i-Game

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

HORIZON - 101132449

D3.3 Experience Design Document

Dissemination level:	Public
Contractual date of delivery:	Month 15, 30/04/2025
Actual date of delivery:	Month 15, 30/04/2025
Workpackage:	WP3 Co-creating games by engaging people from different backgrounds
Task:	T3.3 Co-creation workshops and Concept Prototypes definition
Type:	Report
Approval Status:	Final Draft
Version:	1.0
Number of pages:	64
Filename:	d3.3_i-Game_Experience-Design-Document_v1.0.docx

Abstract

Deliverable 3.3 from the WP3 consists of connecting the 4 axis of experience design for the project: storytelling, aesthetics, technology, and psychology (game design) besides community building.

Funded by
the European Union

History

Version	Date	Reason	Revised by
0.1	30/01/2025	ToC created	Cookie Box
0.2	09/04/2025	1st Draft submitted for internal review	Cookie Box
0.3	28/04/2025	Preliminary version after the internal review for quality check	Cookie Box
0.4	29/04/2025	Final version after the internal review for quality check	CERTH
1.0	30/04/2025	Quality check, content review and issue of final document	CERTH

Author list

Organization	Name	Contact Information
Cookie Box	Oscar García Pañella	oscar.garciap@cookiebox.es
Cookie Box	Roman Zabal	roman.zabal@cookiebox.es
Cookie Box	Carlos Andreu	carlos.andreu@cookiebox.es

Executive Summary

This deliverable outlines the experience design strategy and methodology applied in the i-Game project, which aims to co-create games with high impact on innovation, sustainability, social cohesion, and growth in museums. The Experience Design Document (EDD) presented here is the product of WP3, specifically Task 3.3, focusing on co-creation workshops and the definition of concept prototypes. At the heart of this EDD is the integration of the Game Tetrad — art, narrative, technology, and game design, as the foundational framework to create meaningful, culturally rooted, and engaging experiences, particularly in our case with museums and heritage contexts such as concrete textile museums.

The document is structured in the phases:

1 Analysis Phase (Kick-Off)

This phase sets the strategic foundation through:

- Problem identification and the formulation of specific design objectives.
- Empathy-based user profiling, using tools like empathy maps and personas.
- Analysis of motivators.
- Definition of target behaviours and skills to be developed.
- Potential identification of moments in the user journey to optimize emotional engagement.
- Consideration of tone, audience segmentation, and community activation as part of early planning.

2 Synthesis Phase (Technical Layer)

This section translates insights into concrete design proposals through:

- A set of five game formats, each with detailed GDDs (Game Design Documents), including:
- AR Museum Explorer – an augmented reality experience encouraging exploration and learning.
- VR Museum Journey – a virtual reality game simulating historical textile scenes.
- Mobile Museum Quiz – a mobile app offering thematic learning through questions and missions.
- Casual Museum Puzzles – a puzzle-based game focusing on weaving techniques and workshop customization.
- Hypercasual Museum Puzzles – a fast-paced game designed for short sessions with collectibles and fun facts.
- Adventure and Resource Management in the Museum – a decision-driven game combining storytelling and strategy, where players manage museum resources while uncovering historical narratives and making impactful choices.

Each prototype is documented with its motivational model, target audience, mechanics, reward structures, and expected educational and behavioural impact. The EDD serves as both a creative blueprint and collaborative tool, aligning stakeholders around a shared vision and ensuring that each game aligns with the cultural, educational, and experiential goals of the i-Game initiative. The approach emphasizes co-creation, accessibility, narrative depth, and measurable impact.

Abbreviations and Acronyms

DLC	Exclusive Downloadable Content
EDD	Experience Design Document
GDD	Game Design Document
KPI	Key Performance Indicators
MDA	Mechanics, Dynamics, Aesthetics
PDT	Platform Design Toolkit
VR	Virtual Reality
AR	Augmented Reality

List of Figures

List of Tables

Table of Contents

1 INTRODUCTION

1.1 The Game Tetrad And The Need Of Structure

The design of applied video games, particularly in museographic contexts such as textile museums, requires a systemic and multidisciplinary approach. These projects must go beyond entertainment to become active learning experiences that are emotionally meaningful and culturally enriching. To achieve this, the design architecture must be centred around four fundamental dimensions: art, technology, narrative, and game design. This structure, known as the "tetrad," serves as the conceptual foundation upon which educational or museographic games should be built.

From a functional perspective, any game must present a clear system of goals, rules, interaction, and balanced challenges. When properly aligned, these elements enable the player to enter a state of flow — a full immersion in the activity. This not only optimizes enjoyment but also enhances knowledge retention, the acquisition of skills, and the development of cognitive and emotional capacities.

The aesthetic component plays a vital role. In the context of textile museums, it is essential that the digital aesthetics faithfully reflect the values of the tangible and intangible heritage being conveyed. Visuals, sound, spatial layout, and interactivity must be designed with sensitivity and precision to connect with the user's imagination. At the same time, the technology must facilitate accessibility, stability, and customization — especially in museum environments that welcome diverse audiences.

Game design, understood as the interplay of mechanics, rules, and decisions, must foster exploration, meaningful choices, and either collaboration or competition depending on the player's profile. The rules should be clear, fair, and consistent, offering a progressive balance between chance and skill. The experience must provide continuous rewards as well as controlled moments of difficulty that increase emotional engagement and the sense of achievement.

Narrative, in turn, provides context, emotional depth, and meaning to the experience. A well-crafted story guides the player through a journey that can resemble the hero's journey, structured in stages that allow for the transformation of the main character. This narrative progression encourages identification, empathy, and critical understanding of the content being presented.

In addition, audience segmentation is essential to design inclusive and interpretatively rich experiences. There are many player types (explorers, socializers, achievers, competitors, etc.), and the design must address these motivations by offering multiple modes of interaction and expression within the same environment.

Applied games for textile museums should be conceived as cultural simulators, where time and space can be manipulated to offer experiences that are impossible in a traditional physical setting. The experience should be free, immersive, multisensory, and meaningful, generating moments of discovery that connect with the user's personal interests.

A game designed for this context becomes a bridge between cultural heritage knowledge and contemporary digital language. When the four core elements —art, technology, narrative, and game mechanics— are properly integrated, the result is not only an engaging and enjoyable experience, but also a deep learning environment that resonates with cultural memory and modern technological sensibilities.

1.2 The Experience Design Document (EDD)

Designing an applied game for a museum setting —especially one as rich and nuanced as a textile museum— requires more than just compelling visuals or fun mechanics. It demands a

cohesive and meaningful user experience that connects emotionally with visitors while fostering learning, engagement, and discovery. This is where the Experience Design Document (EDD) comes into play. An EDD is not a technical manual filled with programming details or system specifications. Rather, it's a conceptual and creative blueprint that outlines how visitors will experience and interact with the game-based environment. It places the focus on the journey: what players will feel, think, learn, and remember. It's a narrative and experiential framework that helps translate a museum's cultural and educational goals into a playful, immersive reality. In textile museums, where the exhibits often relate to heritage, craft, materials, and social context, the EDD becomes essential. It helps bridge the gap between historical artifacts and interactive digital storytelling. The EDD ensures that each game element is aligned with the museum's mission and that the visitor's experience feels intentional, engaging, and rooted in the themes of the exhibition. It's also a collaborative tool, enabling museum staff, curators, educators, designers, and developers to co-create a shared vision for the visitor experience, ensuring that everyone is working toward the same goals. While the exact structure may vary, a well-developed EDD typically includes the following components:

- Audience Analysis and Visitor Motivations

Before designing any content, it's crucial to understand the target visitors: Who are they? What are their interests? How do they interact with cultural spaces? This section often includes player/user profiles, motivational drivers, and references to game-related psychological models. In a textile museum, it might differentiate between school groups, families, craft enthusiasts, and heritage tourists.

- Narrative Framework and Fictional Universe

The EDD outlines the core narrative that will drive the experience. Whether it's a journey through historical fashion eras, the story of a textile trader, or a mystery hidden in the museum's collection, the story must resonate with the audience. Key decisions here include the tone (e.g., epic, intimate, humorous), the underlying universal themes (e.g., discovery, transformation), and the world's rules, settings, and symbolic objects (such as a loom, a dye recipe, or a legendary textile). In fact, the document can use classical storytelling frameworks like the Hero's Journey to design the experience. This structure includes stages like the "Call to Adventure," "Trials and Allies," and "Return with Knowledge." Each stage is mapped onto museum spaces or digital touchpoints, helping visitors progress through a meaningful arc of exploration and learning.

- Character Design

Even in museum contexts, characters can play a key role. These might include a historical figure, a fictional guide, or an avatar controlled by the visitor. The EDD describes each character's traits, relationships, and narrative functions. For example, a young apprentice in a silk workshop could serve as a player avatar, helping frame the journey and challenges.

- Game Mechanics and Meta-Structure

This section introduces the interactive layer of the experience: How do players progress? What kinds of challenges do they face? Are there achievements, collectible items, time-based puzzles, or social collaboration features? The EDD lays out the rules, systems of progression, feedback loops, and reward structures — all grounded in the narrative and learning objectives.

- Experience Flow and Interaction Map

Visual maps or diagrams show the flow of the user journey from start to finish. These can include key decision points, transitions between spaces or levels, moments of tension, and

learning milestones. In the museum context, this helps synchronize digital content with the physical exhibition path.

- Practical Implementation and Integration

Finally, the EDD might consider how the experience will be implemented in the real museum environment. This could involve mobile apps, augmented reality, projection mapping, interactive exhibits, or a hybrid physical-digital format. It defines how visitors will access the game (individually or in groups), how long it will last, and how it complements the overall museum visit.
In summary, an Experience Design Document is a strategic and creative tool that translates the museum's mission into an engaging, narrative-driven, and playful experience. For textile museums, where stories are woven into the fabric of culture —literally and metaphorically— an EDD ensures that every thread of the experience is thoughtfully designed. From historical depth to hands-on interaction, from emotional resonance to educational impact, the EDD helps bring textile heritage to life through the power of games.

1.3 The Game Design Documents (GDDs)

A Game Design Document (GDD) is a foundational blueprint for the development of an interactive experience such as an applied or serious game. It outlines the vision, structure, mechanics, and intended player experience in a detailed and systematic way. Its main purpose is to align the efforts of everyone involved in the creation process — from game designers and developers to artists, writers, and stakeholders — ensuring that the game is coherent, engaging, and feasible when developed. An EDD might contain several GDD's. The GDD serves as both a creative reference and a production guide per experience or game included in the whole gamification campaign. It describes how the game will look, feel, and function, specifying everything from genre and platform to gameplay mechanics and reward systems.

The Key Sections of a GDD are:

- Game Overview
  - High-level description of the game's concept.
  - Intended platform (e.g., mobile AR), target audience, and unique features.
  - Genre (e.g., action-adventure, puzzle, simulation).
- Core Objectives
  - What the game aims to achieve (e.g., promote cultural learning, encourage museum exploration, preserve heritage).
- Player Profile
  - Description of the target players: their age range, interests, digital literacy, and motivations (e.g., curiosity, independence, social connection).
- Gameplay Mechanics
  - Specific interactive elements.
  - How players interact with the environment, objects, and story.
- Narrative and Setting
  - The thematic framework and context.
  - How the technology layer creates a dialogue between the physical and digital worlds.

- Motivational Systems
  - The psychological drivers embedded in the gameplay (e.g., autonomy, mastery, status, curiosity).
  - Behaviours the game seeks to trigger (e.g., deeper research, knowledge sharing, cultural appreciation).
- Reward Structures
  - Clear categorization of rewards such as:
  - Status Rewards: Achievements, titles, trophies.
  - Access Rewards: Unlockable content, hidden areas, exclusive modes.
  - Power Rewards: Abilities, boosts, and tools.
  - Stuff Rewards: Collectibles, cosmetic customizations, virtual items.
- Technology and Integration
  - Use of some core technology.
  - Cross-platform considerations, potential for hybrid formats (e.g., VR, mobile web).
- User Journey and Progression
  - How the player progresses through the game.
  - Levels, challenges, and feedback loops that keep engagement high.

A GDD transforms an idea into an actionable development framework. Whether creating a mobile AR game for cultural spaces or a fully immersive mobile narrative adventure, the GDD ensures the final product is consistent, engaging, and aligned with its purpose.

2 EDD: ANALYSIS (KICK OFF)

The analysis phase in an Experience Design Document (EDD) is the methodological starting point for any gamified experience design process. Far from being a mere preliminary exercise, it is a strategic, exploratory, and deeply collaborative stage that determines the coherence, depth, and long-term impact of the final design. It connects two dimensions that are often treated separately: the project's objectives and the subjective experience of the user. Through co-creation workshops, visual tools, and theoretical models drawn from pedagogy and game design, it translates real needs into structural elements for the future experience or game.

- Initial diagnosis: from challenge to objectives

Every good design process begins with a clear challenge. In this initial step, the design team —in collaboration with stakeholders— identifies the problems the experience seeks to address. These challenges may be diverse: low engagement, lack of awareness on a topic, barriers to access, or motivational deficits. From this, both general and specific objectives are established. These should be framed from both a functional perspective (what the system should achieve) and an experiential one (what the user should feel). Additionally, clear key performance indicators (KPIs) can be defined to measure success, such as participation rates, knowledge acquisition, interaction levels, or retention metrics.

- Target profiling: empathy, frustrations, and needs

A user-centred design begins with a deep understanding of the audience. One of the most effective tools for this is the empathy map, which helps the team "step into the shoes" of different user types. This map explores what the user sees, hears, says, thinks, feels, fears, and desires. It often leads to the creation of user personas —archetypal profiles that guide design decisions. Examples of these personas might include:

  - A sceptical but influenceable user.
  - A proactive user engaged with the cause.
  - A pragmatic user who engages only when there's personal value.

Each persona demands unique narrative styles, motivational cues, and interaction models. The more detailed the profiling, the more precisely the design can be tailored.

- Expected behaviours and skills to foster

Once the user profiles are in place, the next step is to define the key behaviours the system should promote: completing challenges, exploring content, collaborating with others, or sharing progress, among other possibilities within the experience. This section also identifies the skills the experience should help develop, both hard skills (like conceptual knowledge, problem-solving) and soft skills (such as empathy, decision-making, strategic thinking, perseverance, or emotional regulation). Thanks to these definitions, the framework can support the design of inclusive mechanics that accommodate a variety of player motivations and interaction styles.

- Intrinsic and extrinsic motivation

Motivation is the driving force behind any meaningful experience. Once the users have been described, it is feasible to identify both intrinsic and extrinsic motivators relevant to the audience. Frameworks such as Steven Reiss' 16 basic desires (e.g., curiosity, social contact, acceptance, order, independence, status) can help tap into deeper psychological triggers. Similarly, the MDA model (Mechanics, Dynamics, Aesthetics) offers a guide to designing for various types of player enjoyment: challenge, discovery, narrative, expression, community,

and immersion. Designing with these motivators in mind makes it possible to craft rich and varied experiences that resonate emotionally and cognitively across different user types. In fact, one highly effective qualitative method that can be additionally used in the analysis phase in some cases is the identification of "magic" and "tragic" moments in the user journey. Magic moments are those that surprise, delight, connect, and empower the user. Tragic moments, in contrast, generate confusion, frustration, or disengagement. The latter should be avoided. Mapping these moments allows the team to amplify what works and anticipate and redesign what doesn't. This highlights the importance of designing emotionally balanced experiences that leave lasting impressions.

- Experience balance and tone

For more advanced designers and creators, the balancing activity defines the emotional, narrative, and functional balance of the experience. It considers pairs of design axes (individual vs. group, competitive vs. cooperative, rational vs. emotional, realistic vs. metaphorical, spontaneous vs. structured) to help articulate the tone and nature of the experience. This balancing act ensures consistency across all design layers, avoiding mismatches between the game's narrative, visuals, and mechanics. It also guides decisions on the type of rewards, feedback systems, and user pacing that should be prioritized to align with the project's mission.

- Community activation and engagement

A final component of the analysis phase that can be worked and delivered in parallel is the focus on strategies to create or strengthen an active community around the experience. This community not only sustains long-term engagement but also becomes a source of feedback, content, and social validation.

  - Tools and mechanisms to support community development may include:
  - Achievement systems and public recognition.
  - Collaborative challenges and missions.
  - User-generated content and storytelling.
  - Profile creation and user roles.
  - Integration with social media and event-based engagement.

The goal is to transition from individual participation to collective belonging, where users not only play but co-create, validate, and amplify the experience.
In conclusion, the analysis phase of an Experience Design Document is not just a methodological formality —it is the strategic heart of the project. It transforms a concept into a human-centred design framework, aligned with real emotional, cognitive, and social needs. By designing from empathy, motivation, and purpose, the resulting gamified experience is not only functional and enjoyable, but also transformative. This is where the real design journey begins: by listening, researching, imagining —and analysing.

Important note: the data gathered from the Kick Off phase during the cocreation should be explicitly and directly shared in this section of the EDD.

3 EDD: SYNTHESIS (TECHNICAL)

3.1 THE GAME DESIGN DOCUMENTS

As part of the methodological process and based on the decisions made regarding game design during the group co-creation activities, specific parameters will be identified in each case, and these can be utilized to inform the selection and recommendation of the most suitable Game formats. The following sections detail the formats, and the conditions established from the co-creation outcomes, which serve as a foundation for recommending each of the formats developed throughout this document.

3.1.1 AR Museum Explorer

AR Museum Explorer is an augmented reality (AR) exploration game specifically designed to be played in a textile museum, although its modular design allows it to be adapted to other types of museums or cultural spaces. The game uses AR technology to blend the physical world of the museum with an interactive digital layer, creating an immersive experience that combines education, entertainment, and exploration. Players, equipped with their mobile devices (smartphones or tablets), become explorers who must uncover the secrets hidden in the fabrics, embroideries, and weavings that are part of the museum's collection. As they move through the exhibits, the app uses the device's camera to recognize the displayed textile pieces and overlay information, animations, and interactive elements on the screen.

Cocreation condition:
Ideal (complete)
IF ((MOTIVATORS = INDEPENDENCE | Freedom) OR (MOTIVATORS = CONTACT | Social) OR (MOTIVATORS = PHYSICAL ACTIVITY | Vitality))
AND IF ((MECHANICS = World Exploration) OR (MECHANICS = Contextual Interactions) OR (MECHANICS = Puzzles) OR (MECHANICS = Inventory))
AND IF (GENRE = Action-adventure) THEN we can suggest the AR Museum Explorer format

Realistic (partial)
Either (just one of the conditions below):
- At least, one of the previous MOTIVATORS besides one of the MECHANICS
- Two cited MOTIVATORS or two cited MECHANICS
- Fulfilling the GENRE
- Or any combination of the previous

Benefits:
- **Educational:** Players learn about textiles, history, and culture in an interactive and fun way.
- **Immersive:** AR makes the experience more transparent, adaptive, engaging and memorable.
- **Motivational:** The game encourages thorough exploration of the museum, ensuring visitors don’t miss any sections while well guided (and educated).
- **Accessible:** The app can offer content in multiple languages and adapt to different levels of knowledge (ages, difficulty levels, digital competence skills).
- **Visual Examples:**

Pokémon GO (Scopely and Niantic) is an augmented reality (AR) mobile game where players explore the real world to find, catch, and battle virtual Pokémon. Using GPS and their device's camera, players can discover Pokémon in different locations, visit PokéStops for items, and join Gym battles. The game encourages outdoor exploration, social interaction, and collecting Pokémon across various environments.

In Game with AR in a real environment

GPS map in a real city

Figure 1. Snapshots of Pokémon GO

Technical sheet

- **Target:** Kids, teens, young adults.
- **Platform:**
  - **AR**: Core technology, blending the physical and digital worlds.
- **Motivators:**
  - **INDEPENDENCE** | Freedom
  - **CONTACT** | Social
- **Genre:**
  - **Action-adventure**: Exploration and interactive challenges.
- **Mechanics:**
  - **World Exploration**: Exploring the museum and its exhibits.
  - **Contextual Interactions**: AR overlays provide interactive information and challenges.
  - **Puzzles**: Solving textile-related puzzles to progress.

Cocreation Items: Kick off phase
Objectives of the Game:

- Promote Cultural Learning: Yes, by providing interactive information about textiles, their history, and cultural significance through AR.
- Preserve Cultural Heritage: Yes, by encouraging players to engage with and learn about textile artifacts in a modern, accessible way.
- Engage Local Communities: Yes, by offering a unique, tech-driven way to explore local museums and cultural spaces.
- Provide an Immersive Experience: Yes, AR technology creates a captivating blend of the physical and digital worlds.

- Reach a Wide Audience: Yes, the game is accessible to players of all ages and can be adapted to multiple languages and knowledge levels.
- Measure Educational and Cultural Impact: Yes, through in-app analytics tracking player action, engagement and learning progress.

Behaviours:

- **Research more about the culture presented in the game:** Likely, as players may become curious about the historical and cultural facts shared through AR. Virtual artifacts can be connected to the real ones by means of game mechanics and storytelling.
- **Visit a museum or cultural site related to the themes explored in the game:** Highly likely, as the game is designed to enhance physical museum visits. And it happens there while visiting.
- **Share knowledge about the textile heritage explored in the game with friends or family:** Likely, as players may discuss the interactive AR experiences they had. They might play together in fact.
- **Advocate for the preservation of a cultural site or tradition highlighted in the game:** Possible, if players feel inspired by the game's content. Besides that, the content can be preserved in a digital way too.
- **Contribute to fan forums or communities discussing the cultural and educational impact of the game:** Possible, if the game builds a dedicated player base.
- **Create and share fan-made content (e.g., videos, artwork, mods) that expands on the cultural aspects of the game:** Possible, especially among tech-savvy players. The museum's contents could be connected with other brands.

Type of Target:

- Museum visitors, history and culture enthusiasts, families, and tech-savvy players interested in AR experiences.
- Kids, teens, young adults.

Platforms:

- **Mobile game:** Primary platform, as AR relies on smartphones or tablets.
- **Hybrid:** Can be adapted for use in other cultural spaces or combined with VR for a more immersive experience.
- **AR:** Core technology, blending the physical and digital worlds.

Game design phase: Motivators in the Game

- CURIOSITY | Questioning
- INDEPENDENCE | Freedom
- CONTACT | Social
- POWER | Efficacy
- STATUS | Vanity

Genre:

- **Action-adventure**: Exploration and interactive challenges**.**
- **Puzzle:** Solving AR-based puzzles to unlock content.
- **Simulation:** Simulating the experience of managing and/or restoring.

Mechanics:

- **Point and click**: Interacting with AR elements by tapping or clicking.
- **World exploration**: Exploring the museum and its exhibits.
- **Contextual interactions:** AR overlays provide interactive information and challenges.
- **Resource management:** Managing virtual resources to restore exhibits or unlock content.
- **Interactable objects:** AR-enhanced exhibits that respond to player actions.
- **Puzzles:** Solving textile-related puzzles to progress.
- **Skills:** Developing skills like pattern recognition or historical knowledge.

Status Rewards:

- **Trophies and Achievements:** Awarded for completing in-museum challenges or uncovering hidden objects with AR.
- **Exclusive Skins:** Customizable AR avatars or unique museum themes for a more personalized experience.
- **Titles or Nicknames:** Earned by progressing through certain levels or unlocking specific achievements.
- **Prestige Ranks and Levels:** Representing growth and expertise within the AR experience.
- **Event and Competition Rewards:** For joining special AR events, receiving unique items and recognition.

Access Rewards:

- **Exclusive Downloadable Content (DLC):** Access to additional AR exhibits or textile history.
- **Early Access:** To new AR features, including augmented reality games or museum enhancements.
- **Exclusive Game Modes:** Special AR challenges, scavenger hunts, or guided tours within the museum.
- **Zones or Exclusive Areas:** Unlocks hidden or restricted sections in the physical museum, accessible via AR.

Power Rewards:

- **Stat Boosts (Attributes):** Enhancements that increase power or speed when solving AR-based puzzles or managing resources.
- **Special Abilities or Powers:** Augmented tools like virtual restoration devices or AR interactions enhancing problem-solving.

Stuff Rewards:

- **Skins:** Customizable AR elements such as guides or exhibit frames that enhance the AR experience.
- **Decorations and Customization Items:** Personalization options for the AR museum interface.
- **Collectibles:** Special AR items such as virtual threads or textile patterns that provide educational insights.
- **Special Resources or Materials:** Used to restore or unlock additional AR-based exhibits.
- **Loot Boxes:** Containing randomly assigned AR items, collectibles, or tools that enhance gameplay.

3.1.2 VR Museum Journey

VR Museum Journey is a virtual reality (VR) game for PC, designed to complement and enhance visits to a textile museum, though it can also be enjoyed independently from home. Using VR headsets (such as Oculus Rift, HTC Vive, or similar), or even in traditional screen mode for those without this hardware, players can immerse themselves in experiences that transcend the limitations of the physical world. This game allows users to see and experience things that would otherwise be impossible, such as reconstructed historical scenes, special exhibitions with added elements, or recreations of people dressed in period costumes that come to life in a virtual environment.

Cocreation condition:
Ideal (complete)
IF (MOTIVATORS = CURIOSITY | Questioning) OR (MOTIVATORS = INDEPENDENCE | Freedom) OR (MOTIVATORS = PHYSICAL ACTIVITY | Vitality)
AND IF (MECHANICS = World Exploration) OR (MECHANICS = Interactable objects) OR (MECHANICS = Skills) OR (MECHANICS = Inventory)
AND IF ((GENRE = Action-adventure) OR (GENRE = Simulation) THEN we can suggest the VR Museum Journey format

Realistic (partial)

- Either (just one of the conditions below):
- At least, one of the previous MOTIVATORS besides one of the MECHANICS
- Two cited MOTIVATORS or two cited MECHANICS
- Fulfilling at least one of the cited GENRES
- Or any combination of the previous

Benefits:

- **Educational**: Players learn about textiles, history, and culture in an interactive and engaging way, making complex topics accessible and fun.
- **Immersive**: VR transports players to different times and places, creating a deeply engaging and memorable experience that feels real. VR is the queen of immersion!
- **Motivational**: The game encourages thorough exploration of the museum, ensuring visitors don't miss any sections and stay engaged throughout their visit. They learn experimentally by acting on the scenes.
- **Accessible**: The game can be played with or without VR headsets, making it available to a wider audience. It also supports multiple languages and adapts to different levels of knowledge.
- **Innovative**: By combining cutting-edge VR technology with cultural heritage, the game offers a unique way to experience and preserve and live history.
- **Flexible**: It can be enjoyed both in the museum as a complementary experience or at home as a standalone virtual tour, making it accessible to people worldwide.

Visual Example:

Ubisoft developed a virtual reality experience titled **Assassin's Creed: Escape the Animus (Ubisoft).** This immersive activity allows participants to dive into the universe of the saga and experience the adventures of the Assassins in a virtual environment

Figure 2. Visual Example

Technical sheet

- **Target:** Teens, young adults, adults (depends on its technological and 3D spatial level).
- **Platform:**
  - **AR**: Core technology, blending the physical and digital worlds.
- **Motivators:**
  - **CURIOSITY** | Questioning
  - **INDEPENDENCE** | Freedom
- **Genre:**
  - **Action-adventure**: Exploration and interactive challenges in a VR environment.
  - **Simulation**: Simulating the experience of managing and restoring a museum.
- **Mechanics:**
  - **World Exploration**: Exploring the museum and its exhibits.
  - **Interactable objects**: VR-enhanced exhibits that respond to player actions.
  - **Skills**: Developing skills like pattern recognition or historical knowledge.

Cocreation Items: Kick off phase

Objectives of the Game:

- **Promote Cultural Learning**: Yes, by offering immersive experiences that teach players about textiles, their history, and cultural significance.
- **Preserve Cultural Heritage**: Yes, by recreating historical scenes and artifacts in a virtual space, making them accessible to a global audience.
- **Engage Local Communities**: Yes, by offering a unique way to explore and appreciate local museums and cultural heritage.
- **Provide an Immersive Experience**: Yes, VR technology creates a deeply engaging and memorable experience.
- **Inspire Player Creativity**: Yes, by allowing players to interact with and explore historical textiles in innovative ways.
- **Reach a Wide Audience**: Yes, the game can be played in VR or traditional screen mode, making it accessible to players with or without VR hardware.
- **Measure Educational and Cultural Impact**: Yes, through in-game analytics tracking player engagement and learning progress.

Behaviours:

- **Research more about the culture presented in the game:** Likely, as players may become curious about the historical and cultural facts shared through VR.
- **Visit a museum or cultural site related to the themes explored in the game:** Possible, especially if players are inspired by the virtual experience where they can interact.

- **Share knowledge about the textile heritage explored in the game with friends or family:** Likely, as players may discuss the immersive VR experiences they had or compete/cooperate.
- **Advocate for the preservation of a cultural site or tradition highlighted in the game:** Possible, if players feel inspired by the game's content.
- **Recreate an art style, craft, or music featured in the game using real-world tools:** Possible, especially for players interested in textiles or history.
- **Contribute to fan forums or communities discussing the cultural and educational impact of the game:** Possible, if the game builds a dedicated player base.
- **Create and share fan-made content (e.g., videos, artwork, mods) that expands on the cultural aspects of the game:** Possible, especially among tech-savvy players**.**

Type of Target:

- Museum visitors, history and culture enthusiasts, VR gamers, and educators looking for innovative teaching tools.
- Teens, young adults, adults (depends on its technological and 3D spatial level).

Platforms:

- **Video game:** Primary platform, designed for PC with optional VR support.
- **VR:** Immersive technology using headsets to experience interactive, 3D environments, enhancing user engagement in virtual spaces.
- **Hybrid:** Can be adapted for use in other cultural spaces or combined with AR for a mixed-reality experience.

Game design phase: Motivators in the Game:

- **CURIOSITY | Questioning**
- **INDEPENDENCE | Freedom**
- **CONTACT | Social**
- **POWER | Efficacy**
- **STATUS | Vanity**
- **ORDER | Stability**

Genre:

- **Action-adventure**: Exploration and interactive challenges in a VR environment.
- **Simulation**: Simulating the experience of managing and restoring a museum.
- **Role-playing**: Players take on the role of curators or restorers, making decisions that impact the museum's success.

Mechanics:

- **World exploration:** Exploring the museum and its exhibits in a fully immersive VR environment.
- **Branched narratives:** Player decisions affect the story and the museum's development.
- **Resource management:** Managing virtual resources to restore exhibits or unlock content.
- **Interactable objects:** VR-enhanced exhibits that respond to player actions.
- **Puzzles:** Solving textile-related puzzles to progress.
- **Skills:** Developing skills like pattern recognition or historical knowledge.
- **Contextual interactions:** VR interactions provide immersive information and challenges.

Types of Rewards: Status Rewards:

- **Trophies and Achievements:** Rewards for completing challenges or unlocking exhibits.
- **Exclusive Skins:** Customizable VR avatars or unique museum themes.
- **Titles or Nicknames:** Earned by reaching milestones or special achievements.
- **Prestige Ranks and Levels:** Reflecting progress and expertise in the virtual museum.
- **Event and Competition Rewards:** Given for participating in special VR events, offering exclusive.

Access Rewards:

- **Exclusive Downloadable Content (DLC):** New VR exhibits or additional historical content to deepen the experience.
- **Early Access:** To new VR features or museum expansions, allowing players to explore before the official release.
- **Exclusive Game Modes:** Unique VR challenges or guided tours, offering alternative ways to explore the museum.
- **Zones or Exclusive Areas:** Unlocks hidden sections of the museum, giving access to restricted or immersive spaces.

Power Rewards:

- **Stat Boosts (Attributes):** Enhances abilities for solving VR puzzles, improving puzzle-solving or resource management.
- **Perks or passive abilities**: Bonuses like faster VR interactions or enhanced information displays.
- **Special Abilities or Powers:** Unique VR interactions, like virtual restoration tools.

Stuff Rewards:

- **Skins**: Customizable VR elements, like virtual guides or exhibit frames.
- **Decorations and customization items:** For personalizing the VR museum experience.
- **Collectibles**: Virtual threads, historical artifacts, or textile patterns.
- **Special resources or materials:** Used to restore exhibits or unlock content.
- **Loot Boxes:** Containing random VR items or collectibles.

3.1.3 Mobile Museum Quiz

Mobile Museum Quiz is a mobile game in which users can follow a thematic route about the evolution of textiles, completing missions that include interactive challenges. For example, they might solve puzzles related to weaving techniques or identify materials used in specific pieces. Throughout the visit, players encounter questions related to the exhibits, their history, manufacturing techniques, or cultural context. Answering correctly allows them to progress in the mission. Users can also collect "virtual threads" or other collectibles by completing missions or answering questions correctly. These elements help them unlock additional stories, achievements, or exclusive content, such as fun facts about the pieces or interviews with experts. The app suggests thematic routes, such as "The Oldest Textiles in the Museum" or "The Symbolism in Traditional Embroidery," guiding users through the different rooms while they complete missions and learn about the pieces.

Cocreation condition:
Ideal (complete)
IF ((MOTIVATORS = CURIOSITY | Questioning) OR (MOTIVATORS = HONOR | Loyalty))
AND IF ((MECHANICS = World Exploration) OR (MECHANICS = Skills) OR (MECHANICS = Final Bosses))

AND IF ((GENRE = Strategy) THEN we can suggest the Mobile Museum Quiz format

Realistic (partial)

- Either (just one of the conditions below):
- One of the previous MOTIVATORS besides one of the MECHANICS
- One of the cited MOTIVATORS or two cited MECHANICS
- Fulfilling the cited GENRE
- Or any combination of the previous

Benefits:

- **Motivation**: The mission system encourages thorough exploration of the museum, ensuring visitors don't miss any sections.
- **Interactive learning**: Answering questions and solving challenges makes learning more active and fun.
- **Competition and collaboration**: Users can compete for the highest score or work together to complete more complex missions.
- **Accessibility**: Without requiring AR, the app is easier to implement and available to a wider audience.

Visuals Examples:

AdventuriQ is a gamification platform that enables game designers to create and deploy interactive activities such as team-building exercises, scavenger hunts, and escape rooms. Users can design these experiences for both indoor and outdoor settings, utilizing various game mechanics to engage participants. The platform offers a content management system for planning and monitoring, along with a free mobile app for participants to interact with the games.

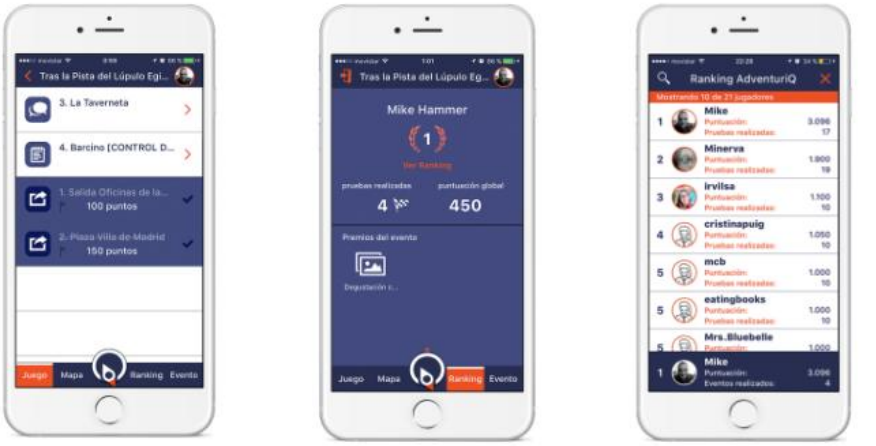


Figure 3. Snapshots of AdventuriQ

Technical sheet

- **Target:** kids, adults, seniors.
- **Platform:**
  - **Hybrid:** Can be adapted for use in other cultural spaces or combined with AR for an enhanced experience.
- **Motivators:**

  - **CURIOSITY** | Questioning
- **Genre:**
  - **Strategy:** Learning about textiles, history, and culture through interactive content and challenges.
- **Mechanics:**
  - **World Exploration:** Exploring the museum and its exhibits.
  - **Skills:** Developing knowledge about textiles and history through repeated play

Cocreation Items: Kick off phase
Objectives of the Game:

- **Promote Cultural Learning:** Yes, by teaching players about textiles, their history, manufacturing techniques, and cultural significance through interactive challenges and questions.
- **Preserve Cultural Heritage:** Yes, by encouraging players to engage with and learn about textile artifacts in a fun and accessible way.
- **Engage Local Communities:** Yes, by offering a unique, gamified way to explore local museums and cultural spaces.
- **Provide an Immersive Experience:** Yes, through thematic routes, interactive challenges, and collectibles that enhance the museum visit.
- **Reach a Wide Audience:** Yes, as a mobile game, it's accessible to players of all ages and skill levels.
- **Measure Educational and Cultural Impact:** Yes, through in-app analytics tracking player engagement, mission completion, and learning progress.

Behaviours:

- **Research more about the culture presented in the game:** Likely, as players may become curious about the historical and cultural facts shared through the game.
- **Visit a museum or cultural site related to the themes explored in the game:** Highly likely, as the game is designed to enhance physical museum visits.
- **Share knowledge about the textile heritage explored in the game with friends or family:** Likely, as players may discuss the missions, collectibles, and fun facts they encounter.
- **Advocate for the preservation of a cultural site or tradition highlighted in the game:** Possible, if players feel inspired by the game's content.
- **Contribute to fan forums or communities discussing the cultural and educational impact of the game:** Possible, if the game builds a dedicated player base.
- **Create and share fan-made content (e.g., videos, artwork, mods) that expands on the cultural aspects of the game:** Possible, especially among tech-savvy players.

Type of Target:

- Museum visitors, families, students, history and culture enthusiasts, and casual gamers.
- Age: kids, adults, seniors.

Platforms:

- **Mobile game**: Primary platform, designed for smartphones and tablets.
- **Hybrid**: Can be adapted for use in other cultural spaces or combined with AR for an enhanced experience.

Game design phase

Motivators in the Game:

- **CURIOSITY | Questioning**
- **INDEPENDENCE | Freedom**
- **CONTACT | Social**
- **POWER | Efficacy**
- **STATUS | Vanity**

Genre:

- **Puzzle:** Solving textile-related quizzes and challenges.
- **Adventure:** Exploring the museum and completing thematic routes.
- **Educational:** Learning about textiles, history, and culture through interactive content.

Mechanics:

- **Point and click:** Interacting with quiz questions and museum exhibits.
- **World exploration:** Exploring the museum and its exhibits through thematic routes.
- **Resource management:** Managing virtual resources like "virtual threads" to unlock content.
- **Interactable objects:** Quiz questions and collectibles that respond to player actions.
- **Puzzles:** Solving textile-related puzzles to progress.
- **Skills:** Developing knowledge about textiles and history through repeated play.

Types of Rewards:

Status Rewards:

- **Trophies and achievements:** For completing quizzes or unlocking exhibits.
- **Exclusive skins:** Customizable avatars or museum themes.
- **Titles or nicknames:** Earned through milestones or special achievements**.**
- **Prestige Ranks and Levels: Reflecting progress and expertise in the game.**
- **Event and Competition Rewards:** For participating in special quiz events.

Access Rewards:

- **Exclusive downloadable content (DLC):** Additional quiz packs or historical content**.**
- **Early Access:** To new quiz features or museum expansions**.**
- **Exclusive Game Modes:** Special quiz challenges or guided tours.
- **Zones or Exclusive Areas:** Unlocking hidden or restricted museum sections.

Power Rewards:

- **Stat Boosts (Attributes):** Improved abilities for solving quizzes or managing resources.
- **Perks or passive abilities**: Bonuses like faster quiz completion or enhanced information displays.
- **Special Abilities or Powers:** Unique quiz interactions, like hints or time extensions.

Stuff Rewards:

- **Skins:** Customizable elements, like virtual guides or exhibit frames.
- **Decorations and customization items:** For personalizing the museum experience.
- **Collectibles:** Virtual threads, historical artifacts, or textile patterns.
- **Special resources or materials:** Used to unlock content or complete missions.
- **Loot Boxes:** Containing random items or collectibles.

3.1.4 Casual Museum Puzzles

Casual Museum Puzzles is a casual game with simple yet engaging mechanics, perfect for players looking for short but rewarding sessions. Players manage a small textile workshop, aiming to improve it and level up by weaving garments through puzzle-based mini-games. These mini games involve connecting threads or combining colours to create unique pieces while learning about historical weaving techniques. As players progress, they unlock new historical eras—such as medieval, renaissance, and modern—each featuring unique designs and techniques. Along the way, they receive brief historical descriptions and fun facts about the textile culture of each era. The workshop can be upgraded with tools and decorations, making it a personalized and visually evolving space.

Cocreation condition:
Ideal (complete)
IF ((MOTIVATORS = POWER | Efficacy) OR (MOTIVATORS = STATUS | Vanity))
AND IF ((MECHANICS = Point and click) OR (MECHANICS = Puzzles) OR (MECHANICS = Final Bosses) OR (MECHANICS = Sporadic combats))
AND IF ((GENRE = Puzzle) OR (GENRE = Platform)) THEN we can suggest the Casual Museum Puzzles format
Realistic (partial)
Either (just one of the conditions below)

- One of the previous MOTIVATORS besides one of the MECHANICS
- One of the cited MOTIVATORS or two cited MECHANICS
- Fulfilling at least one of the cited GENRES
- Or any combination of the previous

Benefits of Both Games (Combined):

- **Quick and engaging:** Perfect for short gaming sessions, with fast-paced mechanics and rewarding progression.
- **Educational:** Learn about textiles, historical techniques, and cultural symbolism in a fun, interactive way.
- **Replayable:** Daily challenges, unlockable content, and increasing difficulty keep players coming back.
- **Creative and strategic:** Combine colours and threads to solve puzzles or manage a workshop, blending creativity with light strategy.
- **Customization:** Personalize your textile workshop with upgrades and decorations, making it uniquely yours.
- **Accessible:** Simple mechanics make both games easy to pick up, while depth and challenges cater to all skill levels.
- **Collectibles:** Unlock cards, patterns, and historical facts, adding a layer of discovery and completion.

Visual examples:

Candy Crush (King) is a match-three puzzle game where players swap candies to complete level objectives. It features power-ups, obstacles, and hundreds of progressively challenging levels.

In Game Level up

Figure 4. Snapshots of Candy Crush (King)

Technical sheet

- **Target:** adults, seniors.
- **Platform:**
  - **Mobile game:** Primary platform for accessibility.
- **Motivators:**
  - **POWER |** Efficacy
  - **STATUS |** Vanity
- **Genre:**
  - **Puzzle:** Solving textile-related puzzles to progress.
- **Mechanics:**
  - **Point and click:** Interacting with puzzles and museum exhibits.
  - **Puzzles:** Solving textile-related puzzles to progress.

Cocreation Items: Kick off phase

Objectives of the Game:

- **Promote Cultural Learning:** Yes, through historical descriptions, fun facts, and unlocking new eras with unique designs and techniques.
- **Preserve Cultural Heritage:** Yes, by teaching players about historical weaving techniques and textile symbolism.
- **Reach a Wide Audience:** Yes, as a casual game, it's accessible to a broad audience.

Behaviours:

- **Research more about the culture presented in the game**: Likely, as players may want to learn more about the historical eras and techniques featured.
- **Visit a museum or cultural site related to the themes explored in the game:** Possible, if players feel inspired by the game's content.
- **Share knowledge about the textile heritage explored in the game with friends or family**: Likely, as players may discuss the historical facts they learn.
- **Contribute to fan forums or communities discussing the cultural and educational impact of the game:** Possible, if the game builds a dedicated community.

Type of Target:

- Casual gamers, history and culture enthusiasts, and players who enjoy creative and management games.

- Age: adults, seniors.

Platforms:

- **Mobile game**: Primary platform for accessibility.
- **Hybrid**: Can also be adapted for PC, especially for players who prefer a larger screen and more detailed gameplay.

Game design phase: Motivators in the Game:

- **CURIOSITY | Questioning**
- **INDEPENDENCE | Freedom**
- **POWER | Efficacy**
- **STATUS | Vanity**.

Genre:

- **Puzzle:** Solving textile-related puzzles to progress.
- **Adventure:** Exploring the museum and completing thematic routes.
- **Educational:** Learning about textiles, history, and culture through interactive content.

Mechanics:

- **Point and click:** Interacting with puzzles and museum exhibits.
- **World exploration:** Exploring the museum and its exhibits through thematic routes.
- **Puzzles:** Solving textile-related puzzles to progress.
- **Skills:** Developing knowledge about textiles and history through repeated play.

Types of Rewards

Status Rewards:

- **Trophies and achievements:** For completing puzzles or unlocking exhibits**.**
- **Exclusive skins:** Customizable avatars or museum themes.
- **Titles or nicknames:** Earned through milestones or special achievements.
- **Prestige Ranks and Levels:** Reflecting progress and expertise in the game.
- **Event and Competition Rewards:** For participating in special puzzle events.

Access Rewards:

- **Exclusive downloadable content (DLC):** Additional puzzle packs or historical content.
- **Early Access:** To new puzzle features or museum expansions.

Power Rewards:

- **Perks or passive abilities:** Bonuses like faster puzzle completion or enhanced information displays.
- **Special Abilities or Powers:** Unique puzzle interactions, like hints or time extensions.

Stuff Rewards:

- **Skins:** Customizable elements, like virtual guides or exhibit frames.
- **Decorations and customization items:** For personalizing the museum experience.
- **Collectibles:** Virtual threads, historical artifacts, or textile patterns.
- **Special resources or materials:** Used to unlock content or complete missions.
- **Loot Boxes: Containing random items or collectibles.**

3.1.5 Hypercasual Museum Puzzles

Hypercasual Museum Puzzles is a hyper-casual game based on simplicity and replayability, designed for short and repetitive gaming sessions. The goal is to complete quick matches to

level up and unlock new challenges. Players must weave patterns as fast as possible by swiping to connect threads and complete designs before time runs out. They must avoid mistakes like broken threads or incorrect colours, which deduct points and hinder progress. As they progress, players unlock new patterns and colours, facing increasingly challenging levels. Progression includes short and fast-paced levels with incremental difficulty, as well as daily challenges and rewards for streaks of correct answers. Upon completing levels, players receive brief messages with fun facts about textiles and unlock collectible cards with historical or cultural information. The goal is to collect all the cards to complete the game, combining quick fun with small touches of learning. In case you are wondering about the differences between **casual** and **hyper-casual** puzzle games, the key lies in their depth, pacing, and engagement style. **Casual games** offer a more structured experience with progressive challenges, customization, and a sense of long-term achievement. On the other hand, **hyper-casual games** focus on simplicity, fast-paced mechanics, and instant replayability, making them perfect for quick, on-the-go sessions. Both games incorporate elements of textile history, but while **casual gameplay fosters long-term progression and personalization**, **hyper-casual gameplay thrives on instant accessibility and high replayability**.

Cocreation condition:
Ideal (complete)
IF ((MOTIVATORS = POWER | Efficacy) OR (MOTIVATORS = STATUS | Vanity))
AND IF ((MECHANICS = Interactable objects) OR (MECHANICS = Puzzles) OR (MECHANICS = Final Bosses) OR (MECHANICS = Sporadic combats))
AND IF ((GENRE = Puzzle) OR (GENRE = Survival)) THEN we can suggest the Hypercasual Museum Puzzles format

Realistic (partial)
Either (just one of the conditions below):

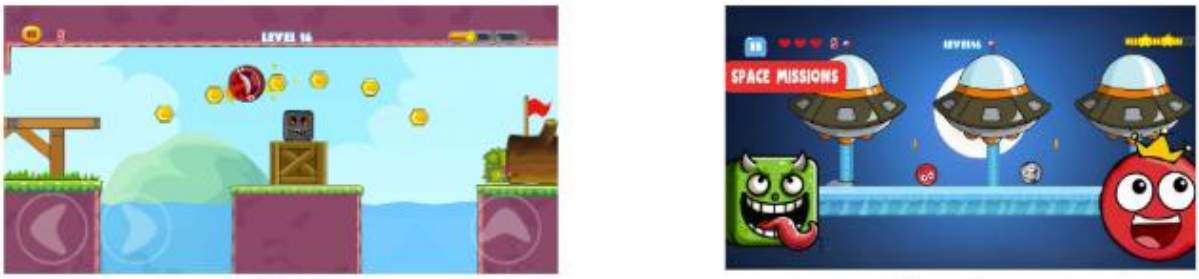
- One of the previous MOTIVATORS besides one of the MECHANICS
- One of the cited MOTIVATORS or two cited MECHANICS
- Fulfilling at least one of the cited GENRES
- Or any combination of the previous

Benefits of Both Games (Combined):

- **Quick and engaging:** Perfect for short gaming sessions, with fast-paced mechanics and rewarding progression.
- **Educational:** Learn about textiles, historical techniques, and cultural symbolism in a fun, interactive way.
- **Replayable:** Daily challenges, unlockable content, and increasing difficulty keep players coming back.
- **Creative and strategic:** Combine colours and threads to solve puzzles or manage a workshop, blending creativity with light strategy.
- **Customization:** Personalize your textile workshop with upgrades and decorations, making it uniquely yours.
- **Accessible:** Simple mechanics make both games easy to pick up, while depth and challenges cater to all skill levels.
- **Collectibles:** Unlock cards, patterns, and historical facts, adding a layer of discovery and completion**.**

Visual Examples:

Red Ball 4 (FDG Entertainment and Yohoho Games) on mobile is a fast-paced, minimalist platformer where players guide a red ball through levels filled with obstacles and enemies. Simple controls and quick gameplay make it highly replayable.



In Game Level up

Figure 5. Snapshot of Red Ball 4

3.4.1.1 Technical sheet

- **Target:** Teens, young adults.
- **Platform:**
  - **Mobile game:** Primary platform due to its hyper-casual nature.
- **Motivators:**
  - **POWER | Efficacy**
  - **STATUS | Vanity**
- **Genre:**
  - **Puzzle:** Solving textile-related puzzles to progress.
- **Mechanics:**
  - **Interactable objects**: Puzzles and collectibles that respond to player actions.
  - **Puzzles**: Solving textile-related puzzles to progress.

Cocreation Items: Kick off phase

- **Promote Cultural Learning:** Yes, through fun facts and collectible cards about textiles and their historical/cultural context.
- **Provide an Immersive Experience:** Yes, through fast-paced, engaging gameplay that keeps players focused and entertained.
- **Reach a Wide Audience:** Yes, as a hyper-casual game, it's designed to be accessible and appealing to players of all ages and skill levels.

Behaviours:

- **Research more about the culture presented in the game:** Likely, as players may become curious about the historical and cultural facts shared in the game.
- **Share knowledge about the textile heritage explored in the game with friends or family:** Possible, as players may discuss the fun facts or collectibles they unlock.
- **Contribute to fan forums or communities discussing the cultural and educational impact of the game:** Possible, if the game gains a dedicated player base.

Type of Target:

- Casual gamers, history enthusiasts, and players interested in quick, educational experiences.
- Teens, young adults.

Platforms:

- **Mobile game**: Primary platform due to its hyper-casual nature.
- **Hybrid:** Could also be adapted for PC with minimal changes.

Game design phase

Motivators in the Game:

- **CURIOSITY | Questioning**
- **INDEPENDENCE | Freedom**
- **POWER | Efficacy**
- **STATUS | Vanity**

Genre:

- **Puzzle:** Solving textile-related puzzles to progress.
- **Educational:** Learning about textiles, history, and culture through interactive content.

Mechanics:

- **Point and click:** Interacting with puzzles by tapping or swiping.
- **Interactable objects:** Puzzles and collectibles that respond to player actions.
- **Puzzles:** Solving textile-related puzzles to progress.
- **Skills:** Developing quick thinking and pattern recognition through repeated play.

Types of Rewards:

Status Rewards:

- **Trophies and achievements:** For completing puzzles or unlocking exhibits.
- **Exclusive skins:** Customizable avatars or puzzle themes.
- **Titles or nicknames:** Earned through milestones or special achievements.
- **Prestige Ranks and Levels:** Reflecting progress and expertise in the game.
- **Event and Competition Rewards:** For participating in special puzzle events or leaderboard challenges.

Access Rewards:

- **Exclusive downloadable content (DLC):** Additional puzzle packs or historical content.
- **Early Access:** To new puzzle features or museum expansions.
- **Exclusive Game Modes:** Special puzzle challenges or timed events.

Power Rewards:

- **Stat Boosts (Attributes):** Improved abilities for solving puzzles faster or with fewer mistakes.
- **Perks or passive abilities:** Bonuses like extra time or hints for challenging puzzles.
- **Special Abilities or Powers:** Unique puzzle interactions, like auto-completing a row or column.

Stuff Rewards:

- **Skins:** Customizable elements, like puzzle backgrounds or themes.
- **Collectibles:** Virtual threads, historical artifacts, or textile patterns.
- **Special resources or materials:** Used to unlock content or complete missions.
- **Loot Boxes:** Containing random items or collectibles.

3.1.6 Adventure and Resource Management in the Museum

Adventure and Resource Management in the Museum is a multiplayer graphic adventure combining visual novel elements and turn-based strategy, set in a textile museum. Players act as curators and restorers, managing resources to solve realistic problems like leaks, dust, and pests while balancing a limited budget. As they restore the museum, they attract more visitors, earning money to buy resources, upgrade facilities, and unlock new areas. Progress reveals historical weaving techniques, textile symbolism, and cultural impact through "historical archives," blending education with collaborative gameplay and strategic decision-making.

Cocreation condition:
Ideal (complete)
IF ((MOTIVATORS = IDEALISM | Compassion) OR (MOTIVATORS = ORDER | Stability))
AND IF ((MECHANICS = Branched narratives) OR (MECHANICS = Resource management))
AND IF ((GENRE = Simulation) OR (GENRE = Role Playing) OR (GENRE = Survival)) THEN we can suggest the Adventure and Resource Management in the Museum format

Realistic (partial)
Either (just one of the conditions below):

- One of the previous MOTIVATORS besides one of the MECHANICS
- One of the cited MOTIVATORS or one of the cited MECHANICS
- Fulfilling at least one of the cited GENRES
- Or any combination of the previous

Benefits:

- **Collaborative gameplay**: Work with other players to restore and manage the museum, fostering teamwork and strategy.
- **Educational**: Learn about textile history, weaving techniques, and cultural symbolism in an engaging way.
- **Realistic challenges**: Solve practical problems like leaks, dust, and pests, adding a unique twist to resource management.
- **Progression and discovery**: Unlock new museum areas and historical archives as you progress, keeping the experience fresh.
- **Immersive storytelling**: Shape the museum's story through your decisions, with a narrative that blends history and strategy.
- **Budget management**: Strategically allocate limited resources, adding depth and realism to the gameplay.

Visual Examples:

Return to Monkey Island (Terrible Toybox and Developer Digital) is a point-and-click adventure game where players solve puzzles and explore humorous, tropical environments. The game follows the protagonist, Guybrush Threepwood, as he embarks on a new adventure to uncover the secrets of Monkey Island.

In Game Resources

Figure 6. Snapshot of Guybrush Threepwood Game

Technical sheet

- **Target:** Teens, young adults, adults, seniors.
- **Platform:**
  - **Video game:** Primary platform, designed for PC or consoles.
  - **Multiplayer:** Encourages collaboration and strategic decision-making among players.
- **Motivators:**
  - **IDEALISM |** Compassion
  - **ORDER |** Stability
- **Genre:**
  - **Simulation:** Simulating the experience of managing and restoring a museum.
  - **Role-playing:** Players take on the role of curators or restorers, making decisions that impact the museum's success.
- **Mechanics:**
  - **Branched narratives**: Player decisions affect the story and the museum's development.
  - **Resource management**: Managing virtual resources to solve problems and restore exhibits.

Cocreation Items: Kick off phase

Objectives of the Game:

- **Promote Cultural Learning:** Yes, by teaching players about historical weaving techniques, textile symbolism, and cultural impact through "historical archives."
- **Preserve Cultural Heritage:** Yes, by simulating the restoration and management of a textile museum, highlighting the importance of preserving cultural artifacts.
- **Engage Local Communities:** Yes, by offering a collaborative and educational experience that can inspire real-world interest in local museums and cultural heritage.
- **Provide an Immersive Experience:** Yes, through a blend of graphic adventure, visual novel storytelling, and strategic gameplay.
- **Inspire Player Creativity:** Yes, by allowing players to make decisions about museum restoration, upgrades, and resource management.
- **Reach a Wide Audience:** Yes, as a multiplayer game with accessible mechanics, it appeals to both casual and strategic gamers.
- **Measure Educational and Cultural Impact:** Yes, through in-game analytics tracking player decisions, progress, and engagement with historical content.

Behaviours:

- **Research more about the culture presented in the game:** Likely, as players may become curious about the historical and cultural facts shared through the game.
- **Visit a museum or cultural site related to the themes explored in the game:** Possible, especially if players feel inspired by the restoration and management aspects.
- **Share knowledge about the textile heritage explored in the game with friends or family:** Likely, as players may discuss their strategies and discoveries.
- **Advocate for the preservation of a cultural site or tradition highlighted in the game:** Possible, if players feel inspired by the game's content.
- **Start a personal project inspired by the cultural themes or artistic elements from the game:** Possible, especially for players interested in history, crafts, or museum management.
- **Contribute to fan forums or communities discussing the cultural and educational impact of the game:** Possible, if the game builds a dedicated player base.
- **Create and share fan-made content (e.g., videos, artwork, mods) that expands on the cultural aspects of the game:** Possible, especially among creative and strategic players.

Type of Target:

- Museum enthusiasts, history and culture lovers, strategic gamers, and players interested in resource management and storytelling.
- Teens, young adults, adults, seniors.

Platforms:

- **Video game:** Primary platform, designed for PC or consoles.
- **Hybrid:** Combines graphic adventure, visual novel, and turn-based strategy elements.
- **Multiplayer:** Encourages collaboration and strategic decision-making among players.

Game design phase: Motivators in the Game:

- **CURIOSITY | Questioning**
- **INDEPENDENCE | Freedom**
- **IDEALISM | Compassion**
- **ORDER | Stability**

Genre:

- **Adventure:** Exploring the museum and uncovering its stories.
- **Strategy**: Managing resources and making decisions to restore the museum.
- **Simulation**: Simulating the experience of managing and restoring a museum.
- **Role-playing**: Players take on the role of curators or restorers, making decisions that impact the museum's success.

Mechanics:

- **World exploration:** Exploring the museum and its exhibits.
- **Branched narratives:** Player decisions affect the story and the museum's development.
- **Resource management:** Managing virtual resources to solve problems and restore exhibits.
- **Interactable objects:** Exhibits and tools that respond to player actions.
- **Skills:** Developing skills like budgeting, restoration, and historical knowledge**.**
- **Contextual interactions:** Interactive elements that provide immersive information and challenges.

Types of Rewards

Status Rewards:

- **Trophies and achievements:** For completing challenges or restoring exhibits.
- **Exclusive skins:** Customizable Museum themes or curator avatars.
- **Titles or nicknames:** Earned through milestones or special achievements.
- **Prestige Ranks and Levels:** Reflecting progress and expertise in the game.
- **Event and Competition Rewards:** For participating in special restoration events.

Access Rewards:

- **Exclusive downloadable content (DLC):** Additional exhibits or historical content.
- **Early Access:** To new features or museum expansions.
- **Exclusive Game Modes: Special** challenges or guided tours.
- **Zones or Exclusive Areas**: Unlocking hidden or restricted museum sections.

Power Rewards:

- **Stat Boosts (Attributes):** Improved abilities for solving problems or managing resources.
- **Perks or passive abilities:** Bonuses like faster restoration or enhanced visitor attraction.
- **Special Abilities or Powers:** Unique tools or interactions, like virtual restoration kits.

Stuff Rewards:

- **Skins**: Customizable elements, like museum decorations or exhibit frames.
- **Decorations and customization items**: For personalizing the museum experience.
- **Collectibles**: Virtual threads, historical artifacts, or textile patterns.
- **Special resources or materials**: Used to restore exhibits or unlock content.
- **Loot Boxes**: Containing random items or collectibles.

3.2 THE STORYTELLING

Please follow these colours codes:

- Blue: Fixed text
- Magenta: Variable (fixed but according to user's selections)
- Orange: Written by the users (in some cases they can build upon a base text provided based on the user's selections)
- Red: Rules & IA generation

3.2.1 The Plot of your Story

According to the decisions you made on the Activity "Universal Plots" (activity based on the book The Immortal Seed [link here]), the Story Plot you considered most interesting or relevant to your target audience; or that better fulfils your goals or addresses your subject, are related to the following Universal patterns:

[IF THEY SELECTED IN SEARCH OF TREASURE AS THE MAIN PLOT AND WITHIN THE LABERYNTH AS THE SECOND]

Mainly:
IN SEARCH OF TREASURE: characterized by a mission that leads to a journey where the hero

will face duels, unexpected aids, escapes... and, after winning the final duel with the owner of the object at the place of arrival, will return victorious to the place of origin, with material and spiritual treasures. This plot comes from the universal reference of Jason and the Argonauts.

Secondarily:
WITHIN THE LABYRINTH: characterized by a man alone faced with a universal, opaque and immobile structure. It shows the attempt of power to absorb and annul man, an adventure across the ocean of disorientation, the total abolition of the concept of home and the conversion of the world into a space for strangers. This plot is based on the universal reference The Castle (Kafka).

Remember that they are the ones that resonated with you as the story that your experience may need probably in a more intuitive and metaphorical way than literal. The idea is that the characteristics of the journey of the main character (or characters) of your universal plot(s) coincide in some way with the type of journey that fits your project and users (Is it an inner journey? Is it an individual or collective one? Is it an upward or downward journey? Is it a contrast between the past and the future? Is it about the creation of a new world?...).This ranking of plots helps you write your story, allowing it to follow the structure and specific characteristics of the chosen plot(s).

3.2.2 The Tone of your Story

According to the decisions you made on the Activity "The Tone of the Story" the Tone you considered that best fitted your target audience are the following:

[IF THEY SELECTED EPIC AND INFORMAL AS THE MAIN TONES]

Mainly:

- **Epic**: Grand, heroic, and larger-than-life. The story often involves significant stakes, monumental events, or legendary characters. It conveys a sense of scale and importance, with dramatic moments and high emotional impact, emphasizing the significance of the journey or struggle.
- **Informal**: relaxed and conversational, using everyday speech and a casual approach. There is no formality or pretension, and the characters engage in natural, unfiltered dialogue. The mood is approachable, often set in familiar, everyday environments.

The Tone of a Story refers to the emotional attitude or overall mood conveyed by the scriptwriter through their story and narrative elements; reflecting how the author feels about the subject matter or how they want the consumer of the story to feel while engaging with it).

3.2.3 The Story

The synopsis you have written for your story is as follows:

To create it, IA can take:

- The main Objectives of the project (Activity 1.1.)
- The Behaviours to activate (1.2.)

- The Empathy map info (1.3.)
- The Intrinsic motivators (2.1.)
- The Genre (2.2.)
- The Plot (3.1.) and
- The Tone information (3.2.)

and propose a Synopsis. Users can change both the Prompt (for instance, adding specific information of their project to narrow the scope of the Prompt) or directly the proposed Synopsis, that has a limitation of 1.000 characters]

"In a world where fabrics shape destinies, Aislin, a young weaver, discovers a…"

3.2.4 The Characters

Here you have the main characters of your story, based on Joseph Campbell and Jung's archetypes.

1. Name: XXX

   Archetype: Hero

   - Role: The central figure of the story who embarks on a journey of growth, challenge, and transformation.
   - Traits: Courageous, determined, and flawed, often starting as an ordinary individual who rises to greatness.
   - Purpose: To overcome obstacles, confront fears, and fulfil their potential, often bringing change to the world around them.

   Character Description:

   Amelia "Mia" Carter, 29, is a former investigative journalist turned private investigator, driven by a relentless sense of justice after uncovering corruption that derailed her career and strained her family ties. With auburn hair, sharp hazel eyes, and a lean frame clad in her signature worn leather jacket, she navigates the shadows of the city, her quick wit and guarded demeanour masking a deep empathy for those society overlooks, while habits like quoting obscure literature and sipping perpetually unfinished cups of black coffee reveal a restless, introspective side.

2. Name: YYY

   Archetype: Mentor

   - Role: A guide or teacher who provides the hero with knowledge, tools, or training.
   - Traits: Wise, experienced, and supportive, often with a past filled with their own struggles.
   - Purpose: To prepare the hero for challenges and impart wisdom, sometimes at the cost of their own life.

   Character Description:

Nathan "Nate" Bishop, 35, is a rugged survivalist and former firefighter with a weathered face that reflects years of hardship and courage. His dark, curly hair is streaked with grey, and his piercing blue eyes hold a quiet intensity, always scanning the environment for threats or opportunities.

3. Name: ZZZ

   Archetype: Shadow

   - Role: The antagonist or opposing force that embodies the hero's deepest fears or darkest desires.
   - Traits: Intimidating, powerful, and often morally complex, representing the hero's internal or external conflict.
   - Purpose: To challenge the hero and serve as a mirror to their weaknesses or potential downfall.

   Character Description:

   Sofia Ramirez, 27, is a vibrant, fiercely ambitious chef working her way up in the competitive world of haute cuisine. With short, jet-black hair often tucked under a bandana and warm brown eyes that light up when she talks about food, she's a whirlwind of energy and determination.

Remember that knowing your characters' personalities, motivations, and backstories ensures their actions and dialogue feel authentic and consistent, making the story more cohesive. Additionally, well-developed characters drive the plot naturally, helping you structure the script around their goals, conflicts, and growth.

3.2.5 Elements

Here you have the main objects and scenarios that could be important to your story:

OBJECTS

- Glasses
- Key
- Book

Remember that objects can play a key role in symbolism, character development, plot devices, world-building, and emotional connection.

SCENARIES

- Bridge
- Library
- Mountains

Remember that scenarios can play a key role in reflecting the characters' emotional states, creating atmosphere and tone, driving the narrative, facilitating interaction and conflict; and enhancing world-building.

3.2.6 Outline

Here you have the Outline where you should define, before start producing the videogame, each scene, with: the plot, the characters that appear, the locations, the dialogues, and any other information you think is relevant for the creation of your story.

	SCENE 1	SCENE 2	SCENE 3	SCENE 4	SCENE 5
Plot					
Description					
Characters					
Location					
Dialogues					

Figure 7. Structure- design

TAKE INTO ACCOUNT THAT:

In video games, unlike movies, the narrative is not always linear, where the story progresses in a fixed sequence, and the audience experiences the plot in a specific order. There are other types of narratives that you can consider when applying storytelling to your videogame.

Here are some types of non-linear narratives:

- **Branching Narrative**: The story offers multiple pathways or choices that lead to different outcomes. The player's decisions influence the direction of the plot, providing a more personalized experience.
- **Emergent Narrative**: The story is created through the interaction of game mechanics and player actions rather than a scripted plot. These narratives arise from the player's decisions and behaviour within the game world.
- **Environmental Storytelling**: The game world itself tells the story through its design, objects, and the environment. Players uncover pieces of the narrative through exploration and observation, without direct exposition.
- **Player-driven Narrative**: Players have significant control over the narrative, often through role-playing or sandbox-style gameplay. They can create their own stories within the game world, making choices that deeply affect the narrative.
- **Non-linear Narrative**: The game allows players to explore the story in any order, without a set path. This type of narrative often features multiple subplots and allows for exploration at the player's own pace.
- **Interactive Storytelling**: This type of narrative emphasizes player interaction with the story, allowing them to influence characters, dialogue, and plot points in real-time, often through decision-making mechanics.
- **Dynamic Narrative**: Similar to emergent storytelling, but with more structured elements, dynamic narratives adapt to the player's actions in ways that go beyond pre-

designed branching paths, creating a unique experience each time.

Each type of narrative offers a different way for players to engage with the story, providing a diverse range of experiences in gaming.

3.3 THE AESTHETICS

Please follow these colours codes:

- Blue: Fixed text
- Magenta: Variable (fixed but according to user's selections)
- Orange: Written by the users (in some cases they can build upon a base text provided based on the user's selections)
- Red: Rules & IA generation

3.3.1 Game Visual Style

According to the decisions you made in the "Game Visual Style" activity, the visual styles you have identified as the best fit for your project are as follows:

1. Characters, Environments, and Items: Minimalist Style. An artistic style that deviates from the norms, focussing on essential elements, limited palettes and simple geometric shapes. Although, its visual effects tend towards abstraction and surrealism. It can be both 2D and 3D.What's special about this style? Negative space can be used effectively to guide the user's gaze. And contrary to what it seems; it is not a restrictive style. Variations can be introduced to keep it attractive and adapt it to the game content or audience.

2. Typography and Menus: Realistic Style. 3D artistic style that seeks to represent reality as faithfully as possible, in terms of characters, settings and objects. Also using full skins, practical lighting and innovative computer animations. Although, sometimes, it adds an artistic touch by introducing differentiating elements, in a similar way to what would be done in the cinema, through the use of colour, composition, photography, setting... to offer players immersive experiences that seem credible.

3. Maps: Minimalist Style.

[WE SHOULD SHOW THE REFERENCE IMAGES HERE]

3.3.2 Art according to used technology: 2D and 3D

According to the decisions you made on the Activity "Art according to used technology: 2D and 3D" the Art you have identified as the best fit for your project is as follows: POLYGONS (LOW POLY): Current 3D games use high-poly technology, allowing perspective and depth to be easily applied. But before, low-poly was used. This can create a reflective environment, allowing you to focus on the psychological narrative of the video game.

[WE SHOULD SHOW THE REFERENCE IMAGES HERE]

3.4 THE COMMUNITY

3.4.1 Community Building Models in i-Game: A Methodological Approach

Introduction: Why Community Building matters in i-Game

The i-Game project is designed with a core mission: building a community for the co-creation of games that have a high impact on innovation, sustainability, social cohesion, and growth. Unlike traditional platform initiatives that focus solely on technology, i-Game recognizes that a platform is only as valuable as the community that engages with it. Therefore, a structured and strategic approach to community building is essential to ensure the success and long-term sustainability of the project. During the i-Game Communities Workshop (April 4, 2024), project partners were introduced to the importance of structured community building methodologies. This session emphasized that a successful platform is not just about technology but about the engagement, motivation, and contributions of its community members. To achieve this, i-Game employs two open-source, Creative Commons-based models for community building, ensuring that the methodology is adaptable and scalable for various stakeholders.

Theoretical Foundations of Community Building

Community building is not an arbitrary process; it is guided by structured methodologies that provide a framework for engagement, motivation, and long-term sustainability. i-Game incorporates two established models:

Model 1: Platform Design Toolkit (PDT)

The Platform Design Toolkit (PDT) was developed by Boundaryless (formerly known as the Platform Design Toolkit Organization), an independent research and consulting group that specializes in platform thinking and ecosystemic innovation. The PDT methodology provides a strategic approach to designing ecosystems where diverse actors collaborate, exchange value, and create sustainable interactions.

Key Concepts of Platform Design Toolkit:

- **Ecosystem Mapping:** Understanding the different roles and interactions within the platform.
- **Value Exchanges:** Identifying what different participants offer and receive.
- **Network Effects:** Ensuring each new participant enhances the ecosystem.
- **Incentives and Transactions**: Structuring rewards and interactions.
- **MVP (Minimum Viable Platform):** A prototype version to validate key assumptions.

Step-by-Step Process in PDT:

1. Ecosystem Discovery
2. Identify all key stakeholders in the ecosystem.
3. Use the Ecosystem Discovery Canvas to map their needs and roles.
4. Tool: Ecosystem Discovery Canvas

Mapping Value Exchanges:

1. Define how each actor contributes and benefits.
2. Use the Value Flow Canvas to design value transactions.
3. Tool: Value Flow Canvas

Defining Platform Experiences:

1. Create interactions that generate network effects.
2. Use the Platform Experience Canvas to structure user interactions.
3. Tool: Platform Experience Canvas

MVP Development & Iteration:

1. Build a Minimum Viable Platform (MVP) to test key assumptions.
2. Use rapid prototyping techniques.

Key Resources for PDT:

1. Website: https://www.boundaryless.io/pdt-toolkit/
2. Toolkit Download: https://platformdesigntoolkit.com/toolkit/

Model 2: Community Canvas

The Community Canvas was created by Fabian Pfortmüller, Sascha Stoltenow, and Nico Luchsinger. It is an open-source framework that helps design, build, and manage communities with a structured, strategic approach. Unlike PDT, which focuses on platform dynamics, Community Canvas is specifically tailored for social groups and participatory communities.

Three Pillars of Community Canvas:

1. Identity: The core principles and purpose of the community.
2. Experience: How people engage and interact.
3. Structure: Governance, rules, and roles.

Step-by-Step Process in Community Canvas:

1. Defining Community Identity
2. Purpose: Why does this community exist?
3. Shared Values: What beliefs unify members?
4. Use the Community Identity Canvas to structure these elements
5. Tool: Community Identity Canvas

Designing the Community Experience:

1. Define how members interact and contribute.
2. Plan events, rituals, and engagement mechanics.
3. Use the Community Experience Canvas.
4. Tool: Community Experience Canvas

Establishing Structure & Governance:

1. Set community guidelines, decision-making rules, and roles.
2. Use the Community Structure Canvas.
3. Tool: Community Structure Canvas

Key Resources for Community Canvas:

1. Website: https://community-canvas.org/
2. Toolkit Download: https://community-canvas.org/download/

Implementation in i-Game

Phase 1: Setting the Foundation

1. Use Community Canvas to define the vision and structure.
2. Identify key stakeholders using the Ecosystem Discovery Canvas.

Phase 2: Engagement & Interaction Design

1. Implement the Platform Experience Canvas for engagement mechanics.
2. Use the Community Experience Canvas to define interaction styles.

Phase 3: Iteration & Growth

1. Launch MVP based on Platform Design Toolkit principles.
2. Use feedback loops and analytics for improvement.

By integrating the Platform Design Toolkit and Community Canvas methodologies, i-Game fosters an engaged, motivated, and self-sustaining community. This structured approach ensures long-term engagement, impact, and ecosystem sustainability.

3.5 Applying Community Building Models in i-Game's Co-Creation Process

3.5.1 Introduction to the Co-Creation Process

Community building within i-Game is not a theoretical concept but a practical and structured effort that has been implemented collaboratively by the project partners. The goal has been to develop and apply a community-building strategy that integrates the Platform Design Toolkit (PDT) and Community Canvas methodologies into the very fabric of the project. This integration ensures that the community aspect is embedded within the project's structure, engagement strategies, and governance models. The co-creation process began with structured workshops and collaborative exercises among partners to define the community's identity, interactions, and governance structures. Both models were used in tandem, leveraging their complementary strengths. Platform Design Toolkit (PDT) helped in mapping the broader ecosystem, identifying stakeholders, and structuring value exchanges. Community Canvas provided a detailed framework for defining the community's purpose, member experience, and governance. In the following sections, we will detail how each of these models was applied in defining and structuring the i-Game community, ensuring that it serves as an active, engaged, and sustainable ecosystem.

3.5.2 Focus on Platform Design Toolkit (April 2024 - October 2024)

Between April and October 2024, the project focused primarily on Platform Design Toolkit (PDT) as the initial phase was dedicated to conceptualizing and designing the game co-creation platform. The decision was made to prioritize platform strategy first before transitioning to community-building methodologies such as Community Canvas in a later phase. This approach, while unconventional, was necessary because:

- The core goal of i-Game at this stage was "platformization", ensuring a well-structured, functional, and scalable co-creation space.
- Community Canvas, while essential for long-term engagement, would be implemented after the platform was conceptualized to address aspects that PDT alone could not solve, such as governance and community sense of belonging.

During this phase, several online workshops were conducted among partners, utilizing PDT methodologies to define:

- **Ecosystem Mapping**: Identifying the different stakeholders and their roles within the platform.
- **Transaction Matrices**: Understanding the core value exchanges between users.
- **Learning Engine Development**: Designing mechanisms to help users continuously learn and adapt within the platform.

3.5.3 Key Workshop Outputs: Defining the Game Co-Creation Platform

Workshops led to the identification of essential functionalities that would form the backbone of the platform. According to the i-Game Community 04/09/24 report**, the following features were prioritized:**

Knowledge Repository:

- Document Library: Storing research, best practices, and cultural resources.
- Glossary: Providing shared terminology for effective collaboration.
- Data and Tools Directory: Facilitating access to datasets and methodologies.

Meetings & Events Management:

- Event Calendar: Scheduling networking and co-creation sessions.
- Virtual Meeting Rooms: Integrating digital collaboration tools.
- Networking Tools: Enabling seamless partner connections.

Co-Creation & Collaboration Tools:

- Focus Groups & Discussion Forums: Facilitating structured topic discussions.
- Interactive Whiteboards & Brainstorming Spaces: Supporting ideation processes.
- Collaborative Workspaces: Allowing joint project development.

Expertise Exchange Platform:

- User Profiles & Expert Matchmaking: Connecting users based on skills and interests.

- Knowledge Exchange Sessions: Hosting sharing and training events.

These functionalities were directly informed by the Transaction Engine workshops, ensuring the platform supports a collaborative and knowledge-rich environment.

3.5.4 Transitioning to Community Canvas for Identity and Governance (Post-October 2024)

Following the conceptualization of the platform, attention turned to ensuring a sustainable, engaged community around it. The next step involved:

- **Defining the Learning Engine**: Ensuring the platform actively supported users in adapting, evolving, and finding new opportunities.
- **Implementing Community Canvas:** Focusing on identity, governance, and sense of belonging, elements that were not fully addressed by PDT alone.

The Community Canvas approach guided the next workshops, ensuring that the i-Game community is not just an ecosystem of transactions but a cohesive, value-driven network with clear roles, governance, and engagement pathways. The additional challenge at this point arose from the fact that the working groups focused on gamification and narrative strategies were already defining the necessary strategies and characteristics to achieve engagement with the different stakeholders. The goal was for the Community Canvas model to contribute to and complement all the work carried out in narrative and gamification efficiently, avoiding redundancies and inefficiencies. And this is going to be explained in point 3.

3.5.5 Challenges & Lessons Learned

- Challenge: Balancing the focus between platform development and community building.
- Solution: Sequencing methodologies, starting with PDT before transitioning to Community Canvas.
- Challenge: Ensuring inclusivity across different stakeholders (cultural institutions, creative industries, game developers).
- Solution: Conducting targeted workshops to identify diverse user needs.
- Challenge: Avoiding the risk of a purely transactional platform with low engagement.
- Solution: Implementing learning and networking mechanisms to encourage deeper participation.

3.6 The Role of Community Canvas in Strengthening i-Game's Community

This section covers how Community Canvas model contribute to shaping the i-Game community complementing the definition done by narrative, aesthetics, and game design Workgroups.

3.6.1 Identifying Gaps in Community Building

After defining the platform structure, a comprehensive analysis was conducted to identify gaps in the community-building strategy. Three key Work in Progress documents were analysed:

- **Attraction Strategy** (Narrative): Evaluated how storytelling influences member

engagement and attraction.
- **Gamified Community Elements**: Examined how gamification mechanics can foster participation
- **Co-Creation Sequence Platform**: Explored the structured flow of engagement within the platform.

From these analyses, **28 potential high-impact** actions were identified to improve community-building efforts.

3.6.2 Workshop for Prioritizing potential Action Plans (February 5, 2025)

A dedicated Community Canvas Workshop was held on February 5, 2025, to structure and prioritize these actions. The workshop focused on:

- Ensuring that the most critical gaps were addressed within the community.
- Using structured Community Canvas methodologies to align identity, governance, and engagement strategies.
- Answering key questions about the community's role, value proposition, and interaction strategies.

The outcome of the workshop was the selection of 12 possible concrete action plans, each designed to strengthen the community's long-term sustainability.

3.6.3 The 12 Action Plans for Strengthening Community Building

The final 12 possible Action Plans would cover:

1. **Defining & Communicating Core Values**: Embedding inclusivity, respect, and sustainability into the onboarding process.
2. **Building Strong Onboarding Experiences**: Gamified welcome kits, interactive learning paths, and mentorship.
3. **Enhancing Community Visibility**: Social media campaigns and outreach strategies.
4. **Implementing Quality Measurement Metrics**: Periodic engagement assessments and impact surveys.
5. **Expanding Learning & Skill Development**: Knowledge hubs, masterclasses, and peer learning initiatives.
6. **Defining Community Roles & Responsibilities**: Structuring mentorship, moderation, and project leadership roles.
7. **Introducing Decentralized Governance Models**: Community-led decision-making and hybrid leadership structures.
8. **Establishing Conflict Resolution Mechanisms**: Reporting tools and community-driven rule enforcement.
9. **Developing Sustainable Funding Strategies**: Crowdfunding, sponsorships, and digital asset monetization.
10. **Enhancing Member Retention & Growth**: Reward systems, professional progression, and incentives.
11. **Ensuring Transparent Communication**: Multi-channel community engagement (platform, Discord, live events).
12. **Aligning Branding & Messaging**: Consistency across communication channels.

3.7 Validation of Community Strategy through Gamification, Storytelling, and KPI Measurement

3.7.1 Reviewing and Refining the Community-Building Strategy

After incorporating Platform Design Toolkit (PDT) and Community Canvas, the next critical step was validating whether the Gamification and Storytelling elements aligned with the community-building strategy. To achieve this, the workgroups conducted a new review to:

- Assess the final definition of the Gamification Strategy and its role in reinforcing community engagement.
- Cross-check how each Action Plan was supported by the impact measurement KPIs defined for tracking success.

This process ensured that all designed actions were effectively integrated into the community-building framework and had measurable impact indicators.

3.7.2 Scanning and Cross-Referencing Key Actions

The project team conducted a detailed scan of:

- Gamification Mechanics & Community Features – checking how each gamification element reinforced engagement and long-term retention.
- Impact KPIs in 2 ways:
    - Ensuring each Action Plan had measurable criteria for monitoring success.
    - Mapping how the impact is going to be measured in the Impact Framework and Data Framework.
- Narrative and Storytelling Strategies – validating how the attraction strategy and storytelling elements contributed to member retention.

3.7.3 The Validation Results: 10 Actions Fully Integrated, 2 Actions Remaining

The review produced remarkable results:

- 10 of the 12 Action Plans were fully aligned with both Gamification Mechanics and KPI tracking.
- Only two action areas lacked clear impact measurement KPIs and gamification reinforcement:
    - Introduce Conflict Resolution & Rule Enforcement Mechanisms
        - Issue: No existing KPIs explicitly measured conflict resolution effectiveness.
        - Gamification Gap: No structured moderation roles or penalty mechanisms were in place.
        - Solution Proposal: Integrate moderation roles, community self-governance mechanisms, and conflict reporting dashboards.
    - Align Branding & Messaging Across Platforms
    - Issue: No KPI explicitly tracked branding consistency across community spaces.
    - Gamification Gap: No explicit gamification mechanics were assigned to branding alignment.

- Solution Proposal: Implement gamified engagement tracking for participation in branding discussions, encouraging user-driven messaging consistency.

3.7.4 Next Steps to Address the Remaining Gaps

To fully complete the Community-Building Strategy, the next steps will focus on:

- Designing Impact KPIs for Conflict Resolution – Establishing clear reporting, moderation feedback loops, and dispute-resolution metrics.
- Gamifying Branding & Messaging Engagement – Encouraging members to actively participate in shaping the community's voice.

By closing these gaps, i-Game's community-building framework will be fully integrated across all strategic areas, ensuring long-term engagement, governance, and alignment with platform growth.

3.8 Some Conclusions and Learnings for Future Projects

The i-Game project offers a unique and valuable case study in building a digital community from the ground up, not as a secondary feature, but as a core strategic element of innovation and impact. As research teams and initiatives increasingly recognize the importance of communities in driving participatory processes and platform sustainability, i-Game's approach delivers critical lessons.

- **From Fragmentation to Integration: The Power of Methodological Sequencing**

One of the most impactful decisions in i-Game was the sequenced application of complementary methodologies: starting with the Platform Design Toolkit (PDT) to structure the platform and its stakeholder ecosystem and then shifting to the Community Canvas to define identity, roles, and governance. This sequencing allowed the project to maintain clarity during the technological build-up phase, while ensuring that the human, relational, and participatory layers of the community were not an afterthought but a second, equally rigorous design process.

- **Making Strategy Measurable: Action Plans Aligned with KPIs**

By translating conceptual community needs into 12 concrete Action Plans, the project created a practical bridge between community vision and measurable outputs. The alignment of each Action Plan with:

- impact monitoring KPIs (from the Impact Framework)
- gamification mechanics (via a dedicated strategy)
- and platform performance indicators

ensured that community-building efforts could be validated using real-time data and ongoing feedback loops. This provides a replicable model for future projects seeking to monitor the intangible (e.g., sense of belonging, co-creation, governance) in tangible terms.

- **Gamification as a Design Layer**

Rather than treating gamification as a superficial engagement tactic, i-Game demonstrates how gamified systems can be embedded into the structure of community-building. From onboarding to skill progression, from retention to co-governance, the gamification strategy became an architectural element, fostering behavioural nudges that align with broader community values. This underlines the need to treat gamification as strategy, not decoration.

- **Validating Coherence Through Cross-Domain Mapping**

One of the most rigorous elements of i-Game was the cross-referencing of all Action Plans with:

- gamification features,
- narrative strategies,
- KPIs from multiple frameworks (impact, gamification, platform).

This produced a highly transparent validation matrix that allowed the team to detect misalignments, prioritize design improvements, and clearly communicate project progress. Projects aiming to be similarly ambitious in scope must integrate cross-domain traceability mechanisms early in the design process.

- **Remaining Gaps as Forward-Looking Opportunities**

Even with a high level of integration, two areas—conflict resolution and branding alignment—remained underrepresented in KPI design and gamification reinforcement. i-Game's transparent identification of these gaps, and its proposal for addressing them, offers a valuable reminder: strategic blind spots are inevitable, but when acknowledged and addressed openly, they become opportunities for iteration, learning, and collective ownership.

The **Key Takeaways** for Future Research Projects are**:**

- Design community strategy as a modular, measurable architecture, not an abstract layer.
- Sequence your methodologies to reduce cognitive overload and maintain strategic clarity.
- Co-design KPIs with stakeholders, ensuring relevance and accountability.
- Integrate gamification and governance early, to make participation meaningful and persistent.
- Validate across systems—strategy, data, design—to reduce silos and build coherence.

3.9 Gamification of the Community

3.9.1 Context and Scenario

Before starting with the explanation of the gamified experience of the i-Game community, it should be mentioned that all the game mechanics and their operation have been designed and configured according to an initial **preliminary demo scenario according to a 3-month participation carried out by an imaginary user**.

In addition to starting 1 co-creation process, this imaginary user will take other actions while in the community that will enrich his/her experience. Below is a detailed list of the actions that will be carried out and the frequency (number of times).

Table 1. Frequencies and actions

ACTIONS	THE ACTION IS CARRIED OUT … TIMES
Arriving	1
Completing a reading	10
Completing a tutorial	5
Filling the profile	1
Connecting to someone new: sending a message	10
Aggregating someone to a project	5
Using the chat	25
Accessing the FAQ	5
Asking a chatbot	15
Joining a project	1
Creating/starting a project	1
Cocreating (every screen/activity counts as one)	17

Later, it will be explained how these actions and their name of repetitions are related to the mechanics of the gamified experience. The following sections detail all the mechanics designed for the i-Game community.

3.9.2 Profiling

Users have a **profile page in the community.** A space within the game where relevant information about the player is collected and displayed. It works as a kind of business card that other players (or the user themselves) can refer to for details about **progress, achievements, customization, and in-game activity**.
The purpose of the profile is to create a **unique representation of the player within the game's community,** and to help them visualize their progress and achievements to motivate them to continue progressing. In addition to allowing other players to know more about a user **if** the profile was decided to be **public**. The first step to take within the community is to complete the profile. The user might choose among different types of **privacy settings**:

- Private for all users of the platform.
- Visible only to friends.
- Public for all users of the platform, added as friends or not.

The profile could **include**:

Basic Player Information

- **Real name and surnames** plus the **username or ID** as an alias by which the player is identified in the game.
- **Avatar,** easy as an image or icon that represents the player (this can be seen as a customization element).

- **Player Level:** Displays accumulated experience and overall progress in the game (see p.5).

Player Statistics

- **Time spent** within the platform.
- Number of **participations** in co-creations, tutorials and readings.
- **Other** indicators that can be defined.

Progress and Achievements

- Summary of **completed actions** such as co-creations, tutorials and readings, etc.
- List of trophies or **badges** earned for goals achieved.
- **Points XP** (p.5).
- Game-specific stats such as **collected unlockable objects** (p.7) and **collections** (p.9).
- Position on global or local **leaderboards**.

Social Interaction

- List of **connections / friends** or teammates.
- Online **status** (connected/disconnected).
- **Invitations** or direct messages.
- Access to the **chat**.

3.9.3 The point system

To encourage the user to participate in the platform, the first game mechanic to introduce is the **accumulation of Experience points -also named XPs-, (***action_xp*[1]**).** Every action within the i-Game community has a value of assigned experience. **These are the values for the demo exercise**:

Table 2. Values for the demo

ACTIVITY	POINTS (XP)
For arrival	50
Complete a reading	50
Complete a tutorial	100
Finish filling in my profile	25
Connect to someone new: sending a message	50
Aggregate someone to one of my projects	25
Use the chat	25
Access the FAQ	10
Ask the chatbot	10
Join a project	100
Create/start a project	100
For every activity completed when cocreating (17 in total)	50

[1] Name of the constant for this mechanic. For more information, see the "Annex" section (p.11).

According to the context and scenario, these actions are the same as those described in the first section of the document ("Context Scenario"). If users performed all the actions the exact times noted above, they would accumulate a total of 3575 points. Certainly, it is difficult for them to get them all. Depending on the amount they accumulate, and therefore the number of times they perform the actions, players will level up (explained below) and earn medals (see “Badge Collection”).

3.9.4 Unlocking levels

By accumulating experience points**, users progress by levelling up in the game.** This mechanic consists of rewarding the player for their effort and their continuity in the game, while motivating them to continue participating in the community. **More level means more status, and this can lead to rewards or becoming an i-Game ambassador.**
For the demo scenario, we have planned 5 levels according to the following quantities of points (*level_xp*[2]):

	NAME	EXPERTICE	DESCRIPTION	POINTS
1	**“Thread Starter”**	Beginner	Users earn points for arriving, completing their profile, and starting to perform basic actions.	100
2	**“Stitch Apprentice”**	Easy	Users have completed some readings and/or tutorials, as well as other basic actions.	200
3	**“Loom Learner”**	Intermediate	Users have already mastered all the possibilities of the application and, perhaps, start a project.	1500
4	**“Weaving Master”**	Advanced	Users continue with their tasks and, little by little, they start with co-creation.	2000
5	**“Textile Virtuoso”**	Expert	Users remain active in the app and complete the co-creation.	3575

According to the context and scenario, the sum of points of the maximum level coincides with the 3575 points that the player would get if he performed all the actions, and on so many occasions, as indicated in the "Context Scenario" section. This quantity could be rounded if necessary (a max of 3550 points f.i.).

3.9.5 Badge Collection

The idea is that **users might earn badges to show reward and status** for performing certain actions within the i-Game community **a certain number of times**. These badges could be

[2] Name of the constant for this mechanic. For more information, see the “Annex” section (p.11).

displayed on the player's profile to gain recognition among the community. **The badges evolve as the user performs the above actions more frequently.** All medal categories have the following evolution (*category_medal_times*[3]):

- **Bronze (Rookie)**: lowest category in which all medals start. It requires a few repetitions of an action.
- **Silver (Warriors)**: requires quite a few repetitions of an action.
- **Gold (Master)**: requires many repetitions of an action.
- **Platinum (Legend)**: highest and final category of all medals. It requires many repetitions of an action.

The actions to be carried out and their respective categories of badges could be (for this initial demoed scenario if finally implementing badges):**CATEGORIES**	**ACTIONS**	**MEDAL & TIMES**
"Literary explorer".	Complete a reading.	**Bronze**: repeat 2 times. **Silver**: repeat 4 times. **Gold**: repeat 7 times. **Platinum**: repeat 10 times.
"Dominator of Knowledge".	Complete a tutorial.	**Bronze**: repeat 1 time. **Silver**: repeat 2 times. **Gold**: repeat 3 times. **Platinum**: repeat 5 times.
"Socialité"	Add a new friend.	**Bronze**: repeat 2 times. **Silver**: repeat 4 times. **Gold**: repeat 7 times. **Platinum**: repeat 10 times.
"Game builder".	Complete 1 activity of the co-creation.	**Bronze**: repeat 4 times. **Silver**: repeat 7 times. **Gold**: repeat 12 times. **Platinum**: repeat 17 times.
"Talkative technologist".	Use the chatbot.	**Bronze**: repeat 4 times. **Silver**: repeat 7 times. **Gold**: repeat 11 times. **Platinum**: repeat 15 times.

[3] Name of the constant for this mechanic. For more information, see the "Annex" section (p.11).

According to the context and scenario, following this numbering, the points of the maximum level of a medal are equal to the number of repetitions per action mentioned in the "Context Scenario" section.

3.9.6 Unlockable

Users get unlockable items as a motivational reward for completing levels (e.g.), accumulating XP points, or specific achievements (*motive_unlockable*[4]). The function of unlockable items is to encourage participation and learning. In addition to the replayability by including varied and secret challenges. Concretely, this is how they work:

- For levelling up: 2 items.
- Every 10 XP points: 1 item.

Some **rewards** could be connected as unlockable although we didn't specify them already. Some "under construction" examples could be (not necessary for the demo):

- Unlock exclusive content
- Customizable avatars and skins
- Access to opportunities and places/venues
- Collaborative Rewards based on a higher visibility
- Real life incentives
- Connection opportunities
- A certification for recognition of skills or experience that can be used in social media or CV
- Buying time for 1-to-1 training
- Acquiring the rights to use some asset in your design
- High-resolution copies of digital assets
- Visibility: the highlights of the month
- "Starter Pack" with profile icons, badges, avatars…
- Early access to specific tools or features as a welcome gift
- Recognition on a leaderboard
- Highlight level ups with special graphics
- Limited edition items

In addition to the rewards, we could offer **community recognitions** such as:

Community roles: Titles such as "Senior Contributor" or "Designer of the Month."
Exclusive Access: Participate in special community challenges or events.
Notable Mentions: Being recognized on some sort of "wall of fame" for contributions to the community.

[4] Name of the constant for this mechanic. For more information, see the "Annex" section (p.11).

4 ON INCLUSION AND ACCESSIBILITY

In order to design inclusive games, the final EDD, generated after the cocreation process, should include the decisions of the participants in this respect. The following steps are crucial in the process and the selected options will be transferred to the EDD document accordingly:

Step 1: selecting at least 2 vulnerable groups for which the designed and developed games should be made accessible.

Step 2: selecting the importance rank (5 - high, 3 - average, 1 - low) for the potential solutions to be considered during game development to address the challenges faced by the players from the selected vulnerable groups.

Table 3. Designed process for vulnerable groups

Vulnerable group	Challenges they may face	Co-creation option	Potential solutions
Players with full or partial visual impairments	• Images and graphics cannot be perceived • Visual relationships and structure cannot be perceived • Visual content in multimedia is not perceivable.	• Purely visual game content that conveys important information has text-based or auditory alternatives	• Meaningful alt text is provided for informative images • Text transcripts are provided for audio and video content • Distinct sound / music design are used for all objects and events • Binaural recording is simulated • Alternative text is provided for buttons/options • Meaningful alternative text is provided for informative images, to convey their content to screen reader users. • Provide a pingable sonar-style audio map and voiced GPS to assist with in-game orientation • Ensure screen reader support, including menus & installers • Allow easy orientation to movement along compass points • Provide pre-recorded voiceovers for all text, including menus and installers

	• Content is often accessed linearly. • Players often navigate from link to link or view a list of links. • Players generally do not use a mouse.	• Players can efficiently interact with the game without a mouse (e.g. using keyboard, touch, etc.)	• Ensure comprehensive screen reader support, including menus and installers to facilitate navigation • Ensure that all key actions can be carried out by digital controls (pads / keys / presses), with more complex input (e.g. analogue, gesture) not required, and included only as supplementary / alternative input methods • Allow easy orientation to / movement along compass points
	• Colours are not perceivable. • Players may not be able to distinguish colours of similar contrast.	• Alternatives for colours and contrast when they convey important information	• Include colour blind modes for gameplay (toggleable colour blindness settings) • Colour is not used as the only way to convey information (e.g. use colour-independent indicators) • Add icons, shapes, patterns, or text labels as alternatives for colours • Meaningful graphic elements have sufficient contrast • Text has sufficient contrast against its background • Use high contrast combinations that stand out even in grayscale • Use symbols in UI elements (e.g. different patterns for health or progress bars)
	• Players may not be able to read normal font size or low contrast text.	• Customizable text size and contrast	• Allow the font size to be adjusted • Text has sufficient contrast against its background, and text contrast can be adjusted • Interaction is not affected by zoom or enlarged text

Players with full or partial hearing impairments	• Players may be unable to hear with audio content. • Players may have difficulty filtering noises.	• Purely auditory game content that conveys important information has text-based or signing alternatives	• Ensure that all important audio information is also conveyed visually, such as through on-screen indicators • Provide signing as an alternative output • Allow players to adjust subtitle presentation, including text size and background opacity, for better readability • Ensure that subtitles/captions are cut down to and presented at a configurable words-per-minute rate • Use symbol-based chat (smileys etc.)
Players with motor (control/mobility) disability	• Players may not be able to use the mouse and/or the keyboard. • Players may become fatigued when navigating numerous items. • Players may have difficulty to timely react during gameplay	• Players can efficiently interact with the game without a mouse and/or a keyboard (e.g. using touch, etc.)	• Allow players to remap controls and adjust sensitivity to accommodate different mobility needs • Provide very simple control schemes that are compatible with assistive technology devices, such as switch or eye tracking • Implement options that allow players to reduce complex input sequences (e.g. macros or single-button actions) • Include options to adjust game speed to cater to players with varying reaction times • Include a cool-down period (post acceptance delay) of 0.5 seconds between inputs • Do not make precise timing essential to gameplay – offer alternatives, actions that can be carried out while paused, or a skip mechanism • Allow play in both landscape and portrait • Ensure compatibility with various input devices, such as adaptive controllers

Players with speech disability	• Players may have difficulty communicating with other players. • Players may have challenges with in-game voice commands. • Players can feel socially isolated when unable to communicate, especially in team-based games.	• Players can efficiently interact with and within the game without using speech (e.g. using mouse, keyboard, touch, etc.)	• Use symbol-based chat (smileys etc) • Base speech recognition on hitting a volume threshold (e.g. 50%) instead of words
Players with cognitive disability	• Players may struggle to interact with some types of content or input.	• Players can efficiently interact with the game through alternative input/output modes (e.g. using mouse, keyboard, touch, voice commands, etc.)	• Allow players to customize the user interface, enabling them to highlight or simplify elements as needed, or to turn off / hide all non-interactive elements • Allow all narrative, tutorials and instructions to be replayed to reinforce understanding • Use simple, concise language and readable fonts to present information • Avoid any sudden unexpected movement or events • Provide an option to disable blood and gore • Provide pre-recorded voice overs for all text, including menus and installers • Use symbol-based chat (smileys etc)

	• Players may become confused at complex layouts or inconsistent navigational schemes. • Players may have difficulty focusing on or comprehending lengthy sections of text. • Players may have difficulty to timely react during gameplay	• Customizable input/output options, including simplification of text and layouts	• Design user interfaces that are consistent and easy to navigate to reduce cognitive load • Provide options to simplify the game layout • Provide options to turn off or hide background movement to minimize distractions • Integrate simplified language tools (for the different languages represented in the project + English) • Allow easy and clear access to personalized settings • Include a cool-down period (post acceptance delay) of 0.5 seconds between inputs • Do not make precise timing essential to gameplay – offer alternatives, actions that can be carried out while paused, or a skip mechanism
Older players	• Players cannot use the user interface components due to their size, layout, content, or structure. • Players may have difficulty to timely react during gameplay	• Use of similarities to non-digital games (familiarity, vs. learning new, easy to learn, simple rules, short play sessions)	• Allow customization of text size and contrast to accommodate age-related visual impairments. • Allow easy and clear access to personalized settings • Offer simplified control schemes to cater to varying dexterity levels. • Include a cool-down period (post acceptance delay) of 0.5 seconds between inputs • Do not make precise timing essential to gameplay – offer alternatives, actions that can be carried out while paused, or a skip mechanism • Allow users to tailor the challenge to their skill levels and abilities. • Ensure clear objectives, easy-to-read text, intuitive non-cluttered and clear interfaces, avoid distraction elements

Players with learning disabilities	• Players may have difficulty focusing on or comprehending lengthy sections of text. • Players may have difficulty to timely react during gameplay	• Clear and easy to understand step by step tutorials and clear concise objectives, a task at a time, and allow for repeated practice while using visual aids and cues to support text.	• Use straightforward language and avoid complex jargon to aid comprehension. • Integrate simplified language tools (for the different languages represented in the project + English) • Use a typography that works well with people with dyslexia or reading difficulties • Include a cool-down period (post acceptance delay) of 0.5 seconds between inputs • Do not make precise timing essential to gameplay – offer alternatives, actions that can be carried out while paused, or a skip mechanism • Emphasize key information through formatting or visual cues to draw attention. • Provide ability to modify the game's difficulty
Players of diverse gender or sexual orientation	• Players can feel socially excluded when not able to express their orientation	• Diverse character representation (and customizable options), and inclusivity in narrative.	• Ensure gender-neutral inclusion language • Filter out hate speech and other disrespectful language • Allow players to make choices that affect the game world and reflect diverse opinions and values.
Players with diverse cultural background (e.g. immigrants, religious, ethnic)	• Players can feel socially excluded when not able to communicate with the game or other players due to language barriers	• Avoiding stereotypes and allowing for customization of values and mindful of cultural diversity. • Consider cultural related style and aesthetic elements.	• Ensure access to translations for all user experience • Filter out hate speech and other disrespectful language • Allow players to make choices that affect the game world and reflect diverse opinions and values.

Players with other diverse needs (e.g. low level of digital skills, low literacy)		• Customizable simple and intuitive User Interface and clear tutorials and comprehensive onboarding materials, easy to understand and follow. • Help sections accessible at any time during gameplay. • Avoiding use of technical jargon.	• Use a clean, uncluttered UI with large, clearly labelled buttons (ability to scale UI elements like text, icons, etc.) • Allow interface and controls to be personalized for simplicity (e.g. fewer steps, bigger text, simplified icons) • Minimize the number of on-screen options at once • Group similar actions or information visually • Provide step-by-step tutorials using visuals, voiceovers, or animations • Allow tutorials to be replayed at any time • Use plain language, avoiding technical terms or jargon • Use of support visual and audio cues. • Ensure that navigation patterns are consistent across menus and screens • Highlight interactive elements with distinct visual markers (like glowing outlines or icons) • Offer contextual help, like pop-up hints or tooltips that explain actions • Include an optional “help mode” that walks the player through each step • Design UI elements using real-world analogies (like folder icons for saving, trash can for delete) to help recognition

Step 3: selecting at least 3 inclusive game content options relevant for the selected vulnerable groups, that should be considered during game development.

Game content elements	**Co-creation Options**	**Potential Solutions**

Character Creation & Customization	Diverse Character Models	• A wide range of skin tones, body shapes, facial features, and hairstyles. • Options for characters with disabilities (e.g., wheelchairs, prosthetics, hearing aids). • Representation of various ethnicities and cultural backgrounds.
	Pronoun Selection	• Allowing players to choose their preferred pronouns (she/her, he/him, they/them, etc.). • Including options for neopronouns.
	Clothing & Accessories	• Culturally diverse clothing options. • Options for religious attire (e.g., hijabs, turbans). • Accessories that represent different identities and backgrounds
	Voice Options	A variety of voice pitches and accents.
Narrative & Storytelling	Diverse Storylines	• Stories that explore different cultural perspectives and experiences. • Narratives that challenge stereotypes and promote empathy. • Stories that include characters from marginalized communities in

		meaningful roles.
	Dialogue & Language	• Inclusive language that avoids offensive or discriminatory terms. • Representation of different dialects and languages. • Options for subtitles and translations.
	Worldbuilding	• Creating game worlds that reflect diverse societies and cultures. • Avoiding Eurocentric or Western-centric perspectives.

Step 4: Based on the participant's experience, including some stories (testimonials) or information about the vulnerable groups that you have selected, that you believe could help the game developers better understand these people or could be inspirational for the game story.

5 FINAL CONCLUSIONS

The development of the i-Game Experience Design Document (EDD) reveals the importance of adopting a structured, empathetic, and context-aware approach to designing applied games in heritage and museum environments, particularly those as rich and complex as textile museums. The process detailed in this document illustrates how meaningful co-creation, combined with solid theoretical models and creative vision, can yield engaging and educationally effective experiences.

At the foundation of this work lies the Game Tetrad —art, technology, narrative, and game design— which functions not as isolated elements, but as interconnected pillars for building cohesive, immersive experiences. The introduction and analysis chapters demonstrate how this framework enables designers to generate not just "games," but cultural experiences that respect heritage while inviting modern digital interactivity.

5.1 User-Centred Foundations

A major takeaway from the Analysis (Kick-Off) phase is the necessity of designing from the user's perspective. Through the use of empathy maps, motivational models, and user personas, the project uncovers a diverse landscape of expectations, emotions, and behavioural tendencies. This forms the basis for personalizing mechanics, tone, and narrative flow — ensuring that each game speaks directly to the intended audiences: whether they are school-aged learners, digital natives, or casual museum visitors.

The deliberate inclusion of both intrinsic and extrinsic motivational structures reinforces the transformative power of these experiences, making them simultaneously playful and purposeful. This is supported by the identification of key behaviours (exploring, sharing, reflecting) and skills (critical thinking, cultural appreciation, collaboration) that each experience aims to foster.

5.2 Emotional Design and Journey Mapping

The importance of moments to assess emotional engagement is a particularly valuable method that contributes to the experiential design's richness. Mapping these moments allows the design team to anticipate and amplify what creates joy and connection, while minimizing friction and disengagement. This sensitivity to user emotion is a hallmark of high-quality gamified systems. Furthermore, the balancing tools discussed —such as dual axes (competitive/cooperative, realistic/metaphorical, emotional/rational)— help refine the tone and personality of each prototype, supporting consistency between mechanics, aesthetics, and message.

5.3 Strategic Integration of Community

This document emphasizes the need to build and activate community as part of the game experience. Whether through public recognition, collaborative challenges, user-generated content, or social media integration, the goal is not just to engage individual users but to create belonging. The analysis demonstrates how games can catalyse lasting cultural participation by fostering dialogue, co-creation, and shared purpose — turning passive visitors into active contributors and ambassadors for cultural institutions.

5.4 Versatile Prototypes with Targeted Impact

Finally, the document describes 6 prototype experiences —from AR-based museum exploration to resource management and virtual reality narratives— to provide concrete examples of how the methodology scales across genres and platforms. Each is tightly aligned with specific motivational profiles, cultural learning outcomes, behavioural intentions and reward structures. This alignment is key to ensuring that the final products are not only thematically relevant, but also measurably impactful in terms of educational value, cultural appreciation, and long-term engagement.

5.5 Summary

The EDD illustrates a robust, human-centred, and replicable framework for designing cultural games. It proves that with the right blend of structure and creativity —grounded in research, inclusive design, and emotional intelligence— it is possible to transform museums and heritage sites into vibrant, participatory spaces of learning through play. This document should serve not only as a reference for the games developed under i-Game, but also as a model for future gamification efforts across other educational and cultural domains.