

### Descriptions and evidence of outputs

The project main output in work package T3 has the title "**Best practice for cultural heritage co-production projects**". It includes: best practice manuals/guidelines, on-line resources and training for cultural heritage co-production projects. These resources will enable organizations and agencies to build successful community-based and sustainable projects. It empowers local communities to record, research, preserve and present their heritage for a range of activities including digital documentation (3D data capture, 360 video, metadata) and narrative creation (story-telling). The project has also enabled access to additional available data sources and open source tools or interfaces that can be used by communities to valorise their cultural heritage to a wide audience and stakeholders. Training events and workshop were delivered (with COVID-19 limitations) to test and promote the tools in local communities. The resources are delivered across a range of channels including: on-line teaching resources, digital publications, tutorial videos.

### Description of the final state of the output

The CINE partners from Iceland and Ireland were responsible for WP T3. The main output can be described as five resources that are all available on-line:

1. Content management system (CMS) for heritage games.
2. Best practice manual for cultural heritage co-production.
3. Practical handbook on gamification and games-based approach to cultural heritage.
4. Guidelines for mapping and digital documentation.
5. App for crowdsourcing registration of heritage remains.

All the resources developed by the partners in this work package are accessible via [www.cinecommunitites.org](http://www.cinecommunitites.org).

## 1. Content management system (CMS) for heritage games

The Icelandic partner Locatify is a pioneer SME in building cloud-based CMS that makes it easy for anyone to create and manage location-based app projects such as indoor and outdoor tour guides and treasure hunt games. In the process of the CINE project they worked with other partners on testing and developing their system for different needs and goals in relation to communicating and co-producing cultural and natural heritage. Based on this work the CMS was updated and improved. The CMS is available on [locatify.com/login/](https://locatify.com/login/) and can be used to build apps for both Android and iOS. On the website there are also tutorials to teach beginners to use the CMS.

### Target audience

General public, SME, education/training centre and school, interest groups including NGOs.

### Durability

Locatify is the owner of the CMS and it is in their interest to ensure it is working.

### Contact details for the partner responsible

Steinunn Anna Gunnlaugsdottir, Co-founder and CEO of Locatify; Skúlagata 23, 310 Borgarnes, Iceland; (+354) 699 4320; [steinunn@locatify.com](mailto:steinunn@locatify.com).

### Supporting evidence

Appendix A - overview of improvements.

[www.locatify.com](https://www.locatify.com)

[www.cinecommunities.org/gamification/](https://www.cinecommunities.org/gamification/)

## 2. Best practice manual for cultural heritage co-production

The Irish partner Donegal County Museum has many years of experience working with communities and was responsible for that part of the work package. An expert in the field was hired to write a comprehensive manual for cultural heritage co-production based on CINE case studies. The manual was completed and is available in two formats – as a pdf for download and on-line at [coproductionguide.com/](http://coproductionguide.com/). The manual can also be viewed at [www.cinecommunities.org](http://www.cinecommunities.org) where all the resources developed by the partners in this work package are accessible.

### Target audience

The main target group is those working in museum/heritage centres and other cultural organisations and community groups. Other target groups are: Interest groups including NGOs, local public authority, education/training centre and school, general public.

### Durability

The manual is completed, ready to use and available on-line for those who are interested. The responsible partner will ensure that the website will be on-line for the years to come.

### Contact details for the partner responsible

Judith McCarthy, Curator, Donegal County Museum, High Road, Letterkenny Co. Donegal; 074 9124613; [jmccarthy@donegalcoco.ie](mailto:jmccarthy@donegalcoco.ie)

### Supporting evidence

[coproductionguide.com](http://coproductionguide.com)

[cinecommunities.org](http://cinecommunities.org)

### 3. Practical handbook on gamification and games-based approach to cultural heritage

The Icelandic partner Gunnar Gunnarsson Institute was responsible for the gamification part of the project. The main output in addition to several deliverables is a practical handbook for cultural organisations on gamification and games-based approach to cultural heritage. In the handbook are guidelines on how to gamify the visitor's experience and examples of games for cultural communication. The handbook is accessible at [cinegamification.com](http://cinegamification.com).

#### Target audience

The main target group is those working in museum/heritage centres and other cultural organisations. Other target groups are: Interest groups including NGOs, local public authority, national public authority, higher education and research, education/training centre and school, SME, general public.

#### Durability

The handbook is completed, ready to use and available on-line for those who are interested. The responsible partner will ensure that the website will be on-line for the years to come.

#### Contact details for the partner responsible

Skúli Björn Gunnarsson, managing director, Gunnar Gunnarsson Institute, 701 Egilsstaðir, Iceland; (+354) 471 2990; [skuli@skriduklaustur.is](mailto:skuli@skriduklaustur.is)

#### Supporting evidence

[cinegamification.com](http://cinegamification.com)

#### 4. Guidelines for mapping and digital documentation

Ulster University in Northern Ireland managed the technical tasks in the work package in collaboration with the University of St. Andrews. Based on the case studies in Ireland and Iceland guidelines for mapping and for digital documentation were created and lists made of data sources and open source tools or interfaces that can be used by communities to valorise their cultural heritage to a wide audience and stakeholders. All this is presented on the website [cinecommunitites.org](http://cinecommunitites.org).

##### **Target audience**

The main target group is those working in museum/heritage centres and other cultural organisations. Other target groups are: National public authority, regional public authority, local public authority, interest groups including NGOs, higher education and research, education/training centre and school, SME, general public.

##### **Durability**

The website is completed, ready to use and available on-line for those who are interested. The responsible partner will ensure that the website will be on-line for the years to come.

##### **Contact details for the partner responsible**

Joan Condell, Professor, School of Computing, Engineering and Intelligent Systems, Ulster University; 079 55813249; [j.condell@ulster.ac.uk](mailto:j.condell@ulster.ac.uk).

##### **Supporting evidence**

[cinecommunitites.org](http://cinecommunitites.org)

## 5. App for crowdsourcing registration of heritage remains

MUNINN is an app that was designed within the CINE-project as a part of the advanced mapping part of WP T3. It was designed in collaboration with the University of St. Andrews, Gunnar Gunnarsson Institute and the associated partner Minjastofnun Íslands (The Cultural Heritage Agency of Iceland), which is an administrative institution and is responsible for archiving information about archaeological and built heritage. They run a geo-located database for protected and listed archaeological sites. In Iceland, each municipality is obliged to register cultural heritage within their territory as a part of their land-use and master plans. Only a part of cultural heritage in the country has been located and listed.

The idea with the MUNINN app is to crowdsource the act of locating cultural remains with the help of the public. The information gathered via the app will go into a special database where it will be certified and made visible for other users within the app.

### Target audience

National public authority, regional public authority, local public authority, interest groups including NGOs, general public.

### Durability

The MUNINN app is in beta-version and on trial by the Minjastofnun at the moment. When the testing is over it will be completed and given the final look. Then it can be made public and promoted. It is an app that can easily be adapted to other countries.

### Contact details for the partner responsible

Associated partner responsible is Minjastofnun: Oddgeir Isaksen, archaeologist & project manager, Minjastofnun, Suðurgötu 39, 101 Reykjavík, Iceland; (+354) 570 1306; oddgeir@minjastofnun.is.

### Supporting evidence

Appendix B - MUNINN heritage app

Presentation in Icelandic at <https://youtu.be/ZFoSXctXFrA>

## Locatify's CMS for heritage games

CINE Report 2021 - Output T3.1. Best practices for cultural heritage co-production projects - WP T3

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The Locatify Creator CMS is a cloud-based content management tool that makes it easy for anyone to create and manage location-based app projects such as; indoor and outdoor tour guides, treasure hunt games or other indoor positioning projects.

It can be accessed at <https://locatify.com/login/>

Further information at <http://www.cinecommunities.org/gamification/>

### Updates in the process of the CINE project

Developments of the system have been the utter focus during the three year period of CINE. The apps have been improved as well. New functions have been created and the CMS has been made more user friendly. Among improvements:

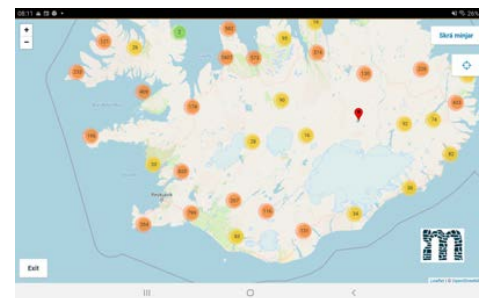
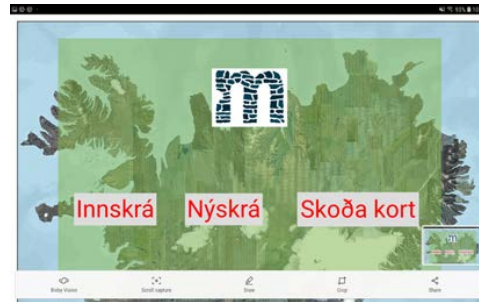
- Updated CMS User Interface to make it easier to create outdoor games
- Custom tour info and treasure hunt pages improved
- Improved challenge templates
- Added ability to preview point content and about game info
- Updated leaderboard to include collected coupons and images
- Upgrade the account with self service
- Improved process for white label app owners to upload informations
- Black mode adapted for game apps
- Games created without location triggering
- Sticker challenges created
- AR functions tested
- A new Locatify's website was published in December 2020

## MUNINN - heritage app



MUNINN is an app that was designed within the CINE-project as a part of the advanced mapping. It was design in collaboration of the University of St. Andrews, Gunnar Gunnarsson Institute and the associated partner Minjastofnun Íslands (The Cultural Heritage Agency of Iceland), which is an administrative institution and is responsible for archiving information about archaeological and built heritage. They run a geo-located database for protected and listed archaeological sites.

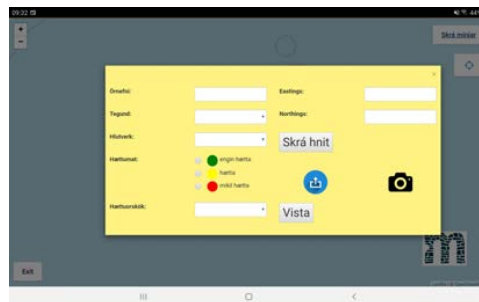
In Iceland, each municipality is obliged to register cultural heritage within their territory as a part of their land-use and master plans. Only a part of cultural heritage in the country has been located and listed. The idea with Muninn app is to crowdsource the act of locating cultural remains with help of the public. The information gathered via the app will go into a special database where it will be certified and made visible for other users within the app.



This can be a vital part in the process of mapping cultural heritage remains in Iceland and will serve as a source for the standardized survey done by professional archaeologists. Also, a part of the intended usage of the app regards the monitoring of individual cultural heritage sites. The entries added in the app can help the Cultural Heritage Agency to observe sites all over the country and monitor changes e.g. impact of erosion on sites.

Information recorded:

- *Name of the site*
- *Type of remains*
- *Purpose of remains*
- *Is the site under threat*
- *Risk factor*
- *GPS-location*



The user can take photo with his phone and send in with the information.

The MUNINN app is in beta-version and on trial by the Minjastofnun at the moment. When the testing is over it will be completed and given the final look. Then it can be made public and promoted. It is an app that can easily be adapted to other countries.

Part of the CINE-project regarding the MUNINN app, was to find ways to gamify the app to encourage people to use it. That has been done theoretically but it is a feasible option for the future. It needs more programming in an upgraded version of the app but could increase the usage.



## MUNINN - gamified



### Gamifying an App with Information about Cultural Remains

#### THE OBJECTIVE:

- To increase public interest in cultural remains.
- To activate the public to locate cultural remains and monitor their condition.

#### Properties of the app:

- Users register with identifiable information.
- The app gathers information from each location into a database.
- You can enter location, name, risk evaluation, type and purpose of the remains, and upload photos from the site.
- Documented locations from the base map of the institution in question are visible in the app through a web browser. Listings received through the app appear within the app after they have been reviewed and approved by the Cultural Heritage Agency. The user himself can always see his own listings even though they have not been reviewed and approved. The listings do not feed into the master-data base of the Cultural Heritage Agency.

***The objective of gamifying a crowdsourcing app is to get more users, collect more information and increasing the quality of said information.***

## Gamification Possibilities

### 1. Users can earn their place as registrars (a level of skill or recognition)

Example: When more than 10 listings have been delivered and 10 of them have been approved by the appropriate institution, the user moves up one level. With each level, you gain access to more technology and can hand in more diverse data, for example 360° images or videos.

### 2. User competition

- Those who submit information receive points for each approved listing.
- The scoreboard is visible on the internet or the app so users can see their position in comparison to others.
- The levels of distinction can enter into play, with a competition in different categories.

### 3. Competition between groups or regions

- A possibility of creating groups which compete in scores or discovered locations.
- A possibility of defining a competition between regions to encourage people to register.

### 4. Built-in user encouragement

- The app encourages the user to go out and discover if they have been inactive for a long time.
- The app praises the user if they list a certain number of locations over a defined period.
- You can activate the phone's pedometer and give extra credit if the user walks a long way for their listings.