

1) Overview descriptions of outputs

This output provides a best practice guides for creating, managing and using Virtual Museums Without Walls. This includes reference applications, workflows and best practice guidelines which provide a comprehensive guide to the capabilities and use of the concept MWW, including best practice guidelines and curatorial guidelines on reconstruction focussed heritage projects.

To support Virtual Museum Infrastructure (OT4.1), Community Heritage Discovery (OT2.4) Community Coproduction (OT3.1) the University of St Andrews and Timespan have developed best practice resources, documents and examples. This includes a toolkit section on CINE GATE early in the project to support partners and stakeholders. It is now a place enriched by bringing together handbooks, tools and examplars created during the projects lifetime. Best practice is also supported through a live VMWW: CINEGATE. People can sign up for and use this service to create their own resources and support their practice. There is also a reference implementation which can be downloaded and installed to set up a new VMWW instance.

The toolbox is aimed at supporting sustainable community heritage. This is available at <https://cineg.org/one-page-express/toolkit/> and includes the following toolkits:

- 1) Digitising heritage: resources for making digital images, audio recordings and video.
- 2) Spherical media: resources making spherical images, videoa and Virtual Tours.
- 3) 3D digitisation: resources for using photogrammetry to digitise artefacts in 3D.
- 4) Handbook for guiding community co production of heritage projects.
- 5) Handbook on gamification and games based approach to cultural heritage.
- 6) Creative Commons: guide to resources, intellectual property and Wikis.
- 7) Archiving and metadata: guide for archiving heritage and media in CINE.
- 8) Digi Tourist guide to creating digital tourist experiences.
- 9) Mobile Heritage support for making heritage apps.
- 10) Heritage Mapping: resources for creating interactive maps
- 11) Virtual time travel; guide to digital reconstrucitons and
- 12) Going Live! Guides for using Soial Media and connecting through live events.

The toolbox contains examples, templates, guidelines and handbooks from all CINE partners. It provided the foundation for developing the CINE Wayfinder. It enabled other organisations to create innovative apps and toolkits for their purposes. It provides guides for creating, archiving and curating content in CINEGATE and for other installations of our Virtual Museum Infrastructure.

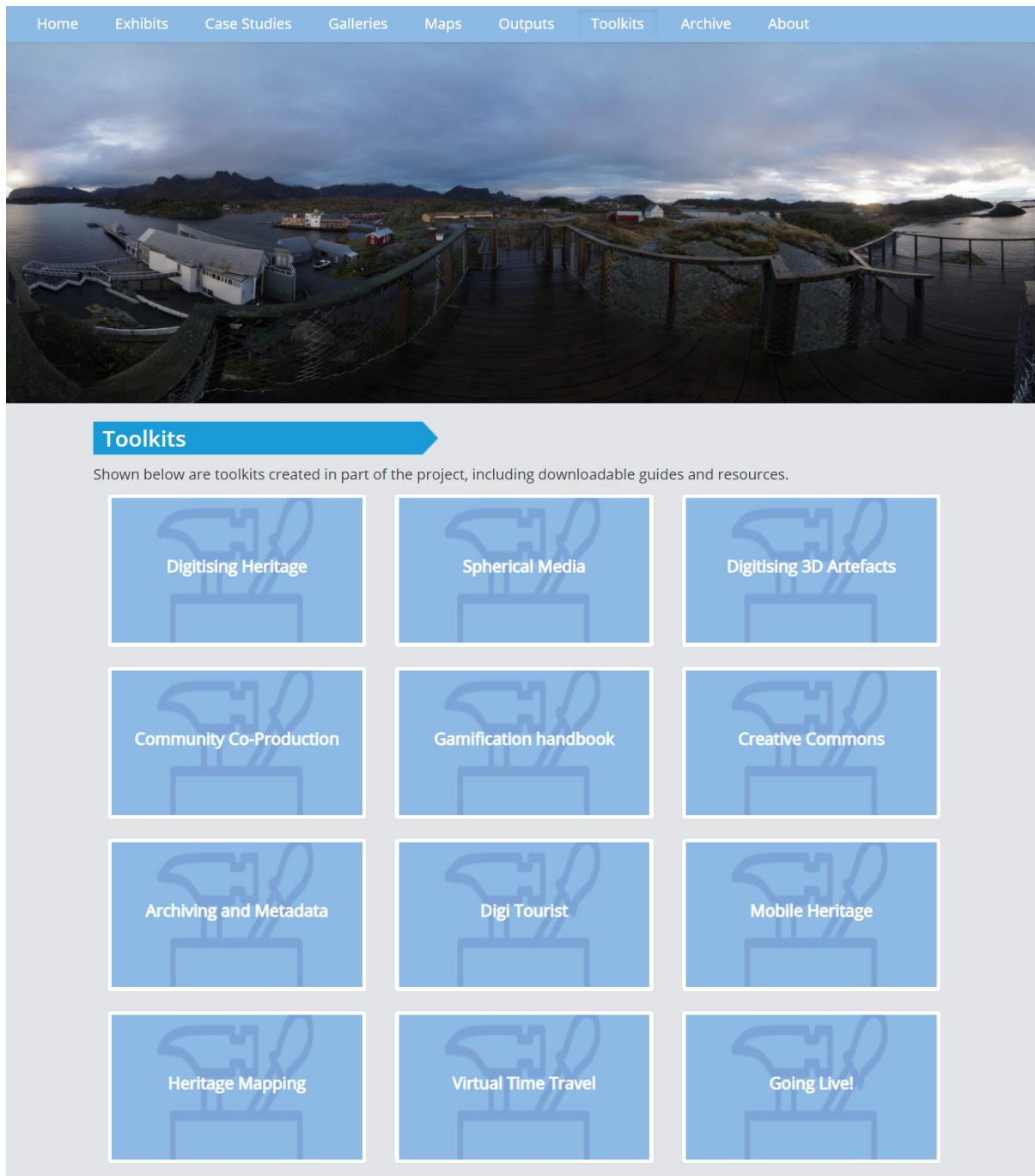


Figure 1 Screen shot of toolkits in CINEGATE

Each toolkit contains resources that provide support for collecting, archiving, curating and exhibiting digital representations of heritage. There are several types of resources, which include: guides, examples, frameworks and exemplar content.

The toolkit draws upon the existing state of the art and experience developed during the project. Examples of our best practice for Virtual Museums Without Walls being followed and sometimes being developed further include activities both within the project and following on from the project.

There has been a lot of interest from heritage organisations in the toolkits, resources and processes developed by CINE. This was accelerated by the impact of COVID 19, and the desire of heritage organisations to connect with their audiences in the digital domain. The toolkits have been used in creating full blown, virtual museums, virtual tours, digital galleries, virtual time travel, in heritage at home events and in series of capacity building workshops.

Durability

All the toolkits are hosted on CINEGATE and are available online. These will be hosted for a period of 5 years minimum. They will be updated during this time. The toolkits will be available for download for a period of 10 years from Zenodo.

Partner Contributions

This workpackage was led by Timespan Museum. In line with the project plan and budget all partners contributed to this workpackage and output. University of St Andrews made the core technical contribution. Gunnar Gunnar Institute led on Gamification, Ulster University led on digitising heritage, Donegal museum led on Community Co Production, Locatify led on mobile heritage, Museum Norge provided oversight and direction and contributed to design and meta data, University of Oslo contributed to virtual time travel. University of St Andrews led on Spherical Media, 3D, Metadata, Virtual time Travel and Going Live!

<https://cineg.org/one-page-express/toolkit/>



Figure 2 Download a package and guide for installing a Virtual Museum Infrastructure

Target Audience

The target audiences are organisations and people that are charged with the preservation and promotion of heritage. These toolkits aim to contribute to building capacity of heritage professionals and volunteers. This is relevant to museums, SMEs local regional and national authorities and community organisations. The general public will benefit as a consequence of the work the best practice guidelines, support and guide.

OT2.2 Output Indicators

Number of schemes/interventions (services) involving sustainable environmental management (specific)

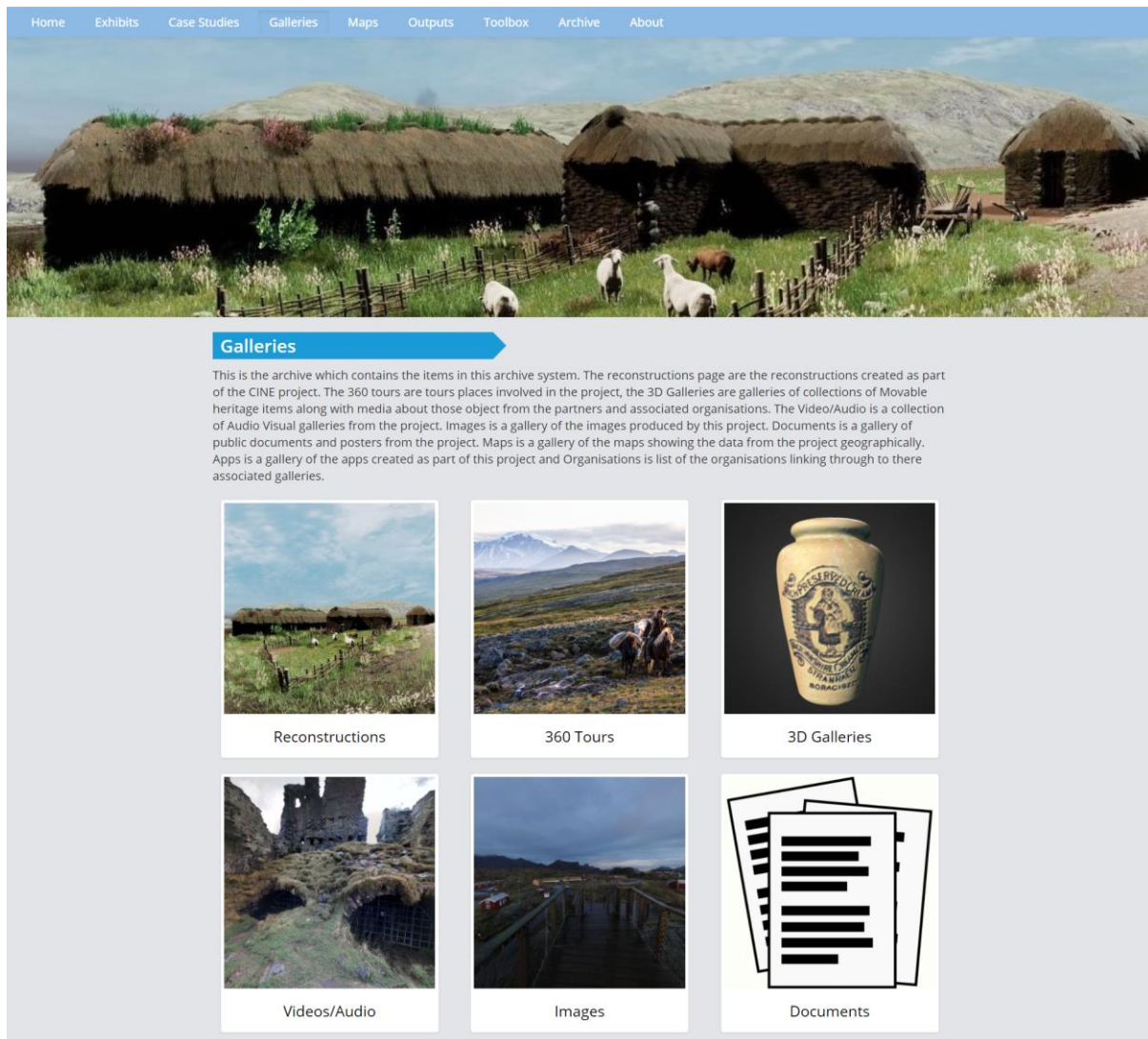


Figure 3 CINE Galleries, show casing work supported VMWW best practice guidance

Best practice working with the VMWW is supported in three ways. A live VMWW CINEGATE provides a framework for creating archiving and exhibiting digital heritage which engages the public thereby increasing engagement with heritage.

www.cineg.org

Toolkits hosted by CINE provide exemplar content, guides and resources that enhance the capability of volunteers, professionals and organisations to follow best practice in the sustainable management of heritage. The toolkits support, the creation of content, archiving and exhibiting. This includes 3D, 360 media and historic reconstructions. It includes digital galleries, virtual tours and interactive mapping.

<https://cineg.org/one-page-express/archives/>

<https://cineg.org/one-page-express/toolkit/>

All the sources and resources needed to set up a Virtual Museum Without Walls, have been packaged up. There are instructions to install. This implementation of the Virtual Museum can be downloaded and installed. This can then be used directly, it can be further developed or components used in relevant contexts.

<https://cineg.org/toolkits/virtual-museum/>

Number of organisations introducing a decision-making tool or governance concept facilitating sustainable environmental management (specific) 3

1 Highlands and Islands Enterprise



<https://vimeo.com/383482846>

With Highlands and Islands Enterprise as part of the CUPIDO North Sea Region project the Virtual Museum Framework to set up a tool for communicating within the project and to run Virtual Reality exhibits and Exhibitions. In the Highlands and Islands of Scotland these include:

- 1 Highlander's Museum
- 2 Aros Centre, Skye
- 3 North Isles Landscape Partnership (Orkney)
- 4 Taigh Chearsabhagh Museum, North Uist

The toolkit has also underpinned a series of workshops held with Highlands and Islands Enterprise and XpoNorth which aimed to enable museum professionals and volunteers to up their digital skills. These included workshops on Digitisation, Virtual Tours, Virtual Reality, Creative Commons and many more topics. We are now linking to recordings of these workshops in the CINE Toolbox.

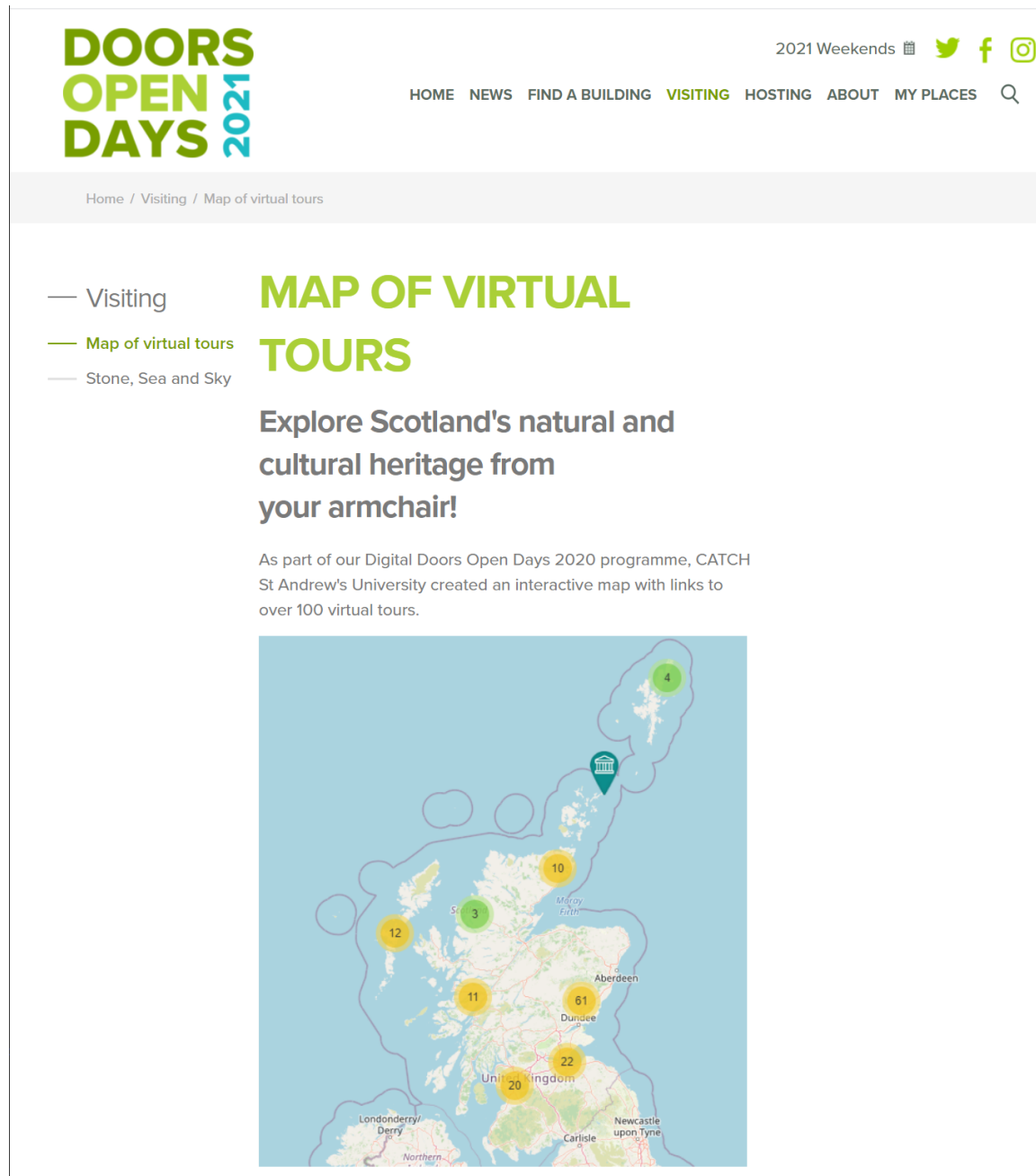
The Virtual Museum is used by CUPIDO partners across the North Sea Region, including Iceland, Norway, Sweden, Denmark, Belgium, Scotland and England.

This work makes direct use of Digitising Heritage, Spherical Media, Heritage Mapping,

<https://www.cupidoeu.org/galleries/orgscotland.php>

<https://www.cupidoeu.org/galleries/about.php>

2 Digital Open Doors Virtual Tours archive Scottish Civic Forum



DOORS OPEN DAYS 2021

2021 Weekends 📅 🐦 f 📷

HOME NEWS FIND A BUILDING **VISITING** HOSTING ABOUT MY PLACES 🔍

Home / Visiting / Map of virtual tours

— Visiting

— **Map of virtual tours**

— Stone, Sea and Sky

MAP OF VIRTUAL TOURS

Explore Scotland's natural and cultural heritage from your armchair!

As part of our Digital Doors Open Days 2020 programme, CATCH St Andrew's University created an interactive map with links to over 100 virtual tours.

Figure 4 Digital Open Doors interactive map of Virtual Tours

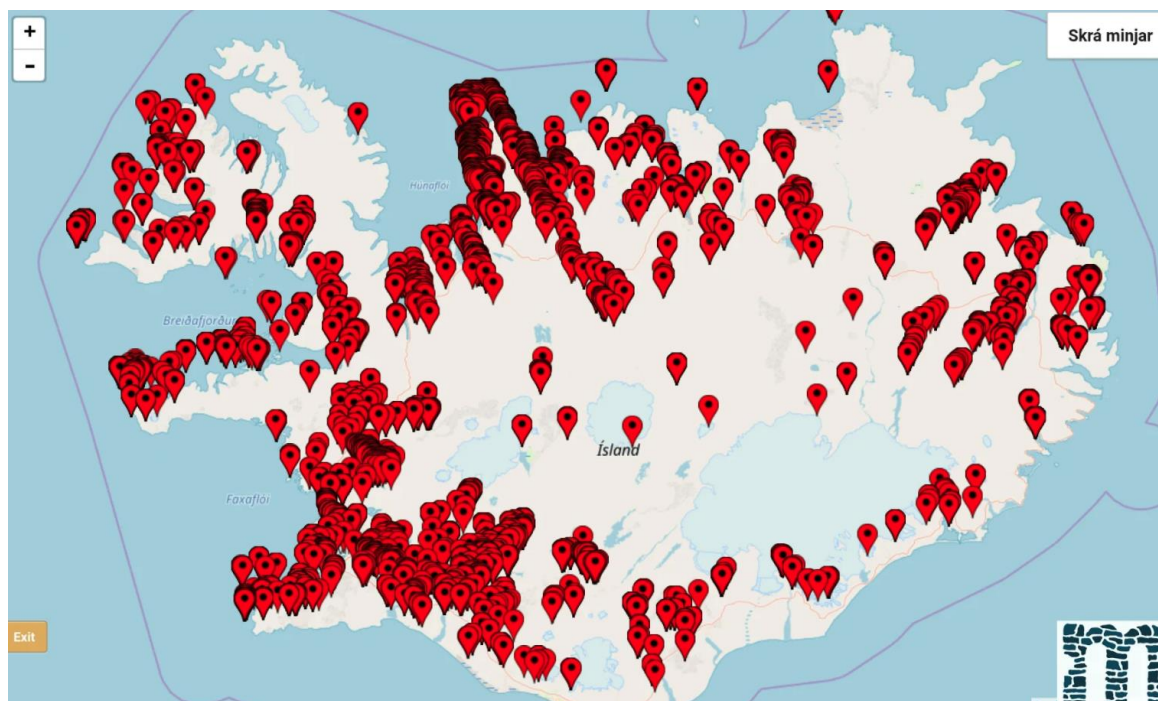
The Scottish Civic Forum is responsible for running the Doors Open events. As part of the response to COVID 19 switched to a Digital Doors Open format. As part of this the VMWW was used to develop an interactive map linked to over 140 virtual tours in Scotland. The

digitisation toolkits were used in developing tours and as a base for capacity building workshops developing the capacity of Digital Open Doors volunteers. The workshops on Digital Imaging, Audio, Video, Creative Commons, Interactive Mapping and Virtual Tours.

<https://www.doorsopendays.org.uk/visiting/map-of-virtual-tours/>

3 Munnin App Iceland adopted by [The Cultural Heritage Agency of Iceland](#)

The National Heritage Agency of Iceland has implemented an app developed by CINE to gather landscape data and let community members / the public provide information.



MUNINN is an app that was designed within the CINEproject as a part of 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 responsible for archiving information about archaeological and built heritage. They run a geo-located database for protected and listed archaeological sites.

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 goes into a special database where it is certified and made visible for other users within the app. This is 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 usage of the app regards the monitoring of individual cultural heritage sites. The entries added in the app 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 and GPS-location. The user can take photo with his phone and send in with the information.

<https://cineg.org/muninn-app/>

<https://play.google.com/store/apps/details?id=org.cineg.minjaslodir>