

# SET OF GAMIFICATION CONCEPTS RELEVANT FOR THE TOURIST ATTRACTION GAMIFICATION SERVICE

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*Version 1.1*

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**Date:** 2018-03-30



European  
Regional  
Development  
Fund

Title of document	Set of gamification concepts relevant for the Tourist Attraction Gamification Service				
Title of project	BalticMuseums: Love IT!				
Document type	Additional project documentation				
Version	1.1				
Document no.					
Component	WP4: Development of the BYOD tours				
Indicator	Result of Activity 4.1				
Period of retention	2025-05-31				
Storage location / Link					
Amendment(s)					
Total number of pages					
created by	Jakub Swacha	Version	1.0	Date	2017-08-31
updated by	Jakub Swacha	Version	1.1	Date	2018-03-30
reviewed by	Karolina Muszyńska	Version	1.1	Date	2018-04-16
approved by		Version		Date	
modified by	Jakub Swacha	Version	1.1	Date	2018-04-19
	page	1; 4-5; 12-13			

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## CONTENTS

<b>1 Introduction</b>	<b>4</b>
1.1 Purpose	4
1.2 Scope	4
1.3 Relevant documents	4
1.4 Acknowledgements	5
1.5 Questions and Comments	5
1.6 List of acronyms and abbreviations	6
1.7 List of tables	6
<b>2 The concepts of tourism gamification</b>	<b>7</b>
2.1 The covered topical areas	7
2.2 Actions	7
2.3 Goals	8
2.4 Rewards	9
2.5 Rules	11
2.6 Status	12
2.7 Communication	13

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# 1 Introduction

## 1.1 Purpose

This document defines the set of concepts to be included in the Tourist Attraction Gamification Service delivered within the BalticMuseums: Love IT! project.

This document is to be used by the members of the development team of the Tourist Attraction Gamification Service within the BalticMuseums: Love IT! project to implement the service in accordance with the requirements specification. Other parties may use this document to understand the concepts of tourist attraction gamification.

## 1.2 Scope

This document lists the concepts to be included in the Tourist Attraction Gamification Service delivered within the BalticMuseums: Love IT! project.

This document does not describe the implementation details of the Tourist Attraction Gamification Service, the hardware platform and operating system environment to host the Tourist Attraction Gamification Service, or visual styles applied to the user interface. It also does not cover the implementation phases or timelines.

## 1.3 Relevant documents

The most relevant documents are:

- the API for Tourist Attraction Gamification which defines Application Programming Interface for the Tourist Attraction Gamification service (under preparation),
- the Analysis of technology selection for the Tourist Attraction Gamification service which defines architectural and technological choices made (under preparation),
- the Tourist Attraction Gamification service design specification which defines its implementation details (under preparation),

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- the Tourist Attraction Gamification service hardware and software requirements specification which defines the necessary requirements for the hardware platform and operating system environment to host the Tourist Attraction Gamification service (under preparation),
  - the Tourist Attraction Gamification service front-end design specification which defines the visual aspect of the user interface (under preparation).

## 1.4 Acknowledgements

The content of this document has been affected by consultations with the following project team members: Robert Ittermann, Agnieszka Miluniec.

## 1.5 Questions and Comments

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More information about the BalticMuseums: Love IT! project can be found at the following website:

<http://www.balticmuseums.info>

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## 1.6 List of acronyms and abbreviations

**API** Application Programming Interface

**POI** Point Of Interest

**POS** Point Of Storyline

## 1.7 List of tables

Table 2.1 Action-area gamification concepts. ....	7
Table 2.2 Goal-area gamification concepts.....	8
Table 2.3 Reward-area gamification concepts. ....	10
Table 2.4 Gamification rule modifiers. ....	11
Table 2.5 Gamification Status concepts .....	12
Table 2.6 Communication-area gamification concepts.....	13

## 2 The concepts of tourism gamification

### 2.1 The covered topical areas

There are six topical areas of tourism gamification for which the relevant concepts were defined:

1. Actions,
2. Goals,
3. Rewards,
4. Rules,
5. Status,
6. Communication.

### 2.2 Actions

The actions (see Table 2.1 below) consists of what tourism gamification service registers as visitor's actions.

**Table 2.1 Action-area gamification concepts.**

Concept name	Concept description	Examples
POI Action	A visitor's action relevant performed at certain POI or with e-guide content relevant to certain POI	<ul style="list-style-type: none"> <li>• Seeing a POI</li> <li>• Viewing specific content element relevant to a POI</li> <li>• Answering a question related to a POI</li> <li>• Passing a puzzle related to a POI</li> <li>• Rating a POI</li> <li>• Commenting a POI</li> </ul>

Concept name	Concept description	Examples
Visitor's Choice	A visitor's decision pertaining to the storyline behind tour or a quest to follow. Makes possible forked storylines. May be implicit (made by a visitor's action, e.g. seeing a specific POI) or explicit (picking an option within an e-guide).	<ul style="list-style-type: none"> <li>• "Go to the courtyard to follow the queen's story, go to the tower to follow the king's story"</li> <li>• "Pick a year you want to travel to..."</li> </ul>
Achievement	A visitor's action meeting certain requirements. Achievements can be specific (pertaining to one POI, POS and/or one time) or generic (achievable at different times or places).	<ul style="list-style-type: none"> <li>• Seeing a POI before 10:00 am [specific]</li> <li>• Answering a question in less than 10 seconds [specific]</li> <li>• Seeing more POIs in a day than ever before [generic]</li> </ul>
Completion	A set of visitor's actions together fulfilling certain requirements. Pertains to Combos, Challenges, Quests and Storyline Locks. Completion is attained when the last of the set requirements is met.	<ul style="list-style-type: none"> <li>• Seeing POI x and POI y</li> <li>• Seeing all POIs in an area</li> <li>• Solving all puzzles in an area</li> </ul>

## 2.3 Goals

The goals (see Table 2.2 below) suggest actions to perform for tourists.

**Table 2.2 Goal-area gamification concepts.**

Concept name	Concept description	Examples
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Concept name	Concept description	Examples
Challenge	A short-time goal set for visitor to get a reward. The requirements and rewards are presented to a visitor beforehand. Requires one or few actions to be performed. May be related to storyline.	<ul style="list-style-type: none"> <li>• Seeing a POI before 10:00 am to get 50 points</li> <li>• Solving a puzzle in less than 30 seconds to get 100 points</li> </ul>
Quest	A medium- to long-time goal set for visitor to get a reward. The requirements and rewards are presented to a visitor beforehand. May require multiple actions to be performed. Should be related to storyline. Quests should be chosen and accepted by visitor (see Visitor's Choice).	<ul style="list-style-type: none"> <li>• Seeing all POIs related to theme X in an attraction</li> <li>• Visiting 5 attractions within two weeks</li> </ul>
Streak	A goal of performing some type of action in a regular fashion (e.g. at least once a day, week or month). A streak is broken	<ul style="list-style-type: none"> <li>• Visit an attraction at least once in a week</li> </ul>
Storyline Lock	A goal set for visitor to continue the storyline. It has to be related to storyline. The main storyline locks should have their requirements presented to a visitor beforehand. The side storyline locks and forked storyline locks can (but does not have to) have their requirements presented to a visitor. The hidden storyline locks must not have their requirements presented to a visitor.	<ul style="list-style-type: none"> <li>• Go to the courtyard</li> <li>• See POI x</li> </ul>
Secret	A hidden goal about existence of which visitor is not informed about beforehand (only after making the first step to attain it). It may be related to the main storyline, define its fork or a new side storyline.	<ul style="list-style-type: none"> <li>• Unlisted POI visited</li> </ul>
Record	A goal defined by visitors themselves with their prior actions. A new record can be set by doing something faster or in a larger quantity than before.	<ul style="list-style-type: none"> <li>• Number of POIs seen in an hour</li> <li>• The longest tour</li> </ul>

## 2.4 Rewards

The rewards (see Table 2.3 below) define what is offered to tourists for making achievements.

**Table 2.3 Reward-area gamification concepts.**

Concept name	Concept description	Examples
Point	The basic form of a reward. Increases the visitor's score, showing their general progress.	<ul style="list-style-type: none"> <li>• Seeing a POI to get 1 point</li> <li>• Solving a puzzle to get 3 points</li> </ul>
Point Bonus	Extra points for completing a challenge or quest	<ul style="list-style-type: none"> <li>• Seeing a POI before 10:00 am to get 50 points</li> <li>• Solving a puzzle in less than 30 seconds to get 100 points</li> </ul>
Multiplier Bonus	Multiplies the base points during a short period of time. Initiated after Level-up, keeping a streak for certain time, completing certain challenges or passing certain POS	<ul style="list-style-type: none"> <li>• Get 2x points for each POI seen in next 30 minutes</li> </ul>
Level-up	Increases the visitor's level, showing their general progress in a more readable way. Initiated after passing certain score thresholds, completing certain quests or passing certain POS	<ul style="list-style-type: none"> <li>• Level-up after passing 1,000 points</li> </ul>
Record held	Stores the numbers depicting certain generic achievements	<ul style="list-style-type: none"> <li>• Longest tour attended: 64 POIs</li> </ul>
Badge	Builds the visitor's achievement portfolio. Earned after breaking certain records, completing certain challenges and quests or passing certain POS	<ul style="list-style-type: none"> <li>• See a POI after 23:00 am to get "Nighthawk" badge</li> </ul>
Virtual item	Builds the visitor's virtual treasury. Earned after performing certain actions at certain POIs, keeping a streak for certain time, or completing certain storylines	<ul style="list-style-type: none"> <li>• Get a virtual golden coin after seeing an exhibition of gold coins</li> </ul>
Prize coupon	A coupon redeemable for real-world discounts or prizes. May substitute or accompany virtual rewards	<ul style="list-style-type: none"> <li>• Get a 50% off default price if you return to the attraction next month</li> <li>• Get a free mascot if you buy anything in the cafeteria</li> </ul>

## 2.5 Rules

The rules link actions to goals and rewards. Table 2.4 lists the modifiers applicable in rule definitions in the tourism gamification service.

**Table 2.4 Gamification rule modifiers.**

Concept name	Concept description	Examples
Any	The rule is initiated only once, for the first POI of the defined collection	<ul style="list-style-type: none"> <li>• Visiting attraction x</li> </ul>
Each	The rule is initiated for every POI belonging to the defined collection	<ul style="list-style-type: none"> <li>• Seeing a POI in attraction x</li> </ul>
All	The rule is initiated only once, for the last POI of the defined collection	<ul style="list-style-type: none"> <li>• Seeing all POIs in attraction x</li> </ul>
Exactly	The rule is initiated only once, for the x-th POI of the defined collection, where x is some number	<ul style="list-style-type: none"> <li>• Seeing 10 POIs in area x</li> </ul>
Each time	The rule is initiated each time certain action is accomplished	<ul style="list-style-type: none"> <li>• Seeing a POI</li> </ul>
First time	The rule is initiated only once, for the first time certain action is accomplished	<ul style="list-style-type: none"> <li>• Seeing a POI x</li> </ul>
Second time	The rule is initiated only once, for the second time certain action is accomplished	<ul style="list-style-type: none"> <li>• Returning to attraction x</li> </ul>
Many times	The rule is initiated only once after certain action was accomplished for a specific number of times	<ul style="list-style-type: none"> <li>• Seeing 10 POIs</li> </ul>
Time of day	The rule is initiated only if the action is accomplished in certain hours	<ul style="list-style-type: none"> <li>• Visiting attraction x in the morning</li> </ul>
Day of week	The rule is initiated only if the action is accomplished on certain week days	<ul style="list-style-type: none"> <li>• Visiting attraction x on Tuesday</li> </ul>

Concept name	Concept description	Examples
Period of year	The rule is initiated only if the action is accomplished in certain period of year	<ul style="list-style-type: none"> <li>Visiting attraction x in March</li> </ul>
Exact time and day	The rule is initiated only if the action is accomplished on certain day and time	<ul style="list-style-type: none"> <li>Visiting an event in attraction x happening between 20 and 22 pm on April, 1</li> </ul>
After	The rule is initiated only if certain other action has already been accomplished	<ul style="list-style-type: none"> <li>Seeing the XVIII-century paintings only after the XVII-century paintings</li> </ul>
Before	The rule is initiated only if certain other action has not been accomplished yet	<ul style="list-style-type: none"> <li>Seeing the pictures of the panorama only before going to the tower</li> </ul>
Attraction	The rule is initiated only if the action is accomplished in a certain attraction	<ul style="list-style-type: none"> <li>Visiting attraction x</li> </ul>
Local	The rule is initiated only if the action is accomplished in an attraction located in certain area	<ul style="list-style-type: none"> <li>Visiting 3 attractions in area x</li> </ul>
Route	The rule is initiated only if the action is accomplished in an attraction located on certain route	<ul style="list-style-type: none"> <li>Visiting 7 attractions on route x</li> </ul>
Global	The rule is initiated regardless of location	<ul style="list-style-type: none"> <li>Seeing a POI</li> </ul>

## 2.6 Status

The status describes how far has the visitor progressed within the gamification scheme. Table 2.5 lists the concepts relevant to this area.

**Table 2.5 Gamification Status concepts**

Concept name	Concept description	Examples
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Concept name	Concept description	Examples
Score	The total number of points earned so far	<ul style="list-style-type: none"> <li>123456</li> </ul>
Level	The current level of a visitor. A number may be associated with a name	<ul style="list-style-type: none"> <li>Level 3 (Scout)</li> </ul>
Achievements	The list of completed storylines and quests	<ul style="list-style-type: none"> <li>Finished the story of "Count Helene's memoirs"</li> <li>Saw each POI in castle Malbork</li> </ul>
Records	The list of current personal records including the general records held	<ul style="list-style-type: none"> <li>The longest tour: 64 POIs</li> </ul>
General ranking position	The visitor's rank based on points	<ul style="list-style-type: none"> <li>Current rank: 546</li> </ul>
Record ranking position	The visitor's rank based on respective records	<ul style="list-style-type: none"> <li>The longest tour: 64 POIs (rank: 77)</li> </ul>
Badges	The list of earned badges	<ul style="list-style-type: none"> <li>Early bird</li> </ul>
Virtual items	The list of acquired virtual items	<ul style="list-style-type: none"> <li>The golden coin of king Louis</li> </ul>
Coupons	The list of valid coupons	<ul style="list-style-type: none"> <li>50% off latte in cafeteria</li> </ul>

## 2.7 Communication

The concepts of the communication area (see Table 2.6) pertain to the ways of how the visitors are informed about their progress and status.

**Table 2.6 Communication-area gamification concepts**

Concept name	Concept description	Examples
Got points	Information on the number of base points just earned	<ul style="list-style-type: none"> <li>50 points</li> </ul>

Concept name	Concept description	Examples
Got bonus	Information on the number of bonus points just earned	<ul style="list-style-type: none"> <li>Bonus: 50 points</li> </ul>
Got multiplier	Information on the multiplier bonus just activated	<ul style="list-style-type: none"> <li>Multiplier: 2x</li> </ul>
Promotion	Information on the level-up right after achieving it	<ul style="list-style-type: none"> <li>Level up!</li> </ul>
New Record	Information on the new Record set right after achieving it	<ul style="list-style-type: none"> <li>New record!</li> </ul>
Badge awarded	Information on the earning of a badge right after making a relevant action	<ul style="list-style-type: none"> <li>New badge awarded</li> </ul>
Item awarded	Information on the awarding of a virtual item right after making a relevant action	<ul style="list-style-type: none"> <li>Item received</li> </ul>
Coupon awarded	Information on the earning of a coupon right after making a relevant action	<ul style="list-style-type: none"> <li>New coupon received</li> </ul>
Coupon spent	Information on spending the coupon right after doing it	<ul style="list-style-type: none"> <li>Coupon spent</li> </ul>
Coupon lost	Information when the coupon becomes invalid	<ul style="list-style-type: none"> <li>Unused coupon lost</li> </ul>
Secret uncovered	Information on uncovering a Secret right after making a relevant action	<ul style="list-style-type: none"> <li>Secret uncovered!</li> </ul>
Challenge continuation	Information on continuing a challenge right after making a relevant action	<ul style="list-style-type: none"> <li>Sea birds challenge: 3 to go</li> </ul>
Challenge finished	Information on completing or failing a challenge right after making a relevant action	<ul style="list-style-type: none"> <li>Challenge completed!</li> </ul>
Quest active	Information confirming choosing a quest right after doing it	<ul style="list-style-type: none"> <li>Quest assigned</li> </ul>
Quest continuation	Information on continuing a quest right after making a relevant action	<ul style="list-style-type: none"> <li>Sea birds quest: 3 to go</li> </ul>
Quest finished	Information on completing or failing a quest right after doing it	<ul style="list-style-type: none"> <li>Quest failed!</li> </ul>
Streak continuation	Information on continuation of Streak right after making a relevant action	<ul style="list-style-type: none"> <li>Streak continues!</li> </ul>

Concept name	Concept description	Examples
Storyline unlock	Information on unlocking Storyline right after making a relevant action	<ul style="list-style-type: none"> <li>• Storyline unlocked!</li> </ul>
General progress bar	Information on how many points are needed for the next level-up (accessible all time)	<ul style="list-style-type: none"> <li>• 12345 points to level-up</li> </ul>
Quest progress bar	Information on how many respective actions are needed to complete the quest (accessible all time)	<ul style="list-style-type: none"> <li>• See 3 birds, 13 monkeys</li> </ul>
Time reminder	Information on how much time is left before a challenge or quest is failed (shown after the time left is below certain threshold)	<ul style="list-style-type: none"> <li>• 00:36 to complete the challenge</li> </ul>
General leaderboard	Information on top visitors with the highest number of points (accessible all time)	<ul style="list-style-type: none"> <li>• 1. The Master, 2. Bob</li> </ul>
Record leaderboards	Information on top visitors with the best respective records (accessible all time)	<ul style="list-style-type: none"> <li>• Best: The Master (128 POIs in a tour)</li> </ul>
Avatar	Information on the registered visitor's nickname and avatar (accessible all time)	<ul style="list-style-type: none"> <li>• The Master</li> </ul>

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