

VIKING NETWORKS & YOUNG ADULTS

a project by museums willing to change and be a part of the solution for the future.






NORA

VIKING NETWORKS & YOUNG ADULTS

A NETWORK APPROACH TO KNOWLEDGE AND SUSTAINABILITY

PUBLISHED BY: Lofotr vikingmuseum/Museum nord

This publication is part of the project, developed in cooperation with:

Byggðasafn skagfirðinga

Lofotr vikingmuseum/museum nord

Kujataa - world heritage

Kyle & lochalsh community trust

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Viking Network - and Young adults

The Nora-project is a 3-year project between four project partners: Lofotr Viking museum in coastal Norway, Byggðasafn Skagfirðinga in Iceland, Kujataa in Greenland and Kyle & Lochalsh Community Trust in Scotland. The purpose of this project is to provide jobs and knowledge for young adults, build a network of knowledge and develop meaningful vocational skills in association with the Viking Heritage Project between the partners. Simultaneously, the aim was to explore ideas and share experiences around different methods for energy-saving and carbon-reduction onsite via cultural tourism.

Throughout the three years, the project focused on different areas every year. While doing so, the partners visited the respective countries to learn about the challenges and the best practices. The world is changing, and therefore, we have to change with it and help to create a better future. Sustainability has never been as important as it is today. Therefore it is important to take action in all areas, as well within tourism. We did a lot of research, as well as learn from each other. By gaining more knowledge, we can more easily adapt to changes and be even more sustainable in the future.

Partners in the project

Here the project partners are visiting Tyrfingsstaðir in Skagafjörður, a restored turf farm by The Heritage Craft School.
Photo: Linn Olsen

NORWAY

LOFOTR VIKINGMUSEUM

Lofotr Viking Museum was established in 1995 by the municipality of Vestvågøy, situated in the Lofoten archipelago north of the Arctic Circle in Northern Norway.

In 1981, a farmer, Frik Harald Bjerkli, ploughed on the site and discovered archaeological items in the earth. This led to a large archaeological investigation of the area. The archaeological investigations revealed the longest longhouse so far found from the Viking Age.

Today, the museum consists of several buildings, both reconstructions from the Viking Age as well as modern buildings. The longhouse is located on top of a hill, and there is a 15-minute (1500 meter) walk down to the harbour where the boat houses, different activities and the Viking ship are lying. The museum's main purpose is to teach research-based knowledge about the society in the north of Norway in the period 800–1050 AD. The knowledge is presented in a variety of forms; guided by "Vikings", audio guiding, song and theatre, Viking activities, food and feasts, demonstrations of Viking handicrafts, visitors' participation in sailing the Viking ship and much more. The museum focuses on having an active dissemination where guests can participate in learning about handicrafts, trying activities and asking questions to our Vikings. We aim to be a living museum where you take a step into the past and have an experience through smell, feel and touch what it was like living as a Viking.

There has been a steady increase in guests since the opening of the museum; in the year 2025 Lofotr had approximately 140,000 guests.

Lofotr Viking Museum is a part of Museum Nord, which runs 21 different museums in the region. Museum Nord is currently working to implement a new strategy for sustainability from 2024. Lofotr Næringsdrift AS, which is the partner in this sustainability project, is a daughter company of Museum Nord.

ICELAND

SKAGAFJÖRÐUR HERITAGE MUSEUM

The Skagafjörður Heritage Museum is a centre for conservation and research on local history and the cultural heritage of Skagafjörður, a region in the north of Iceland. The museum is owned by the municipality and was founded in 1948, making it one of the oldest heritage museums in Iceland.

Today, there are three historic buildings on the museum grounds. In Glaumbær Turf Farm, a farmstead for over 1000 years, we have an exhibition about life in the 19th century. The first exhibition was opened in 1952. Glaumbær Turf Farm belongs to, and is protected by, the Historic Building Collection of the National Museum of Iceland. Áshús and Gilsstofa are two 19th-century timber buildings which host various exhibitions and the museum's café. The Archaeology Department of the museum was established in 2003 and is responsible for promoting research on cultural heritage in Skagafjörður and elsewhere. The museum also runs The Heritage Craft School project, teaching traditional building methods using turf, stones and timber.

The Icelandic Sagas reference that Snorri Þorfinnsson, son of Þorfinnur Karlsefni and Guðríður Þorbjarnardóttir, farmed at Glaumbær in the 11th century. Archaeological research has revealed a 10th-11th-century long house, roughly 150 m east of Glaumbær Turf Farm. The future plan for the museum is to excavate the longhouse and rebuild it. The longhouse and the old turf farm represent two very different forms of dwellings, allowing us to see in one place both the first and the final stages of 1000 years of Icelandic turf house development.

GREENLAND

KUJATAA

Kujataa – a subarctic farming landscape in Greenland – is located in the municipality of Kujalleq in South Greenland. The property is made up of five component parts that together represent the demographic and administrative core of a farming community based on a combination of animal husbandry and marine mammal hunting established by Norse colonists in the 10th century AD and continued to this day by Inuit farmers.

The size of the World Heritage Site is 319.52 km^2. There are 21 farmers, 89 Norse ruin sites, 20 Inuit ruin sites, and the Agricultural School and Research Station with a nursery and garden. World Heritage Kujataa is the only place where Arctic Inuit hunters became farmers. The Norsemen were farmers who had hunting as a secondary occupation. The Inuit people were hunters who later had farming as a secondary occupation until the first Inuit settled to live on farming only in 1924. In Qassiarsuk/Brattahlið, we have the first Christian church built on the North American continent, Tjodhilðurs church (Eric the Red's wife), and a reconstruction of both the church and a longhouse was given as a gift from the North European countries in connection with the 1000th anniversary of the introduction of Christianity in 2000.

Our main focus today is the following:

Firstly, to protect the heritage from mass tourism by creating designated paths, developing site-specific guidelines, involving decision-makers — both the municipality and politicians — and cooperating with countries experienced in these areas. **Secondly**, to educate young people in building and maintaining turf houses and pathways, both Inuit and Norse, to preserve existing structures and create new ones **Thirdly**, to protect the environment from pollution, especially from cruise ships. **And finally**, to develop green energy solutions.

SCOTLAND

KYLE & LOCHALSH COMMUNITY TRUST

Kyle & Lochalsh Community Trust (KLCT/ The Trust) was established in 2012 to deliver sustainable regeneration across Lochalsh in the western Highlands of Scotland - a region which, despite its magnificent landscapes and beautiful coastal settings, is amongst the most deprived and economically fragile in the country. The Trust owns amenity ground (the Plock), and public toilets, showers, a laundrette and pontoons. The Trust recently established a reuse shop and community fridge, community transport service, local food growing project and is currently carrying out a feasibility study into an affordable housing project.

The Plock is 26 hectares of natural heritage on the edge of Kyle of Lochalsh, whose habitats include seashore, native woodland, wildflower meadow and heathland. Since 2019, through grant funding, we have invested in ongoing improved access to the site, habitat restoration for biodiversity, hosted a range of activities, educational visits, green health initiatives and offered volunteering opportunities.

To secure the future of the Plock as a community asset, KLCT is seeking ways to create a sustainable income stream that supports local young people by offering skills development and training, leading to improved employment opportunities in the area. Inspired by local history, the trust aims to recreate a Viking longhouse on the site, drawing on our rich connection to Norse culture. From the Viking raids in the 8th century until the final repulsion of Norse control at the battle of Largs in 1263, Skye and Lochalsh were the epicentre of connectivity between Scotland and Scandinavia. Its creation will help us meet our aims to increase educational opportunities, create jobs and improve living standards for both local residents and visitors to the area


OMEGA

CHAPTER 1

SUSTAINABLE TOURISM

SUSTAINABLE TOURISM

The World Tourism Organisation defines sustainable tourism as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities". It is all about holidaying in an eco-, green- and environmentally friendly way.

Tourism is one of the world's fastest-growing industries, and therefore it is really important to talk about sustainability and make the changes that need to be made in this industry. Sustainable tourism is composed of three different pillars:

- **Social justice: respecting the local society and culture**
- **Economic development: Promoting the local economy**
- **Environmental integrity: having a positive impact on the environment**

By increasing the awareness of these pillars, we can help both the travellers and the tourism industry to make better and more sustainable choices.

Sustainability has never been more prominent on the global agenda than it is today — yet there is still a long way to go, particularly in rural and remote areas. All partners in this project are based in such regions, often requiring long and demanding journeys to reach. Once visitors arrive, limited public transportation means they frequently have to rent a car to continue their travels.

Take, for example, a visitor traveling from Asia to Iceland. The carbon footprint of such a journey is significant. If the guest then stays only briefly, sleeps in a camper van or tent, and interacts minimally with the local economy, the visit contributes little — if anything — to local development or environmental sustainability. In fact, it may place additional pressure on natural and cultural resources. This is a common challenge faced by many of our project partners. So, how can we address this?

Museums and cultural institutions have a key role to play as educators, community anchors, and advocates for sustainable values. By raising awareness around responsible travel behavior and creating conditions for more sustainable tourism, we can help shape travel patterns and contribute positively to both environmental integrity and local economic growth.

Through collaboration, knowledge sharing, and practical action, we can be part of the solution — and support both visitors and communities in making more sustainable choices.

https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/briefingnote/wcms_162197.pdf

SERVING THE COMMUNITY WHILE WELCOMING THE WORLD

The business goodwill of the Skagafjörður Heritage Museum has accumulated for over 70 years, resulting in an insignificant need for marketing. For decades (excluding COVID years), the number of visitors to the museum has been growing, and visitors in the year 2023 were 70 thousand. If the number of visitors were to grow considerably, it might pose a danger to the sustainability of the turf farm, which we are obligated to protect.

The majority of the museum's visitors are foreign guests 95%. A part of the museum's policy is to strengthen its relationship with locals, and especially inhabitants in Skagafjörður, so marketing is mostly directed towards Icelanders. The museum also publishes all information, social media content, and other marketing material in Icelandic. In most cases, the content is also translated into English or other languages, and the translation is then put below or beside the Icelandic text.

The marketing that the museum pursues includes:

- Running a homepage (glaumbaer.is) as well as social media accounts on Facebook (Byggðasafn Skagfirðinga – Skagafjörður Heritage Museum), Instagram (@ byggdasafnskagfirdinga), and Tik Tok (@ glaumbaer).
- Using special incentives, like occasional and annual events, which have seen large numbers of local visitors.
- Offering annual tickets at the price of a single ticket, for people living in the municipality.
- Placing advertisements in brochures that are distributed in various tourist information centres and other places in Iceland.
- Offering all reporters free access to the museum. International reporters often write articles or publish information on other media platforms.
- Writing of articles, among others, for the local paper, Feykir.

Furthermore, there is some indirect marketing that happens through associations which the museum is a part of, such as The Icelandic Museum Association, and Visit North Iceland, and these associations market abroad. Then there are a myriad of brochures, booklets, and travel websites where information about the museum is published without the museum having a hand in it.

MARKETING FOR A SUSTAINABLE FUTURE

When the archaeological site was discovered, it gained global attention as a major Viking find. The reconstructed longhouse became a community-supported local symbol, giving the museum strong publicity and a foundation for growth. Marketing evolved from broad traditional efforts to digital strategies over time.

The museum has long attracted visitors from around the world. Over time, travel patterns and interests have shifted; organised cruise tours have declined as more visitors prefer independent travel. Meanwhile, local engagement has decreased, with fewer repeat visits from the community. The focus on sustainability has, however, increased.

Changing visitor patterns, sustainability, and the digital shift have required new marketing approaches. Not everyone is interested in Viking history, nor can all visit in person. With today's overwhelming flow of information, it's crucial to reach the right audience. We are therefore moving from broad-based to targeted, sustainable marketing. The strategy focuses on reaching the right guest at the right time and place.

By analysing visitor statistics and audience studies, we have developed personas — fictional profiles representing key visitor types — to guide our communication.

Model for targeted marketing:

Collecting data → Analysing → Segmentation → Creating personas → Targeted message → Efficient distribution

Using personas helps tailor messages, choose channels, and use resources more efficiently, reducing paper waste and supporting digital tools. This gives better control over reach, encourages sustainable travel, and enhances knowledge sharing. Our regional destination company collaborates on shared personas, allowing coordinated campaigns across businesses — increasing impact while reducing duplication. We still have work ahead to refine our strategy and rebuild our local role as a place for families to gather, learn, and create memories.

Benefits:

- Reduction of paper consumption.
- More efficient use of resources.
- Increased relevance, both locally and internationally.
- Can influence travel behaviour.
- Strengthen the local engagement by making it more accessible.

MARKETING

The five component areas of Kujataa vary in accessibility and visitor facilities, which are key to interpretation and tourism. Despite its historical and cultural value, there remains untapped potential to increase visibility and awareness locally, nationally, and internationally.

Status of tourism and interpretation

Igaliku and Qassiarsuk: These areas host established tourism operators such as Farm Holidays and Riding Greenland, offering accommodation and activities in the historic landscape. Most visitors stay more than one night. The operators collaborate with Blue Ice Explorer on marketing and booking and have largely handled their own promotion.

Sissarluttoq is a remote are and difficult to access visited only by a few experienced hikers each year. No organised marketing or infrastructure exists.

Tasikuluulik home to two basic youth hostels used by locals, researchers, and students. There is strong potential for knowledge dissemination linked to archaeological projects. The area is remote and sees very limited tourism.

At Upernaviarsuk and the Hvalsey Church Ruin, Local operators run tours between the Hvalsey ruin and the agricultural station Upernaviarsuk, where modern Greenlandic farming is studied. The station is well known among locals as a source of vegetables. Promotion is limited to Facebook and word of mouth, both effective in small communities.

Current marketing channels

- Local and international tour operators (e.g., Blue Ice Explorer, Local Greenland, cruise operators).
- Websites such as Visit Greenland, social media platforms, primarily Facebook, Instragram and Youtube, with short films where marketing efforts in South Greenland are coordinated by Innovation South Greenland, while Visit Greenland manages national and international branding.
- Each year, Kujataa hosts UNESCO Days in four component areas, inviting local communities to social events where archaeologists present their work. These activities strengthen engagement and understanding of World Heritage values. In Upernaviarsuk, Sagalands supports the events with boat transport.
- Museum-based interpretation: The museum in Qaqortoq includes a small exhibition on Norse settlers, scheduled for an update with the new curator to strengthen Kujataa-related storytelling.

Project objectives

The project aims to develop and implement a comprehensive communication and marketing plan that will. Relaunch and improve Kujataa's website with updated content, interactive maps, and practical information. Strengthen collaboration with tourism operators, museums, and local storytellers. Increase UNESCO branding nationally and internationally. Support local ownership and knowledge of the World Heritage site

GAL GAIDHEAL - MARKETING

Kyle of Lochalsh has been considered a drive-through town since the bridge to Skye was built in 1995. Many of the tourists visiting Kyle are on route to Skye and rarely spend any time in the town. This has proven detrimental to Kyle's development, resulting in multiple businesses closing over the years. However, Skye's tourism has been rapidly increasing, with predictions of it growing further in the years to come.

Several attractions try to take advantage of the steady flow of visitors passing through by using the limited marketing resources available. The most successful of these would be Eilean Donan Castle in Dornie, which boasts the title of most photographed castle in Scotland. Although due to the castle's already worldwide popularity, it rarely finds itself needing to advertise. This has seen a negative impact on local engagement, which is especially noticeable in the winter seasons.

With an increasing intake of visitors to the area and a lack of appropriate infrastructure, several attractions have found themselves needing to limit the number of tourists they can accept. Some of these limitations include the prevention of cruise ship groups from visiting sites. Before the limitations were put in place, the popular tourist sites would experience extreme overcrowding and shorter visits as a result.

We have found it essential for tourist attractions to strike a balance between catering to the needs of tourists and locals.

Kyle of Lochalsh Community Trust relies predominantly on local engagement, with a need for more tourist interest. The Trust already hosts several events and community programs throughout the year. Our focus for these events is on the local community, making the need for wider advertising unnecessary. However, in the summer seasons, we have seen a slight increase in participation from tourists visiting the area.

Currently, KLCT uses the following methods for self-advertising:

- Leaflets & posters
- Our own community newsletter
- Local paper
- Social media (Facebook, Instagram, Twitter)
- Our own website https://www.lochalsh.uk

With any future development of the Viking Longhouse, KLCT will need to expand its marketing to cater for the tourists already passing through.

TRANSPORT CHALLENGES FOR RURAL MUSEUMS

In recent years, guests of the museum in Glaumbær visiting from abroad have made up 95% of the total. Assuming that the distribution of nationalities is the same for guests in Glaumbær as in all of Iceland, 29.5% of these visitors travelled from the US or Canada. Each of these ca. 15.000 visitors undertake a journey of 4000-9000 kilometres by flight to Iceland. Most other visitors travel from Europe, going 1000-5000 kilometres by flight. It is therefore evident that the average distance travelled by a visitor to Glaumbær is, currently, relatively long.

Since Iceland is an island, it is always going to demand long-distance travel by flight or boat. Furthermore, most people come through Keflavík airport in the South of Iceland, which means they must go by car to get to Glaumbær, which is in the North. The same goes for Icelanders living in other parts of Iceland; they have to use a private car to get to the museum, as public transportation is not very productive in the countryside, and no bus rides go directly to the museum. The museum is not actively working against long-distance travel, but some measures are being taken to lessen the carbon footprint of travellers and encourage sustainable tourism. **The steps are as follow**:

- Marketing is primarily aimed at local residents and Icelanders, and the museum does not actively market itself outside Iceland.
- It is preferable to promote year-round tourism, and this is only possible by receiving people from all over the world, including long-distance travellers. The museum has seen an increase in off-season tourists in the last few years and has managed opening hours to accommodate this.
- A great part of the museum´s visitors often arrive by buses on organized tours. This has its ups and downsides; on one hand, it is better that people share a ride instead of arriving in many different cars. On the other hand, bus groups are often part of fast tourism, which means the guests are travelling between many places and not spending any considerable amount of time in each place, which is not sustainable.
- The museum is a part of the association Visit North Iceland, which is marketing towards getting people to spend more time in the North of Iceland. Increasing the nights that guests spend in the North and promoting slow tourism.

Visit North Iceland is also working towards getting more flights to Akureyri airport, which is only one hour from the museum There are already a number of flights arriving in Akureyri, mainly from European destinations. This shortens the distance that guests need to go by car considerably.

BALANCING ACCESS AND IMPACT

Lofoten is located in Northern Norway and consists of many small islands. Travelling here can be challenging, as the region is far from major airports and often requires several modes of transportation. The journey is neither simple nor inexpensive. While our geographical location cannot be changed, there are factors we can influence. This project focuses on two key issues: the environmental impact of long-distance travel and pressure on the cultural landscape.

Long-distance travel raises concerns about carbon emissions, while local tourism contributes to wear on nature. With around 140,000 annual visitors, the landscape experiences considerable strain. Limited public transport forces many to travel by car, yet tourism remains vital for the local economy.

Balancing Marketing and Sustainability

Our new marketing strategy (see chapter 1.1.2) aims to reach the right guests while considering whether long-distance travellers are the most suitable audience. Year-round tourism requires diverse markets, but organisations such as Visit Norway and Destination Lofoten have stopped broad marketing toward these segments.

To address challenges, we must balance visitor demand with long-term sustainability of both the community and the landscape. Measures include improved visitor flow management, awareness of sustainable travel, and stronger cooperation with local stakeholders. Such actions can reduce pressure, support the community, and ensure cultural heritage remains accessible for future generations.

Travel patterns have shifted, with more visitors from Asia and the United States. These travellers often stay only one day. Even if not our main target markets, we must still manage this trend sustainably. Short-term, high-volume travel adds pressure on both local communities and the landscape.

Proposed Measures

- Develop strategies to extend long-distance travellers' stays through collaboration with Destination Lofoten and local operators.
- Focus on attracting the right guests by influencing target groups and travel patterns.
- Spread demand throughout the year to reduce pressure on sensitive areas.
- Collaborate with organisations such as Arctic Routes to promote more sustainable travel.

This is only a starting point. We aim to test and refine these measures while learning from other countries' experiences in visitor management to protect both nature and heritage in Lofoten.

LONG DISTANCE TRAVELLING

South Greenland offers unique natural and cultural experiences but presents distinct transportation challenges—particularly outside the summer season. The primary international access point is Narsarsuaq Airport, which is only open for direct international flights in the summer. In winter, travel becomes significantly more complicated due to ice, limited flight routes, and reliance on helicopters and boats. Internally, there are no roads between settlements, so all transport depends on air and sea travel, both of which are vulnerable to seasonal weather changes.

Access to cultural sites in the region, such as the Norse ruins in Qassiarsuk, can therefore be limited or unpredictable, especially in winter and spring. Planning a visit requires flexibility, and visitors must often rely on local tour operators to coordinate transportation options. From 2026, a new international airport in Qaqortoq will replace Narsarsuaq, improving access to much of South Greenland, though Qassiarsuk will become more remote.

Solutions and initiatives implemented

- Direct international flights to Narsarsuaq from Denmark and Iceland operate only in the summer (June–September).
- Outside the summer, access requires routing through Nuuk or Kangerlussuaq, adding time and dependency on internal connections.
- Travel from Narsarsuaq to other towns (e.g., Qaqortoq, Narsaq) depends on Helicopter flights (Air Greenland), which are highly weather-dependent. Ferries (Disko Line), which are limited in winter due to fjord ice and spring pack ice. Local operators offer flexible, seasonal transport and charter options.
- Marketing of tourism in the region promotes slow tourism and local engagement, and we adjust expectations around speed and accessibility.

From 2026 a new international airport in Qaqortoq will improve access to most of South Greenland. Direct flights to and from Iceland will open. Narsarsuaq Airport will then close, thus lengthening the journey to Qassiarsuk but making travel to other towns more direct.

Reflections and future plans

Sustainable tourism in South Greenland will continue to depend on coordination with weather-sensitive transport systems. The new airport in Qaqortoq is a major infrastructural upgrade that will make travel to most of the region more predictable and climate resilient. Direct flight to Keflavik will open a route to the rest of the world and avoid the bottleneck in Narsarsuaq.

BEALACH FADA

LONG DISTANCE TRAVEL

The Highlands of Scotland are predominantly accessed by road, with limited rail networks. A train link is available from Inverness to Kyle and runs 4 times a day. We also host a couple of bus routes which interconnect. These bus routes are managed by a single company called Citylink and run a connection between Inverness to Kyle and between Glasgow to Kyle. The nearest airport to Kyle is approximately 130km East in Inverness and mostly handles domestic traffic. Almost all visitors to the Highlands travel by road in either their own or hired vehicles, and an increasing number of these are motor homes. Many of our international tourists come to the area via small-scale bus tours.

A survey conducted in 2020 found that Skye attracts approximately 650,000 tourists a year. This number is expected to increase as the island's popularity grows. A large percentage of tourists who visit the area are from the UK, with a smaller percentage being international.

from Americans. Throughout the season, we will also have a large number of tourists visiting from Europe. The European tourists we are most frequented by come from France, Germany and Italy. In recent years, we have experienced an increase in Asian tourists coming to the area, mostly from China.

Kyle's greatest challenge at the moment is providing amenities that the tourists would want to stop for. Currently, Kyle is simply seen as a drive-through on the way to Skye and needs to find ways to encourage the tourists to stop and spend more time there and enrich the local ecomomy.

BALANCING PRESERVATION AND TOURISM

Glaumbær has enjoyed significant growth in tourism over the past decade, attracting more and more visitors each year — particularly during the summer season. Glaumbær sells admission tickets to 60-70 thousand guests every year, excluding visitors visiting outside of opening hours, as the museum grounds are open to the public after hours. Pedestrian traffic causes strain on the museum grounds, the houses, and the museum collection, which the museum is under an obligation to protect. The museum has therefore taken several measures to ensure sustainable tourism within the museum grounds, especially regarding the preservation of the houses and museum artefacts.

Safeguarding measures include:

- Putting flagstones on the floor in the entrance of the turf house and burlap on the floors inside the turf house to protect the original earth floor from the rough soles of modern shoes.
- Restricting the number of people allowed inside the turf house at a time (40 pax) and managing the number of guests in each room to prevent overcrowding.
- Rules in the buildings include restrictions on backpacks to protect the walls and artefacts.
- Restricting the number of people allowed on the upper floor in Áshús, as the floorboards are old and fragile.
- Until 2021, the museum grounds were open to all, and tickets were bought in the turf house. By closing the museum grounds and placing the ticket office at the entrance, it became much easier to manage the flow of visitors and protect the houses.
- Making paths, made of flagstone and gravel, to direct guests and prevent erosion.
- Hiring more curators to keep an eye on the houses and museum artefacts, as well as directing the guest traffic.
- Watering and organically fertilising the turf house roof.

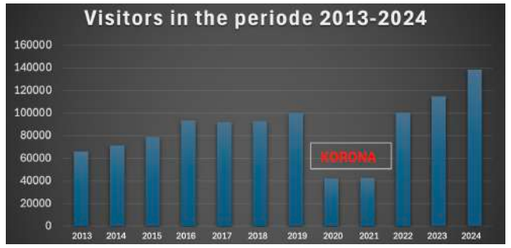
There are still some challenges present, which the museum plans to resolve:

- The parking lot is too small, which creates unnecessary risks for both cars and pedestrians, and guests sometimes park in unsuitable places, such as on the grass. The plan is to expand the parking area in the future, with improved access from the road.
- Some people climb over the turf walls surrounding the area to enter it. The walls will be raised.
- Some areas within the museum grounds are prone to erosion despite the paths that have been made. More paths need to be made, and some paths need to be added.

All turf houses degrade over time. Currently, the need for restoration and repair is considerable and growing, which poses a major challenge for the owner of the building as well as for the other fragile turf structures in the Historic Building Collection of the National Museum of Iceland. Adequate funding and timely action are essential to prevent further deterioration.

COLLABORATION IS ESSENTIAL

Over the past decade, Lofoten has experienced a significant growth in tourism. With the rise of the internet and social media, the region's dramatic landscapes, rich culture, and Viking history have been widely showcased, positioning Lofoten as a flagship destination for Norway. As a result, visitor numbers have increased substantially, with mass tourism peaking during the summer months.



This has led to several challenges:

- Overcrowding during the winter: Snow, ice, and cold weather make outdoor areas less accessible, causing guests to gather indoors. This creates crowding and discomfort. Heating the longhouse remains costly and ineffective.
- Limited parking capacity in the summer season: The parking lot is too small during peak season, forcing the use of nearby fields to accommodate overflow. This damages the environment and requires extra staff to manage traffic.
- Wear and tear on buildings and paths: High visitor numbers strain infrastructure, with wet shoes and snow in winter further damaging wooden floors. Maintenance costs increase, and the site's authenticity is at risk.
- Significant challenge for the whole area: Mass tourism affects not only Lofotr but also the local community. Residents experience disturbances from tourists in private areas, while nature suffers from erosion and damaged trails. In addition, outdated roads and infrastructure cannot handle the heavy traffic.

Suggested measures:

- Improve visitor flow and signage to guide guests along designated paths.
- Develop new outdoor winter experiences to reduce pressure indoors.
- Explore energy-efficient heating solutions.
- Create long-term plans for sustainable parking infrastructure.
- Promote shuttle buses or alternative transport like bicycles.
- Design alternative walking routes to reduce strain on vulnerable areas.

Collaboration is essential

Meeting these challenges requires cooperation between municipalities, national authorities, and the tourism industry. Nationally, Norway plans to introduce a tourism tax in 2026 to fund infrastructure, nature conservation and waste management.

Locally, Destination Lofoten has created a sustainability network, which Lofotr Viking Museum actively supports. Our focus is on attracting responsible travellers, increasing relevance, reducing waste, and improving the visitor experience. We also prioritise local suppliers to strengthen the regional economy and reduce our environmental footprint.

MASS-TOURISM MANAGEMENT

In 2024, 78 cruise ship calls were planned for Qaqortoq, but only 41 ships arrived—mainly due to unusually heavy sea ice. Similar conditions affected other ports in South Greenland. While this underscores the vulnerability of cruise tourism to climate and seasonal ice, it also confirms the region's strong appeal during summer months, when most ships arrive.

Some cruise ships enter Kujataa World Heritage via anchor and tender boats. This presents a set of challenges for the protection of cultural heritage and local sustainability. The three main concerns are: (1) limited infrastructure to support mass tourism, especially in rural areas; (2) lack of substantial income generated for the sites visited; and (3) pollution of air, sea, and land caused by cruise activity.

SOLUTIONS AND INITIATIVES IMPLEMENTED

Infrastructure and site protection

Tender boats have occasionally docked at unregulated beaches near archaeological sites, creating unauthorised paths. Site-specific landing guidelines have been introduced and are proving effective.

A path-building project began in 2025, using natural materials, in collaboration with Icelandic partners (Stokkar and Steinar) and local youth began through the Siu-Tsiu socio-economic program.

Public infrastructure—such as toilets, benches, signs, and visitor centres—is in planning or development.

Wayfinding signs will be installed between sheep farms in Qassiarsuk and Igaliku in 2025; other areas follow in 2026.

Inatsisartut (the government) enabled municipalities to designate green, yellow, and red cruise zones.

Economics and zoning

Greenland introduced a per-person zone fee in 2024, with the generated revenue allocated to strengthening local infrastructure in the Kommune Kujalleq (The Municipality of Kujataa) Kujataa's five sub-areas were also approved for individual zone fees. Current income comes primarily from guided tours in three areas, limited souvenir sales by authorised guides who help protect the sites and share knowledge.

Environmental impact and international cooperation

In 2022, Kujataa began collaborating with ITAP and the U.S. Department of the Interior on cruise emissions. The initiative was halted by the U.S. in early 2025 but re-established in November 2025.

In 2023, a seminar gathered UNESCO site managers from Greenland. Since then, the managers have met annually to discuss these themes and coordinate heritage management.

Local hunters report fewer whale sightings in Hvalsey Fjord with increased cruise traffic. Discussions include banning ships from certain fjords and encouraging anchoring near towns with transfers by smaller boats.

Reflections and future plans

While cruise tourism offers visibility and potential income, the current setup brings more strain than benefit to Kujataa. With improved zoning, infrastructure, and environmental regulation, the aim is to shift towards low-impact, locally beneficial tourism, rooted in heritage preservation and sustainable visitor experiences.

THA CRUACHAN - MASS TOURISM

Kyle of Lochalsh has suffered from being just 'on the road to Skye' since the construction of the bridge in 1995. Without being considered as a destination in its own right, Kyle has a gradual wilting as businesses close or move away. Currently, the main tourist attraction in the town is the Co-op food store, which is frequently visited by tourists stocking up on supplies.

Before the bridge, Kyle was the main crossing for a 5-minute ferry to Skye. With limited crossings, more people were forced to stay in the area for longer durations. This kept Kyle and neighbouring villages occupied and with a consistent income. With the construction of the bridge, access to Skye was made easier than ever before. With the bridge being part of a main road, the area has seen a dramatic increase in vehicles. Most tourists choose to travel using either their own car or a motorhome. There is a lack of facilities in the area suited to accommodating the vast increase in tourism. Limited parking, attractions, cafes, shops and general amenities mean that what is already available is stretched to breaking point each season.

The Plock is located adjacent to the bridge, with thousands of visitors passing by each week. This gives it prime potential to help the community by creating an attraction. Constructing the only Longhouse on mainland Scotland would give people a reason to stop. With the potential to harness some of this passing trade, the Plock could help development and business growth in the area. However, it will need a careful balance to be implemented, as other sites, such as Eilean Donnan, have had negative experiences from a surge in tourism. Before COVID, Eilean Donnan Castle prohibited tours from cruises due to the number of visitors becoming unmanageable. The increase in visitors meant overcrowding and impacted the experience for everyone. The Isle of Skye also experiences negative impacts from the vast numbers of people visiting. These impacts include overcrowding of sites, an increase in discarded waste, congestion on the roads, shops running out of food, the erosion of natural attractions and damage to our natural surroundings. These impacts are mostly due to a lack of facilities on the island designed to accommodate tourists. Despite this, there is still a reluctance from the local community to increase development.

BUILDING ON RENEWABLE ENERGY

When it comes to energy consumption, the Skagafjörður Heritage Museum benefits from the fact that Iceland is the world's largest green energy producer per capita and largest electricity producer per capita, with approximately 55,000 kWh per person per year. About 85% of the total primary energy supply in Iceland is derived from domestically produced renewable energy sources.

The museum has taken some measures when it comes to energy preservation, such as:

- Changing all light incandescent bulbs to LEDs.
- Regarding transportation for staff, the museum is located in a rural area, and some staff members live up to 40km away from the workplace and thus must go by car. However, the year-round employees can work from home, depending on the type of work they are doing, especially during winter.

The museum is not a part of any certification process, but it has an environmental policy which focuses on sustainability by reducing waste by buying better products, reusing, and recycling. **This is being done with the following steps:**

- Making sure that, e.g. cleaning products are environmentally friendly, and that packaging is recyclable or biodegradable. As well as avoiding the use of disposable packaging.
- Reducing waste and simplifying purchase processes.
- By recycling the waste which is produced within the museum.
- Putting up recycling bins on the museum grounds for the use of museum guests.
- Reducing the use of paper brochures in Glaumbær by reusing them and by developing digital solutions.
- Reducing food waste in the café by keeping a record of how much is sold and how much food must be thrown away at the end of each day. This information will be used in the museums to better manage how much food is made for each day and what can be expected in sales at different times of the year.

Building on its existing practices and the advantages of Iceland’s renewable energy system, the museum has an opportunity to take a more proactive role in environmental stewardship. By formalizing its environmental policy, setting clear targets, and embedding sustainability into all aspects of operations—from procurement and waste management to visitor engagement—the museum can continuously improve its performance. Doing so would align daily practice more closely with the museum’s values and strengthen its role as a responsible and forward-looking cultural institution.

TOWARDS GREENER OPERATIONS

Eco-Lighthouse is Norway´s leading certification scheme for documenting environmental efforts and social responsibility. It`s the first national scheme in Europe to be recognised by the European Commission.

Lofotr was among the first companies in Lofoten to achieve Eco-Lighthouse certification. It must be renewed every three years as criteria evolve, with annual reports detailing our environmental impact and the measures taken to meet the requirements. For us, this is a good way to make us aware of what we do and how to improve. These can be both big changes and small actions, and each plays an important role in reducing the CO_2 footprint.

We review each criterion, considering why it has received its current result and what actions we can take to improve. The criteria cover several key areas:

- Suppliers: Are our suppliers environmentally conscious? Can this affect this? We also examine the products we purchase—are they ecological, local, or sustainably produced?
- Waste: How much waste do we generate in each category, and how is it sorted? Are there opportunities to reduce or reuse materials?
- Energy: Are we using more energy than necessary? Where can we adjust to reduce consumption?
- Transport: How much do we drive or fly? Can we replace some travel with online meetings, plan shared rides, or optimise travel routes?
- Work environment: Are the lighting, temperature, and tools at our workplaces optimal? How can we reduce sick leave and encourage employees to remain engaged and productive longer?
- Climate accounting: How much CO_2 does the museum generate, and what measures can we take to reduce it?
- Progress since the last report: A review of the actions we have implemented over the past year to improve sustainability.
- Work plan for the coming year: Clear, measurable goals that allow us to continuously improve and push ourselves to achieve more each year.

All of our staff are informed about the criteria and work together to achieve them. Our summer staff, who work here for a shorter period, are also informed and trained on how to contribute to caring for the environment by following our plans.

In addition to this, there are several other actions we take to contribute to green practices. Some of these include:

- Suppliers that have an eco-certification will be preferred.
- We aim to work with tour operators who are certified or whose guests are environmentally conscious.

We still have a long way to go and will continue to work to reduce our CO_2 footprint. In the future, we will focus on reducing paper waste, finding alternative ways to heat our longhouse, and collaborating with local public transport to influence how our guests travel.

source: https://eco-lighthouse.org/about/

GREEN PRACTICES

Greenland is actively developing its tourism and energy sectors with a strong focus on sustainability. New tourism legislation aims to ensure that growth benefits local communities and protects sensitive landscapes. At the same time, communities—particularly in the UNESCO Kujataa area—are driving the green transition through grassroots solutions such as farm-based hydropower. Geography and limited infrastructure present challenges, but they also inspire place-based innovation, especially in off-grid regions.

The New Tourism Law (2024) requires local ownership of tourism businesses, introduces zoning to regulate activity in environmentally sensitive areas, and limits short-term operations by foreign-run companies that provide minimal local benefit.

Green energy development combines national infrastructure with local innovation. Across Greenland, there are five major hydropower plants (91.3 MW), fifteen solar installations (620 kW), three wind turbines (56 kW), and twenty-three district heating plants operated by Nukissiorfiit. In the Kujataa area, eight micro-hydropower plants now supply nine farms with green electricity, with the largest unit generating 40 kW from a nearby waterfall. Solar panels are increasingly installed on sheep stables, and although off-grid farms still rely on diesel generators, the transition to renewable energy is steadily progressing.

Kujataa has also initiated a Nordic knowledge-sharing collaboration with Finland and Norway to explore heat storage without batteries and to further develop micro-hydropower solutions. The partnership aims to gather technical knowledge and practical experience, making it easier for local farmers to establish their own small-scale power systems, as they cannot be connected to the national grid. At the same time, the Government of Greenland has introduced improved loan conditions to support investments in green energy, helping farmers move toward more sustainable and self-sufficient power sources.

Transport and resource use are also evolving. Disko Line has acquired Maliina Ittuk, a hybrid vessel that will reduce CO_2 emissions on passenger routes in South Greenland. Hybrid and electric cars are present in towns, although battery-powered boats and ATVs are not yet feasible due to long distances and Arctic environmental conditions. Circular practices remain strong: farmers routinely reuse engines, wood, and metal, and local materials such as wool, horn, and driftwood are used in festivals and artisan crafts.

Greenland's green shift is rooted in both national planning and local ingenuity. Efforts are underway to scale successful models, improve infrastructure, and ensure that environmental gains go hand in hand with economic benefits for local communities. Green energy and sustainable tourism concessions will remain key areas of focus in the coming years.

UAINE - GREEN PRACTICES

Scotland is proudly one of Europe's leading countries in green practices and energy. Over the past few years, Scotland has developed vast wind farms across the North Sea with the intention of replacing the oil revenue. Scotland already produces a surplus in energy using green methods and plans to increase this over the years to come. The Scottish Government brought in a program offering grants to landowners to replace their forestry spruce trees with native hardwoods.

Kyle of Lochalsh Community Trust also follows and encourages green practices. The trust brought an electric bus for community use in the area. We have a solar-powered battery pack used in place of a generator at our events. We are currently in the process of implementing composting toilets for our site.

The Green Flag Award is managed and administered in Scotland by Keep Scotland Beautiful.

The Green Flag Award® scheme recognises and rewards well-managed parks and green spaces, setting the benchmark standard for the management of recreational outdoor spaces across the United Kingdom and around the world.

Purpose and aims

- To ensure that everybody has access to quality green and other open spaces, irrespective of where they live.
- To ensure that these spaces are appropriately managed and meet the needs of the communities that they serve.
- To establish standards of good management
- To promote and share good practice amongst the green space sectors.
- To recognise and reward the hard work of managers, staff and volunteers.

The Scottish Outdoor Access Code (SOAC) is the equivalent of the 'Allemannsretten' in Norway. It sets in law the right of responsible access to open land, with certain exceptions.

In terms of general public awareness, much educational work still remains to be done across the whole country on defining some of the terms in the SOAC, such as 'wild camping'. Details can be found here: https://www.outdooraccess-scotland.scot/

https://www.keepscotlandbeautiful.org/

MARKETING

Marketing strategies can vary based on the desired objectives. For instance, marketing can be employed to influence travel distances and can play a role in distributing tourist flow more evenly throughout the year or across different areas. Thus, marketing can play a crucial role in promoting and fostering sustainable tourism practices. **Presented below are some exemplary practices in this regard:**

- **Engage the local community** in destination marketing, as residents typically have minimal travel distances, resulting in lower environmental impact. This can also create a sense of pride and ownership, contributing to increased goodwill.
- **Special incentives for the locals**, such as annual tickets and occasional or annual events, providing families with the opportunity to visit and enjoy activities such as games, crafts, and educational events together.
- **Target markets** in regions with short travel distances to the destination and refrain from marketing in areas requiring long-distance travel to reach the destination.
- **Balancing tourist needs and local engagement,** ensuring that marketing does not prioritise external visitors at the expense of community needs. Heritage sites should remain welcoming, meaningful spaces for local use alongside tourism.
- **Evolve a marketing strategy to target specific audiences,** focusing on reaching individuals interested in the museum. This shift involves creating personas based on thorough research, resulting in more efficient and sustainable practices, such as reduced paper usage and investment in digital tools and employee knowledge.
- **Encourage tourists to visit during the off-season** to help distribute visitor numbers more evenly throughout the year. This can reduce the environmental and social impact of overtourism.

In summary, engaging the local community in destination marketing is crucial for minimising environmental impact and increasing local goodwill. Providing special incentives for residents, including annual tickets and events, targeting markets with short travel distances, adapting marketing strategies based on desired visitors, and promoting off-peak tourism are essential steps to promote sustainable tourism.

LONG DISTANCE TRAVELLING

Long-distance travel is a common challenge for all four partner regions, which are located in remote, rural areas, often far from major transport hubs. Although these destinations depend on international visitors, they also strive to reduce environmental impact and promote slower, more meaningful travel experiences. The key is not to stop people from travelling but to encourage longer stays, responsible behaviour, and better transport coordination.

Best practices identified across the partner countries include:

- **Encouraging longer stays** rather than short visits, helping to balance carbon emissions from flights by ensuring that travel has greater cultural and economic value.
- **Promoting slow tourism and regional dispersal** — encouraging visitors to explore rural areas and stay longer in one place instead of fast-paced travel between multiple sites.
- **Targeting closer markets** and focusing marketing on domestic or regional travellers to reduce overall travel distances.
- **Improving local transport systems,** such as shuttle buses, shared car options, or better public links between museums and nearby towns.
- **Raising awareness** of sustainable travel behaviour through on-site information, signage, and storytelling that inspires care for the landscape.
- **Seasonal and year-round tourism** planning to spread visitor numbers, reducing peak-season congestion and environmental pressure.
- **Collaboration between partners** and local tourism boards to develop unified strategies and communication about sustainable access routes.

In summary, while long-distance travelling will remain a necessity for many visitors, each country can influence how and why people travel. By promoting longer stays, targeting nearby markets, improving transport links, and sharing sustainability messages, we can reduce emissions, protect cultural landscapes, and provide visitors with richer, more responsible experiences.

MASS TOURISM MANAGEMENT

Across Iceland, Norway, Greenland, and Scotland, heritage institutions and communities face increasing pressure from mass tourism. While contexts differ, the chapters highlight a shared commitment to balancing visitor access with the protection of fragile cultural landscapes, buildings, and local livelihoods. The following best practices emerge across the institutions:

- **Structured visitor access and flow control** improves protection of fragile sites. Ticketed entry points, capacity limits within buildings, group-size management, and clearly defined circulation routes help reduce wear on historic structures and improve visitor experience.
- **Targeted protection measures** safeguard buildings and landscapes. Durable flooring, restrictions on large backpacks, and clearly marked paths using natural materials reduce erosion and material degradation while preserving authenticity.
- **Proper infrastructure supports sustainable use.** Adequate parking, toilets, benches, signage, visitor centres, and regulated landing zones for boats help concentrate visitor impact in appropriate areas and prevent damaging use of heritage landscapes.
- **Active site stewardship enhances both care and interpretation**. Employing trained staff, guides, and curators ensures continuous monitoring, visitor guidance, and knowledge sharing, strengthening protection while enriching understanding of the site.
- **Distributing visitors across sites and seasons reduces pressure.** Developing alternative walking routes, outdoor experiences, and seasonal activities, particularly in winter, spreads use more evenly and protects vulnerable areas during peak periods.
- **Keeping tourism income local strengthens sustainability.** Admission fees, cruise or zone-based charges, guided-tour systems, and partnerships with local suppliers generate income that directly supports maintenance, infrastructure, and community livelihoods.
- **Energy- and climate-conscious operations protect heritage long term.** Exploring efficient heating solutions, climate-adaptive maintenance, and landscape care practices supports both conservation goals and environmental responsibility.
- **Collaborative governance ensures long-term success.** Coordination between site managers, municipalities, national authorities, tourism organisations, and local communities enables shared standards and responsible destination development.

Sustainable tourism at heritage sites is achieved through planned access, protective infrastructure, skilled staffing, local economic integration, and strong collaboration. By applying these solutions, heritage institutions can welcome visitors while safeguarding cultural value and supporting resilient communities for the future.

GREEN PRACTICE

Environmental sustainability can be integrated into daily operations, governance, and community life. Although national contexts and energy systems differ, these examples offer transferable solutions that show how cultural and natural heritage sites can reduce environmental impact while strengthening local benefit and long-term resilience.

- **Improve energy efficiency in everyday operations.** Simple measures such as replacing incandescent lighting with LED bulbs and optimising heating and lighting use reduce energy consumption without compromising visitor experience.
- **Embed sustainability through policies and certification.** Environmental policies or formal certification schemes provide clear frameworks for action, encouraging continuous improvement, accountability, and regular evaluation of energy use, waste, transport, and procurement.
- **Reduce waste and promote circular practices.** Recycling systems for staff and visitors, reduced use of disposable materials, digital alternatives to printed brochures, and careful monitoring of food waste help minimise resource use and emissions.
- **Support sustainable transport solutions.** Remote working options, shared or electric vehicles, hybrid vessels, and collaboration with public transport providers lower emissions linked to staff and visitor travel.
- **Adopt renewable and locally adapted energy solutions.** Large-scale renewable energy systems, such as wind and hydropower, can be complemented by small-scale, place-based solutions including micro-hydropower, solar installations, and district heating, particularly in rural or off-grid areas.
- **Use legislation and incentives to guide sustainable tourism.** Zoning systems, local ownership requirements, and favourable loan conditions encourage environmentally responsible development that benefits local communities.
- **Engage staff, communities, and visitors.** Training employees, supporting community-led initiatives, and promoting responsible access codes raise awareness and ensure sustainability goals are shared and upheld.

Effective environmental practice in heritage settings combines practical operational changes, supportive policy frameworks, renewable energy adoption, and strong community engagement. By applying these solutions, heritage institutions can align conservation, climate responsibility, and social benefit, ensuring their sites remain viable and valued for generations to come.

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CHAPTER 2
BUILDINGS

AUTHENTIC BUILT HERITAGE IN A MODERN WORLD

Buildings are more than physical structures — they are carriers of memory, identity, and craft traditions that connect past and present. Across Iceland, Norway, Scotland, and Greenland, built heritage tells the story of how people adapted to harsh climates, limited resources, and changing cultural influences. From Icelandic turf farms to Norwegian longhouses, Scottish stone structures, and the intertwined Norse-Inuit building traditions of Greenland, the architectural landscape of the North reflects resilience, ingenuity, and a deep relationship with the environment.

As shown in the project's field visits and research, building practices in all partner regions depend on a delicate balance between authenticity and modern needs. Archaeological evidence, written sources, oral traditions, and surviving structures offer essential guidance — but also leave gaps that require interpretation. The challenge, then, is to rebuild, restore, and preserve in ways that honour historical accuracy while acknowledging the practical realities of today. This includes respecting fragile materials, communicating uncertainties to the public, and making environmentally responsible choices in design, construction, and maintenance.

Throughout this chapter, we explore three main dimensions of building heritage:

- Building design: How archaeological remains, documentation, and comparative studies guide reconstructions — from Iceland's turf architecture to Norway's monumental 83-metre longhouse, Greenland's Norse and Inuit dwellings, and Scotland's interpretation of fragmentary longhouse evidence.
- Building materials: The use of traditional materials such as turf, stone, timber, and driftwood, and the sustainability benefits of reviving long-lasting, locally sourced techniques.
- Modernization and technology: How contemporary solutions, safety standards, and environmental considerations intersect with historical authenticity, influencing choices in heating, roofing, maintenance, accessibility, and visitor management.

Together, these perspectives show that building heritage is not static. It evolves through research, craftsmanship, and dialogue between the past and the present. By examining how each partner region approaches reconstruction and preservation, this chapter highlights both shared challenges and innovative solutions — ensuring that Northern building traditions remain understood, respected, and sustainable for generations to come.

RESEARCH AND RECONSTRUCTION OF TURF HOUSES

The Skagafjörður Heritage Museum has conducted research on standing and half-standing turf houses in the Skagafjörður region, and also runs The Heritage Craft School, which offers courses in, among other things, turf, stone and timber construction. These research efforts and training programs mean that the museum possesses an exceptionally strong knowledge base regarding the turf house heritage.

Evidence of early Icelandic building design can be found in a combination of archaeological sites, written records, and surviving examples of turf houses and stone structures.

- When reconstructing a house that is at least partially still standing, it is often possible to identify key aspects of its design, such as layout, proportions, and structural features. It is important to use all available sources to recreate the design as accurately as possible.
- If the house is no longer standing, photographs, drawings, or written descriptions may provide insight into its original appearance. The design of a building can also often be identified through archaeological excavation.
- If no sources or findings exist, it may be necessary to study other comparable houses in the same area, or even across the country. In some cases, it may be helpful to examine buildings in other countries that share a common architectural heritage.

However, it is particularly difficult to determine how the earliest types of buildings were designed, as certain architectural elements are no longer visible today, even with modern archaeological methods. Furthermore, there are very few, if any, written sources describing how houses were constructed in Iceland during its first centuries of settlement, which leaves room for interpretations based on the knowledge we now have, which might be inaccurate for that time. In those cases, it is important to inform visitors about which parts of the structure have been modified, so that the public is not misinformed about their heritage.

DESIGNING THE CHIEFTAIN'S HOUSE

The remarkable archaeological discovery of Norway's largest Viking Age longhouse at Borg, unearthed between 1986 and 1989, inspired an ambitious historical project. In response, Vestvågøy municipality made the visionary decision to commission a full-scale reconstruction of the Chieftain's house and establish a Viking Age Museum on the site.

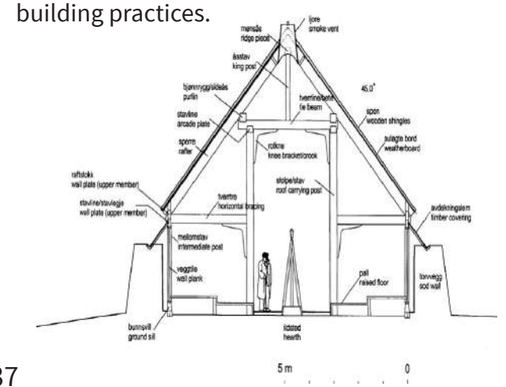
To ensure historical accuracy and academic integrity, the municipality entered a primary partnership with Tromsø Museum (under the University of Tromsø), which provided expert guidance on museological aspects. The architectural firm BOARCH was selected in 1992 after winning a design competition. A central tenet of their design was a thoughtful site plan that efficiently managed visitor traffic while integrating with access routes to the adjacent church and surrounding nature reserves.

The crown jewel of the project, is the reconstruction of the vast 83-meter-long Chieftain's longhouse. It`s the product of meticulous research into Viking Age architectural techniques. This was blended with distinct regional building customs, notably the traditional stavlægje stave construction principle. Similarly, the reconstruction of the great naust (boathouse) designed to house Lofotr—a replica of the famed Gokstad ship—draws on structural details revealed through archaeological excavations, resulting in an authentically simple and robust design.

The excavated foundations revealed a longhouse measuring 83 meters in length and 9 in width. The building was divided into several distinct sections, including residential quarters with a central hearth, an entrance area with two doorways, a banquet hall with its own hearth, and a byre section.

The archaeological discoveries formed the basis for the reconstruction. The Chieftain's Longhouse was built in accordance with the plans and layout documented during excavation. Principal structural elements include two rows of paired posts, exterior walls supported by a sill beam, and an outer turf wall. The posts were positioned at the same locations and spacing as the postholes identified during excavation. The rest of the floor plan of the 83-meter-long and 9-meter-wide longhouse was replicated. The exterior walls were built on a sill beam, and the construction drew its form and style from Norwegian stave churches and older wooden buildings in Norway and Iceland. The gable ends of the house are rounded, following archaeological findings.

No archaeological evidence existed regarding the original roof covering. Early in the process, the use of turf was abandoned due to the quantities required and technical challenges posed by height, pitch, and weight. A compromise was achieved through wooden shingles, a long-standing tradition in Norwegian building practices.



BUILDING DESIGN

In South Greenland, within the UNESCO World Heritage site of Kujataa, the history of buildings reflects three intertwined traditions: Norse, Inuit, and later colonial farming. Each group had to respond creatively to limited resources, climate challenges, and cultural exchange.

The Norse settlers (c. 985–1450) left behind stone farmsteads, byres, and churches, with Hvalsey Church standing as the best-preserved medieval ruin in Greenland. Excavations reveal foundations and turf walls showing how European masonry traditions were adapted to Arctic conditions. Written sources give little detail, so much knowledge comes from comparing Greenlandic ruins with those in Iceland and Norway.

The Inuit, relying on oral tradition, built turf houses and semi-subterranean winter dwellings using driftwood, whalebone, stone, and turf. Their designs changed over time, responding flexibly to climate and available resources.

In the late 18th century, Anders and Tuperna Olsen established sheep farming in Igaliku. New stone farmhouses were built using materials from Norse ruins, symbolising continuity. Early Inuit carpenters constructed wooden houses, combining local skills with European knowledge, many of which are still preserved.

Today, these building traditions remain visible, and modern projects increasingly return to old methods, recognising their durability and sustainability. For example, when building new trails in heritage landscapes, turf- and stone-based solutions are used because they last longer than modern alternatives.

Implemented solutions:

- Stabilisation and conservation of Norse ruins, especially Hvalsey Church.
- Reconstruction of Inuit dwellings for education and tourism.
- Restoration of early modern farmhouses in Igaliku using traditional techniques.
- Use of local stone and turf methods in present-day projects, such as trail building.
- Training programs for local guides and craftspeople to pass on building knowledge.

In sum, Kujataa's building heritage shows resilience, continuity, and adaptation. By combining conservation with the revival of traditional methods, Greenland demonstrates that old techniques can still offer the most sustainable solutions for today's challenges.

TAIGH MÒR - BUILDING DESIGN

KLCT's design is styled on longhouse finds across Scotland. However, these finds are limited to the islands, with the majority in the northern islands of Orkney and Shetland. The closest known longhouse in our area is in the Outer Hebrides, specifically Uist. Despite limited evidence, we have discerned basic common features between the three locations to inform our longhouse design.

The longhouses appear to have had stone walls with a wooden frame interior. The roof is speculative, as it rarely leaves archaeological evidence. Most reconstructions have turf roofs. We consider this most likely, as it requires minimal upkeep, materials are easily gathered, and it withstands volatile weather. A common Highland practice was to include a thin turf layer on blackhouse roofs as matting between cabers and thatch, well documented and likely unchanged historically.

In Iceland, we saw museum turf houses occupied until recently, with full turf walls and a roof of thick slabs on timber frames. Floors were compressed earth, though in drier conditions matting was needed to reduce dust. Plastic sheeting prevented leaks, but modern materials can cause roofs to subside. Over time, walls compress, requiring new layers periodically.

Norway's reconstruction of the largest longhouse is grander than any Viking find in Scotland and exceeds our Trust's reconstruction capabilities. The wooden structure has a shingle roof, following basic longhouse wooden-frame design. Outer walls mimic turf but are wooden frames with a thin turf mat layer. Floors are concrete to handle visitor wear. Intended for summer use only. The lack of insulation has caused issues as it remains open in winter.

Greenland's reconstruction is a small wooden longhouse with turf walls and roof. Smaller visitor numbers and less rainfall likely help preserve it, despite harsher weather than the Scottish Highlands.

Visits to these sites were extremely useful. They advised what not to do and how to maintain authenticity. Using these examples and local excavations, we designed what we consider an accurate reconstruction of a Viking longhouse in Scotland.

BUILDING WITH TURF

Icelanders' choice of building materials has historically been shaped by harsh climatic conditions and limited natural resources, particularly the lack of forests. Knowledge of early Icelandic building traditions comes from archaeological evidence, written sources, and surviving examples of turf houses and stone structures across the country. Today, the main challenges facing turf house heritage and turf construction are the scarcity of specialised knowledge and the high cost involved. Only a small number of people possess the skills needed to cut and build with turf, suitable extraction sites must be identified, and authentic construction relies on manual labour, making the process extremely time-consuming and expensive.

- **Reconstructing partially standing houses:** When a house is still partially standing, it is often possible to identify which building materials were originally used, including specific turf types. While this information may not be recoverable for the entire structure, all available physical evidence should be carefully analysed to ensure the most accurate reconstruction possible.

- **Reconstructing houses that no longer stand:** If a building has completely disappeared, historical photographs, drawings, and written descriptions can provide valuable insight into its former appearance. Archaeological excavation may also reveal information about materials and construction methods. When such evidence is limited or absent, comparable houses in the same region, or elsewhere in the country, may be studied. In some cases, buildings in other countries with shared building traditions can also offer useful references.

- **Balancing authenticity and practicality:** Ideally, all work should be carried out by hand to preserve historical authenticity. However, certain types of turf can now be cut using machinery, significantly reducing labour and cost. This makes turf construction more accessible for projects with limited funding, even if it represents a partial departure from traditional methods.

- **Cost-driven repair strategies:** Due to limited funding for turf house maintenance, repairs have sometimes focused only on visibly deteriorating outer wall layers instead of addressing underlying structural problems. Although cheaper in the short term, this approach often leads to greater damage over time and ultimately higher costs. Proper repairs from the start are more effective and economical in the long run. Importance of continuous maintenance: Historically, turf houses were rarely repaired all at once. Instead, small sections were maintained regularly, addressing settling, shifting, or leaks as soon as problems appeared. Ongoing, preventative maintenance, such as annual minor repairs and quickly sealing openings with turf, remains the most effective and sustainable approach for preserving turf houses today.

MATERIALS - LONGHOUSE ADAPTATIONS

This longhouse was originally designed for summer use only. When it began to be used during winter, several practical challenges emerged, leading to important updates and improvements.

- **Foundation and Heating System**: The building stands on a solid concrete foundation. Beneath this concrete, a thick layer of insulation helps retain heat, and heating cables are embedded within to provide consistent warmth during colder months.

- **Structure and Walls**: The framework is built from sturdy pine wood, assembled using traditional techniques such as wooden pegs and natural joints for authenticity and strength. Both the exterior and interior walls are made from upright wooden planks, each approximately two inches thick, giving the building a robust and historic appearance.

- **Roof Construction**: The roof is a heavy-duty structure made from pine rafters and beams. It is sealed with overlapping planks and roofing sheets to ensure it is weatherproof. Small ventilation openings are included to allow air circulation and prevent moisture buildup. The roof is covered with traditional wooden shingles—around 46,000 in total—which are treated with a protective coating of wood tar and turpentine. This treatment is reapplied every five years to maintain durability.

- **Turf Wall History and Improvement**: A turf wall was built around the longhouse to provide additional insulation and preserve historical accuracy. Designed by Icelandic expert Helgi Sigurdsson; the head teacher at the Heritage Craft School, the wall was initially constructed using local turf, as importing specialised turf from Iceland was too expensive. Unfortunately, the local turf retained moisture and, after seven years, caused significant rot to the wooden structure. The wall was eventually replaced with a modernised version that includes better ventilation. This updated design has proven effective, preventing moisture buildup and protecting the building.

- **Interior Floors**: The floors in the living and banquet areas were originally made of packed dirt, in keeping with historical design. However, the underfloor heating caused the soil to dry out and turn to dust, which spread throughout the rooms. These floors were replaced with concrete, which is designed to look like the original dirt floors while being much more practical.

- **Fire Safety**: To address fire risks, a sprinkler system has been installed in the roof. Because smoke from the fireplaces would regularly set off standard smoke detectors. Instead, we use sprinkler systems. At 67°C or higher, the system will activate an automatic fire protection measure that sprays water to control and extinguish the fire. This will not affect the whole building unless necessary. If the fire alarm is activated, a signal is sent directly to the local fire department for a quick response.

Before **After**

BUILDING MATERIALS

In the Kujataa World Heritage area of South Greenland, building design and materials reflect Norse and Inuit traditions, as well as later farming practices. Knowledge comes from ruins, archaeological research, oral tradition, and preserved 18th–19th century houses.

Norse Period (c. 985–1450)

The Norse left stone ruins—farmsteads, byres, and churches. Hvalsey Church, Greenland's best-preserved medieval ruin, shows skilled masonry with granite blocks, linking to Iceland and Norway. Most farm buildings combined stone foundations with thick turf walls. Timber was scarce; driftwood or imported wood was used sparingly, and lime mortar appeared in few churches. Written sources reveal little about construction, so archaeology is key.

Inuit tradition

Inuit communities relied on turf, stone, driftwood, and bones. Semi-subterranean winter houses were insulated with turf and supported by driftwood or whale bones. Dwellings evolved over time, adapting to climate and contact, with knowledge transmitted orally but documented archaeologically.

Modern farming era (from the 1780s)

Sheep farming introduced by Anders and Tuperna Olsen in Igaliku reused Norse stones for barns and houses. Imported timber and lime mortar became more common, and early Inuit carpenters built wooden houses that remain preserved, reflecting European skills transfer.

Constraints and adaptation

Building design reflected material availability and cost; turf and stone compensated for scarce timber. Ingenuity and resource use shaped the cultural landscape.

Solutions implemented

- Archaeological documentation preserves knowledge.
- Stabilisation protects turf and stone structures.
- Early wooden houses show timber construction.
- Reuse of Norse stones illustrates continuity.
- Reconstructions like Erik the Red's longhouse give tangible insight.
- Community engagement strengthens cultural identity.
- A forthcoming book on Norse prehistory will support tourism and education.

Reflections and future plans

Kujataa's heritage is fragile. Turf decays quickly in a warming climate, and stone is vulnerable to erosion. Future priorities include improved conservation, 3D documentation, and sharing knowledge on sustainable use of local materials, ensuring ruins and reconstructions continue to tell the story of resilience in South Greenland.

DÙTHCHAS - BUILDING MATERIALS

Building materials are based on a number of varying examples from across the northern hemisphere. We took into consideration the examples from our colleague museums in Greenland, Iceland and Norway. However, archaeological evidence found from longhouse excavations in Scotland proved that the materials and style were a little different.

Two key examples for longhouse design come from Unst in Shetland and Bornais in Uist. These longhouses are built with a relatively high-toned wall, a turf roof and a wooden frame. It is possible these longhouses differ from the others due to a different climate, but also due to the native populace already having a building style that the Vikings incorporated. Another reason could be due to the available materials in the area.

As our study has progressed, we found that a lot of our local turf was insufficient for building long-lasting walls. The wet winter and dry summer climate would also result in them either melting away, or requiring constant upkeep. Similarly to why the buildings in Southern Iceland use higher stone walls than those found in the North.

Many different roofing materials were considered for our longhouse. We looked at a variety of thatches, straw, rush, heather and bracken. The Heather was the most likely to be used and was a consistent thatch for roofs for highland buildings well into the 20th century. However, after speaking with several specialists, it was soon discovered that the quantity of thatch required and the amount of upkeep it would need made the concept impractical. This brought us back to the turf roof, which is the choice material for every example seen apart from the Lofotr longhouse, which uses shingles. We chose not to pursue the shingle option ourselves as they are expensive and can be easily removed in adverse weather, which we are regularly exposed to.

Stonewalling is a common practice in the highlands and islands of Scotland. The native inhabitants have always built with stone. It is a readily available material, versatile and needs very little maintenance.

MODERN SOLUTIONS AND AUTHENTICITY

Since both the knowledge and the resources required for turf construction have become highly specialised, building and maintaining a turf house has become very costly. This often leads to attempts to reduce the amount of turf used by incorporating modern solutions. Historically, the National Museum of Iceland has experimented with such solutions in the House Collection, for example, when addressing issues like leaks. In addition, certain modern solutions have also had to be incorporated to better preserve the houses and artefacts and protect them from the impact of modern visitor traffic.

- **Plastic tarps under turf roofs:** At Glaumbær Turf Farm, plastic tarps were installed beneath the turf roofs during repairs in the 1990s to allow for thinner turf layers while preventing leaks. This solution has proven unsuitable as water seeps through the thin turf, runs into the alleys between gables, infiltrates the walls, and eventually breaks through the front, causing structural damage. In the long term, it would likely be more economical to construct thicker roofs, as was traditionally done, as they would support proper soil and vegetation capable of absorbing water naturally.
- **Fishing nets to secure turf:** Fishing nets were added above the plastic tarps to prevent turf from sliding off the roofs. While mostly effective, they only work when the turf layer is thick enough for grass to root. Thin turf dries out and blows away, reinforcing the need for thicker roofs.
- **Mechanical ventilation system:** An air ventilation system has been installed to stabilise indoor temperatures at around 10°C and reduce humidity. This protects both artefacts and the building itself. The system partially replaces the warmth and ventilation once provided by daily human activity, such as cooking and movement, and has proven particularly beneficial during winter.
- **Stone slates in the entrance:** Natural stone slates have been laid in the entrance to protect the original dirt floor from heavy foot traffic. Although there is no evidence that stone flooring was originally used at Glaumbær, stone floors are documented in other turf houses. The slates have been highly effective in preventing wear.
- **Burlap floor coverings:** In other rooms, burlap is nailed down to protect dirt floors from modern shoes. It is vacuumed daily, occasionally dampened to control dust, and replaced annually due to wear. While ash was historically used to harden floors, this method would not withstand current visitor levels.
- **Treated timber:** One room reconstructed in the early 1980s used timber treated with wood preservative. This causes the interior to appear unnaturally modern, as the wood remains visually new. Untreated wood would have better preserved the building's historical character.

HISTORIC BUILDINGS: YEAR-ROUND USE

Originally designed for summer use, our museum now operates year-round, revealing challenges related to heating, authenticity, and visitor comfort.

Main Issues:

- Heat loss from size and construction.
- Smoke from woodfires.
- High energy use.
- Authenticity concerns in design.
- Sprinkler system limitations.

As tourism expanded with evening feasts and events, the chieftain's house began operating year-round. Maintaining comfortable temperatures remains a challenge.

Current Heating Solutions: A large diesel generator now heats about 60% of the chieftain's house—mainly the living quarters and feast hall—by supplying warm air. We're adding exterior insulation mats, while roof insulation is still under review due to cost and sprinkler complications.

Delivered Energy to the Building (Calculated)

Energy Source	Delivered Energy (kWh)	Specific Delivered (kWh/m²)
Direct electricity	447,288	578.6
Oil	116,552	150.8
Total delivered energy	**563,840**	**729.4**
Solar power for export	0	0
Net delivered energy	**563,840**	**729.4**

Energy Use and Emissions: We maintain 20 °C during open hours and 18 °C otherwise. Annual energy use is about 564,000 kWh, producing roughly 92,000 kg of CO_2.

Other Solutions: Historic firepits once provided warmth but are no longer suitable for safety and environmental reasons. Fires are still used in the living quarters and feast hall, though smoke remains a problem. A divided roof hatch helps direct ventilation by wind. The feast hall also features a dual fireplace—one wood, one gas. The gas fire gives ambience with less smoke but little heat; wood is used for cooking and crafts.

Future Ideas: We are exploring geothermal heating, now in early research with Asplan Viak. Preliminary results are promising but not yet conclusive. If viable, the system could sustainably heat both the Chieftain's House and the exhibition/welcome centre, advancing our sustainability goals.

Lessons Learned: Seasonal design is unsustainable—year-round operation demands adaptable solutions. Blending modern construction with Viking aesthetics is feasible, as shown in our new harbour facilities. Purchasing modular units and adapting them for authenticity cuts costs while improving hygiene, efficiency, and climate resilience. Even with limited budgets, authentic, functional, and sustainable results are achievable year-round.

MODERNISATION/TECHNOLOGY

In the Kujataa World Heritage area, reconstructions and preservation projects aim to make traditional houses understandable and accessible to the public. These efforts involve modern materials and methods, often with mixed results. Some solutions have succeeded, while others created long-term challenges, offering valuable lessons for future projects.

Presentation of the situation: The reconstructed buildings in Qassiarsuk, including Erik the Red's longhouse and Tjodhildur's church, were gifts illustrating traditional Norse building techniques. Modern interventions were added to protect them from the harsh climate—for example, plastic sheets under turf roofs to block rainwater. Studies showed these trapped moisture, accelerating decay instead of preventing it, making repairs costly.Same experiences have been recorded in Iceland.

Another challenge is that the reconstructions were gifts from external groups. While generous, local builders and communities gained little maintenance knowledge, increasing costs and hindering sustainable upkeep.

Inuit houses pose different challenges. Their long, narrow entrances, once practical, do not suit modern visitors. A modern, wider entrance changed the building's character, showing the difficulty of balancing authenticity and accessibility.

More recent turf houses (19th–20th century) were small wooden-frame houses with turf and windows. These proved more adaptable, and some building techniques were documented. However, few still know how to construct such houses, and skills risk disappearing. Modernisation has made us reliant on documentation rather than living knowledge, and preservation remains limited.

Solutions implemented

- Reconstructions for education: Erik the Red's longhouse and Tjodhildur's church provide learning experiences, though plastic under turf roofs caused long-term damage.
- Community involvement: Later projects include local builders to pass on maintenance skills.
- Tourist accessibility: Modifying traditional entrances can distort original designs.
- Documentation: Written and drawn records of later turf houses provide a foundation for future reconstructions.
- Skill preservation: Few craftspeople still know traditional techniques; awareness programs and workshops are needed.

Reflections and future plans: Modern technology offers both opportunities and pitfalls. Plastic sheeting caused new problems; reliance on outside builders created dependence. Future projects should prioritise authentic materials, local involvement, and knowledge transfer. Plans include workshops, continued documentation, and careful assessment of modern materials to ensure modernisation supports rather than compromises Greenland's building heritage.

TRÀTH TEACHDAIL - MODERNISATION

KLCT's longhouse must incorporate modern amenities. Without them, we risk negatively impacting our visitors' experience. KLCT wants to prioritise visitor comfort, which requires keeping some modern features.

We took inspiration from our colleagues and the use of modern materials in their own constructions. This allows our building to comply with regulations and ensures longevity. At the time of writing, we are still finalising the design, but we will take measures to make the building wind and waterproof, ensuring a pleasant experience for visitors and staff. To achieve this, we will include a protective layer between our roofing materials and fill the centre of our stone wall. The wall will use limecrete to seal gaps and help insulate the interior, while the roof's protective layer will prevent leaks and act as insulation. Electricity and modern lighting will also be implemented, essential during the winter months.

The Trust is considering using a wooden flatpack building, designed to appear as a Viking longhouse. Building the interior this way would allow KLCT to explore a community build, offering a cost-effective and engaging process that benefits local people. It would provide practical experience and serve as an example others can learn from. Housing is a major issue in our community, and exploring solutions that could also support local needs is something we should consider.

The Plock operates over a 60-hectare expanse of wild, rugged terrain. To make this landscape accessible, regular path maintenance and creation are required. Due to our climate, we experience heavy rainfall each year, creating boggy terrain that makes standard construction methods difficult. However, we have been practising an ancient technique that can 'float' the paths we build.

Standard path construction requires excavating to reach a hard surface. In peatland, this would mean digging down to impractical depths and using large amounts of materials. Without a firm base, the path's stability is at risk. The use of wool provides a strong foundation that allows the path to 'float' over deep peat. Developed from ancient engineering techniques, this method offers an environmentally friendly alternative to geotextiles using locally sourced materials. It is expected to perform with similar longevity. Using wool is both appropriate and sustainable. Path making basics:

- Choose your path line.
- Check for running water/animal shelters/ rare plants.
- Cut away the topsoil.
- Dig out the path line into a trench/tray.
- Fill the tray with thick bundles of wool. The fleece provides a barrier between gravel and soil, preventing aggregate loss.
- Place large stones on top of the wool to weigh it down and create a hard surface.
- Gravel to layer over the large stones.
- Cut a drainage channel along the path's side. Cut sections of cross drains to prevent flooding.

BUILDING DESIGN

Approaches to reconstructing traditional buildings can vary depending on the available evidence and resources for their design. Furthermore, sometimes there is a lack of information or resources, which calls for other solutions without losing the authenticity. **Presented below are some exemplary practices in this regard:**

- **Draw on available evidence:** Archaeological remains, surviving buildings, ruins, written records, oral sources, photographs, drawings, and/or information from other places with similar building heritage.
- **Investigate what remains:** If parts of a building are still standing, study its layout, proportions, and structure to understand the building design.
- **Collaboration:** Collaborate with other institutions or experts with experience or knowledge on the subject, to ensure that the building design is as authentic and well-made as possible.
- **Seek authentic solutions:** Where evidence or resources are missing, seek the most authentic solutions available to ensure reconstructions remain as faithful and functional as possible. In those cases, it is important to inform visitors of those changes so that they are not misinformed about their heritage.

Experience has taught us that modern additions can create more problems than they solve. For example, it has been common practice to place a plastic tarp beneath the turf roof in several of the National Museum's historic turf buildings in an effort to prevent leaks. However, these tarps have caused moisture to remain trapped inside the structure, leading to timber rot. They also prevent the turf from binding properly; the grass grows poorly and tends to slide down the roof.

In summary, it is important to draw on all available knowledge when considering a design for a traditional building to maintain authenticity. In those cases where modifications have to be made, it is important to find solutions that are faithful to the heritage in question and be transparent about those kinds of solutions.

BUILDING MATERIALS

Experiences from Iceland, Norway, Greenland and Scotland show that traditional building materials and construction methods in the North Atlantic are closely linked to climate, local resources and long-established knowledge. Turf, stone and limited timber have been combined in different ways, depending on availability, environmental conditions and cultural tradition. Successful conservation and reconstruction require an understanding of these regional variations rather than the application of a uniform model.

Where buildings are partially standing, physical evidence should be the primary source for identifying original materials and construction techniques. In cases where structures no longer survive, historical photographs, written descriptions, archaeological investigation and comparisons with similar buildings in the same region provide valuable guidance. Evidence from neighbouring regions with shared building traditions may also be relevant when local information is limited.

Traditional construction methods remain central to achieving historical accuracy. However, practical constraints such as cost, labour availability and modern use have shown that carefully considered adaptations may be necessary. The selective use of mechanised processes, modern foundations or concealed technical installations can improve durability and usability, provided they do not alter the visual character or long-term performance of the building.

Moisture management is a recurring concern across all regions. Inappropriate turf quality, insufficient ventilation or unsuitable combinations of materials can lead to decay, particularly where timber structures are involved. Experience shows that improved ventilation and attention to drainage and airflow are essential, especially in wet or changing climatic conditions.

Long-term preservation depends on continuous maintenance rather than large-scale repairs. Historically, buildings were maintained through regular minor interventions, addressing problems as they emerged. Preventative maintenance has proven more effective and economical than short-term repairs that fail to resolve underlying structural issues.

Modern safety and functional requirements, including heating and fire protection, must be addressed where buildings are accessible or in use today. These systems should be integrated in a way that minimises visual impact and respects the historic character of the structure.

Across all case studies, the availability of skilled knowledge remains a key challenge. Documentation, training and community involvement are therefore essential for sustaining traditional building practices. Sharing knowledge through research, reconstruction projects and public engagement strengthens conservation efforts and cultural understanding of North Atlantic building traditions.

MODERNIZATION/TECHNOLOGY

Modernisation and technology are essential tools for combining heritage preservation with contemporary sustainability goals. Across the partner institutions, modernisation is not only about efficiency or new materials but about using innovation to protect cultural heritage, reduce energy consumption, and engage new audiences.

Key best practices from all partners include:

- Blending traditional craftsmanship with modern techniques – using digital documentation, laser scanning, or 3D modelling to record and reconstruct historical buildings accurately.
- Implementing energy-efficient solutions – from geothermal and hydropower systems in Iceland and Greenland to improved insulation, LED lighting, and alternative heating methods in Norway and Scotland.
- Encouraging local innovation – supporting small-scale renewable projects, such as micro-hydropower and solar energy on farms in Greenland or electric community transport in Scotland.
- Using technology for interpretation and education – interactive digital displays, online resources, and virtual storytelling tools make heritage accessible to young audiences and remote visitors.
- Promoting sustainable building materials – reusing wood, stone, turf, and other local materials in reconstructions to reduce environmental impact while preserving authenticity.
- Sharing knowledge across borders – through Nordic cooperation on energy storage and digital reconstruction, helping partners learn from each other's experiments and adapt solutions to local contexts.
- Balancing innovation with authenticity – ensuring that modernisation serves heritage rather than replacing it, maintaining cultural integrity while meeting modern sustainability standards.

In summary, modernisation and technology strengthen the connection between heritage and the future. By integrating renewable energy, digital tools, and traditional knowledge, all partners demonstrate that sustainable development and historical preservation can go hand in hand—creating models for how rural cultural sites can thrive in a changing world.

CHAPTER 3
KNOWLEDGE

PROVIDING KNOWLEDGE TO THE FUTURE

It has never been as important to preserve and share knowledge across generations. In rural areas this task can be especially challenging. Young adults often leave for education or work, and long distances limit access to cultural institutions. When fewer young people remain or return, the risk grows that local traditions, stories, and skills may fade over time. At the same time, these communities depend on their younger generations to sustain cultural heritage and ensure a vibrant future.

Our institutions play a central role as places where knowledge is collected, interpreted, and passed on. Yet we must ask ourselves how accessible we truly are. Are we reaching out to young adults, or waiting for them to come to us? Through school programs, guided visits, hiring young locals, and offering volunteering opportunities, we help create meaningful connections and strengthen local identity. Social media, digital storytelling, and targeted activities also allow us to meet young people in the spaces where they are most active.

By engaging with local communities, collaborating with regional groups and businesses, and making information easy to find and use, we help keep knowledge alive. Together, we can inspire young adults to participate, contribute, and carry local heritage into the future.

ENGAGING YOUNG ADULTS

Skagafjörður Heritage Museum makes a conscious effort to engage young adults, both by providing opportunities and by creating connections that inspire them to stay involved in cultural heritage.

The museum makes a conscious effort to hire local youngsters for summer jobs, creating opportunities for young people to take on responsibility, develop skills, and connect with their heritage. This promotes the museum within the schools and the local community, and also helps to spark interest among young adults in working at and visiting the museum. Many return summer after summer, gradually gaining knowledge that they can carry into the future. There are also examples of young adults whose experiences at the museum inspired them to study archaeology, history, or folklore, ultimately leading to careers in those fields.

- Summer staff are often given the opportunity to take part in other museum projects, such as this one, allowing them to grow in their roles. There are even examples of young people who began as summer staff and now continue to work at the museum as specialists. In this way, the museum encourages young people to pursue education in fields that are related to the museum work, and helps keep them in the region by creating jobs for them.
- Summer staff are encouraged to participate in courses at the Heritage Craft School, where they can learn traditional Icelandic crafts and building techniques.
- The museum hosts a variety of family-oriented events, especially designed for children and young adults. These include Halloween and Advent celebrations, as well as activities during the fall and winter school breaks. These events are free of charge and the programs combine lessons on Icelandic history and folklore with arts and crafts, costumes, and other entertainment.

- Maintaining an active presence on Facebook and Instagram, sharing informative content to spread knowledge. While most of the museum's followers are middle-aged, the museum has recently launched a TikTok account to connect with a younger audience.

SAY YES TO STUDENTS

The importance of saying yes to workplace placements for local school pupils must not be underestimated. These short placements often form the foundation for years of summer jobs. Pupils spend 2–3 weeks in a workplace, and this is where companies need to step in. These weeks give young people insight into working life and help them get to know a company. Businesses should make themselves attractive and ensure that each pupil has a mentor who welcomes and supports them.

In addition to these short-term placements, long-term collaboration with schools is essential. By welcoming pupils from lower secondary school onward, businesses can show young people the opportunities that exist locally. This creates familiarity and belonging—key factors in encouraging them to stay in the region as adults.

Education fairs and school collaboration

We also take part in local education fairs, where pupils from lower and upper secondary schools explore different career paths. Here we highlight opportunities within the museum sector, tourism, and the wider community. Meeting companies and cultural organisations face to face helps pupils see that meaningful jobs and future possibilities exist close to home.

Such collaboration between schools, businesses, and cultural institutions is crucial. It builds bridges between education and working life and shows young people that their community invests in them.

Special days and local involvement

Once a year, before Christmas, the museum holds an open day; a Christmas workshop for the community. Admission is free and visitors can join various activities. Children make gifts, the chieftain hosts, and annual passes and shop offers are available. It has become an important local meeting place.

Vikingleirskolen (Viking Youth Camp)

Vikingleirskolen has been a proud part of our activities since 2001 and remains close to our hearts. Although not organised through local schools, we collaborate with a local company to make it accessible for children and young adults across Nordland County.

During the three-day program, pupils step into the Viking Age: they learn about the discovery of the chieftain's house, explore Viking cooking, history, and mythology, and are introduced to archaeological methods.

We hope they leave with a lasting interest in history—perhaps returning as volunteers, seasonal staff, or future museum employees. Some may even be inspired to study archaeology or Viking history, continuing the work of preserving and sharing our cultural heritage.

YOUNG ADULTS

Passing knowledge on to the next generation is a central part of our work in the Kujataa World Heritage area. Young adults, school children, and students are key to ensuring that local history and traditions remain alive and relevant. Our institution therefore places strong emphasis on involving them directly in education, activities, and employment.

Presentation of the situation: A school service is being developed in one of the museum departments in Qaqortoq. Here, classes can learn about Norse and Inuit heritage not only by listening but also by touching, trying, and being active. In collaboration with local partners, we have created educational materials that include traditional games from both Inuit and Norse cultures. These materials have been distributed to all town and village schools, and home educators, ensuring regional access.

We are also working with archaeologists to develop 3D models and animations of cultural objects and sites. For example, digital models allow students to rotate and take apart a kayak to understand its components. This technology will also be applied to selected ruins and sites, providing interactive ways for young people to explore heritage.

Local engagement is equally important. Our site guides are all locally trained Arctic Guides from Campus Kujalleq, and we prioritise hiring young people for guiding and related work. In this way, we provide jobs, skills, and pride for the younger generation while strengthening local ownership of the World Heritage site.

Solutions implemented

- School service in Qaqortoq: Hands-on activities for classes, including traditional games and interactive learning.
- Educational materials: Booklets with activities and games about Norse and Inuit history, distributed regionally.
- Digital innovation: Collaboration with archaeologists to create 3D models and animations of objects and ruins.
- Local youth employment: Site guides trained at Campus Kujalleq gain skills and experience while contributing to heritage presentation.
- Community collaboration: Initiatives developed with local educators and cultural actors to ensure relevance and long-term use.
- Siu-Tsiu: a socio-economic project in Qaqortoq involving youth, such as the path project in Hvalsey.

Reflections and future plans: Involving young adults is not only about education but also about retention. By giving them opportunities to work, learn, and take pride in their heritage, we hope to encourage more to remain in or return to the area. We plan to strengthen our social media presence and expand digital offerings, making Kujataa's history more accessible locally and globally. Events and exhibits for younger audiences will remain a priority, emphasizing interaction and creativity.

Through education, digital tools, local employment, and cultural activities, we aim to build a strong bridge between the past and the next generation.

ÓGAN - WORKING WITH YOUNG ADULTS

Over the course of two years, Kyle and Lochalsh Community Trust conducted a program working with a group of young adults from the local secondary school. The project was designed to teach skills in ancient heritage, providing practical experience to increase employability and enhance knowledge of local heritage and history. The program opened opportunities for students that they would never have otherwise encountered.

Initially, the group started with high numbers for an after-school activity in our area. Twelve students signed up, showing interest and attended the first session. A huge pull for many was the opportunity to visit the countries we were collaborating with through the NORA project. For many, this provided unique once-in-a-lifetime opportunities. KLCT included the students in the NORA project, involving them in meetings, gathering useful feedback, and developing their work experience. An unforeseen benefit was that KLCT created a working format which can be distributed to other organisations working with young adults in rural communities. **The sessions helped KLCT design a robust, workable program for collaborating with outside organisations and students, easily adaptable for others to use.**

- The greatest challenge faced was travel. This is a consistent issue for any project in the Lochalsh area, especially when working with groups that generally don't drive. During the creation of the program, careful attention was taken to make the sessions coincide with available transport. However, as many students lived off the main road or train line, they still faced complications getting home once sessions finished.
- For the more specialist lessons provided through our project, we brought in skilled individuals who could teach the students to a higher standard. On several occasions, we successfully brought in third parties to run these sessions. However, it came with many difficulties due to expense, long travel distances, or scheduling conflicts. On occasion, to make a single specialist session run, KLCT would spend months organising and preparing. These struggles can also be attributed to our rural location. A site situated closer to towns and cities would have a wider variety of skilled individuals and less commitment for attendance.
- A key element to the project's success was having someone dedicated to the sessions who could easily engage with the students. The sessions ran over two years and needed to be viewed as a consistent and reliable outlet for the students.
- Keeping students interested through an exciting schedule maintained participation. Through the first year, the sessions were designed to enhance their capabilities as they progressed. They had exciting conclusions to work towards, whether a finished product, traineeship, or trip where they could apply what they had learnt.
- A big pull for the students was the opportunities provided by the sessions. They developed specialist skills enhancing their employability. The secondary school doesn't offer away trips to foreign countries, but through this project, we could offer this to young people in our rural community who would otherwise never have had the chance.

PASSING HERITAGE TO THE NEXT GENERATION

The museum has operated the Heritage Craft School Fornverkaskólinn since 2007, offering courses in traditional Icelandic craft methods. The museum is also, despite being in the countryside, close to one univeristy, one comprehensive secondary school, three orimary and secondary schools and three kindergardens. According to the Museum Act governing accredited museums in Iceland, children are entitled to free admission until the age of 18. A museum shall provide school students visiting as part of organized educational trips with free admission.

- The Heritage Craft School is dedicated to preserving and teaching traditional Icelandic craft methods and building techniques. While it primarily focuses on turf and stone construction, the school has also offered courses in other traditional crafts. These courses are open to all ages and often attract enthusiastic young participants.
- Visits from school groups are the most consistent way the museum passes knowledge on to younger generations. Local schools visit annually, ensuring that students gain insight into history and their cultural heritage. The museum is also a popular destination for schools across Iceland, welcoming groups from kindergarten to university level from all parts of the country.
- Guided tours are offered with different areas of emphasis depending on the needs of school groups. Tours may focus on the history of Glaumbær, the history of Iceland more broadly, or on turf architecture.
- Museum staff have taught classes at the local high school, emphasising turf, objects from the museum's collection and local history.
- The museum offers an "artefact bingo" in three difficulty levels, where children search for specific objects within the old turf farm. The game is frequently included in our events and is also available for school groups.
- The museum has virtual reality headsets that allow guests to "step back in time" and experience various activities inside the turf house, illustrating what life was like in the past.
- The museum has published two children's books with the aim of presenting "the old days" in a way that is both accessible and entertaining. In addition, it offers free puzzle books for children, created as companions to the storybooks.

The museum has begun collaboration with teachers at the local primary and secondary school. In addition, we aim to create a program that will allow us to visit schools and actively engage students in learning about Iceland's history.

EDUCATION THROUGH LIVING HERITAGE

Our commitment to preserving history goes beyond teaching facts — we have a strong focus on intangible cultural heritage. Lofotr's international reputation attracts students from around the world who come to learn, practice, and demonstrate traditional crafts. Through working at the museum or participating in educational programs such as Erasmus placements, students gain hands-on experience while applying their knowledge in authentic Viking Age settings. Visitors can observe these crafts in action, creating a tangible link between past and present. In addition to supporting international students, we actively pass on knowledge to the next generation in our local community.

Nearby kindergartens frequently visit the museum, giving children early exposure to history and heritage. Admission is free for children under six, and adults can purchase a discounted annual pass, encouraging repeated visits and making the museum grounds both a learning and play space. Our local kindergarten, just a short walk away, is Viking-themed and has a strong interest in the Viking Age. While we collaborated closely in the past, contact is now limited — something we aim to improve.

School groups visit mainly in autumn and spring, often spending the entire day at the museum. Many bring packed lunches and gather around the campfire, with indoor facilities available in case of bad weather. To make visits enriching, we offer tailored activities including storytelling, lending boxes with books and artefacts, and firewood for the campfire area. Guided tours are adapted to pupils' ages, and when schools request specific themes, we adjust our focus.

We welcome international students through the Erasmus Student Network (ESN). Students from abroad can join us at the museum, study, and take part in activities, gaining valuable experience while contributing to our work.

Museum Nord, of which Lofotr is part, is an approved **apprenticeship** provider and has offered valuable opportunities to young adults. We have welcomed students across various subjects, from traditional crafts like blacksmithing to tourism and marketing. Some of our apprentices include:

- Oona Torgersen (Blacksmith, 1996–1997)
- Margaret Stensen (Office Administration, 1996–1997)
- Ingvild Lykja (Guide, 2016–2018)Madelen Berg Hansen (Tourism Studies, 2018–2020)

Beyond on-site visits, we collaborate with schools and kindergartens in several ways. One ongoing project involves creating educational kits with questions, games, and teaching materials for classroom use. We also invite classes to participate in museum programs covering both the Viking Age and the Middle Ages, combining hands-on learning with historical education.

Through these efforts, Lofotr serves not only as a museum but as a dynamic learning environment, connecting students, local children, and visitors to the rich cultural heritage of the Viking Age. By combining practical experience, education, and community engagement, we ensure that knowledge, skills, and appreciation for history are passed on to the next generation — keeping the past alive today.

EDUCATION

Education is one of the most important tools for passing knowledge on to the next generation. In the Kujataa World Heritage area, we work to ensure that children and students not only learn about the past but also experience it as part of their own lives.

Presentation of the Situation

For the youngest generations, interactive and digital approaches are the most effective. As described earlier, we are developing 3D models and animations that allow schoolchildren to explore objects and ruins in new ways. Bringing entire school classes to the World Heritage sites is often too expensive due to high boat rental costs, so we focus on bringing heritage into the classrooms instead.

At the same time, children who grow up on farms within the World Heritage area live surrounded by cultural heritage and modern farming culture. Two schools and several home educators in the region ensure that this connection is part of everyday teaching. Local teachers are deeply engaged in passing on heritage knowledge. In addition, archaeologists working in the area regularly organise “archaeologist for a day” activities, giving children hands-on experience in excavation and interpretation.

Solutions Implemented

- **Interactive digital learning:** 3D models and animations provide access to heritage in the classroom.
- **Integration into local schools:** Teaching in the area’s two schools and among home educators on farms links daily life with heritage.
- **Field activities:** Archaeologists involve children directly during excavations, giving practical experience.
- **Accessibility focus**: When transportation to sites is not feasible, heritage content is brought to the students.
- **The school service in the museum**: The Arctic guide students can teach the young pupils.

Reflections

Education within Kujataa is about creating strong links between heritage and everyday life. By combining digital innovation, school-based activities, and occasional field experiences, we ensure that the next generation grows up with knowledge of and pride in their cultural landscape.

EÒLAS - EDUCATION

The work conducted with the young adults is part of a larger inspiration for KLCT to provide an outlet which will help local people learn more about their local heritage and history. With the Longhouse being the epicentre for our work, we hope to provide a facility where people can learn the history of the region but also benefit from learning ancient skills.

Lochalsh benefits from a lot of accessible historical sites but fails to capitalise on their existence. Our main pioneers in providing historical information in the area are the castles. However, these sites predominantly focus on the clan that occupied them and don’t usually expand further into the area's history.

Prime examples of this are Eilean Donnan, Dunvegan and Armadale. With only one located in Lochalsh and the other two on Skye, these places are excellent at presenting a specific time in history, focused on a specific subject. KLCT’s aim with the longhouse is to provide a place where locals and visitors can learn a broader scope of their heritage.

Over the course of two years, KLCT created a regular after-school program dedicated to teaching ancient skills. The program was designed to teach a group of young adults from the local secondary school in variety of skills. Through these sessions, we were able to teach the students about their local history and heritage through practical exercises. As the lessons advanced, we found ourselves able to take the students to visit local heritage sites. These lessons created a better connection between the students and their local heritage. Many of them are developing a deeper understanding and interest in ancient history and its connection to their surroundings.

Over the course of the two years, the students learnt a number of practical skills, including dry stone walling, advanced woodworking, and silversmithing, but also experienced incomparable opportunities to learn first-hand their Viking heritage in the area.

A MUSEUM FOR THE LOCAL COMMUNITY

Skagafjörður Heritage Museum is the centre for conservation and research on local history and cultural heritage in Skagafjörður. Given the rural location of the museum and the stated purpose (local heritage), both community involvement and approval are a crucial goal for the museum and something it aims to improve and sustain in multiple ways.

Perhaps the most deliberate effort to retain and increase local visitors is the annual ticket offered to residents of the Municipality of Skagafjörður, where the museum is located. With the purchase of a single admission, locals receive a ticket valid for one year. This initiative ties in well with the museum's events, giving residents an added incentive to attend programs, visit the exhibitions, or stop by the café more frequently. The off-season events in particular benefit from the annual ticket, with many guests making use of it when deciding to visit.

The museum hosts a wide variety of events, most of which are designed with the local community in mind.

Some of the museum's events include volunteers from local groups or individuals, e.g. Pilsaþytur (a group of people with a passion for the Icelandic National Costume), Icelandic Sheep dog owners (on the Icelandic Sheep dog day), Handraðinn (a folk custom group), Kvæðamannafélagið Gefjun (a folksong group), to name a few.

The museum has published booklets on a wide range of topics, including historical and cultural traditions, local stories, and research related to the museum or the Skagafjörður region. These are available both online and in print. The museum also publishes reports on archaeological excavations and related research, which are available online.

The museum maintains active social media, sharing information about events, artefacts, research, courses, and behind-the-scenes activities to keep the local community informed and engaged.

ENGAGING THROUGH EVENTS

Over the years, Lofotr Viking Museum has gained broad recognition through strong collaborations with national and international partners. While we continue to attract visitors year-round, attendance from local residents has gradually declined. In response, several community-oriented initiatives have been introduced to strengthen our local presence and emphasize that the museum is also a space for the community — not only a summer destination.

Key initiatives include:

- Lofotr Viking Festival
- Community and Events Calendar
- Locally-Focused Events
- Partnership with Meieriet Public Library
- Participation in Local Events (e.g., Høstvekka)
- Annual Passes and the Christmas Workshop
- Opening Ceremonies and Community Events
- The Lofotr Viking Ship at Ballstad

Throughout the year, the museum hosts a range of events, often included in the annual pass or covered by standard entry. **The free Christmas Workshop** has become a key local tradition, drawing families to creative and social activities.

The **partnership with Meieriet Public Library** remains particularly valuable. Together, we host four annual educational sessions for children and families, combining storytelling, learning, and cultural engagement.

During **Høstvekka**, a regional festival combining markets, conferences, and cultural activities, Lofotr strengthens local partnerships with producers, organizations, and families.

The museum's local presence is further expressed through **the Viking ship Lofotr**, a seaworthy replica of the Gokstad ship docked at Ballstad harbour. In collaboration with **Fosen Maritime School,** students trained in traditional sailing gain practical experience, ensuring the continuation of historical seafaring skills.

Lofotr also participates in local events and ceremonies, including collaboration with the **Viking kindergarten**, which integrates Iron Age history into its curriculum. These partnerships demonstrate the museum's ongoing commitment to community engagement.

Finally, the annual **Lofotr Viking Festival** remains the museum's largest and most visited event. This four-day celebration gathers Viking reenactors from Norway and abroad, offering performances, crafts, and cultural experiences that bring history to life.

COMMUNITY INVOLVEMENT

Greenland is an enormous country without roads between towns and settlements. All travel depends on sea or air routes, making it costly, time-consuming, and weather-sensitive. Events are often delayed or cancelled, so community engagement must balance physical presence with digital communication.

For Kujataa World Heritage, this means that while it is not always possible to be present everywhere, outreach is prioritised through both online channels and local visits. An information officer at Innovation South Greenland shares news and updates widely, while staff also travel to sub-areas to meet residents directly. This combination helps secure local support and makes heritage knowledge accessible.

Solutions implemented

- Digital channels: Social media and websites spread information quickly across large distances.
- Direct visits: Meetings, workshops, and training held in sub-areas strengthen dialogue and trust.
- Volunteers and events: Cooperation with local farmers, schools, and associations ensures involvement in guided tours, workshops, and heritage days.
- Partnerships: Close collaboration with municipalities, businesses, and cultural actors supports anchoring.

Reflections and future plans

Digital outreach works well in Greenland, but does not reach everyone. Therefore, continued physical presence remains important. In the future, Kujataa plans to expand collaboration with schools and local groups, while also testing hybrid solutions such as livestreamed talks. In this way, the heritage remains both locally rooted and widely accessible.

DUALCHAS - COMMUNITY INVOLVEMENT

KLCT's project aims to include the community throughout the entire process. We began with surveys where locals shared feedback on what they wanted developed on our site and its purpose. From this, the Trust identified the community's key priorities: jobs, amenities, and a place dedicated to local heritage.

Taking on board these needs, we began designing our Longhouse to incorporate top priorities. From the outset, construction was planned to be open to community involvement, allowing locals to gain skills in building and craftsmanship. This inclusion helps people develop future employability while fostering a sense of ownership, as the building results directly from community feedback and serves local development.

The Trust also recognised the importance of involving local businesses. By providing an anchor building, the area gains a destination for visitors. Increased footfall to Kyle of Lochalsh will create a ripple effect, benefitting nearby businesses. Establishing a strong brand through the Longhouse aims to inspire growth, job creation, and sustainable economic progress.

Housing remains a major issue in Lochalsh. Some Longhouse designs explore a flatpack building concept—an efficient, affordable method widely used in Europe. The interior would follow this model, while the exterior reflects traditional longhouse design. Although this reduces some authenticity, it offers modern comfort and accessibility. It also provides practical training for locals in cost-effective construction methods, supporting long-term housing resilience.

Maintaining an authentic exterior preserves the building's unique identity and educational value. Schools, colleges, and researchers could visit to study ancient construction, biodiversity, and human–nature coexistence. Inside, visitors would experience a comfortable, interactive learning environment. Both locals and tourists would gain a meaningful connection to Lochalsh's heritage.

Through constructing this single building, the Trust aims to create a community hub addressing needs across generations—offering learning opportunities, supporting local business, and strengthening regional identity.

BEST PRACTICES - YOUNG ADULTS

Meaningful engagement with young adults is essential for sustaining cultural heritage and strengthening rural communities. By combining education, employment, and creative participation, these initiatives show how heritage sites can inspire long-term interest, skills development, and a sense of belonging among younger generations.

- **Create early pathways into heritage work through employment and placements.** Summer jobs, workplace placements, and mentoring give young people practical experience, responsibility, and insight into museum and heritage careers, often leading to repeat employment or long-term involvement.
- **Build strong partnerships with schools and educators.** Long-term collaboration with primary and secondary schools, education fairs, and tailored school services connect curricula with local heritage and help young people see future opportunities within their own regions.
- **Offer hands-on and experiential learning.** Workshops, youth camps, traditional crafts training, archaeological activities, and interactive games allow young adults to learn by doing, making history tangible and memorable.
- **Use digital tools to reach and inspire younger audiences**. Social media platforms, 3D models, animations, and digital learning resources expand access, support different learning styles, and connect local heritage to global audiences.
- **Develop inclusive, family- and youth-oriented events.** Free community events, seasonal celebrations, and open days create welcoming entry points for young people and families, strengthening local relationships with heritage institutions.
- **Invest in skills development and progression.** Providing opportunities to participate in projects, specialist training, and international collaboration builds confidence, employability, and motivation, especially in rural areas.
- **Keep youth programs consistent and well-led.** Youth engagement is most effective when activities are regular, coordinated by dedicated staff, and designed with clear goals and outcomes.

Effective engagement of young adults combines practical work opportunities, education, digital innovation, and community-based activities. By offering meaningful experiences and clear pathways into heritage-related fields, institutions can empower young people to value, protect, and carry cultural heritage into the future.

BEST PRACTICES - EDUCATION

Education plays a central role in passing cultural heritage knowledge on to future generations. Museums and heritage institutions contribute through schools, apprenticeships, interactive learning, and collaborations, ensuring that both local children and international students engage with traditions in meaningful ways. **Presented below are some exemplary practices in this regard:**

- **Courses and workshops** dedicated to traditional crafts provide hands-on experience in methods such as turf and stone construction, while also engaging participants of different ages.
- **Regular school visits from kindergarten to university level** create consistent opportunities for young people to learn history and heritage through guided tours, games, and tailored activities.
- **Collaborations with teachers and schools** strengthen heritage education, including developing teaching materials, classroom kits, and outreach programs that bring heritage directly to students.
- **Apprenticeships** and placements allow young adults to gain practical skills not only in traditional crafts but also in fields like tourism and museum work, ensuring heritage skills are transferred across disciplines.
- **Digital solutions**, including 3D models and animations, expand access to heritage where travel is difficult, complementing on-site experiences and making education more widely available.
- **Interactive approaches** such as excavation days or object-based games make heritage learning active, playful, and memorable for children.

In summary, craft training, engaging with schools and teachers, apprenticeships, and digital solutions can ensure that knowledge and heritage are passed on effectively. By offering both hands-on and accessible learning opportunities, younger generations can learn about their cultural heritage and keep traditions alive for the future.

BEST PRACTICES - COMMUNITY INVOLVEMENT

Active engagement with local communities plays a key role in sustaining and sharing cultural heritage knowledge across all partner regions. By positioning heritage sites as open, inclusive, and collaborative spaces, institutions support learning, creativity, and shared experiences across generations. Strong community connections ensure that heritage knowledge remains relevant, lived, and continuously passed on, while strengthening social cohesion and local identity.

Across the partner countries, cooperation with schools, kindergartens, cultural institutions, voluntary groups, and local initiatives embeds knowledge exchange in everyday life. Community-oriented approaches balance international outreach with local responsibility, encourage year-round engagement, and reinforce heritage institutions as trusted community resources. Our best practices are:

- **Create pathways for students and apprentices:** Offer apprenticeships, placements, and work-based learning opportunities that provide practical experience, skills development, and insight into heritage-related professions.
- **Engage children at an early age:** Provide free or low-threshold access for kindergartens and age-adapted educational programmes, ensuring heritage becomes part of children's learning and play.
- **Develop inclusive community events:** Organise open days, workshops, festivals, and seasonal or locally rooted events that invite residents to participate actively.
- **Build strong local partnerships:** Collaborate with schools, libraries, cultural organisations, municipalities, voluntary groups, and local businesses to integrate heritage into wider networks.
- **Use living heritage as a learning tool:** Hands-on activities such as traditional crafts, storytelling, reenactments, or use of historic environments enable direct engagement with heritage knowledge.
- **Encourage repeat engagement through local offers**: Annual passes, local benefits, or community memberships support sustained relationships beyond peak visitor seasons.

Benefits

- Strengthens local identity, pride, and shared ownership.
- Builds long-term relationships with children, young people, and families.
- Positions heritage institutions as community-based knowledge hubs.
- Encourages year-round engagement and shared use of heritage sites.
- Supports sustainable knowledge transfer for present and future generations.








CHAPTER 4
FINAL THOUGHTS & EVALUATION

WHAT WE CARRY WITH US

This project has given us an excellent network of connections and valuable insights. Going through the guidelines we set for the project at the beginning encouraged us to reflect more deeply on our own work, what we are doing well and what could be improved. It will influence our museum policy and future strategies, e.g. surrounding sustainability.

We learned a great deal from how the Lofotr Viking Museum has built up its activities around its heritage site, especially how they have responded to the rise in tourism. Their approach to welcoming visitors, designing new buildings that harmonise with the restorations, and organising large events across extensive areas was very inspiring. It was also amazing to see how vibrant and varied the businesses in the region are, despite geographical challenges.

Furthermore, they can be applauded for the dedicated work being done to improve access and transport to the island.

From Greenland, we took note of how they welcome cruise groups while protecting a sensitive natural environment. Their heritage sites are well cared for, with site guides, signs, and an organisation that ensures visitors are guided properly rather than wandering freely, which helps preserve both the sites and the experience.

Scotland offered inspiration in the dedication shown through volunteer work and the strong relationship with the the local community and school, an excellent model to follow.

More broadly, it was enriching to experience the culture and history of the other countries. These visits help us understand our own history better and improve how we share it with others.

We are also even more grateful now for the fact that our own turf heritage has been preserved, enabling us to create an authentic turfbuildings through the skills of the Heritage Craft School. In the next phase of the project, which revolves around excavating and reconstructing the Glaumbær longhouse, we want to emphasise authenticity, address challenges openly, and keep the process transparent by acknowledging which elements are faithful to the original and which are interpretations/modifications.

LEARNING THROUGH COLLABORATION

Through this project, we have had the opportunity to collaborate and learn from other countries. While we share similar cultures and a common Viking history, there is still much to learn from one another. Establishing common guidelines but allowing for different goals has created a dynamic project suited to each country, while also providing valuable insights. The project has encouraged reflection, made room for understanding, and highlighted best practices for addressing challenges and integrating sustainability more effectively.

The first and most important experience we take with us from this project is that, as different countries, we each have unique strengths and challenges. It is therefore valuable to recognise our own advantages while also learning from one another. Iceland has shown us the value of turf, both in its historical use and its potential today. They take pride in their heritage while combining historical knowledge with modern technology to preserve and share it. We have also been inspired by their use of ground heating and have tested whether this is something that is an option for us. Unfortunately, it is not, but it has been a great experience to see what is adaptable to another country, and what is not.

Scotland has given us valuable insight into how it connects with the local community, especially the youth. Their ability to engage young people and pass on intangible cultural heritage is truly inspiring. They show pride in their history, and they manage to share how it has shaped their culture. At the same time, they play an active role in the community and have developed new spaces for education and engagement.

Greenland has demonstrated a strong ability to protect nature and the environment through a variety of measures. By building clearly defined paths, they provide both guidance and accessibility for visitors while safeguarding the surrounding landscape. They also share valuable information on responsible behaviour, offering introductions to cruise groups upon arrival. Through guided tours, they are able to both share knowledge and maintain greater control, ensuring that tourism contributes to protecting their nature rather than harming it.

Looking back on this project, we are left with great appreciation for the opportunity to come together and share knowledge. It has given us the chance to reflect on our own challenges, evaluate what our best practices are, and share our experiences. We are proud of how far we have come and that we are a flagship in our local area, but we still have a way to go when it comes to local engagement, and Scotland has truly shown how this can be done. We are looking forward to how we can apply what we have learned in the future, and we will be presenting the handbook to all of our staff.

EVALUATION

This project has given us valuable connections and insight into how other countries work with World Heritage. It has been highly inspiring to see how advanced they are in both knowledge and practice, and how much we can learn from their experience. Compared to our partners, we in Greenland are still relatively new in this field, but this has made the exchange even more meaningful.

We are very impressed by the work of the Lofoten Museum in dealing with the increasing number of tourists and the measures they have taken to meet the demands that come with it. This applies not only to the museum itself but also to the wider efforts to make heritage more accessible for visitors.

From Iceland, we have taken with us the great pride they show in their cultural heritage, and the dedication they put into communicating each story through museums, exhibitions, and the use of modern technology. It is remarkable to see how much effort is invested in ensuring that every aspect of their past is preserved and shared.

In Kyle of Lochalsh, Scotland, the ambition to build a reconstructed longhouse is an inspiring example of how communities reconnect with their Viking roots. Such initiatives do not just preserve history but actively bring it to life, creating new platforms for education, tourism, and community engagement. It highlights how shared Norse heritage continues to shape local identities across the North Atlantic.

Overall, this has been a very valuable and educational project, showing us how our common history through the Vikings can be a foundation for cultural exchange, sustainable tourism, and stronger connections between communities across borders.

TUIGSE - EVALUATION

The Kyle and Lochalsh Community Trust have benefited incredibly from its involvement in this very special project. The Trust has been given extensive inspiration from its NORA colleagues in this project, who have assisted in influencing our future heritage site. Unlike the other collaborators, KLCT is a community trust and has a different foundation of operations from most heritage centres. Our direction is community-led and not entirely history-focused. This means our team is extremely varied, with multiple seemingly unrelated projects happening all at once. The NORA project provided the Trust with access to expertise and experience we would have otherwise lacked. Especially with the current longhouse project being our very first establishment of a historically inspired visitor attraction.

In Iceland, there is still a rich knowledge of building with turf. This is a skill largely lost in Scotland, and the expertise provided useful insight into Viking construction previously unconsidered. It helped influence the roof on our own longhouse design and consider the effect in a different climate. It was very useful to see how they work alongside other heritage sites in the surrounding area, bolstering each other's footfall despite the distance between each site.

- Building with turf.
- Expertise in cutting and building with turf.
- Examples of historical buildings still in use: SOMETHING IS MISSING
- Creating a distributed network of heritage sites to help increase visitations to surrounding communities.
- How to prolong a building's lifespan with the implementation of modern materials.

We learnt a lot from Norway, largely becoming a victim of its own success and how to best future-proof our own reconstruction. Considering the potential to be overwhelmed by a sudden increase in visitor numbers was very useful to the Trust. Many other facilities in the Highlands of Scotland have struggled with this in the past. Seeing how Lofotr mitigates the wear and tear on its site from increased use allows us to assess where it may need reinforcement. Other factors, such as installing heating due to being open beyond previous planning and the choice of roofing due to shingles being vulnerable in high winds, were incorporated into our own budget planning.

- How to future-proof a visitor centre
- How to incorporate authentic aesthetics using modern materials without distracting from the overall finish
- Maximising a building's use and creating job roles
- Budgeting and what not to do during the building process.
- Problems associated with popularity increase outpacing development capabilities.

Greenland's longhouse demonstrated how effective a simple reconstruction can be. The use of unique artefacts that demonstrate their own cultural identity was particularly inspiring. A similarity between Greenland and Scotland is that the countries were already inhabited when Viking culture came to their shores. This led to the two countries developing their own cultural ties to the nordic countries, but also their own very different identities, with some common attributes.

- A good example of a 10th-century longhouse
- Use of accessible materials.
- Despite having smaller tourist numbers, the importance of these recreations.
- Creating a brand and first steps as a fledgling heritage attraction.

All three centres involved provided excellent examples of visitor engagement and how to display artefacts or replicas. The enhanced knowledge provided in the shared history and experience in operating a visitor attraction is invaluable. Along with the contacts made through the collaboration, and their specialist expertise. KLCT hopes to utilise all these benefits in the development and construction of its own heritage centre.

NORA