

DIE ASTA EXPERIENCE
NEW MEDIA - GAMES - ATTRACTIONS - LEARNING

Tea Party – game description

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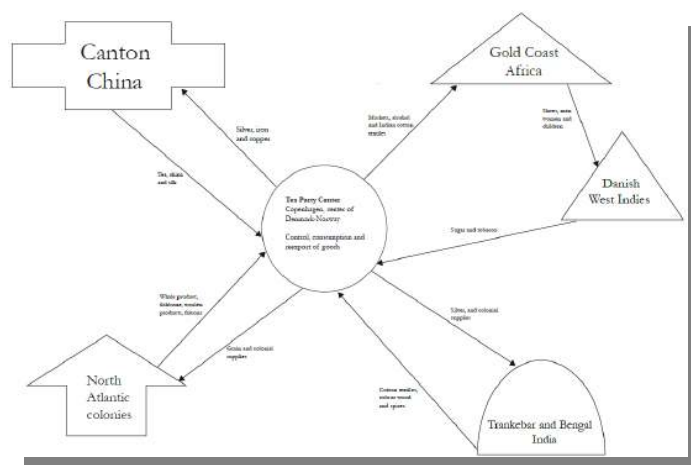


1. Resume

About this document

This document is a brief project overview, describing the Tea Party trading game. The overview is based on the initial description from the document “tea party – Trading game” (Benjamin Asmussen, Feb. 2011), with some adjustments and additions.

This description is our initial thoughts and ideas on the game, which can be modified and refined. We thus believe that further discussion and meeting should be held, to define the final solution. This will ensure that all aspects, like the learning potential, the visitors experience, the visual style, budget etc., will fit to the needs of the museum.



Basically this game can be made either as a “tight and fun solution”, a “grand and engaging experience” or something in between. We just think that the more we blur the boundaries between the virtual game and the physical scenography, the greater the experience will be for all visitors.

Brief description of project

Tea Party is a game about sailing, trading and profiting, in the 18. century. The visitor takes on the role as a trader, commanding his or her own ship, while walking around the exhibition. The visitor has to navigate physically between the different locations resembling harbor/destinations, to buy cheap and sell expensive, while avoiding pirates, storms and other hazards.

Purpose

The Tea Party game has to fulfill the following purposes, in prioritized order:

- Learning
- Entertainment
- Social experience
- Create atmosphere for the other visitors

Core game play

The player has to steer his/hers ship between the different destinations, by physically going from one area of the exhibition, to another. The actual route that the player walks, affects the ship and cargo, by modifying the chance of events, bad weather and ship-trouble.

The 6 destinations are represented as individual destinations regarding to Benjamin Asmussens description, where the player can buy and sell wares. Each destination has a limited selection of wares and a limited supply and demand, which also affects prices.



The player competes against the other visitors, for the highest score. The players can interact, by purchasing all goods from a harbor/destination, so others players can't buy it or sell a lot of good to a harbor, to dump prices.

Optional gameplay feature

The player is given a character, which nationality and type of ship, affects the amount of cargo, the prices, events and available special missions. These missions can earn the crafty player extra money and advantages. The characters can be inspired by historical authentic characters.

User case – 9 year old Frank and his Father Stephen plays the game

Stephen has brought Frank to the exhibition on a Saturday, to fill out their time weekend with more interesting experiences than TV and Playstation. After entering the exhibition, Frank sees the overview-screen, where the ships are sailing around loading and unloading cargo, and he wants to “play with”.

After acquiring an Ipad at the information booth, they walk around together, and see their ship move around on the map on the Ipad and the overview screen at the same time. On the map they see the 6 harbors glow and pulsate, as they were sights to see. Frank and Stephen quickly figures out, that if they walk towards the different exhibition areas, the ship also moves towards the given harbor on the map on the Ipad.

When they reach the first harbor at Copenhagen, they are greeted by the harbor master, who offers them wares for purchase for their cargo-hold and sends them on their way to the next harbor.

After they see their ship setting sail out of the harbor with cargo of guns, the Ipads once again shows the map of the world. Now they can see only a few of the harbors glow and pulsate, which Stephen guess is which harbors that buys the guns they are carrying. After explaining it to his son, Frank run towards the nearest harbor that glows, which he thinks is the Wet-Indies.

When Frank gets to the West-Indies (with his father trailing behind), he sees the ship port and unload the cargo and hear the “ca-ching” sounds of the money rolling in, the harbor master informs him, that he probably would have made more money, selling it at the Gold Coast. On the other hand, this harbor has plenty of goods in form of sugar canes, to sell for Frank and his father.

Frank and Stephen start talking about sailing the cargo to Copenhagen, where sugar often yields nice prices. But on the overview screen the father and son can see, that somebody just entered the port in Copenhagen and sold a lot of sugar, making the prices fall. So they start walking towards China, which also buy sugar at the moment and yield better prices. –thus starts a new journey, taking the father and his son to new and untried trading routes...



2. The team

To give the best solution, Die Asta Experience has chosen to put together a team of different competences, to address the three most important tasks in solving the project:

- Knowledge and design of learning experiences in museums
- Game design and production
- Visualization and physical integration with the exhibition.

This solution is also more flexible, as the best suited person is responsible for the specific parts of the project regarding to their core competence.

Competences:

Die Asta – learning and experiences combining physical/ virtual. Developer and producer, developed and produced learning games, interactive exhibitions, interactive films, cross media project for city/web/ mobile, boardgames and film scripts.

PortaPlay – programming and game design for web / mobile / on-location

Søren Robert Lund – architect, exhibitions, form and design integrating the digital experience in the physical

Track record:

The team has prior solved small and big projects together, for a full list of projects, see attached CV's for Søren Robert Lund and PortaPlay

- *The Globe*, launch 2009, budget 1,5 mill.
Interactive installation on Rådhuspladsen during coop 15. Cross media installation on site, web, mobile and TV. (Concept/ production lead Die Asta/ Gamedesign/programming web/mobile – Portaplay.)
- *Danmarks Vej og Bro museum*, launch june 2011, budget 2 mill.
(Concept/interactive installations Die Asta/ Architekt/ atmospheric room design/interactive design Søren Robert Lund/ Gamedesign and production Portaplay.) 1
- *Brede Værk*, launch 2009, budget 6,7 mill.
(Concept/ production – Die Asta Experience / Gamedesign for interactive ticket and user experience flow – Portaplay)
- *The Northsea Exhibition*, launch 2010, budget 54 mill.
(Concept/ interactive design: Die Asta Experience/ Architekt/ Interactive installations Søren Robert Lund Arkitekter/ Gamedesign/ Producing - Portaplay)



3. The 3 levels

The game-concept is divided into three "levels", which reflects the range of possibilities, regarding the physical integration of the game in the exhibition. The first level is the basic game experience, where level 2 and 3 integrates the exhibition and the other audiences in the experience. The more we expand the game into the physical space, the more we get both players and the other guests involved in the learning experience in the game.

Level 1 – Basic gameplay

No extra scenography / modification of the planned scenography are needed, apart from some "destination name signs" (if these are not already planned). User interacts with Ipad and sensors / 2D tags OR uses their interactive ticket together with ticket readers and some touch-screens.

Level 2 – Physical and virtual duality

Projections and paintings/printed film on walls and floors that visualize the world map and the harbors/destinations – thus increasing the sense of journey and the atmosphere in the exhibition and the game.

User interact using Ipad and sensors and a central "overview map" (screen or projection) show all players' movements and scores.

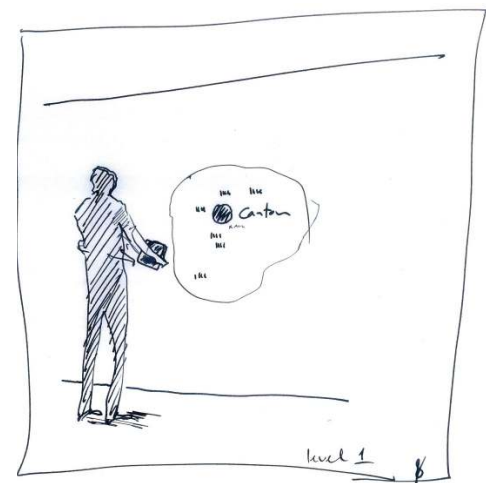
Level 3 – Total scenography

The whole exhibition is places geographically correct, on a large map covering the whole floor. Large scenography on each location, which is augmented by 3D graphics and animations, projected upon them.

Ipads are integrated into "props" e.g. small model of ships or cargo-barrels.

Explanation: Level 1 – Basic gameplay

The existing, planned scenography is kept or gets simple map-outlines added (Dogville charcoal marking). Some signs explaining how to play the game are added, but the rest of the experience happens on the Ipad / touch-screen at the harbors/destinations.



Explanation: Level 2 – Physical and virtual duality

The majority of the game-play is still told using the Ipad, but each harbor/ destination, gets an added visual layer, projected upon the floor / empty walls. The

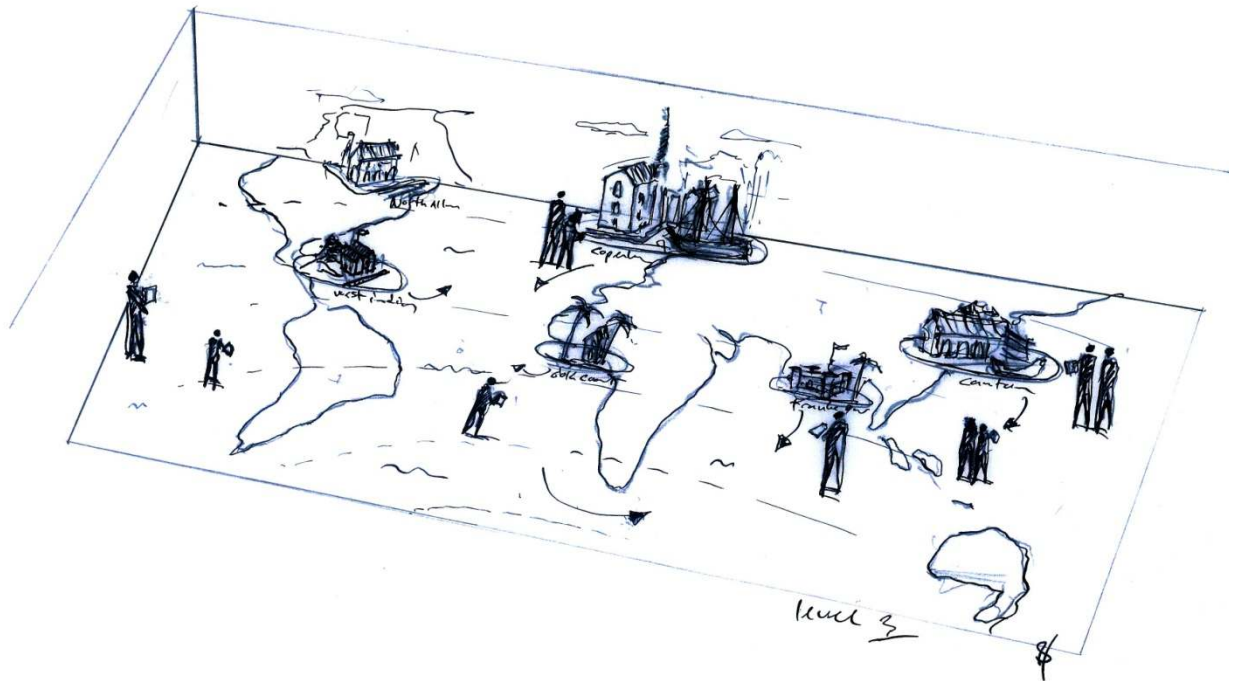


projections show the given destination and the present interaction happening with the players. Visitors not playing the game will thus see a ship arriving at the port and see goods being loaded and unloaded and money changing hands, while the player trades on the Ipad.

The projection can add depth and realism, by projecting on simple geometrical forms (e.g. physical shapes in the scenography, which gets "pictures" projected upon them).

Explanation: Level 3 Total scenography

The existing, planned scenography is modified, to cooperate with the game.



Each destination is placed on a giant map depicted on the floor, on the actual, geographical correct location. To travel between Copenhagen and the gold coast thus means, that the player actually has to walk across the world map.

Each harbor has its own unique look, consisting of physical scenography, with 3D graphics and animations projected "on top of it" giving the static, physical props movement and life.

Each player, the cargo they carry and the events they experience, will also be shown (projected) on the giant world map. Visitors can thus see ships sailing around on the floor, steer around storms and arrive to harbors/destinations to unload their cargo.

These projections use the existing graphics from the game, as shown on the Ipads. This not only increases the immersion of the game but also creates a life of its own, in the physical, scenographical universe of the exhibition.



4. Feature list

Below is a list of possible features that can be used in the game.

All features are options that can be used, changed or discarded, when defining the actual, realized solution.

All the visualization examples below are also only inspirational examples, giving an idea of how other related projects and ideas have used the effect / idea.

Level 1 - Basic gameplay

See the map

The map will resemble a combination of a 2D map, with a topographical model and with 3D elements “sticking out”. The player moves around the map in a semi-bird eye perspective, giving the player some overview while still keeping an immersing perspective



Navigate your ship by walking around the exhibition

The player's ship moves from harbor to harbor, as the player walks from harbor to harbor.

Play on a touch-screen device OR using the interactive ticket

The player can interact with the game, using a touch-screen, such as an Ipad or Android Tablet.

OR

They can play the game using an interactive ticket and screens / projections at the destination / harbors.

Running start

The game is active at all times, enabling all visitors to enter and exit at any time. Each player will be able to play a certain number of minutes (e.g. 5), before they are presented with a score, and asked to play again. There is no fixed number of



players in the game, as the game will automatically adjust its difficulty level to the amount of players active at a given time.

Enter the harbor

When reaching a harbor, the player sees the ship enter the given harbor, on the Ipad / the touch screen at the physical scenography. The harbors/destinations thus constitute a virtual scenography of that destination, showing its “look and feel” using images, animations



and sounds. While in the harbor, the player can buy, sell, repair his ship and receive / cash in special missions.

Show harbor on Pad

Show the above interactive harbor, on the players Ipad.

Changing seasons

As the time progresses, the seasons change in the game, affecting winds and currents, triggering events etc.

Sail ahoy – and other events

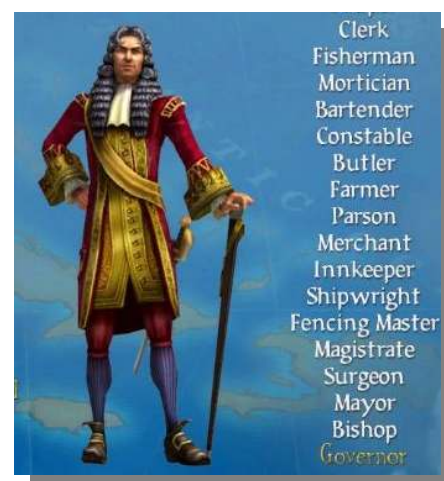
The player can experience accidents and happy incidents, such as ship-wreck, rescuing wealthy merchants, getting cheated in harbors/destinations, entering harbors where war is going on etc. If the players sails to fast (runs around the exhibition), they also increase the risk of hitting shoals, wrecking sails or having their sales get sick or injuring themselves. The events will be based on historical correct data and anecdotes.

Special missions

The players can pickup and deliver special missions, in the different harbors/destinations. E.g. make a speedy delivery from one harbor to another, smuggle contraband, without getting caught etc. The missions will be based on historical correct data and anecdotes.

Player characters, titles and highscore

At game start, the player is given a character, depicting ship type, advantages and available special missions. When a players e.g. 5 minutes game are over, he/she is given a title, depending on their roles and their scores.



Cloning of the game to web

The game will also be available on the web (e.g. the museums website), using a normal browser. Players entering the game will compete directly against the visitors playing the game, but with some disadvantages (e.g. mouse controls, less visual feedback and instruction from the exhibition etc.).



Level 2 – Physical and virtual duality

Navigate your ship by walking around the exhibition 1:1

The players' movement around the exhibition depicts the ships movement on the map, when sailing between harbors/destinations. The player thus has to navigate around continents and hazardous waters, to reach their destination harbors safely.

Dangerous waters

The players don't have to follow the established sailing routes, but the chance of bad weather, opposing currents and winds, and other sea-hazards are higher when going off the beaten path – getting the players to understand, why the certain paths were preferred and often followed.

Show harbor in scenography

Show the interactive harbor on the actual location. The harbors consist of a 2D / 3D image with animations, projected / shown on a screen, somewhere in the scenography on the location.

Central "Overview screen"

A central screen or projection, which shows the map of the world and the different destinations, as well as the different player's ships and high scores.



See all players' movements on the Ipad and overview screens

Each ship /player is visible on the overview screen AND on the tablets. Whenever a player moves around the exhibition, the ship will move accordingly on the map. It is thus possible to see, exactly where in the exhibition / on the world map, all players are at any given time, on all Ipad and on the overview screen. The players can use this knowledge to figure out where there is abundance and shortage of goods and the visitors will see a living exhibition, with ships sailing around and trading.



See highscores and titles on the central overview screen

The players' titles and scores are shown on the central overview screen, as the game progresses. Optionally – a picture of the player (taken by the pad, while playing) is posted together with the title and score.

Game graphics projected onto walls

Existing scenography is augmented with game graphics and animations projected on top of them. E.g. the harbors/destinations are also projected onto the walls at the given destination.



Level 3 – Total scenography

Large map printed / projected on the floor

The whole area of the exhibition is painted as a giant map of the world. Each destination is positioned on its geographical position. The player thus has to walk from Africa to West-Indies, to trade between the two destinations. -if this is not possible, each destination can have their small fragment of the world-map, painted/projected underneath it.



See you movement on map screen

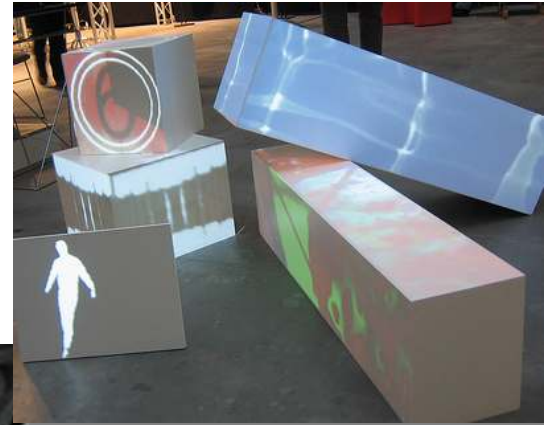
Each ship /player is visible on the whole exhibition area (as well as on the Ipad and overview screen). Whenever a player moves, the ship will move accordingly and all weather formations, events and graphical effects from the pad, are also visible on the whole floor of the exhibition, for all visitors to see.



3D graphics projected onto scenography

The scenography is adjusted to cooperate with animated 3D graphics, depicting the harbor, the ships setting sail, the trading process etc.

E.g. a physical, empty barrel get projected a pile of still breathing and wiggling fish, on top of it combined with sounds of the loading dock. When standing near the barrel, the visitors can see, feel and hear the location.



Smells and odors

Odor dispensers / “digital aromatic signs” are placed around the scenography, to emit contextual smells, increasing the immersion and communicating the available cargo and environment, at the given destination.



Other add-ons

On-location game on mobile phones / Pads

The game will be available as a downloadable app, which can be played both in and out of the museum. The players will compete against the visitors playing the game, as explained in the web-version.



5. The scalable vision – feature list for the 3 levels

We see the full feature list as a grand vision, which we have broken into a scalable model with 3 steps. See the different fields as options, which can be added or removed.

	Interface	Map visualization	Scenography
Level 1 -Basic gameplay	Interactive ticket and screen / projection at harbor OR Pads	Destination name at the harbors/destinations	Existing scenography (unchanged)
Level 2 - Physical and virtual duality	Pads + central “overview screen”	Painted or projected map-segments, around the harbors/destinations	Existing scenography with added 3D graphics projected on empty flat surfaces
Level 3 - Total scenography	Pads integrated in “prop” as a ship/ cargo-room etc. + central overview screen	Painted or projected map on the whole exhibition area. Ships moving around the map.	Scenography adjusted to integrate 3D graphics projected on scenography (e.g. real-life barrel with a projection of wiggling fish on top). Odor dispenser at harbors/destinations.

-all tree levels include a web-version.

It is possible to scale the scope both and down, in relation to the user experience, physical integration with the surroundings, adjustment of scenography etc.

We would recommend level 2, physical and virtual duality.

-this solution combines the virtual and physical world, expanding the experience for both players and other visitors. It would also make it easier to make changes in the content of the game, without too many changes to the physical environment. Furthermore, level 2 will be in our opinion, the best balance between the game and the exhibition.

As the mobile experience can relate to all levels, we have budgeted this module separately. Also, if a guest comes with their own Ipad, we can make a module so they are able to join, using their own tablet. See budget overview at the end of the document.



6. Budget estimates

Level 1 - basic gameplay

Budget includes development meetings with the museum, is exclusive vat.

Gamedesign and programming 175.000
(se feaure list for level 1 for details)

Hardware
5 ipads, 20.000, positioning hardware 15.000 47.000
Wiring estimated 12.000

Technical integration in exhibition 55.000
(* estimated, depends on the design from the architechts.)

Total: **277.000**

*

A question of how many sensors/ tags on each destination. For example:
will the player tag each type of ware, or will they just sign in on the destination,
and then choose the different wares on the Ipad.

Extra modules

Visitor Pad version* 15.000
Visitor phone version* 50.000
Hosting pr. year 15.000

*

Game playable on the visitors Ipads/Android pads and Iphones/Android phones.



Level 2 - physical and virtual duality

Budget includes development meetings with the museum, is exclusive vat.

Gamedesign and programming 330.000
(se feaure list for level 2 for details)

Hardware

10 ipads, 40.000, positioning hardware 15.000 145.000
6 destinations + 1 central screen (local computers) 75.000
Wiring estimated 15.000

Technical integration in exhibition

Signs,barcodes/ interactive ticket 100.000
(* estimated, depends on the design from the architechts.)

Physical integration and scenography in exhibition

750.000
** se feature list below

Total: **1.325.000**

*

A question of how many sensors/ tags on each destination. For example:
will the player tag each type of ware, or will they just sign in on the destination, and then choose the different wares on the Ipad.

**

Overview screen as projection on wall, incl. wall-paint and borders/frame.
6 Destinations with 2 projectors pr. destination (to remove shadows)
incl. reliefs, frames and paint, barcode and graphics.
Effects on floors with spots, colored light etc.
Projector and movement sensors on floors.
Signs with explanation of rules.
Painting and integration with the exhibition.
Electrical- and network wiring.

Extra modules

Visitor Pad version* 15.000

Visitor phone version* 50.000

Hosting pr. year 15.000

*

Game playable on the visitors Ipad/Android pads and Iphones/Android phones.



Level 3 - total scenography

Budget includes development meetings with the museum, is exclusive vat.

Gamedesign and programming 525.000
(se feaure list for level 3 for details)

Hardware

10 ipads, 40.000, positioning hardware 15.000 210.000
6 destinations + 1 central screen (local computers) 75.000
4 computers for global projection of world map 60.000
Wiring estimated 20.000

Technical integration in exhibition 100.000
Signs, barcodes/ interactive ticket
(* estimated, depends on the design from the architects.)

Physical integration and scenography in exhibition 1.440.000
** se feature list below

Total: **2.275.000**

*

A question of how many sensors/ tags on each destination. For example:
will the player tag each type of ware, or will they just sign in on the destination, and then choose the different wares on the Ipad.

**

Overview screen as projection on wall, incl. wall-paint and borders/frame.
Floor and worldmap painting.
Painting of all non-scenographic surfaces.
6 destinations with minihouses / constructions in wood, steel, concrete with effects on floor with spots and colored light, paint, graphics etc.
And extruding onto floor with sand, palms, beach etc.
Assorted effects on floor with spots and colored light.
Projectors for projections on floor, movement sensors etc.
Signs with explanation of rules.
Painting and integration with the exhibition.
Electrical- and network wiring.

Extra modules

Visitor Pad version* 15.000
Visitor phone version* 50.000
Hosting pr. year 15.000

*

Game playable on the visitors Ipad/Android pads and Iphones/Android phones.



7. Technical aspect and platform

Technical platform

The game will be made using Unity 3D.

Museum's devices

The game will run on-location, either on PC/Mac's using the interactive ticket
OR

On Touch-Pads and optionally on a pc+screen/projection at each destination/harbor.

The game will run on pads (Ipad / Android tablet / Win7 tablet) by downloading an app, which will then use the local wifi for synchronization.

The localization of the Ipads will either be done using

Triangulation using several Wifi-spots / Bluetooth canons.

OR

2D barcodes at each harbor.

OR

RFID tags at each harbor/destination (if using the interactive ticket).

Online

The game can be made ready to host on the museums website. Here it will be available to play, using a normal browser (no downloads).

Visitor's mobile devices

The game can be made ready to download on the visitors Iphone / android phones /Pads. They can be downloaded for free, using the wifi hotspots.

Needed infrastructure

To enable on-location play using pads / phones, we either need

4 Wifi/Bluetooth-hotspots for locating the users present location.

OR

2D barcodes or similar at each destination/harbor (for a simplified version).

We cannot presume to rely on the devices GPS features, as the concrete in the building might interfere and make the data unprecise.

