by Open Impact are the Theory of Change (ToC) and Social Return on Investment (SROI), which provide a robust methodological foundation for the impact framework. Central to the project's impact monitoring strategy is the creation of an impact monitoring dashboard, developed using Microsoft Power BI[1]. This tool consolidates various data points related to the project's performance, offering stakeholders a real-time or near-real-time view of key metrics. The dashboard facilitates data-driven decision-making and ensures transparency and accountability in reporting the project's progress and outcomes. The framework's adaptability is crucial for capturing the real-time effects of the project and making necessary adjustments. As the project progresses (M5-M34, as per T2.4), the dashboard will evolve, providing richer and more detailed insights. Data collection will be both qualitative and quantitative, supported by tools and methodologies provided by Open Impact. The co-design platform will also play a significant role in collecting impact-relevant data from its users, enriching the project's overall data set.

The benefits of this visual impact monitoring approach include enhanced comprehension of complex data, improved decision-making, increased stakeholder engagement, and transparent reporting, as well as enhanced support to building economic growth and social development as envisaged by the i-Game project. By leveraging advanced data visualisation technologies and robust data management systems, the i-Game project aims to align with global sustainability goals and communicate its impacts effectively to all stakeholders.

As we move forward, Task 2.4 will set the foundations for the data collection strategy, followed by the official kick-off of impact monitoring. The data framework and collection roadmap will be validated consortium-wide to ensure alignment and effective implementation. The i-Game project is well-positioned to drive meaningful, measurable, and sustainable impacts, setting new standards in game development, cultural engagement, and social innovation.

[1] For more information about Microsoft Power BI, see section 3.1.1

Abbreviations

EI: Expected Impact

SDGs: Sustainable Development Goals

PO: Project Objectives

SROI: Social Return on Investment

UN: United Nations

NPV: Net Present Value

Glossary

Impact Framework: A structured approach designed to measure, assess, and communicate the effects of a project on its stakeholders and broader society. It encompasses methodologies and tools to evaluate social, economic, cultural, and environmental impacts.

Output: The tangible products, services, or results that are produced as a direct result of project activities. Outputs are typically immediate and short-term in nature.

Outcome: The changes or benefits that occur as a result of the project's outputs. Outcomes are generally medium-term effects that reflect the achievement of the project's objectives.

Impact: The long-term, broader effects of the project on society, the economy, culture, or the environment. Impacts are often more difficult to measure than outputs or outcomes, as they represent significant changes at a higher level.

Stakeholders: Individuals, groups, or organisations that are affected by or can affect the outcome of a project. Stakeholders can include project partners, beneficiaries, community members, funders, and policy makers.

Target Groups: Specific groups of stakeholders that the project aims to benefit or engage with. Target groups are often identified based on their relevance to the project's objectives and impact goals.

Proxy: A substitute measure that approximates or represents the value of an outcome when direct measurement is not possible. Proxies are often used in impact assessment to estimate social or economic value.

Cashability: refers to the ability to translate a project's outcome into monetary terms. It involves identifying and assigning financial proxies to the outcomes and indicators, thereby quantifying the social value generated by the project in financial metrics. This concept is crucial for calculating the Social Return on Investment (SROI), allowing stakeholders to understand the economic value of the project's social impacts.

Target Value: The specific, measurable goal set for a project outcome or indicator. Target values are used to evaluate the success of a project and to monitor progress towards achieving its objectives.

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1. Introduction

The i-Game project, funded under the Horizon Europe program, represents a significant leap forward in the realm of video game development and its integration into diverse cultural and creative sectors. Video games have become an integral part of European society, not only as a cultural and commercial industry but also as a vital aspect of people's daily lives. The European Union's video game market is notable for its rapid growth, contributing significantly to the overall market value and standing as a testament to the industry's dynamic evolution.

The primary objective of the i-Game project is to establish an accessible, open-source collaborative game design platform that fosters the co-creation of games by diverse actors across various ecosystems within cultural and creative sectors and industries (CCSI). This initiative is aimed at enhancing innovation, promoting social cohesion, and advancing sustainability. Central to the project is the development of the collaborative co-design-oriented cross-sectoral platform. This platform is designed to guide the creation of inclusive gamified experiences, including serious games, applied games, and video games, which will be further developed and brought to the public.

The project's goals are ambitious: to engage stakeholders of varying abilities, expertise, and disciplines in the video game industry; to provide tools that enable the collaborative creation of mobile and virtual reality games; to cultivate an ethical-design culture within the industry; and to rigorously monitor, assess, and manage the impacts of video games across different sectors, particularly those targeting culture, museums, creative industries, and fashion/textiles. The project's pilots will specifically explore these co-designed gamified experiences for stakeholders in the cultural and textile/fashion sectors. Additionally, it will explore the involvement and participation of diverse groups of stakeholders in the co-creation space, ensuring that the developed solutions are directly relevant and impactful.

A hallmark of the i-Game project is its commitment to understanding the positive impacts of online games on individuals, culture, and society. This insight will be utilised to identify the key elements necessary for developing a new generation of games aimed at enhancing well-being. The project's interdisciplinary and inclusive approach, involving organisations with diverse backgrounds and expertise, ensures a comprehensive address of the complex issues related to the impact of games. These efforts are reflected in the key outcome areas embedded in the presented impact framework: knowledge exchange, network development, community and social relationships, economic development, learning and capacity building, social inclusiveness, and technological development.

The i-Game project is inherently innovative, evolutionary, and adaptive. This is reflected in the design and implementation of its impact framework, which is intended to be dynamic and responsive to the ongoing developments within the project. The impact framework will evolve in tandem with the project, ensuring that it remains relevant and effective in measuring the diverse outcomes and impacts. This adaptive nature is crucial for capturing the real-time effects of the

project and for making necessary adjustments that align with the project's goals and stakeholder expectations.

In this report, which is based primarily on the outputs and the activities of T2.3 “Impact framework co-development” with references also to T2.4 “Impact monitoring and assessment”, we will detail the processes and methodologies involved in the co-development of the impact framework, the creation of an impact monitoring dashboard, and the results achieved. Each section will provide insights into how the i-Game project is paving the way for a more integrated and impactful development of video games within a co-creation space across various sectors. We will explore the collaborative processes that underpin the project, the role of stakeholders, and the specific outcomes and indicators that measure the project's success. Ultimately, this report aims to showcase how the i-Game project is setting new standards in game development, cultural engagement, and social innovation, driving towards a future where video games serve as powerful tools for fostering social cohesion, promoting sustainability, and enhancing cultural and educational experiences.

1.1 Impact framework co-development

The i-Game project places significant emphasis on the co-development of its impact framework, recognizing that such a collaborative approach is crucial for accurately measuring and enhancing the project's social, economic, cultural and scientific/technological impacts. The co-development process involves the active participation of all consortium members, ensuring that the framework is comprehensive, inclusive, and reflective of the diverse expertise and perspectives within the consortium.

Co-developing the impact framework is essential for several reasons:

- **Inclusivity and representation**: by involving all consortium members in the development process, the framework benefits from a wide range of insights and experiences. This inclusivity ensures that the framework addresses the needs and expectations of all stakeholders, leading to more accurate and meaningful impact assessments.
- **Shared ownership**: a collaborative approach fosters a sense of shared ownership and responsibility among consortium members. When all partners contribute to the framework's design, they are more likely to be committed to its implementation and to the continuous improvement of the project's impact.
- **Enhanced relevance and applicability**: the consortium-wide co-development process ensures that the framework is tailored to the specific context and goals of the i-Game project. This relevance enhances the framework's applicability, making it a practical tool for monitoring and evaluating the project's outcomes.
- **Methodological rigour**: engaging multiple stakeholders in the development process allows for the integration of diverse methodological approaches and best practices. This

collaboration enhances the framework's rigour, ensuring that it meets high standards of validity and reliability in impact assessment.

The methodology employed in co-developing the i-Game impact framework is structured and participatory, designed to harness the collective expertise of the consortium. The key steps in this methodology include:

- **Stakeholder engagement**: the process begins with identifying and engaging all relevant stakeholders, including project partners, beneficiaries, and external experts. Workshops, consultations, and focus groups are conducted to gather input and ensure that diverse perspectives are considered.
- **Defining impact areas and outcomes**: stakeholders collaboratively identify the key impact areas and desired outcomes for the project. This step involves mapping out the social, economic, cultural, and environmental domains that the project aims to influence.
- **Indicator selection and validation**: the next step involves selecting appropriate indicators to measure the identified outcomes. These indicators are validated through stakeholder feedback and alignment with best practices in impact assessment.
- **Framework design and iteration**: based on the input and feedback gathered, the impact framework is designed. This design is iterative, with multiple rounds of review and refinement to ensure that it accurately reflects the project's goals and stakeholder expectations.
- **Implementation planning**: the final step involves planning for the implementation of the framework, including the development of tools and processes for data collection, analysis, and reporting.

The detailed process of co-development will be further elaborated in section 2.2.1, "Co-development," where specific activities, methodologies, and stakeholder engagement strategies will be discussed comprehensively.

The co-development of the impact framework is closely aligned with the tasks and work packages outlined in the project documentation. Specifically, Work Package 2 focuses on establishing a robust impact framework and monitoring system. Task 2.3 involves the detailed co-development process, ensuring that the framework is collaboratively designed and implemented. This alignment with the project structure underscores the importance of a coordinated and systematic approach to impact assessment.

In conclusion, the consortium-wide co-development of the impact framework for the i-Game project is a foundational process that ensures the framework's inclusivity, relevance, and methodological rigour. By engaging all stakeholders in this collaborative effort, the project is well-positioned to accurately measure and enhance its impact across various domains.

1.2 Impact monitoring dashboard

An impact monitoring dashboard is an essential tool for tracking and visualising the outcomes and impacts of a project. It provides a centralised platform where data related to the project's performance can be collected, analysed, and presented in an accessible and interactive format. This tool is particularly valuable for the i-Game project as it supports transparency, accountability, and data-driven decision-making.

What is an Impact Monitoring Dashboard?

An impact monitoring dashboard is a digital interface that consolidates various data points related to a project's impact. It enables stakeholders to view and analyse key performance indicators (KPIs) and other relevant metrics in real-time or near-real-time. By integrating data from multiple sources, the dashboard offers a comprehensive overview of the project's progress and outcomes.

Relevance of data visualisation in impact monitoring

Data visualisation is a critical component of effective impact monitoring and results dissemination. Visual representations of data, such as graphs, charts, and maps, make complex information more understandable and actionable. Here are some key benefits of data visualisation in the context of impact monitoring:

- **Enhanced comprehension:** visualising data helps stakeholders quickly grasp complex patterns and trends, facilitating better understanding and interpretation of the impact data.
- **Improved decision-making:** by presenting data in an accessible format, visualisation tools enable stakeholders to make informed decisions based on evidence rather than intuition.
- **Increased engagement:** interactive visualisations can engage stakeholders more effectively than static reports, encouraging them to explore the data and gain deeper insights.
- **Transparent reporting:** visual tools enhance the transparency of impact reporting by making it easier to communicate results to a wide audience, including non-technical stakeholders.

For the i-Game project, the impact monitoring dashboard is an indispensable tool for several reasons:

- **Centralised data management**: the dashboard consolidates data from various activities and stakeholders, providing a single point of reference for monitoring the project's impact.

- **Near-Real-Time insights**: although the dashboard is not exactly a live-data visualisation tool, it offers a time-lapse photography approach to impact results, allowing stakeholders to monitor changes and trends over time, during and after the project.
- **Alignment with UN SDGs**: the dashboard will track the project's contributions to the United Nations Sustainable Development Goals (SDGs), providing a framework to measure and communicate the broader societal impacts.

Tools and implementation

The implementation of the impact monitoring dashboard for the i-Game project leverages two fundamental tools:

- **Open Impact's Database®**: this proprietary database integrates various data sources and impact assessments, providing a robust foundation for the dashboard. It supports the collection, storage, and analysis of impact data, ensuring comprehensive and reliable insights.
- **Microsoft Power BI**: this powerful data visualisation tool is used to create interactive and user-friendly dashboards. Microsoft Power BI allows for the integration of data from Open Impact's Database®, enabling dynamic visualisations that can be easily explored by stakeholders.

Impact data collection and monitoring activities for the i-Game project are scheduled to start at Month 5 within T2.4 “Impact monitoring and assessment” (M5-M34). Consequently, the dashboard will initially be sparse, as data will only begin to populate the system as collection activities progress. This phased approach ensures that the dashboard evolves alongside the project, gradually providing richer and more detailed insights.

The impact monitoring dashboard is a pivotal component of the i-Game project's impact evaluation strategy. Detailed information about the dashboard, including its structure, functionalities, and the underlying data framework, will be presented in Section 3. Specifically, Section 3.1 will delve into the technical aspects of the dashboard, including the use of Microsoft Power BI and the integration with Open Impact's Database®.

In conclusion, the impact monitoring dashboard for the i-Game project serves as a crucial tool for visualising and tracking the project's outcomes. By leveraging advanced data visualisation technologies and robust data management systems, the dashboard enhances the project's ability to monitor its impact, align with global sustainability goals, and communicate results effectively to all stakeholders.

2. i-Game's impact framework

This section provides a comprehensive overview of the impact framework developed for the i-Game project, outlining its significance, design process, and components. The impact framework serves as a structured approach to evaluate the project's social, economic, cultural, and environmental outcomes. It begins with an explanation of what an impact framework is, detailing its role in systematically measuring and analysing the effects of the project on various stakeholders. As previously mentioned, the design of the framework was a collaborative effort, involving extensive input from all consortium members. This participatory process ensured that the framework is inclusive, relevant, and robust, capturing diverse perspectives and expertise. Section 2.2.1 will delve into the specifics of this co-development process, illustrating how stakeholder engagement and methodological rigour were prioritised.

Key components of the framework include defined outcome areas, specific project outcomes, and relevant key performance indicators (KPIs). These elements are meticulously mapped to the project's stakeholders and aligned with the United Nations Sustainable Development Goals (SDGs), ensuring that the framework not only measures impact effectively but also supports broader sustainability objectives.

By providing detailed descriptions of the outcome areas, outcomes, and KPIs, this section offers insights into how the i-Game project intends to track and enhance its impact. The framework is designed to be a dynamic tool that evolves with the project, facilitating continuous improvement and effective communication of results. Through this structured approach, the i-Game project aims to generate meaningful, measurable, and sustainable impacts.

2.1 What is an impact framework

An impact framework is a systematic approach designed to measure, assess, and communicate the effects of a project or initiative on its intended stakeholders and broader society. It encompasses a range of methodologies and tools that help in understanding and quantifying the social, economic, cultural, and environmental impacts of a project. The ultimate goal of an impact framework is to provide actionable insights that drive improvement, accountability, and strategic decision-making.

The theory behind impact frameworks

At its core, an impact framework is grounded in the theory that by systematically evaluating outcomes and impacts, organisations can enhance their effectiveness and contribute to positive change. The framework typically includes the following components:

Outcome Areas
These are the broad domains in which the project aims to make a difference, such as knowledge

exchange, network development, community relationships, economic development, learning and capacity building, social inclusiveness, and technological development.

Outcomes

Specific changes or benefits that occur as a result of a project's activities. They represent the short-term and medium-term effects on stakeholders and are critical indicators of a project's success in achieving its goals.

Key Performance Indicators (KPIs)

Quantifiable measures used to track and evaluate the success in achieving specific outcomes. They provide clear metrics for assessing the effectiveness of a project's activities and progress, enabling data-driven decision-making and performance improvements.

Stakeholder Mapping

The process of identifying and analysing individuals, groups, or organisations affected by or capable of impacting a project. It ensures their needs and perspectives are considered, facilitating effective engagement and communication strategies.

Open Impact's approaches

Open Impact, committed to impact assessment and evaluation, employs several methodologies to ensure the robustness and relevance of impact frameworks. Two key approaches utilised by Open Impact are the Theory of Change (ToC) and Social Return on Investment (SROI).

Theory of Change (ToC)

The Theory of Change is a comprehensive methodology that maps out the pathway from project activities to long-term outcomes and impacts. It involves:

- **Identifying inputs**: Resources invested in the project, such as time, money, and expertise.
- **Defining activities**: Actions taken to achieve the project's goals.
- **Mapping outputs**: Direct results of the activities, such as products, services, or events.
- **Determining outcomes**: Short-term and medium-term changes that result from the outputs.
- **Specifying impacts**: Long-term effects and broader societal changes influenced by the outcomes.

By making explicit the assumptions and causal links between activities and impacts, the Theory of Change helps in designing more effective interventions and evaluating their success.

Social Return on Investment (SROI)

SROI is a methodology that assigns a monetary value to the social, economic, and environmental benefits generated by a project. It involves:

- **Stakeholder engagement**: involving stakeholders in defining what constitutes value and how it should be measured.
- **Valuation of outcomes**: using financial proxies to estimate the economic value of the outcomes.
- **Impact calculation**: comparing the value of the benefits to the costs of the project to calculate the social return on investment.

SROI provides a tangible way to communicate the value of the project's impacts in financial terms, making it easier to justify investments and demonstrate accountability.

An impact framework is a crucial tool for understanding and enhancing the value generated by a project. By employing methodologies like the Theory of Change and SROI, Open Impact ensures that the impact framework for the i-Game project is rigorous, relevant, and actionable. This structured approach not only helps in measuring and communicating the project's impacts but also in making strategic decisions that drive continuous improvement and sustainable development.

2.2 Designing the framework: a collaborative process

Designing the impact framework for the i-Game project was an inherently collaborative process, emphasising the active engagement and contribution of all consortium members. This collaborative effort was essential for ensuring that the framework accurately captures and enhances the social, economic, cultural, and scientific/technological impacts of the project.

The co-design process, even though it sparked before through consortium-wide discussions and shared material, officially kicked-off with a pivotal meeting during the i-Game Technical Meeting in Barcelona in April 2024. This meeting served as a foundational step in identifying the project's key impact stakeholders, referred to as Target Groups (TGs). The identification of TGs was crucial, as it laid the groundwork for a more focused and relevant impact assessment, ensuring that the needs and expectations of all stakeholders were thoroughly understood and addressed. This is the visual representation of the stakeholder mapping reached during the meeting in Barcelona:

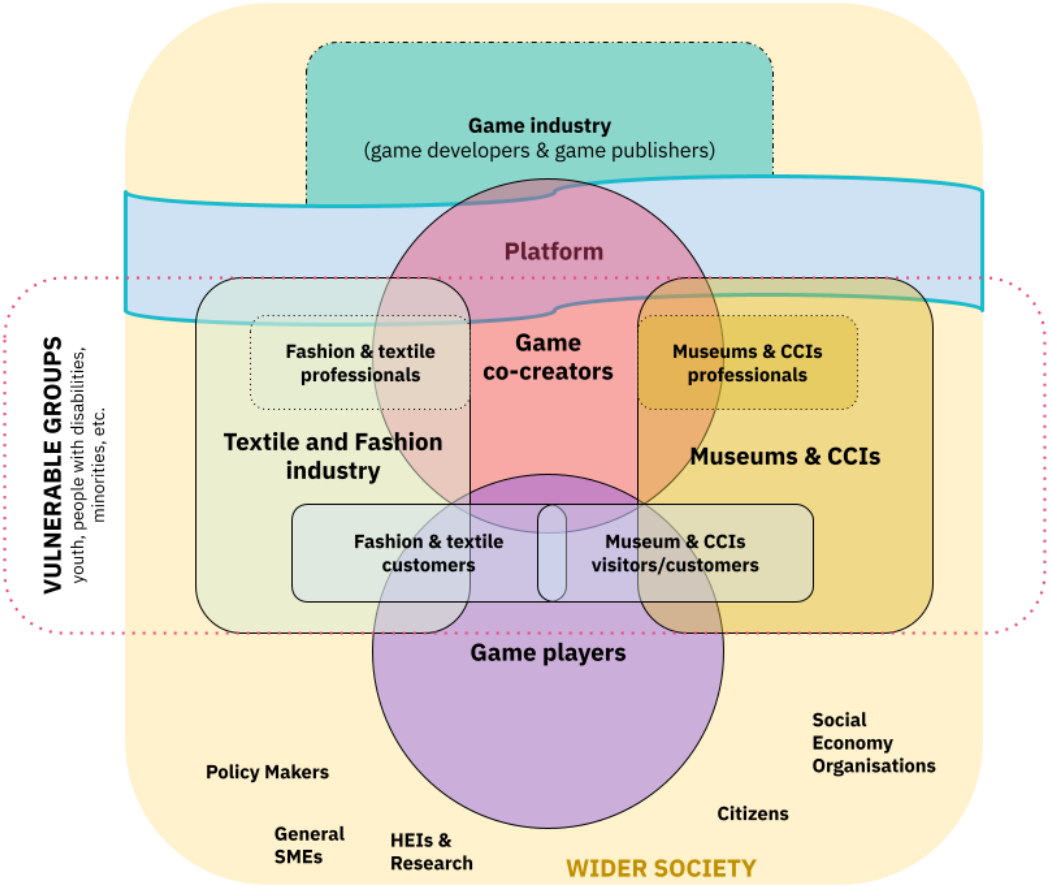

Figure 1. Visual i-Game's impact stakeholders map

Following the Barcelona meeting, the co-design process continued primarily online, leveraging various digital tools to facilitate broad and inclusive participation. The consortium employed shared spreadsheets to collaboratively input and review data, ensuring transparency and collective ownership of the framework. These spreadsheets served as living documents, continuously updated and refined based on ongoing discussions and feedback.

To foster a deeper level of engagement, consortium-wide online workshops were conducted, facilitated by Open Impact. These workshops provided a platform for collective brainstorming, knowledge sharing, and consensus-building. Participants from diverse backgrounds and expertise areas contributed their insights, leading to a richer and more comprehensive framework. The workshops also allowed for real-time problem-solving and refinement of ideas, ensuring that the framework evolved in response to emerging insights and considerations.

In addition to the group workshops, Open Impact conducted one-to-one sessions with individual partners. These sessions were tailored to address specific concerns and contributions of each partner, ensuring that their unique perspectives were integrated into the framework. This

personalised approach not only enhanced the inclusivity of the process but also strengthened the commitment of each partner to the framework's implementation and success.

Email correspondence played a significant role in maintaining momentum and continuity throughout the co-design process. It allowed for asynchronous communication, enabling partners to contribute at their convenience and ensuring that discussions could continue seamlessly despite geographical and time zone differences.

The collaborative process of designing the impact framework is further detailed in the subsequent sections. On one hand, section 2.2.1 "Co-development" will delve deeper into the specific activities, methodologies, and strategies employed during the co-development phase. This section will provide a comprehensive overview of the iterative process of framework refinement, highlighting the collective efforts and contributions of all consortium members. On the other hand, section 2.2.2 "Open Impact's role" will illustrate the crucial role played by Open Impact as the technical partner and facilitator of the process. Open Impact's expertise in impact assessment and their methodical approach to stakeholder engagement were instrumental in guiding the consortium through the co-design journey.

In summary, the collaborative process of designing the impact framework for the i-Game project was a multifaceted effort that combined in-person meetings, online workshops, personalised sessions, and continuous digital communication. This inclusive and iterative approach ensured that the framework is well-rounded, effectively capturing the diverse impacts of the project and setting a strong foundation for its successful implementation and monitoring.

2.2.1 Co-development

Co-developing the impact framework for a project as ambitious as i-Game is both a challenging and essential task. The project is inherently evolutionary, progressive, and demands a high degree of adaptability. This dynamic nature must be mirrored in the final impact framework to guide and support project partners in executing their respective tasks effectively, strategically, and successfully. Thus, co-developing the framework is not merely a procedural necessity but a strategic collaborative process critical to the overall success of the project.

The co-development of the impact framework begins with the foundational concepts outlined in the project proposal. However, it further evolves by considering the implementation needs and leveraging the diverse expertise of all project partners, who are also the primary stakeholders in terms of impact requirements. This approach ensures that the framework is not only aligned with the initial proposal but also refined to meet the practical and strategic needs of the project during its execution.

The co-development process essentially reimagines the foreseen impact framework to meet both call-level and project-level expectations effectively. By adopting a collaborative approach, the framework is adjusted and fine-tuned to encompass outcome areas and specific outcomes that

accurately reflect the project's ambitions. This process involves gathering input from all partners to define precise impact Key Performance Indicators (KPIs) and target values for each outcome that the consortium collectively agrees upon.

Key steps in the co-development process include:

- **High-level strategic alignment**: initially, the process involves aligning the high-level understanding of the project's scope and the expectations set forth by the funding call. This step is crucial for ensuring that the impact framework comprehensively addresses the overarching goals of both the i-Game project and the Horizon Europe program.

- **Collaborative redesign**: the preliminary impact framework is collaboratively redesigned through intensive discussions, workshops and shared material (i.e. collaborative online-based spreadsheets). This step allows for the integration of insights and expertise from all consortium members, ensuring that the framework is robust and relevant to the project's evolving needs.

- **Outcome areas and specific outcomes**: the framework is structured around clearly defined outcome areas and specific outcomes that the project aims to achieve. These areas and outcomes are meticulously selected to capture the full spectrum of the project's potential impacts on social, economic, cultural, and scientific/technological domains.

- **Defining KPIs and targets**: with the outcome areas and specific outcomes established, the next step is to define relevant KPIs and set target values. This involves detailed consultations with all partners to ensure that the selected KPIs are practical, measurable, and aligned with both project-level and call-level objectives.

The collaborative nature of this process ensures that the final framework is a product of shared understanding and consensus. It allows for adjustments and refinements based on real-time feedback and the evolving context of the project. The output is a comprehensive, yet simple and meaningful, set of outcome areas and outcomes that effectively represent the project's impact.

For the i-Game project, this process was intricate but ultimately rewarding. The result is an impact framework that satisfies the entire consortium and accurately reflects the foreseeable impact of the project. This framework not only guides the project partners in their respective tasks but also serves as a strategic tool for monitoring and evaluating the project's success.

The co-development process, thus, is a testament to the collaborative spirit and strategic foresight of the i-Game consortium. It translates high-level strategic goals into actionable outcomes, ensuring that the project not only meets but, hopefully, exceeds the expectations set by the Horizon Europe funding call.

2.2.2 Open Impact’s role

Open Impact played a pivotal technical role in facilitating the co-development process of the i-Game impact framework. As the lead partner for Task 2.3, Open Impact's responsibilities extended beyond mere coordination, involving deep technical expertise and strategic facilitation to ensure the framework's robustness and relevance.

From the outset, Open Impact's primary objective was to craft a balanced impact framework that would accurately capture and enhance the project's social, economic, cultural, and scientific/technological impacts. Their technical role encompassed several key activities designed to integrate valuable insights and inputs from all consortium partners, ensuring that the framework was comprehensive and aligned with the project's ambitious goals.

Facilitating the co-development process

Open Impact facilitated the co-development process through a series of structured activities. These included consortium-wide online workshops, one-to-one sessions with individual partners, and continuous engagement via shared digital tools and email correspondence. By adopting a participatory approach, Open Impact ensured that the diverse expertise and perspectives of all partners were effectively integrated into the framework.

Crafting a balanced framework

A critical aspect of Open Impact’s role was to design a balanced impact framework. This involved identifying relevant outcome areas and specific outcomes that the project aimed to achieve. Open Impact meticulously defined these areas and outcomes to ensure they accurately reflected the project's scope and objectives.

Developing relevant KPIs

Open Impact focused on developing relevant Key Performance Indicators (KPIs) for each outcome area. These KPIs were crucial for measuring the project's progress and success. Open Impact worked closely with consortium partners to select practical and measurable KPIs, ensuring that they were aligned with both project-level and call-level objectives.

Mapping to POs, EIs, and SDGs

To enhance the framework's strategic alignment, Open Impact mapped each KPI to the project's Project-level Objectives (POs), Call-level Expected Impacts (EIs), and the United Nations Sustainable Development Goals (SDGs). This mapping ensured that the framework not only tracked the project's specific impacts but also demonstrated its broader contributions to global sustainability goals.

Identifying cashability and financial proxies
Open Impact also identified the cashability of each KPI, determining whether the outcomes could be translated into financial metrics. For those that could, they identified appropriate financial proxies. These proxies were essential for quantifying the social value generated by the project, providing a tangible measure of its economic impact.

Setting up predictive SROI index
A significant technical contribution of Open Impact was setting up the mitigators for calculating a predictive Social Return on Investment (SROI) index for the project. By employing both the Theory of Change (ToC) and Social Return on Investment (SROI) methodologies, Open Impact developed a predictive model that could forecast the long-term social and economic returns of the i-Game project. This predictive SROI index was instrumental in demonstrating the project's potential value and ensuring accountability and transparency in its impact assessment.

In summary, Open Impact's technical role was integral to the success of the i-Game impact framework co-development process. Their expertise in impact assessment, strategic facilitation, and technical precision ensured that the framework was robust, balanced, and aligned with the project's ambitious goals. By integrating insights from all consortium partners and employing rigorous methodologies, Open Impact crafted a framework that not only guides the project's implementation but also provides a comprehensive tool for measuring and communicating its impact.

2.3 Results

The collaborative and technical efforts dedicated to the i-Game project have resulted in a comprehensive impact framework that captures the multifaceted impacts of the initiative. This framework, while not an actual deliverable, is a crucial project output that guides the strategic implementation and assessment of i-Game's objectives. It embodies the project’s innovative, adaptive, and evolutionary nature, ensuring relevance and efficacy throughout its lifespan. In the following sections, we will delve into the detailed aspects of the developed impact framework, providing a thorough understanding of its structure, components, and significance. Each section is interconnected, reflecting the cohesive and systematic approach taken in its development.

Section 2.3.1 **i-Game’s impact framework**	Section 2.3.2 **General overview**	Section 2.3.3 **Outcome areas**
This section introduces the overall impact framework, outlining its purpose and the collaborative process that led to its creation. It	Here, we provide a high-level summary of the framework, offering a snapshot of its core elements and how they interrelate.	This section breaks down the primary outcome areas identified through the co-development process. It highlights the broad

sets the stage for understanding the framework's role in guiding the project towards achieving its intended impacts.	This overview helps contextualise the more detailed discussions in the subsequent sections.	domains in which the i-Game project aims to make significant impacts, setting the foundation for more specific outcomes.

Section 2.3.4 **Project outcomes**	Section 2.3.5 **Stakeholders**	Section 2.3.6 **Impact indicators**
Building on the outcome areas, this section details the specific outcomes that the project strives to achieve. It clarifies the anticipated changes and benefits resulting from the project's activities, providing concrete goals for assessment.	Understanding the stakeholders involved is crucial for impact assessment. This section identifies the key stakeholders, or Target Groups (TGs), involved in and affected by the i-Game project, emphasising the importance of their roles and perspectives in the framework.	This section outlines the Key Performance Indicators (KPIs) that have been defined to measure the project's success in achieving its outcomes. It explains how these indicators provide quantifiable metrics for tracking progress and impact.

Section 2.3.7 **Financial proxies**	Section 2.3.8 **Mapping UN SDGs**	Section 2.3.9: **Towards the data framework**
Financial proxies are vital for translating social value into financial terms. This section discusses the identified financial proxies for the project's KPIs, enabling the calculation of the Social Return on Investment (SROI) and demonstrating the project's economic impact.	To ensure global relevance, this section maps the project's outcomes and KPIs to the United Nations Sustainable Development Goals (SDGs). It illustrates how the i-Game project contributes to broader global sustainability objectives.	Finally, this section transitions towards the development of a comprehensive data framework. It discusses how data collection, analysis, and reporting mechanisms are structured to support the ongoing monitoring and evaluation of the project's impact.

In conclusion, the sections that follow provide an in-depth exploration of the i-Game impact framework, highlighting the collaborative and technical processes that shaped it. Each section builds on the previous one, creating a coherent and comprehensive narrative that illustrates the framework's integral role in guiding and assessing the i-Game project.

2.3.1 i-Game's impact framework

The i-Game impact framework captures the project's dedication to driving innovation, fostering social cohesion, and promoting sustainability within the video game industry. It aims to enhance knowledge exchange across cultural and technological sectors, stimulate network development, and strengthen community relationships. The framework is designed to increase economic opportunities by improving organisational sustainability and fostering innovation in cultural

services and products. It also focuses on developing both soft and hard skills among participants, elevating awareness of sustainability and inclusion, and advancing human-centred technology development. By aligning with the United Nations Sustainable Development Goals (SDGs) and utilising financial proxies for calculating Social Return on Investment (SROI), the framework ensures the project's impacts are meaningful, measurable, and contribute to broader societal goals.

2.3.2 General overview

The high-level framework of the i-Game project is organised into seven primary outcome areas, each with specific outcomes aimed at capturing the project's diverse impacts. These outcome areas include:

- **Knowledge exchange**
  Enhancing knowledge on arts and culture (1.1) and technology development (1.2).
- **Network development**
  Fostering enhanced network development (2.1) and cross-sectoral collaboration (2.2).
- **Community and social relationships**
  Strengthening the sense of belonging to a broader community (3.1) and increasing participation in cultural activities (3.2).
- **Economic development**
  Aiming for increased job opportunities (4.1), boosted organisational sustainability (4.2), and innovation in cultural services and products (4.3).
- **Learning & capacity building**
  Focusing on the development of soft and life skills (5.1), improved educational performance/experience (5.2), and enhancement of hard skills (5.3).
- **Social inclusiveness**
  Elevating awareness of sustainability and inclusion (6.1) and increasing accessibility to cultural initiatives (6.2).
- **Technological development**
  Promoting human-centred technology development (7.1) and fostering legal awareness and ethical-design culture in the video game industry (7.2).

This framework encapsulates the project's comprehensive approach to achieving its social, economic, cultural, and technological goals.

#	Outcome Area	#	Outcome
1	Knowledge Exchange	1.1	Expanded knowledge on arts and culture
		1.2	Expanded knowledge on technology development
2	Network Development	2.1	Enhanced network development
		2.2	Enhanced cross-sectoral collaboration
3	Community and Social Relationships	3.1	Strengthened sense of belonging to a broader community
		3.2	Increased participation in cultural activities
4	Economic development	4.1	Increased job opportunities
		4.2	Boosted organisations sustainability
		4.3	Innovation in cultural services and products
5	Learning & capacity building	5.1	Development of soft and life skills
		5.2	Improved educational performance/experience
		5.3	Enhancement of hard skills
6	Social inclusiveness	6.1	Elevated awareness on sustainability and inclusion
		6.2	Increased accessibility to cultural initiatives
7	Technological development	7.1	Human-centred technology development
		7.2	Fostered legal awareness and ethical-design culture in video game industry

Figure 2. Outline of the high-level framework with outcome areas and specific outcomes

The relevance of this framework content is paramount in determining the project's scope and overall direction. By clearly defining the outcome areas and specific outcomes, the framework provides a structured approach to understanding and measuring the diverse impacts of the i-Game project. It ensures that all aspects of the project are aligned with its broader objectives, facilitating strategic planning and effective implementation.

Moreover, the framework's comprehensive nature allows for the integration of various stakeholders' perspectives, ensuring that the project remains inclusive and adaptive to evolving needs. By mapping these outcomes to relevant KPIs, UN SDGs, and financial proxies, the framework not only tracks progress but also demonstrates the project's contribution to global sustainability goals, enhancing its overall impact and value.

Color coding of the outcome areas

The framework utilises a colour-coding system to visually distinguish each outcome area, enhancing clarity and ease of reference:

Table 1. Outcome area colour coding scheme

Knowledge exchange	Represented in yellow, highlighting the emphasis on expanding knowledge in arts, culture, and technology.
Network development	Shown in green, symbolising the growth and strengthening of networks and collaborations.
Community and social relationships	Depicted in pink, indicating the focus on fostering a sense of belonging and cultural participation.
Economic development	Coloured in orange, reflecting the aim to enhance economic opportunities and organisational sustainability.
Learning & capacity building	Illustrated in light blue, signifying the development of skills and educational improvements.
Social inclusiveness	Marked in dark purple, emphasising awareness and accessibility in sustainability and inclusion efforts.
Technological development	Shown in red, representing the drive for human-centred technology and ethical practices in the gaming industry.

This colour-coding scheme aids in quickly identifying and associating each outcome area with its respective goals and activities within the framework.

2.3.3 Outcome areas

As it was already highlighted several times, the i-Game project's impact framework is structured around seven primary outcome areas. Each area addresses critical aspects of the project's goals and the diverse sectors it engages with, including the video game industry, cultural institutions, and the textile/fashion sectors. The framework aims to maximise positive impacts while

recognizing and mitigating potential negative externalities. Below is a detailed description of each outcome area, its implications, and proposed approaches to mitigate negative externalities.

- **Knowledge exchange**

The "Knowledge exchange" outcome area focuses on enhancing knowledge across arts, culture, and technology development. Within the overall project's context, considering project partners and involved SMEs, high education institutions and social economy organisations, this area is pivotal in fostering cross-disciplinary understanding and collaboration among stakeholders. In the video game industry, this translates to creating games that are not only entertaining but also educational and culturally enriching. For the cultural and textile/fashion sectors, and specifically for museums as they are the main actors in the project pilots, it means leveraging gaming technologies to enhance storytelling, preservation practices, and innovation.

Positive externalities
Diffusion of cultural heritage and advanced technological competencies
Negative externalities
Potential intellectual property issues or misappropriation of cultural content
Mitigation approaches
Establish clear guidelines for cultural content use, provide training on intellectual property rights, and foster partnerships with cultural institutions to ensure respectful and accurate representations

- **Network development**

"Network development" emphasises the creation and strengthening of networks and collaborations. This is crucial for the i-Game project as it seeks to build a robust ecosystem of stakeholders from various sectors. In the video game industry, this means fostering connections between developers, cultural institutions, and other industries to drive innovation. For the cultural (e.g. museums) and textile/fashion sectors, it involves building bridges that facilitate the exchange of ideas and resources, leading to collaborative projects and new market opportunities.

Positive externalities
Enhanced resource sharing and innovation
Negative externalities

Dependency on partnerships that could limit individual stakeholder autonomy or competitiveness
Mitigation approaches
Promote balanced collaborations with clear agreements on resource sharing and autonomy, and encourage diverse partnership networks to avoid over-reliance on a single entity

- **Community and social relationships**

This outcome area aims to strengthen community ties and increase participation in cultural activities. In the context of the i-Game project, fostering a sense of belonging and community engagement is essential. For the video game industry, it means developing games that promote social interaction and community building. In the cultural (e.g. museums) and textile/fashion sectors, it involves creating inclusive cultural initiatives that attract diverse audiences.

Positive externalities
Improved social cohesion and cultural appreciation
Negative externalities
Potential exclusion of non-participating communities or over-commercialization of cultural event
Mitigation approaches
Ensure inclusive outreach and engagement strategies, offer free or low-cost participation options, and maintain a balance between commercial and community-focused activities

- **Economic development**

"Economic development" focuses on boosting organisational sustainability and fostering innovation in cultural services and products. For the i-Game project, this involves creating economic opportunities through the development and commercialization of innovative game-related products and services. In the video game industry, it means driving economic growth by introducing new, marketable products. For cultural (e.g. museums) and textile/fashion sectors, it translates to enhancing the economic viability of cultural initiatives and fashion products through gamification and technological integration.

Positive externalities
Economic growth and improved organisational sustainability
Negative externalities
Market saturation or economic disparities among different regions or groups
Mitigation approaches
Conduct market research to identify gaps and opportunities, provide support to smaller or emerging markets, and promote equitable access to economic opportunities

- **Learning & capacity building**

This outcome area is dedicated to developing both soft and hard skills and improving educational experiences. For the i-Game project, it means providing educational tools and experiences through gaming. In the video game industry, it involves integrating educational content into games to enhance learning. For cultural (e.g. museums) and textile/fashion sectors, it means using gamification to teach and enhance skills related to these fields.

Positive externalities
Improved educational outcomes and skill development
Negative externalities
Over-reliance on gamified learning tools, potentially diminishing traditional “educational” methods
Mitigation approaches
Integrate gamified tools with traditional “educational” methods, ensure diverse and balanced learning approaches, and continuously evaluate the effectiveness of gamified learning experiences

- **Social inclusiveness**

"Social inclusiveness" aims to elevate awareness of sustainability and inclusion while increasing accessibility to cultural initiatives. For the i-Game project, this involves creating games and experiences that are accessible and promote social good. In the video game industry, it means designing inclusive games that cater to diverse audiences. For cultural (e.g. museums) and

textile/fashion sectors, it involves ensuring that cultural products and initiatives are accessible to all, including marginalised groups.

Positive externalities
Increased social equity and cultural participation
Negative externalities
Tokenism or superficial inclusion efforts that do not address deeper systemic issues
Mitigation approaches
Engage with marginalised communities to understand their needs, ensure genuine representation and involvement in project activities, and implement ongoing feedback mechanisms to improve inclusiveness

- **Technological development**

The "Technological development" outcome area focuses on advancing human-centred technology and fostering a legal awareness and ethical-design culture within the video game industry. For the i-Game project, this entails leveraging cutting-edge technology to enhance user experiences and ensure ethical standards are upheld. In the video game industry, it translates to creating innovative and user-friendly gaming technologies that prioritise user well-being and ethical considerations. For the cultural and textile/fashion sectors, it means integrating advanced technologies to enhance the quality and impact of cultural and fashion-related products.

Positive externalities
Technological advancements that improve user experience and industry standards
Negative externalities
Privacy concerns, ethical dilemmas related to AI, and potential job displacement due to automation
Mitigation approaches
Develop clear ethical guidelines for technology use, ensure transparency and user consent in data practices, and provide training and support for workers transitioning to new technology-driven roles

In conclusion, the seven primary outcome areas of the i-Game project's impact framework provide a comprehensive and structured approach to achieving the project's diverse goals. By addressing these outcomes areas, the framework ensures that the project's impacts are far-reaching and multifaceted. Each outcome area not only drives positive change but also includes strategies to mitigate potential negative externalities, ensuring sustainable and inclusive growth across the video game, cultural, and textile/fashion sectors. This holistic approach positions the i-Game project to make meaningful contributions to both its immediate stakeholders and broader societal objectives.

2.3.4 Project Outcomes

This section details the specific outcomes that the i-Game project aims to achieve within its seven primary outcome areas. Each outcome is crucial for measuring the project's success and impact, contributing to the overall goals of fostering innovation, social cohesion, and sustainability in the video game, cultural, and textile/fashion sectors. The following descriptions outline the relevance of each outcome to the project, its externalities, mitigation approaches, and alignment with the United Nations Sustainable Development Goals (SDGs). Listed SDGs here are the most relevant to the outcome-level. For a more in-depth alignment regarding the SDGs, including their connection to each KPI, refer to section 2.3.6. Additionally, more details on how we achieved this alignment are presented in section 2.3.8.

1.1 Expanded knowledge on arts and culture	
Description:	This outcome aims to enhance stakeholders' understanding and appreciation of arts and culture through the integration of gaming technologies. It fosters deeper cultural engagement and awareness among participants, enriching the gaming experience with cultural and educational value. This is essential for creating culturally enriched games that resonate with diverse audiences and promote cultural literacy.
Positive externalities:	The promotion of cultural heritage, increased cultural literacy, and greater appreciation for diverse cultures. By integrating cultural elements into gaming, participants develop a deeper understanding and respect for different cultural traditions and histories, fostering cultural preservation and intercultural dialogue.
Negative externalities:	Potential issues include cultural appropriation, misrepresentation, or oversimplification of cultural narratives. There is a risk of trivialising or inaccurately portraying cultural elements, which could lead to misunderstandings or reinforce stereotypes.

1.1 Expanded knowledge on arts and culture	
Mitigation approaches:	Engaging cultural experts, conducting thorough cultural research, and ensuring accurate representation in game development. Implementing guidelines for respectful cultural content use and providing training on cultural sensitivity and intellectual property rights.
Relevant SDGs	SDG 4 (Quality Education) SDG 11 (Sustainable Cities and Communities) 

1.2 Expanded knowledge on technology development	
Description:	This outcome focuses on advancing participants' understanding of technology development within the gaming industry. It is crucial for fostering innovation and ensuring that stakeholders stay updated with the latest technological advancements. By enhancing technical knowledge, the project aims to support the creation of cutting-edge gaming technologies.
Positive externalities:	Enhanced technical skills, innovation capabilities, and the development of new technological solutions. This outcome encourages continuous learning and adaptation, leading to a more innovative and competitive gaming industry.
Negative externalities:	Potential issues include a technological divide, where some stakeholders may lack access to the latest technologies, and over-reliance on technology, which might undermine traditional skills and methods.
Mitigation approaches:	Providing accessible training and resources, promoting inclusive access to technology, and balancing technological advancements with traditional practices. Encouraging continuous professional development and collaboration between tech-savvy and less technologically advanced stakeholders.

1.2 Expanded knowledge on technology development	
Relevant SDGs	SDG 9 (Industry, Innovation, and Infrastructure) SDG 4 (Quality Education) 

2.1 Enhanced network development	
Description:	This outcome aims to strengthen and expand the networks among project stakeholders, fostering collaboration and resource sharing. It is essential for creating a robust ecosystem that supports innovation and growth. Enhanced networks facilitate the exchange of ideas, knowledge, and resources, driving collaborative efforts and partnerships.
Positive externalities:	Improved collaboration, resource pooling, and innovation. Strong networks can lead to synergies between stakeholders, resulting in more effective and innovative projects. Enhanced networking also opens up new opportunities for collaboration and knowledge exchange.
Negative externalities:	Dependency on networks could limit individual stakeholder autonomy or competitiveness. Over-reliance on established networks might stifle new and innovative partnerships and lead to unequal power dynamics within the network.
Mitigation approaches:	Promote balanced collaborations with clear agreements on resource sharing and autonomy. Encourage diverse partnership networks to avoid over-reliance on a single entity and foster new connections by supporting emerging stakeholders.
Relevant SDGs	SDG 17 (Partnerships for the Goals) SDG 9 (Industry, Innovation, and Infrastructure) 

2.2 Enhanced cross-sectoral collaboration	
Description:	This outcome focuses on fostering collaboration across different sectors, such as gaming, culture, and fashion. It enhances innovation and resource sharing by bringing together diverse expertise and perspectives. Cross-sectoral collaboration leads to innovative projects that benefit from the unique strengths of each sector.
Positive externalities:	Cross-industry innovation, new collaborative opportunities, and the creation of hybrid solutions that leverage the strengths of multiple sectors. This can lead to breakthroughs that would not be possible within a single sector.
Negative externalities:	Potential conflicts of interest, resource allocation issues, and challenges in aligning goals and priorities across sectors. Cross-sectoral projects can be complex to manage and may face communication and coordination difficulties.
Mitigation approaches:	Implement clear communication and conflict resolution mechanisms. Foster mutual understanding and respect among stakeholders and develop structured project management approaches to handle the complexity of cross-sectoral collaborations.
Relevant SDGs	SDG 17 (Partnerships for the Goals) SDG 9 (Industry, Innovation, and Infrastructure) SDG 8 (Decent Work and Economic Growth) 

3.1 Strengthened sense of belonging to a broader community	
Description:	This outcome aims to enhance the sense of community and belonging among participants. It is crucial for fostering social cohesion and community engagement. By creating inclusive and engaging activities, the project seeks to build a strong sense of identity and connection among participants.

3.1 Strengthened sense of belonging to a broader community	
Positive externalities:	Improved social ties, community support, and increased civic engagement. A stronger sense of belonging can lead to more cohesive and supportive communities, enhancing overall well-being and social stability.
Negative externalities:	Potential exclusion of non-participating groups or those who feel alienated by the community activities. There is a risk of creating in-groups and out-groups, which can exacerbate social divisions.
Mitigation approaches:	Ensure inclusive outreach and engagement strategies that actively involve diverse groups. Offer free or low-cost participation options to make activities accessible to all and maintain a balance between community-focused and inclusive activities.
Relevant SDGs	SDG 11 (Sustainable Cities and Communities) SDG 10 (Reduced Inequalities) 

3.2 Increased participation in cultural activities	
Description:	This outcome focuses on boosting participation in cultural activities through gamified experiences. It is essential for cultural engagement and appreciation, encouraging individuals to explore and participate in cultural events and initiatives. The goal is to make cultural activities more accessible and appealing through innovative approaches.
Positive externalities:	Increased cultural participation, diversity in cultural activities, and enhanced cultural literacy. Gamified experiences can attract a broader audience and make cultural events more engaging and interactive.
Negative externalities:	Potential commercialization of cultural events, which may undermine their authenticity. There is a risk that cultural activities

3.2 Increased participation in cultural activities	
	could be overshadowed by their gamified elements, leading to a focus on entertainment over cultural value.
Mitigation approaches:	Maintain a balance between commercial and community-focused activities. Ensure that gamification enhances rather than detracts from the cultural significance of events, and involve cultural experts in the design of gamified experiences.
Relevant SDGs	SDG 11 (Sustainable Cities and Communities) SDG 4 (Quality Education) SDG 10 (Reduced Inequalities) 

4.1 Increased job opportunities	
Description:	This outcome aims to create new job opportunities within the project's scope. It is significant for economic development and employment growth. The project seeks to generate employment through the development and commercialization of innovative game-related products and services.
Positive externalities:	Job creation, economic growth, and enhanced career prospects for individuals in the gaming and cultural sectors. Increased employment can lead to greater economic stability and growth within the community.
Negative externalities:	Potential job market saturation, economic disparities, and over-reliance on project-generated jobs. There is a risk that job creation may not be sustainable in the long term or may disproportionately benefit certain groups.
Mitigation approaches:	Conduct targeted job creation efforts that address market needs. Support emerging markets and ensure that job opportunities are equitable and inclusive. Develop strategies for sustainable employment beyond the project's duration.

4.1 Increased job opportunities	
Relevant SDGs	SDG 8 (Decent Work and Economic Growth) SDG 9 (Industry, Innovation, and Infrastructure) 

4.2 Boosted organisations sustainability	
Description:	This outcome focuses on enhancing the sustainability of organisations involved in the project. It is critical for long-term economic viability and resilience. The project aims to improve organisational practices to ensure they can sustain their operations and growth over time.
Positive externalities:	Improved sustainability practices, organisational resilience, and long-term economic stability. Sustainable organisations can better withstand market fluctuations and contribute positively to the economy.
Negative externalities:	Unequal access to sustainability resources and potential resistance to adopting new practices. Smaller organisations may struggle to implement sustainability measures compared to larger, more resource-rich entities.
Mitigation approaches:	Equitable resource distribution, providing sustainability training and support tailored to organisational needs, and fostering a collaborative environment where organisations can share best practices and resources.
Relevant SDGs	SDG 8 (Decent Work and Economic Growth) SDG 12 (Responsible Consumption and Production) SDG 9 (Industry, Innovation, and Infrastructure) 

4.3 Innovation in cultural services and products	
Description:	This outcome aims to foster innovation in cultural services and products through gamification and technology. It is essential for cultural sector growth and creativity. The goal is to create new and innovative cultural products that appeal to diverse audiences.
Positive externalities:	Development of innovative cultural products and services, enhanced cultural engagement, and economic growth. Innovative cultural offerings can attract new audiences and increase cultural participation.
Negative externalities:	Potential over-commercialization of cultural assets and the risk of cultural dilution. There is a possibility that the focus on innovation could overshadow traditional cultural values and practices.
Mitigation approaches:	Ensure cultural integrity in the development of new products, balance innovation with respect for traditional practices, and involve cultural stakeholders in the innovation process to maintain authenticity.
Relevant SDGs	SDG 9 (Industry, Innovation, and Infrastructure) SDG 11 (Sustainable Cities and Communities) SDG 12 (Responsible Consumption and Production) 

5.1 Development of soft and life skills	
Description:	This outcome focuses on developing essential soft and life skills among participants. It is vital for personal and professional growth, helping individuals improve their communication, teamwork, and problem-solving abilities. These skills are critical for success in various aspects of life and work.
Positive externalities:	Improved interpersonal skills, enhanced employability, and personal development. Developing soft and life skills contributes

5.1 Development of soft and life skills	
	to overall well-being and better integration into professional and social environments.
Negative externalities:	An overemphasis on soft skills could detract from technical skill development. There is a risk of not providing a balanced education that addresses both soft and hard skills.
Mitigation approaches:	Integrate soft skill development with technical training, ensuring a comprehensive approach to education. Promote balanced learning experiences that value both interpersonal and technical competencies.
Relevant SDGs	SDG 4 (Quality Education) SDG 8 (Decent Work and Economic Growth) 

5.2 Improved educational performance/experience	
Description:	This outcome aims to enhance educational performance and experiences through engagement with the i-Game platform. By participating in co-design activities, workshops, and gamified experiences, the project seeks to improve learning outcomes and motivation among stakeholders. The interactive and enjoyable nature of these activities is intended to foster a deeper understanding and retention of knowledge.
Positive externalities:	This outcome aims to enhance educational performance and experiences through engagement with the i-Game platform. By participating in co-design activities, workshops, and gamified experiences, the project seeks to improve learning outcomes and motivation among stakeholders. The interactive and enjoyable nature of these activities is intended to foster a deeper understanding and retention of knowledge.

5.2 Improved educational performance/experience	
Negative externalities:	Over-reliance on gamified tools and co-design activities could potentially diminish the value of traditional learning methods. There is a risk that the focus on gamification and workshops might overshadow foundational learning techniques.
Mitigation approaches:	Integrate gamified learning and co-design activities with traditional methods, ensuring a balanced approach. Continuously evaluate the effectiveness of these tools and activities, adapting them to complement existing educational practices and foundational learning methods.
Relevant SDGs	SDG 4 (Quality Education) SDG 9 (Industry, Innovation, and Infrastructure) 

5.3 Enhancement of hard skills	
Description:	This outcome focuses on enhancing technical and vocational skills among participants through the i-Game platform. By engaging in co-design activities, workshops, and gamified experiences, participants will develop specific technical skills essential for professional development and industry relevance. The project aims to improve job readiness and career prospects through targeted skill-building.
Positive externalities:	Improved technical competencies, better job readiness, and enhanced career prospects. Developing hard skills ensures that participants are well-equipped to meet industry demands and excel in their careers. Additionally, these skills can foster innovation and adaptability in various professional contexts.
Negative externalities:	Potential skill gaps or outdated training programs that do not align with current industry needs. There is a risk of not providing up-to-date and relevant technical education, which could render the training ineffective.

5.3 Enhancement of hard skills	
Mitigation approaches:	Offer up-to-date training programs, continuous skill assessment, and adapt educational content to reflect industry trends. Collaborate with industry experts to ensure training relevance and effectiveness. Regularly update and revise training materials based on feedback and emerging industry requirements.
Relevant SDGs	SDG 4 (Quality Education) SDG 8 (Decent Work and Economic Growth) SDG 9 (Industry, Innovation, and Infrastructure) 

6.1 Elevated awareness on sustainability and inclusion	
Description:	This outcome aims to increase awareness of sustainability and social inclusion among participants. It is crucial for fostering responsible and inclusive practices within the project and beyond. By promoting these values, the project seeks to create a more equitable and sustainable future.
Positive externalities:	Greater environmental and social consciousness, improved sustainability practices, and enhanced social inclusion. Raising awareness can lead to more responsible behaviours and inclusive policies.
Negative externalities:	Superficial inclusion efforts that do not address deeper systemic issues. There is a risk that initiatives might appear tokenistic if not implemented genuinely.
Mitigation approaches:	Engage deeply with sustainability and inclusion issues, ensure genuine representation and involvement, and implement ongoing feedback mechanisms to improve practices. Promote comprehensive understanding and commitment to these values.
Relevant SDGs	SDG 10 (Reduced Inequalities) SDG 12 (Responsible Consumption and Production)

6.1 Elevated awareness on sustainability and inclusion	
	

6.2 Increased accessibility to cultural initiatives	
Description:	This outcome focuses on making cultural initiatives more accessible to diverse audiences. It is essential for cultural democratisation and inclusivity, ensuring that everyone has the opportunity to engage with and benefit from cultural activities.
Positive externalities:	Broader cultural participation, diversity, and inclusivity. Making cultural initiatives accessible can enhance community engagement and ensure that cultural heritage is appreciated by a wider audience.
Negative externalities:	Tokenism or inadequate accessibility measures that fail to genuinely include all groups. There is a risk that efforts might not be comprehensive or effective.
Mitigation approaches:	Ensure genuine engagement and comprehensive accessibility planning, involve diverse stakeholders in the design of initiatives, and implement measures that address the specific needs of different groups.
Relevant SDGs	SDG 10 (Reduced Inequalities) SDG 11 (Sustainable Cities and Communities) 

7.1 Human-centred technology development	
Description:	This outcome emphasises the development of technology that prioritises user needs and ethical considerations. It is critical for

7.1 Human-centred technology development	
	responsible technological advancement, ensuring that innovations benefit users and uphold ethical standards.
Positive externalities:	Improved user experience, ethical technology use, and enhanced user satisfaction. Human-centred design leads to technologies that are more intuitive, accessible, and aligned with user needs.
Negative externalities:	Privacy concerns, ethical dilemmas related to AI, and potential job displacement due to automation. There is a risk of not adequately addressing the ethical implications of technological advancements.
Mitigation approaches:	Develop robust ethical guidelines, ensure transparency and user consent in data practices, and provide training and support for workers transitioning to new technology-driven roles. Promote ethical considerations in all stages of technology development.
Relevant SDGs	SDG 9 (Industry, Innovation, and Infrastructure) SDG 16 (Peace, Justice, and Strong Institutions) 

7.2 Fostered legal awareness and ethical-design culture in video game industry	
Description:	This outcome aims to enhance legal awareness and promote an ethical design culture within the video game industry. It is crucial for ensuring compliance and responsible game development, fostering an industry-wide commitment to ethical practices.
Positive externalities:	Better compliance, ethical standards, and industry reputation. Promoting legal awareness and ethical design can lead to more responsible and trustworthy game development practices, benefiting both developers and users.
Negative externalities:	Regulatory challenges, resistance to change, and potential costs associated with compliance. There is a risk that implementing

7.2 Fostered legal awareness and ethical-design culture in video game industry	
	these practices could be seen as burdensome by some stakeholders.
Mitigation approaches:	Provide comprehensive legal training, foster a culture of ethics, and develop resources to support compliance. Engage with stakeholders to understand their concerns and collaboratively develop solutions that are feasible and effective.
Relevant SDGs	SDG 16 (Peace, Justice, and Strong Institutions) SDG 4 (Quality Education) 

In summary, the project outcomes of the i-Game framework are designed to drive meaningful and sustainable impacts across various domains. By addressing key areas such as knowledge exchange, network development, community relationships, economic growth, skill development, inclusiveness, and technological advancement, the framework ensures that the project's contributions are holistic and far-reaching. Through careful consideration of potential externalities and proactive mitigation strategies, the i-Game project is well-positioned to achieve its ambitious goals and foster positive change in the video game, cultural, and textile/fashion sectors.

2.3.5 Stakeholders

The i-Game project involves a diverse array of stakeholders, each playing a critical role in achieving the project's ambitious objectives. The stakeholder mapping process was meticulously detailed, linking each stakeholder to relevant outcomes and KPIs to ensure precise measurement and robust data collection. This approach lays a solid foundation for assessing the project's impact on various stakeholders, fostering a comprehensive understanding of their contributions and benefits.

Stakeholder Clusters and Expected Impacts

Cluster 1 | Museums & Cultural and Creative Industries (CCIs)

- **Museums/CCIs institutions/professionals (TG1)**: These stakeholders are essential for integrating cultural elements into game development, thereby enhancing cultural preservation and innovation, and increasing visitor experience and social innovation.

Expected impacts include improved cultural engagement and the adoption of advanced technological solutions in preserving cultural heritage and making it more approachable.

- **Museums/CCIs visitors/customers (TG2)**: Visitors and customers will benefit from enriched cultural experiences through gamified interactions, leading to increased cultural literacy, engagement and sense of cultural belonging and well-being.

Cluster 2 | Textile & Fashion

- **Textile and Fashion industry/professionals (TG3)**: This group will experience enhanced creativity and innovation in cultural services and products, improving sustainability and integrating cultural and gamified narratives into fashion design.
- **Textile and Fashion customers (TG4)**: Customers will have greater access to innovative, sustainable fashion products enriched by cultural elements, promoting cultural appreciation, sustainable consumption, and enhancing their own creativity.

Cluster 3 | End-users

- **Game players (TG5)**: As primary beneficiaries, game players will enjoy enhanced gaming experiences that are culturally enriched and educational, fostering broader cultural awareness and knowledge.
- **Game co-creators (TG6)**: Co-creators will benefit from collaborative opportunities, enhancing their creative and technical skills through participation in game development processes and create a sense of belonging also for underrepresented groups.

Cluster 4 | Game industry

- **Game industry (TG7)**: Industry stakeholders will see advancements in technology and innovation, promoting ethical practices and sustainable growth within the industry.

Cluster 5 | Wider society

- **Citizens (TG8)**: The broader public will experience increased cultural engagement and participation in community activities, fostering social cohesion and a sense of belonging.
- **Policy Makers (TG9)**: Policy makers will be equipped with insights from the project's outcomes, aiding in the development of policies that support innovation, cultural preservation, and sustainability.
- **SMEs (TG10)**: Small and medium enterprises will benefit from enhanced networking opportunities, resource sharing, and economic growth through participation in innovative projects.
- **Higher Education and Research Institutions (TG11)**: These institutions will gain from enhanced knowledge exchange and collaborative research opportunities, fostering academic and practical advancements.

- **Social Economy Organisations (TG12)**: SEOs will benefit from increased awareness and integration of sustainability and inclusiveness practices, promoting social equity and innovative solutions.

The stakeholder mapping process in the i-Game project was conducted with remarkable granularity. Each stakeholder group was linked not only to the most relevant project outcomes but also to specific KPIs. This detailed mapping allows for precise measurement and assessment of the project's impact on each stakeholder group, facilitating targeted data collection and ensuring comprehensive evaluation. By connecting stakeholders to relevant KPIs, the project can track progress accurately and make informed, data-driven decisions to enhance its effectiveness.

In conclusion, the detailed stakeholder mapping of the i-Game project ensures that the unique contributions and impacts of each stakeholder group are recognized and measured. This comprehensive approach supports the project's broader goals of fostering innovation, social cohesion, and sustainability, making it well-positioned to achieve its vision of creating an accessible, co-creation platform for high-impact games.

2.3.6 Impact indicators

This section presents the key performance indicators (KPIs) used to measure the impact of the i-Game project. The KPIs are essential for assessing the project's success in achieving its diverse goals, covering areas such as knowledge exchange, network development, community relationships, economic development, skill enhancement, inclusiveness, and technological advancement.

The KPIs are clustered by their outcome areas and detailed through two separate tables for clarity and comprehensiveness. The first table lists the KPIs along with their respective numbers, specific related outcomes, and outcome areas. This provides a clear view of how each KPI aligns with the project's intended outcomes. The second table links the KPIs to their respective numbers, relevant EU call-level Expected Impacts (EIs), relevant Sustainable Development Goals (SDGs), relevant Project-level Objectives (POs), and the foreseen data collection methods. This structured presentation ensures a thorough understanding of each KPI's role in measuring and achieving the project's overall objectives, facilitating effective monitoring and evaluation.

This following table presents the Project Objectives (POs) and Expected Impacts (EIs) of the i-Game project. The POs outline the project's goals, such as engaging diverse video game stakeholders, fostering collaborative platforms, and promoting ethical design. The EIs describe the broader anticipated impacts, including policy recommendations, technological innovation, and contributions to economic growth and social cohesion. This alignment ensures that the project’s KPIs are strategically directed towards achieving significant and measurable outcomes.

Table 2. i-Game's Project Objectives (POs) and Call-level Expected Impacts (EIs)

PO1	To engage video game stakeholders of different abilities, expertise, and disciplines, to contribute, learn, share and tap into new innovative and economic opportunities.
PO2	To provide a collaborative platform with the tools to co-create mobile and virtual reality games by engaging different users, from different backgrounds and sectors.
PO3	To develop an ethical-design culture in the video game industry.
PO4	To monitor, assess and manage the impact that the video games have on different sectors, especially targeting culture/museums, creative industries and fashion/textile.
PO5	To help understand why and how online games positively impact people, culture and society and help extract the ingredients necessary for developing a new generation of games targeted to improve people's well-being.

EI1	Well founded and prioritised recommendations for European policy, including R&I policy, to support sustained innovation and growth in the European video game industry.
EI2	Methodology(ies), supported by evidence, to increment the use of video game knowhow and technology to drive innovation in other economic sectors
EI3	Significant contributions towards a thriving European video game industry that contributes decisively to economic growth, job creation, physical and mental well-being as well as to social and cultural cohesion

Outcome Area 1 | Knowledge exchange

Table 3. KPIs for Outcome Area 1

Outcome Area	#	Outcome description	#	KPI
Knowledge Exchange	1.1	Expanded knowledge on arts and culture	1	Percentage of end-users reporting increased knowledge on arts and culture after project activities
			2	Percentage of cultural institutions reporting improved knowledge exchange and preservation practices
			3	Number of empowered professionals understanding culture- & fashion-related issues in game development
			4	Number of stakeholders claiming improved sensitivity and awareness of cultural content
	1.2	Expanded knowledge on technology development	5	Percentage of cultural institutions/museum administrators reporting new knowledge on creating cultural experiences and narratives
			6	Number of empowered professionals understanding tech-related issues in game development
			7	Number of cultural & textile/fashion organisations reporting enhanced knowledge on gaming and tech sectors
			8	Number of empowered professionals understanding more about tech-related issues related to technology development

Table 4. KPIs for Outcome Area 1 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
1	**Percentage of end-users reporting increased knowledge on arts and culture after project activities**	EI2	SDG 4	PO5	Surveys
2	**Percentage of cultural institutions reporting improved knowledge exchange and preservation practices**	EI3	SDG 4	PO4	Interviews and feedback forms
3	**Number of empowered professionals understanding culture- & fashion-related issues in game development**	EI2	SDG 8	PO2	Surveys and interviews with professionals
4	**Number of stakeholders claiming improved sensitivity and awareness of cultural content**	EI3	SDG 4	PO1	Surveys and focus groups
5	**Percentage of cultural institutions/museum administrators reporting new knowledge on creating cultural experiences and narratives**	EI2	SDG 4	PO4	Surveys

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
6	**Number of empowered professionals understanding tech-related issues in game development**	EI2	SDG 4	PO2	Workshops and training evaluations
7	**Number of cultural & textile/fashion organisations reporting enhanced knowledge on gaming and tech sectors**	EI2	SDG 8	PO2	Surveys and interviews with organisations
8	**Number of empowered professionals understanding more about tech-related issues related to technology development**	EI2	SDG 9	PO2	Workshops and training evaluations

Outcome Area 2 | Network development

Table 5. KPIs for Outcome Area 2

Outcome Area	#	Outcome description	#	KPI
Network Development	2.1	Enhanced network development	10	Number of organisations engaged and degree of engagement
			11	Number of stakeholders and end-users actively involved in network development initiatives
			12	Number of new partnerships formed
			13	Number of initiatives and projects launched from new partnerships
	2.2	Enhanced cross-sectoral collaboration	14	Number of cross-sectoral collaborations resulting in new cultural products or services
			15	Number of cross-sectoral participants actively engaging in co-design activities on the platform
			16	Number of stakeholders reporting enhanced collaboration and understanding with other stakeholders from diverse sectors
			17	Number of co-design initiatives and projects initiated within the platform by cross-sectoral community members

Table 6. KPIs for Outcome Area 2 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
10	**Number of organisations engaged and degree of engagement**	EI1	SDG 17	PO1	Membership records and participation logs

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
11	**Number of stakeholders and end-users actively involved in network development initiatives**	EI2	SDG 17	PO1	Surveys and participation records
12	**Number of new partnerships formed**	EI2	SDG 17	PO1	Partnership agreements
13	**Number of initiatives and projects launched from new partnerships**	EI3	SDG 9	PO1	Project reports and case studies
14	**Number of cross-sectoral collaborations resulting in new cultural products or services**	EI2	SDG 9	PO1	Surveys and interviews
15	**Number of cross-sectoral participants actively engaging in co-design activities on the platform**	EI3	SDG 11	PO5	Participation logs and activity records
16	**Number of stakeholders reporting enhanced collaboration and understanding with other stakeholders from diverse sectors**	EI2	SDG 9	PO2	Surveys and interviews with stakeholders
17	**Number of co-design initiatives and projects initiated within the platform by cross-sectoral community members**	EI3	SDG 11	PO5	Platform analytics and project reports

Outcome Area 3 | Community and social relationships

Table 7. KPIs for Outcome Area 3

Outcome Area	#	Outcome description	#	KPI
Community and Social Relationships	**3.1**	**Strengthened sense of belonging to a broader community**	18	Percentage of end-users reporting improved sense of belonging to the local community through heritage promotion
			19	Percentage of community members reporting a stronger sense of identity and belonging to the gaming community
			20	Number of end-users actively participating in community events
			21	Number of community-driven initiatives supported by the project
	3.2	**Increased participation in cultural activities**	22	Percentage increase in participation in cultural activities
			23	Number of new end-users visiting partner cultural institutions for the first time during or after the project
			24	Number of end-users expressing a desire to participate in future cultural activities

Table 8. KPIs for Outcome Area 3 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
18	**Percentage of end-users reporting improved sense of belonging to the local community through heritage promotion**	EI3	SDG 11	PO5	Surveys and community feedback
19	**Percentage of community members reporting a stronger sense of identity and belonging to the gaming community**	EI3	SDG 11	PO5	Surveys and community feedback
20	**Number of end-users actively participating in community events**	EI3	SDG 11	PO5	Event participation logs
21	**Number of community-driven initiatives supported by the project**	EI3	SDG 11	PO5	Community project reports
22	**Percentage increase in participation in cultural activities**	EI3	SDG 11	PO2	Attendance records and surveys
23	**Number of new end-users visiting partner cultural institutions for the first time during or after the project**	EI3	SDG 11	PO2	Visitor logs and feedback forms
24	**Number of end-users expressing a desire to participate in future cultural activities**	EI3	SDG 11	PO2	Surveys and focus groups

Outcome Area 4 | Economic development

Table 9. KPIs for Outcome Area 4

Outcome Area	#	Outcome description	#	KPI
Economic development	**4.1**	**Increased job opportunities**	25	Percentage of stakeholder organisations developing job descriptions for new roles inspired by the project's outcomes
			26	Number of stakeholders planning to recruit or expand their workforce due to project-inspired initiatives
	4.2	**Boosted organisations sustainability**	27	New funding/investments attracted by cultural institutions and fashion designers/textile companies for sustainable products
			28	Number of organisations reporting improved sustainability practices
	4.3	**Innovation in cultural services and products**	29	Number of new services launched and innovated
			30	Number of newly created or innovated products
			31	Number of good practices disseminated

Table 10. KPIs for Outcome Area 4 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
25	**Percentage of stakeholder organisations developing job descriptions for new roles inspired by the project's outcomes**	EI3	SDG 8	PO1	Analysis of job postings and organisational reports
26	**Number of stakeholders planning to recruit or expand their workforce due to project-inspired initiatives**	EI3	SDG 8	PO1	Surveys and focus groups with stakeholders
27	**New funding/investments attracted by cultural institutions and fashion designers/textile companies for sustainable products**	EI3	SDG 8	PO1	Financial records
28	**Number of organisations reporting improved sustainability practices**	EI3	SDG 8	PO1	Sustainability assessments
29	**Number of new services launched and innovated**	EI2	SDG 9	PO1	Innovation logs and project reports
30	**Number of newly created or innovated products**	EI3	SDG 9	PO5	Product logs, innovation records, and surveys
31	**Number of good practices disseminated**	EI2	SDG 9	PO1	Best practices documentation

Outcome Area 5 | Learning and capacity building

Table 11. KPIs for Outcome Area 5

Outcome Area	#	Outcome description	#	KPI
Learning & capacity building	5.1	Development of soft and life skills	32	Number of people reporting increased soft and life skills through project activities
	5.2	Improved educational performance/experience	33	Number of people reporting improved educational performance through digital experiences
	5.3	Enhancement of hard skills	34	Number of fashion/textile professionals reporting enhanced technical skills in gamification and transmedia storytelling due to the project's activities
			35	Number of cultural industry professionals reporting enhanced technical skills in service innovation and experience management through gamified experiences
			36	Number of game co-designers reporting enhanced technical skills in game design and technology development through the co-design platform
			37	Number of contents/technical knowledge consumed

Outcome Area	#	Outcome description	#	KPI
				during the game design process
			38	Number of end-users claiming improved work efficiency thanks to the development of hard skills

Table 12. KPIs for Outcome Area 5 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
32	**Number of people reporting increased soft and life skills through project activities**	EI3	SDG 4	PO2	Surveys and interviews
33	**Number of people reporting improved educational performance through digital experiences**	EI3	SDG 4	PO5	Academic records and surveys
34	**Number of fashion/textile professionals reporting enhanced technical skills in gamification and transmedia storytelling due to the project's activities**	EI3	SDG 8	PO2	Surveys and interviews with fashion/textile professionals
35	**Number of cultural industry professionals reporting enhanced technical skills in service innovation and experience management through gamified experiences**	EI3	SDG 8	PO2	Surveys and interviews with cultural industry professionals
36	**Number of game co-designers reporting enhanced technical skills in game design and technology development through the co-design platform**	EI3	SDG 8	PO2	Surveys and interviews with game co-designers
37	**Number of contents/technical knowledge consumed during the game design process**	EI2	SDG 4	PO2	Content usage analytics
38	**Number of end-users claiming improved work efficiency thanks to the development of hard skills**	EI3	SDG 8	PO2	Surveys and interviews

Outcome Area 6 | Social inclusiveness

Table 13. KPIs for Outcome Area 6

Outcome Area	#	Outcome description	#	KPI
Social inclusiveness	**6.1**	**Elevated awareness on sustainability and inclusion**	39	Number of end-users reporting increased sensitivity to sustainability and social inclusion issues
			40	Number of stakeholders claiming to have reached a deeper understanding of social inclusivity and its value through gamification
	6.2	**Increased accessibility to cultural initiatives**	41	Number of end-users with vulnerable and/or disadvantaged conditions claiming greater inclusion and

Outcome Area	#	Outcome description	#	KPI
				accessibility in cultural experiences delivered through video games and other project-promoted activities

Table 14. KPIs for Outcome Area 6 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
39	**Number of end-users reporting increased sensitivity to sustainability and social inclusion issues**	EI3	SDG 10	PO3	Surveys and interviews
40	**Number of stakeholders claiming to have reached a deeper understanding of social inclusivity and its value through gamification**	EI3	SDG 10	PO3	Focus groups and surveys
41	**Number of end-users with vulnerable and/or disadvantaged conditions claiming greater inclusion and accessibility in cultural experiences delivered through video games and other project-promoted activities**	EI3	SDG 10	PO5	Surveys and interviews with end-users

Outcome Area 7 | Technological development

Table 15. KPIs for Outcome Area 7

Outcome Area	#	Outcome description	#	KPI
Technological development	**7.1**	**Human-centred technology development**	42	Number of digitised cultural objects and assets
			43	Percentage of platform users reporting satisfaction with the accessibility features
			44	Number of collaborative projects initiated through the platform
			45	Percentage of users who understand and effectively use explainable AI components
			46	Number of users participating in workshops on on ethics and social inclusiveness
			47	User engagement levels in co-design activities on the platform
			48	Percentage of gamified experiences co-designed on the platform that include elements of diversity and inclusion
			49	Number of users participating in workshops on heritage promotion and education through gamification

Outcome Area	#	Outcome description	#	KPI
			50	Percentage of platform users who feel their contributions to co-design activities are valued
			51	Number of new features implemented on the platform based on user feedback
			52	Percentage of users who report increased knowledge of ethics, diversity, and inclusion after using the platform
	7.2	Fostered legal awareness and ethical-design culture in video game industry	53	Number of video game professionals reporting participation in legal awareness programs
			54	Number of video game companies and SMEs adopting legal compliance frameworks
			55	Number of legal awareness materials (e.g., guidelines, toolkits) disseminated to video game professionals
			56	Number of video game professionals reporting participation in ethical-design culture programs
			57	Number of ethical design guidelines and best practices disseminated to video game professionals
			58	Number of video game companies adopting ethical design practices

Table 16. KPIs for Outcome Area 7 with relevant EIs, SDGs, POs and data collection method

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
42	**Number of digitised cultural objects and assets**	EI3	SDG 9	PO2	Digitalization logs and reports
43	**Percentage of platform users reporting satisfaction with the accessibility features**	EI1	SDG 10	PO5	Surveys and feedback forms
44	**Number of collaborative projects initiated through the platform**	EI2	SDG 17	PO2	Platform analytics and project logs
45	**Percentage of users who understand and effectively use explainable AI components**	EI3	SDG 9	PO5	Surveys and usage analytics
46	**Number of users participating in workshops on on ethics and social inclusiveness**	EI1	SDG 10	PO3	Workshop attendance logs
47	**User engagement levels in co-design activities on the platform**	EI2	SDG 17	PO2	Platform analytics (e.g., time spent, actions taken)
48	**Percentage of gamified experiences co-designed on the platform that include elements of diversity and inclusion**	EI3	SDG 10	PO5	Content analysis of co-designed projects

#	KPI	EU-EIs	SDGs	POs	Data Collection Method
49	**Number of users participating in workshops on heritage promotion and education through gamification**	EI3	SDG 4	PO5	Workshop attendance logs
50	**Percentage of platform users who feel their contributions to co-design activities are valued**	EI3	SDG 11	PO2	Surveys and feedback forms
51	**Number of new features implemented on the platform based on user feedback**	EI2	SDG 9	PO2	Platform development logs and user feedback analysis
52	**Percentage of users who report increased knowledge of ethics, diversity, and inclusion after using the platform**	EI1	SDG 4	PO3	Surveys and interviews with users
53	**Number of video game professionals reporting participation in legal awareness programs**	EI1	SDG 4	PO3	Surveys and interviews with professionals
54	**Number of video game companies and SMEs adopting legal compliance frameworks**	EI1	SDG 16	PO3	Surveys and interviews with companies
55	**Number of legal awareness materials (e.g., guidelines, toolkits) disseminated to video game professionals**	EI1	SDG 4	PO3	Distribution logs and feedback forms
56	**Number of video game professionals reporting participation in ethical-design culture programs**	EI1	SDG 4	PO3	Surveys and interviews with professionals
57	**Number of ethical design guidelines and best practices disseminated to video game professionals**	EI1	SDG 4	PO3	Distribution logs and feedback forms
58	**Number of video game companies adopting ethical design practices**	EI1	SDG 16	PO3	Surveys and interviews with companies

In conclusion, section 2.3.6 has detailed the key performance indicators (KPIs) essential for measuring the i-Game project's impact. Organised into two comprehensive tables, these KPIs align with the project's outcome areas, Project Objectives (POs), Expected Impacts (EIs), and relevant SDGs. This structured approach ensures precise measurement, effective monitoring, and robust data collection, providing a clear pathway to assess and enhance the project's success. By systematically tracking these indicators, the i-Game project can drive meaningful and sustainable impacts across all involved sectors.

2.3.7 Financial Proxies

Financial proxies are critical components of the i-Game project's impact framework, allowing the translation of social and environmental outcomes into monetary values. This section explains the role of financial proxies in the Social Return on Investment (SROI) calculations, detailing how they are defined, determined for KPI cashability, and adaptable throughout the project lifecycle to ensure accuracy and relevance.

A financial proxy is a monetary value assigned to a non-financial outcome, enabling its inclusion in the SROI calculation. These proxies help quantify the social, cultural, and environmental benefits generated by the project in economic terms. By assigning a financial value to outcomes

such as increased cultural knowledge or improved community cohesion, the i-Game project can demonstrate the economic worth of its social impacts, facilitating better communication of value to stakeholders and funders.

The methodology for determining the cashability of a KPI involves several steps. First, each KPI is analysed to identify whether its outcomes can be translated into economic terms. This involves assessing the direct and indirect financial impacts of the KPI. Once potential financial impacts are identified, appropriate financial proxies are selected based on available data and best practices. These proxies are then validated through stakeholder consultations and expert reviews to ensure they accurately reflect the value of the outcomes. This rigorous process ensures that only KPIs with a clear economic impact are included in the SROI calculations.

Financial proxies are not static and can be adapted during the project lifecycle. As research progresses and new data becomes available, proxies can be refined or replaced with more accurate or relevant alternatives. This flexibility ensures that the SROI calculation remains robust and reflective of the true value generated by the project. Continuous monitoring and periodic reviews of financial proxies, guided by stakeholder feedback and emerging best practices, allow the i-Game project to maintain high standards of accuracy and relevance in its impact assessment. This adaptive approach ensures the financial proxies stay aligned with the project's evolving understanding of its impacts.

Table 17. Cashable KPIs of the i-Game project with relevant financial proxy description

KPI#	KPI	Target Value	Proxy Description
3	Number of empowered professionals understanding culture- & fashion-related issues in game development	100 professionals	Course on Digital Humanities
6	Number of empowered professionals understanding tech-related issues in game development	60% of professionals (60 out of 100)	Course on Digital Humanities
7	Number of cultural & textile/fashion organisations reporting enhanced knowledge on gaming and tech sectors	50 organisations	Course on Digital Humanities
8	Number of empowered professionals understanding more about tech-related issues related to technology development	50% of professionals (250 out of 500)	Course on Digital Humanities
11	Number of new partnerships formed	10 partnerships/year	Average value of new partnership deals
12	Number of initiatives and projects launched from new partnerships	5 projects/year	Average costs of urban regeneration interventions and territorial animation projects
13	Number of cross-sectoral collaborations resulting in new cultural products or services	12 collaborations/year	Tutoring cost for a incubation process

KPI#	KPI	Target Value	Proxy Description
19	Number of end-users actively participating in community events	1000 end-users	Value of event participation fees
21	Percentage increase in participation in cultural activities	50% increase (250 additional participants out of 500)	Increased revenue from ticket sales
25	Number of stakeholders planning to recruit or expand their workforce due to project-inspired initiatives	15 stakeholders	Annual unemployment benefit
26	New funding/investments attracted by cultural institutions and fashion designers/textile companies for sustainable products	7 funding granted	Tuscany region financing to cultural organisations through public call
28	Number of new services launched and innovated	12 services/year	Tutoring cost for a incubation process
29	Number of newly created or innovated products	30 products	Tutoring cost for a incubation process
31	Number of people reporting increased soft and life skills through project activities	50% of participants (250 out of 500)	Soft skills course - Forma Camere, Camera di Commercio di Roma
33	Number of fashion/textile professionals reporting enhanced technical skills in gamification and transmedia storytelling due to the project's activities	60 professionals	Cost of game design course
34	Number of cultural industry professionals reporting enhanced technical skills in service innovation and experience management through gamified experiences	50 professionals	Cost of innovation management course
35	Number of game co-designers reporting enhanced technical skills in game design and technology development through the co-design platform	80 co-designers	Cost of game design course
41	Number of digitised cultural objects and assets	350 digitised objects	Cost savings from digital preservation
43	Number of collaborative projects initiated through the platform	20 projects/year	Cost of digitalization voucher
45	Number of users participating in workshops on on ethics and social inclusiveness	200 users/year	Course on Digital Humanities
50	Number of new features implemented on the platform based on user feedback	10 features/year	Development cost savings per feature
52	Number of video game professionals reporting participation in legal awareness programs	150 professionals/year	Average cost of legal awareness training program per professional
53	Number of video game companies and SMEs adopting legal compliance frameworks	40 companies	Cost of implementing a legal compliance framework per company
54	Number of legal awareness materials (e.g., guidelines, toolkits) disseminated to video game professionals	500 materials/year	Cost of producing and distributing legal awareness materials per unit

KPI#	KPI	Target Value	Proxy Description
55	Number of video game professionals reporting participation in ethical-design culture programs	200 professionals/year	Average cost of ethical-design training program per professional
56	Number of ethical design guidelines and best practices disseminated to video game professionals	300 materials/year	Cost of producing and distributing ethical design materials per unit

The i-Game project has identified several key performance indicators (KPIs) linked to financial proxies, facilitating the calculation of the Social Return on Investment (SROI). These financial proxies provide a monetary value to the outcomes, helping quantify the economic impact of the project.

The table below presents a comprehensive list of the financial proxies used in the i-Game project's SROI calculation. Each proxy includes a description, source details, and the estimated monetary value. This table underscores the rigorous approach taken to quantify the economic impact of the project through carefully selected and verified financial proxies. The inclusion of esteemed values where sources are pending further highlights the ongoing refinement of the impact assessment process.

Table 18. Applied financial proxies with sources and/or esteemed values

Proxy Description	Source description	Source link	Proxy value
Course on Digital Humanities	Harvard Education	Source link	**€202.00**
Average value of new partnership deals	Uni Cassino	Source link	**€450.00**
Average costs of urban regeneration interventions and territorial animation projects	Italian Ministry of Interior	Link pending	**€10,000.00**
Tutoring cost for a incubation process	Invitalia Smart&Start	Source link	**€7,500.00**
Value of event participation fees	Esteemed value	Source pending	**€117.00**
Increased revenue from ticket sales	Esteemed value	Source pending	**€10.00**
Annual unemployment benefit (Nuova Assicurazione Sociale per l'Impiego-NASpI)	Italian National Social Security Institute	Source link	**€11,000.00**
Tuscany region financing to cultural organisations through public call	Tuscany Region public financing figures	Source link	**€20,000.00**

Soft skills course - Forma Camere, Camera di Commercio di Roma	Chamber of Commerce of Rome	Source link	**€150.00**
Cost of game design course	Online course	Source link	**€2,500.00**
Cost of innovation management course	Online course	Source link	**€3,000.00**
Cost savings from digital preservation	Esteemed value	Source pending	**€2,000.00**
Cost of digitalization voucher	Italian Ministry of Enterprise	Source link	**€10,000.00**
Development cost savings per feature (Game developer cost per hour per number of hours worked)	EUVIC Group	Source link	**€2,000.00**
Average cost of legal awareness training program per professional	Esteemed value	Source pending	**€1,000.00**
Cost of implementing a legal compliance framework per company	Esteemed value	Source pending	**€5,000.00**
Cost of producing and distributing legal awareness materials per unit	Esteemed value	Source pending	**€50.00**
Average cost of ethical-design training program per professional	Esteemed value	Source pending	**€1,000.00**
Cost of producing and distributing ethical design materials per unit	Esteemed value	Source pending	**€50.00**

In the area of Knowledge Exchange, the project aims to expand knowledge on arts, culture, and technology development. For Outcome 1.1, which focuses on expanding knowledge on arts and culture, the KPI involves the number of empowered professionals understanding culture- and fashion-related issues in game development. The financial proxy for this is a course on Digital Humanities, valued at €202 per professional, with a target of 100 professionals.

For Outcome 1.2, which aims to expand knowledge on technology development, multiple KPIs have been identified. One KPI measures the number of professionals understanding tech-related issues in game development, with a target of 60 professionals, using the same Digital Humanities course valued at €202. Another KPI tracks the number of cultural and textile/fashion organisations reporting enhanced knowledge on gaming and tech sectors, targeting 50 organisations at the same proxy value. Additionally, another KPI targets 250 professionals

understanding more about tech-related issues related to technology development, again using the Digital Humanities course at €202 per professional.

In the Network Development outcome area, the project focuses on enhancing network development and cross-sectoral collaboration. For Outcome 2.1, which aims to enhance network development, the project targets forming 10 new partnerships per year, using an average value of new partnership deals valued at €450 each. It also aims to launch five initiatives and projects from these partnerships annually, with the financial proxy being the average cost of urban regeneration interventions, valued at €10,000 per project. Outcome 2.2 targets 12 cross-sectoral collaborations annually, with a tutoring cost for an incubation process as the proxy, valued at €7,500 per collaboration.

In the Community and Social Relationships area, Outcome 3.1 aims to strengthen the sense of belonging to a broader community. The KPI here is the number of end-users actively participating in community events, with a target of 1000 end-users, using the value of event participation fees, set at €117 per participant. For Outcome 3.2, which seeks to increase participation in cultural activities, the KPI targets a 50% increase in participation, equating to 250 additional participants, with increased revenue from ticket sales, valued at €10 per ticket, as the financial proxy.

Economic Development outcomes focus on job opportunities, organisational sustainability, and innovation in cultural services and products. For Outcome 4.1, the project measures the number of stakeholders planning to recruit or expand their workforce, using the annual unemployment benefit (NASpI), valued at €11,000 per stakeholder, with a target of 15 stakeholders. Outcome 4.2 targets new funding and investments for cultural institutions and fashion designers, with Tuscany region financing valued at €20,000 per grant, targeting seven grants. For Outcome 4.3, which involves innovation in cultural services and products, the project measures new services and products launched, with a tutoring cost for an incubation process valued at €7,500, targeting 12 services and 30 products annually.

In Learning and Capacity Building, Outcome 5.1 focuses on the development of soft and life skills, with a KPI measuring the number of people reporting increased skills through project activities, targeting 250 participants using a soft skills course valued at €150 per person. Outcome 5.3 measures the enhancement of hard skills among fashion/textile professionals, cultural industry professionals, and game co-designers. The financial proxies for these KPIs include game design and innovation management courses, with values ranging from €2,500 to €3,000 per participant, targeting 60 fashion/textile professionals, 50 cultural industry professionals, and 80 game co-designers.

In the area of Technological Development, Outcome 7.1 focuses on human-centred technology development. KPIs include the number of digitised cultural objects and assets, with cost savings from digital preservation valued at €2,000 per object, targeting 350 objects. It also includes the number of collaborative projects initiated through the platform, with a digitization voucher valued at €10,000 per project, targeting 20 projects annually. Additionally, the project measures the number of users participating in workshops on ethics and social inclusiveness, targeting 200

users annually, with a Digital Humanities course valued at €202 per user. Another KPI measures the number of new features implemented on the platform based on user feedback, with development cost savings per feature valued at €2,000, targeting 10 features annually.

Outcome 7.2 aims to foster legal awareness and ethical-design culture in the video game industry. KPIs include the number of video game professionals participating in legal awareness programs, with an average cost of legal awareness training valued at €1,000 per professional, targeting 150 professionals annually. It also includes the number of video game companies and SMEs adopting legal compliance frameworks, with a cost of €5,000 per company, targeting 40 companies. Further, the project measures the number of legal awareness materials disseminated, targeting 500 materials annually, with a production and distribution cost of €50 per unit. Finally, the number of video game professionals participating in ethical-design culture programs and the dissemination of ethical design guidelines and best practices are measured, with training programs and materials valued at €1,000 and €50, respectively.

For certain KPIs, the proxy sources are still listed as "Source pending", indicating that the project team is currently searching for the most appropriate sources for these proxies. This approach ensures that all proxies used in the SROI calculation meet high-quality standards and accurately reflect the economic value of the outcomes. As the project progresses, these proxies will be updated to ensure they remain relevant and precise. This comprehensive overview highlights the structured approach the i-Game project employs to quantify its impact through financial proxies, ensuring a rigorous and transparent assessment of its contributions to innovation, sustainability, and social cohesion.

The calculation of the Social Return on Investment (SROI) for the i-Game project represents a significant intellectual effort, particularly given the project's complexity and its current design phase. Scientifically, this task is challenging because it involves making predictive assessments based on projected outcomes and impacts.

Our preliminary SROI estimate is approximately 2 (see dedicated paragraph in section 3.1), indicating that for every euro invested, there is an anticipated social return of two euros. However, it is important to acknowledge that both the target values and financial proxies assigned to the cashable KPIs are subject to variation as the project progresses. As the project advances, new insights and data will emerge, necessitating adjustments to these values to ensure they accurately reflect the evolving impact landscape. This dynamic approach allows for a more precise and adaptable assessment of the project's social return, accommodating changes and refinements in our understanding of its outcomes and impacts over time.

This estimate will be continuously updated in terms of structure, targets, and proxies as the project evolves. Just as the impact framework, which monitors outcomes and may undergo changes, the SROI calculation will track the degree of monetisation of the project's impacts

and will be adjusted accordingly as project activities and outputs develop. Thus, while we provide an initial SROI estimate, it is crucial to consider that these values are not fixed and may be adjusted to reflect new data and insights gathered throughout the project's lifecycle. This approach ensures that our impact measurement remains accurate and relevant, accommodating the project's ongoing development and the refined methodologies applied during the evaluation process.

2.3.8 Mapping UN SDGs

Figure 3. i-Game's most relevant mapped UN SDGs

The i-Game project is committed to aligning its outcomes and key performance indicators (KPIs) with the United Nations Sustainable Development Goals (SDGs), ensuring that its impact extends beyond immediate project objectives to contribute to broader global goals. This alignment not only enhances the project's relevance and significance but also facilitates the measurement and communication of its societal impact.

The process of mapping outcomes and KPIs to the SDGs involves a meticulous analysis of the goals and targets within the SDG framework, identifying those that most closely align with the objectives and activities of the i-Game project. Each outcome area and its corresponding KPIs are examined to determine how they contribute to specific SDGs. The criteria for this mapping include the nature of the outcome, the expected impact on stakeholders, and the alignment with SDG targets.

For instance, in the Knowledge Exchange outcome area, KPIs related to expanded knowledge on arts, culture, and technology development are mapped to SDG-4 (Quality Education) and SDG-8 (Decent Work and Economic Growth). These mappings reflect the project's emphasis on enhancing educational experiences and fostering innovation in various sectors. Similarly, outcomes focusing on network development and cross-sectoral collaboration are linked to SDG-9 (Industry, Innovation, and Infrastructure) and SDG-17 (Partnerships for the Goals), highlighting the project's role in promoting collaborative efforts and technological advancements.

In the Community and Social Relationships outcome area, KPIs that measure participation in community events and cultural activities are mapped to SDG-11 (Sustainable Cities and Communities). This mapping underscores the project's contribution to creating inclusive and sustainable communities through increased cultural engagement and social cohesion. Economic

development outcomes, such as increased job opportunities and organisational sustainability, are aligned with SDG-8, emphasising the project's impact on economic growth and employment.

For Learning and Capacity Building, KPIs related to the development of soft and hard skills are mapped to SDG-4, reflecting the project's commitment to enhancing educational outcomes and lifelong learning opportunities. Technological development outcomes, which focus on human-centred technology and ethical design in the video game industry, are linked to SDG 9 and SDG-10 (Reduced Inequalities). These mappings highlight the project's efforts to promote inclusive and responsible technological advancements.

The mapping of outcomes and KPIs to SDGs is not static; it evolves as the project progresses and as new insights are gained. This dynamic approach ensures that the i-Game project remains aligned with global sustainability goals, continuously adapting to maximise its positive impact on society. For instance, some additional SDGs are already listed as potentially suitable to be mapped to some outcomes or KPIs depending on the data and the specific stakeholders that will actually be involved. For the record, these potential SDGs are: SDG-3 “Good health and well-being” and SDG-5 “Gender Equality”.

In conclusion, the comprehensive mapping of the i-Game project's outcomes and KPIs to the UN SDGs demonstrates a strategic approach to achieving meaningful and measurable societal impact. By aligning with specific SDGs, the project reinforces its commitment to contributing to global sustainability and development, ensuring that its efforts are recognized and valued on a broader scale.

2.3.9 Towards the data framework

As the i-Game project progresses, a critical next step is the development of a comprehensive data framework, which will be undertaken in Task 2.4. This process is currently ongoing and is designed to ensure that data collection activities are systematically aligned with the project's impact framework. The data framework will serve as the foundation for gathering, analysing, and interpreting data related to the project's outcomes and key performance indicators (KPIs).

The development of the data framework involves a collaborative effort among all project partners and their connected stakeholders. Each partner will be responsible for collecting data from their respective stakeholder groups, ensuring that the data gathered is both relevant and comprehensive. Open Impact, as the technical partner, will play a crucial role in this process by providing the necessary data collection tools and methodologies. These tools will be tailored to suit the diverse range of KPIs, encompassing both qualitative and quantitative measures.

Data collection within the i-Game project is designed to be multifaceted, leveraging various methods to capture the full spectrum of project impacts. Quantitative data will be collected through surveys, structured interviews, and digital tools that track specific metrics. For instance, tools like online surveys will be used to gather numerical data on participation rates, knowledge

gains, and partnership formations. These methods will provide concrete, measurable insights into the project's progress and impact.

Qualitative data collection will involve more nuanced methods such as focus groups, in-depth interviews, and observational studies. These approaches will help capture the experiences, perceptions, and insights of stakeholders, providing a richer, more detailed understanding of the project's effects. For example, focus groups with game co-creators and industry professionals will explore their experiences and the perceived impact of the i-Game platform on their work and collaboration efforts.

To ensure that data collection is systematic and efficient, a detailed data collection roadmap is being developed. This roadmap will outline the specific methods and tools to be used for each KPI, as well as the timelines and responsibilities for data collection activities. The roadmap will be shared consortium-wide for validation, ensuring that all partners are aligned and prepared for its implementation. This collaborative validation process will help identify any potential challenges and ensure that the data collection plan is practical and feasible. Open Impact will provide ongoing technical support throughout the data collection phase, ensuring that partners have the resources and guidance needed to collect high-quality data. This support will include training sessions, troubleshooting assistance, and regular check-ins to monitor progress and address any issues that arise. By offering this level of support, Open Impact aims to facilitate a smooth and effective data collection process, enabling all partners to contribute valuable data to the project's overall evaluation. Once the data is collected, Open Impact will take the lead in analysing and interpreting the results. This analysis will integrate both qualitative and quantitative data, providing a comprehensive view of the project's impact. The findings will be used to assess progress towards the project's goals, identify areas for improvement, and inform future project activities. This iterative process of data collection, analysis, and feedback will help ensure that the i-Game project remains adaptive and responsive to the needs of its stakeholders.

In conclusion, the development of the data framework in Task 2.4 is a pivotal step for the i-Game project. By establishing a robust system for data collection and analysis, the project can effectively measure its impact and make informed decisions to enhance its outcomes. The collaborative efforts of all partners, supported by Open Impact's technical expertise, will ensure that the data framework is comprehensive, reliable, and aligned with the project's ambitious goals.

3. i-Game's impact monitoring

Section 3 of the report introduces the comprehensive impact monitoring framework for the i-Game project, highlighting the sophisticated Power BI dashboard developed for this purpose. This section outlines the dashboard's architecture and functionalities, designed to provide real-time insights into the project's impact. By consolidating and visualising data, the dashboard enables stakeholders to easily access and interpret complex information. The section covers key aspects such as data collection methodologies, integration of diverse data sources, and alignment of project outcomes with UN SDGs. Through this detailed overview, readers will understand how the dashboard enhances transparency, accountability, and strategic decision-making within the i-Game project.

3.1 i-Game's impact monitoring dashboard

The i-Game Power BI dashboard serves as a central tool for visualising and monitoring the project's impact in real-time. This sophisticated platform aggregates data from various sources, providing an accessible and interactive means to track progress and outcomes. The dashboard is designed to display key performance indicators (KPIs) linked to the project's goals and mapped to relevant UN Sustainable Development Goals (SDGs).

Dashboard Overview

The dashboard is available at this link:

https://app.powerbi.com/view?r=eyJrIjoiYTI5ZmE4ZTctZDQ3My00MGQzLWJiZTMtNTFkMWRhNTEyNmEwIiwidCI6ImE0MDZkY2ZmLTAwNTktNDIzYi1iOWE1LTlkYTQyNDNkN2VkMyIsImMiOjl9&pageName=acd8334fd270583de957%22

The dashboard consists of several key sections and visuals, each offering unique insights into the project's performance.

Intro View

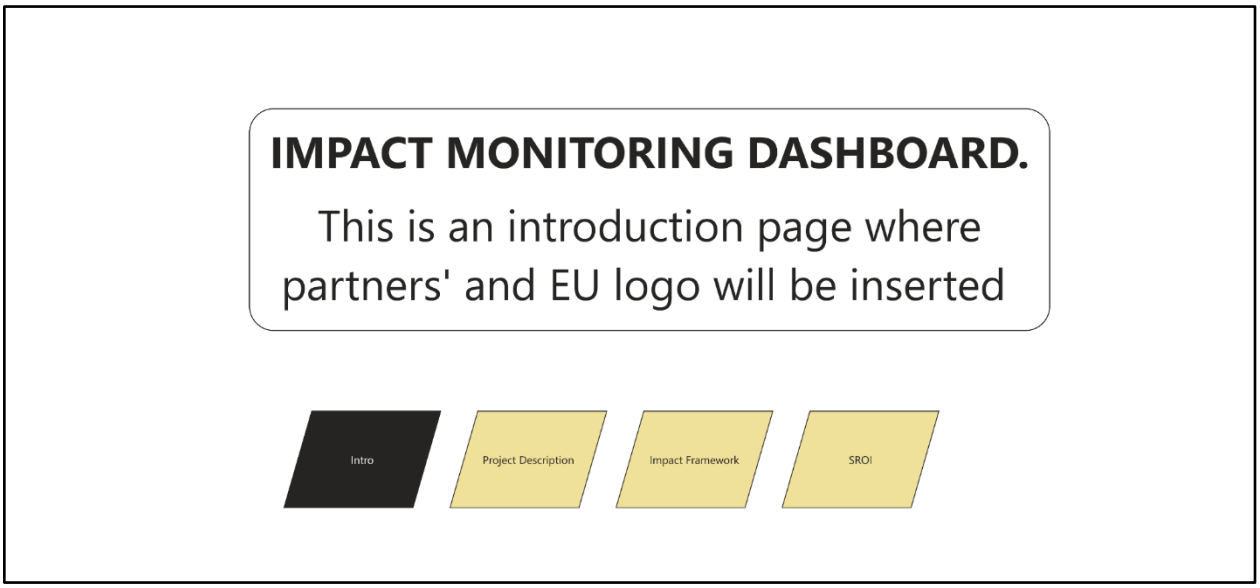

Figure 4. Introduction page of the i-Game Impact Monitoring Dashboard

This screenshot showcases the welcoming intro page of the i-Game project's Impact Monitoring Dashboard. It serves as the initial interface, highlighting the main sections that users can navigate: "Intro," "Project Description," "Impact Framework," and "SROI." This introductory page will include partners' and EU logos, setting the stage for a comprehensive exploration of the project's impact data and outcomes, with a user-friendly layout guiding stakeholders through various aspects of the project's monitoring and evaluation framework.

Project presentation page

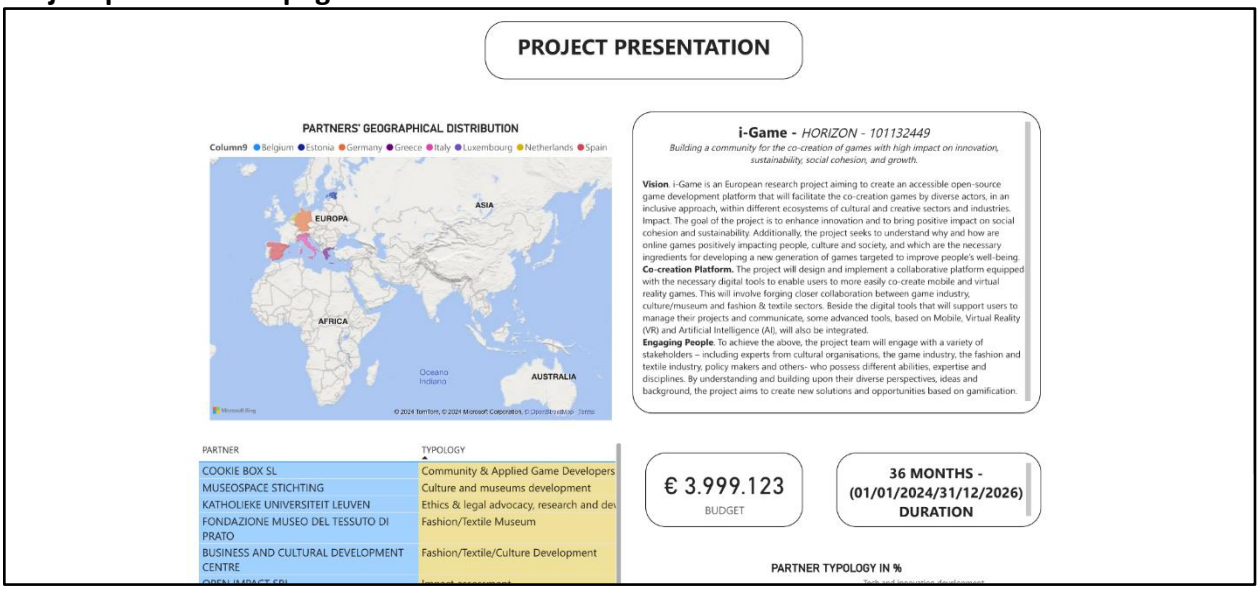

Figure 5. Project presentation page of the i-Game Impact Monitoring Dashboard

The screenshot from the project presentation page of the i-Game dashboard provides an overview of the project's key elements. It includes a map showing the geographical distribution of project partners across various European countries, highlighting the collaboration among institutions from Belgium, Estonia, Germany, Greece, Italy, Luxembourg, Netherlands, and Spain. Additionally, it summarises the project's vision, impact, and co-creation platform goals, emphasising its focus on innovation, sustainability, social cohesion, and growth. The dashboard also details the project's budget, duration, and the typology of partners involved, offering a comprehensive snapshot of the project's structure and objectives.

Impact framework view

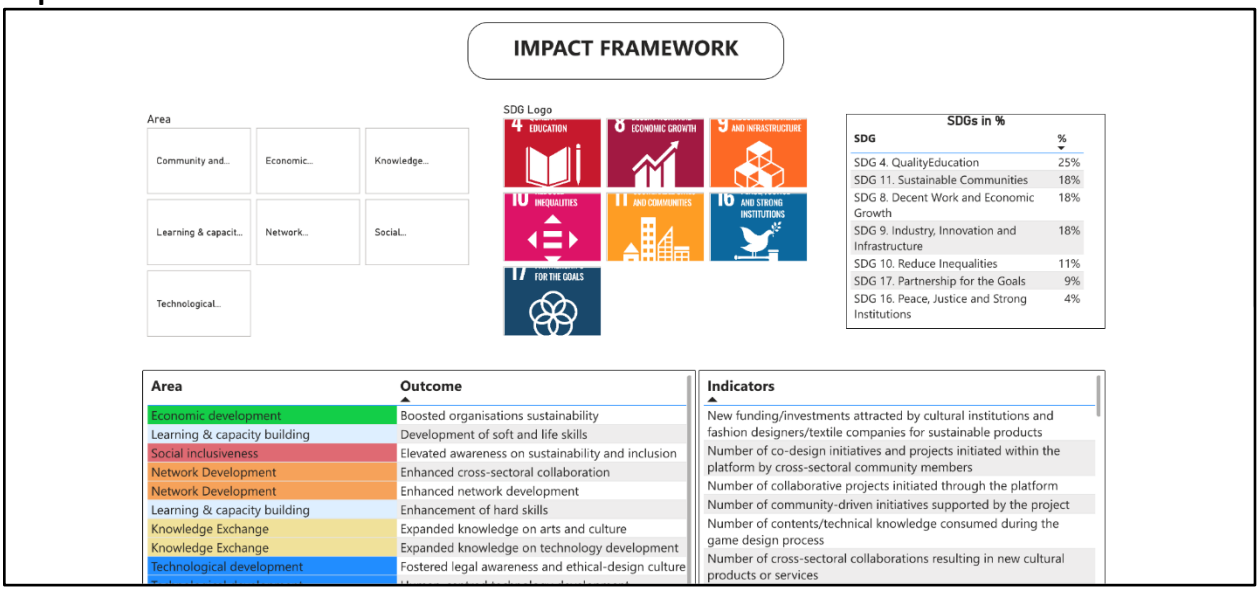

Figure 6. Impact framework view from the i-Game impact monitoring dashboard

This screenshot from the impact framework view of the dashboard presents a detailed overview of the project's alignment with the United Nations Sustainable Development Goals (SDGs). On the left, it shows different impact areas such as Economic Development, Learning & Capacity Building, Social Inclusiveness, Network Development, Knowledge Exchange, and Technological Development. Next to it, various SDG logos are displayed, including Quality Education (SDG 4), Decent Work and Economic Growth (SDG 8), Industry, Innovation, and Infrastructure (SDG 9), and more. Below, a table links each impact area and outcome to specific indicators, providing a comprehensive framework for tracking project progress and alignment with the SDGs.

SROI view

Figure 7. Predictive SROI view from the i-Game impact monitoring dashboard

The SROI view of the dashboard provides a comprehensive summary of the i-Game project's financial impact, visualising the budget, net present value, and the Social Return on Investment (SROI) ratio. The dashboard presents detailed tables with outcome descriptions, KPIs, proxy descriptions, and target values. The current figures highlight the financial projections based on the expected outcomes and proxies. However, it is noted that these figures will be updated as Task 2.4 progresses and actual data is collected. (insert screenshot of SROI view here)

Future Enhancements

It is important to note that the dashboard is currently in its preliminary stage. As task 2.4 unfolds, the dashboard will evolve significantly in terms of visuals, graphics, and content richness. Presently, the dashboard does not contain any collected data, making it essentially a framework ready to be populated.

Future enhancements will include:

- **Enhanced visuals and graphics**: improved aesthetics and more sophisticated data visualisation techniques to make the dashboard more user-friendly and engaging.
- **Data integration**: near-real-time data integration from ongoing project activities, enabling stakeholders to see up-to-date progress and impact metrics.
- **User interaction**: increased interactivity with more detailed drill-down options and customizable views to cater to different stakeholder needs.

Data Collection and Implementation

The comprehensive data framework for the i-Game project, developed in task 2.4, will ensure robust data collection methods tailored to each KPI. This includes both qualitative and quantitative data, gathered through various tools such as surveys, focus groups, and interviews. Open Impact, the technical partner, will provide support in data collection, ensuring consistency and reliability. The data collection roadmap, which will be validated and aligned with all consortium members, sets the stage for effective data gathering and analysis.

By the end of the project, the dashboard will be a rich repository of data and insights, providing a transparent and comprehensive view of the i-Game project's impact. This evolving tool will play a crucial role in guiding the project's strategic decisions and demonstrating its contributions to innovation, sustainability, social cohesion, and growth.

SROI Forecast

The final slide presents a forecast SROI for the project, including the current targets. For each outcome, the methodology applied allows viewers to see its indicators, financial proxies, and proxy values in the central matrix table in the Power BI Dashboard (see page 4 of the Dashboard). Additionally, the Social Value Generated and its SROI can be filtered by outcome, outcome area, SDG, and Call Expected Impact. The slide also shows the four SROI mitigators—deadweight, attribution, displacement, and drop-off—which can be filtered by the same categories.

- **Deadweight** measures the proportion of outcomes that would have occurred even without the project's activities.
- **Displacement** assesses the extent to which the project's outcomes displace other potential outcomes, generating negative effects elsewhere.
- **Attribution** evaluates the contribution of other organisations or individuals to the outcomes, indicating the percentage of the outcome generated by external stakeholders.
- **Drop-off** measures the percentage of the outcome expected to diminish over one year.
- **Duration** indicates the number of years considered for the SROI calculation.

The summary result for the i-Game project shows a **SROI** index of **2.12**, meaning that for every euro invested, there is an anticipated social return of 2.12 euros over a five-year period. The SROI formula involves a ratio with the total quantified social value (net of mitigators and discounted over the considered time span) as the numerator and the investment value needed to achieve the outcomes as the denominator.

$$\text{SROI} = \frac{\text{NPV}}{\text{INVESTED VALUE}}$$

$$\text{SROI} = \frac{€10{,}887{,}213.31}{€3{,}999{,}122.50} = 2.12$$

The social value generated can be filtered both in absolute monetary value and SROI proportion by outcome, outcome area, SDG, and Expected Impact Cluster. Additionally, for each outcome, the value of each mitigator is displayed.

3.1.1 The tool behind: Microsoft Power BI

Microsoft Power BI is a comprehensive business analytics tool developed by Microsoft, designed to enable users to visualise and share insights from their data. It connects to a wide variety of data sources, including databases, cloud services, and spreadsheets, allowing for seamless data integration. Power BI offers powerful data modelling and transformation capabilities, enabling users to clean and prepare their data for analysis. Its robust visualisation tools allow for the creation of interactive dashboards and reports that can be easily customised to meet specific needs.

For the i-Game project, Power BI is an excellent choice for developing a near-real-time impact dashboard due to its scalability, flexibility, and ease of use. The platform's ability to handle large datasets and perform complex calculations ensures that all relevant data can be processed and visualised effectively. Power BI's interactive features, such as drill-downs and dynamic filtering, enable users to explore data in-depth and gain valuable insights.

Moreover, Power BI's cloud-based service ensures that dashboards and reports are always up-to-date and accessible from anywhere, promoting transparency and collaboration among project stakeholders. The platform's integration with other Microsoft services, such as Azure and Office 365, further enhances its capabilities, providing a seamless workflow for data analysis and reporting.

In summary, Microsoft Power BI stands out as a leading tool for creating an impactful, interactive, and user-friendly dashboard for the i-Game project. Its advanced features and intuitive interface make it an ideal solution for tracking and visualising project outcomes, ensuring that stakeholders have access to the most relevant and timely information to support data-driven decision-making.

3.1.2 Overall structure of the dashboard

The i-Game impact dashboard, built using Microsoft Power BI, is structured to provide a comprehensive and intuitive overview of the project's progress and impact. It begins with an introduction page, featuring a summary of the project, partners involved, and geographical

distribution. This is followed by a detailed project description, outlining the vision, goals, and key activities.

The core of the dashboard is the Impact Framework section, which categorises outcomes by thematic areas, such as Knowledge Exchange, Network Development, and Economic Development. Each category is linked to relevant KPIs, displaying their progress and alignment with UN SDGs.

Additionally, the Social Return on Investment (SROI) section provides financial metrics, showcasing the project's economic value and sustainability. The dashboard integrates visualisations like charts, graphs, and maps to enhance data comprehension and engagement.

The dashboard is designed to be dynamic, with near-real-time data updates and interactive features, allowing stakeholders to drill down into specific details. As the project progresses, the dashboard will evolve, incorporating new data and insights to continuously reflect the project's impact and achievements.

3.1.3 The dataset

The dataset for the i-Game impact dashboard will be set up to comprehensively capture both qualitative and quantitative data collected throughout the project's lifecycle. This data will be gathered from various stakeholders, including game co-creators, industry professionals, cultural institutions, and end-users.

Data collection methods will include surveys, interviews, focus groups, and automated tracking tools integrated into the co-creation platform. These methods will provide insights into key performance indicators (KPIs) linked to project outcomes such as knowledge expansion, network development, and economic growth.

The dataset will also incorporate near-real-time data inputs from ongoing project activities, ensuring that the dashboard reflects the latest developments and impacts. Each data point will be meticulously mapped to relevant outcome areas, KPIs, UN SDGs, and expected impacts, facilitating detailed analysis and reporting.

Open Impact will play a crucial role in standardising the data collection processes and ensuring the integrity and reliability of the dataset, enabling the creation of an accurate and dynamic impact monitoring system. This robust dataset will serve as the foundation for evaluating the project's success and guiding strategic decisions.

3.1.4 Benefits of visual impact monitoring

Visual impact monitoring offers significant benefits in managing and communicating the progress and results of the i-Game project. By utilising visual tools, such as Microsoft Power BI, complex

data sets are transformed into accessible, interactive visualisations. This approach enhances comprehension, allowing stakeholders to quickly grasp key insights and trends.

Visual impact monitoring supports real-time or near-real-time tracking of project activities, facilitating timely adjustments and informed decision-making. Stakeholders can explore data dynamically, fostering greater engagement and collaboration. Additionally, visual tools ensure transparency, as visual representations of data make it easier to communicate results to diverse audiences, including non-technical stakeholders.

The clarity provided by visual impact monitoring aids in demonstrating the project's alignment with strategic goals, such as the UN SDGs, and in showcasing its broader societal impacts. Ultimately, visual impact monitoring helps drive project success by making data more actionable and by ensuring that all stakeholders are well-informed and aligned.

4. Conclusions

As we conclude this comprehensive report on the i-Game project's impact framework and its innovative monitoring dashboard, we reflect on the collaborative journey undertaken by the consortium. The development of the framework and the accompanying dashboard has been a meticulous process, designed to capture the project's dynamic and evolutionary nature effectively. Throughout this process, the emphasis on inclusivity, methodological rigor, and adaptive strategies has been paramount, ensuring that the framework remains robust and relevant.

The i-Game project, with its ambitious goals, is poised to make significant strides in fostering innovation, sustainability, social cohesion, and growth through the co-creation of high-impact games. The project's ecosystem, integrating diverse sectors such as culture, fashion, and technology, exemplifies a modern, interdisciplinary approach to addressing societal challenges. The impact framework and monitoring dashboard are central to this effort, providing the tools necessary for ongoing assessment and strategic adjustments.

One of the key strengths of the impact framework is its adaptability. As the project progresses, the framework and dashboard will undergo minor fixes and changes, reflecting the project's dynamic and evolutionary nature. This flexibility ensures that the tools remain aligned with the project's goals and responsive to new insights and developments. The collaborative approach to developing these tools guarantees that they are not only scientifically sound but also practically relevant to all stakeholders involved.

Looking ahead, the upcoming sections, "Next Steps" and "Impact-Relevant Data Collection," will outline the future trajectory of the project. The next steps will detail the immediate actions required to continue the project's momentum, while the data collection section will delve into the methodologies and tools that will be employed to gather and analyse impact data effectively. These sections will provide a roadmap for sustaining the project's impact and ensuring that it meets its ambitious targets.

In conclusion, the i-Game project's impact framework and monitoring dashboard represent a significant achievement in collaborative, adaptive project management. They exemplify how interdisciplinary efforts and innovative tools can come together to address complex societal challenges. The project's potential to foster a vibrant impact ecosystem is immense, promising advancements in technology, cultural engagement, and sustainable development. As we move forward, the commitment to continuous improvement and stakeholder engagement will be key to realising the full potential of the i-Game project, driving meaningful and measurable impacts across various domains.

4.1 Next steps

As we advance to the next phase of the i-Game project, Task 2.4 will be pivotal. Initially, this task will focus on establishing a solid foundation for the data collection strategy. This will involve developing a robust data framework and creating a clear, shared, consortium-approved data collection roadmap with well-thought collection time frames and clear division of data gathering tasks among project partners. Following this, the impact monitoring phase will officially commence, running in parallel with the ongoing refinement and constant tuning of the dashboard. Additionally, if needed, adjustments to the impact framework will be made, specifically concerning individual KPIs, target values, and financial proxies, to ensure their continued relevance and accuracy. This iterative process will enable the project to capture its dynamic and evolving nature effectively, ensuring that the impact measurements are precise and meaningful. By maintaining flexibility and responsiveness in our approach, we aim to uphold the integrity and effectiveness of the impact monitoring system throughout the project lifespan.

4.2 Impact-relevant data collection

In the i-Game project, Open Impact plays a crucial role in crafting and selecting the most appropriate tools to ensure consistent data collection throughout the project's duration. This consistency, maintained at a formal level, is essential to guarantee high-quality standards during the subsequent data analysis phase. Open Impact's responsibility includes developing a comprehensive data collection strategy, ensuring that all relevant metrics are captured accurately and uniformly.

The operational data collection will be carried out by the designated project partners, who will work in constant alignment with Open Impact. This collaboration will ensure that the tools provided by Open Impact are utilised effectively, and any issues or discrepancies are addressed promptly. Open Impact has encouraged the technical partners to incorporate features into the co-design platform that facilitate the collection of impact-relevant data from user interactions. This strategic integration will significantly enrich the project's dataset, providing a more comprehensive view of its impact. As the co-design platform becomes operational, the data collected from its usage will be a valuable addition to other impact-related data gathered during the project. This holistic approach to data collection, combining qualitative and quantitative methods, will provide a robust foundation for impact assessment.

In conclusion, Open Impact's strategic role in guiding and supporting data collection efforts is critical to the success of the i-Game project. By ensuring the use of consistent and high-quality data collection tools, Open Impact helps maintain the integrity of the impact evaluation process, ultimately contributing to the project's overall success and its positive impact on innovation, sustainability, social cohesion, and growth.

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