

NPA GLOW2.0 - Green Energy Technologies for Tourism Growth



Deliverable 2.5.1: Regional Workshops and Events

(30.8.2024)

Interreg



Co-funded by
the European Union

GLOW2.0

Northern Periphery and Arctic

Photo: Noel Bauza/ Pixabay

Introduction

The objective of NPA GLOW2.0 – Green Energy Technologies for Tourism Growth project is to support enterprises and public organisations in developing tourism flow during the dark autumn and winter months, using darkness of nature and Dark Sky as additional elements for diversifying the tourism package, while effectively communicating light pollution and ways to prevent and reduce it.

The aim of GLOW2.0 activity A2.5 was to engage with regional SMEs from the NPA participating regions of Finland, Ireland, Iceland, and Norway in developing immersive technology solutions that could support the marketing or delivery of their product/service to the Dark Sky's tourism economy. To achieve this, GLOW2.0 project consortium organised Capacity Building workshops and events for enterprises and organisations on immersive technology development needs and Service Design processes. These took place in own regions, and via jointly organised events. Synergies with other similar projects were also encouraged and utilised to broaden networking and for advancing the horizontal principles in line with GLOW2.0 project.



GLOW2.0 cooperation for networking and sustainability during regional and joint events.

All partners in collaboration also arranged, in addition to other regional events, capacity building events in form of learning journeys and joint webinar covering the various themes in GLOW2.0. These were designed to support tourism enterprises and organisations from participating regions/ NPA-regions, including those not directly working with the project. Among other themes, enterprises and organisations were engaged on ways immersive technology solutions could assist them in marketing or delivering their products or services related to Dark Sky Tourism. The learning journeys have been important events for testing the immersive technology/ virtual planetarium being developed in the project with target groups, and other available technologies in the regions and market that can be adapted in dark sky tourism economy.

This report summarizes the main activities and outcomes of GLOW2.0 workshops and events organised as part of capacity building, upskilling and reskilling of enterprises and organisations during first half of the project implementation.

Workshops and Events

FINLAND

During the first project period, an event on immersive technology testing for target groups was organised in Eastern Finland by the Lead Partner of the project, Karelia UAS. This was held on 2.5.2023 as interest for testing and learning possibilities already came up during the first **consultation workshop 14.3.2023** when Karelia presented the project aims and objectives, and engaged the target group with surveys. The event was attended by 22 participants, this included associated partner ELY-Centre/ NKBR. During the consultation workshop, it came clear that the region had already made plans for immersive technologies use as the municipality had purchased some equipment for tourism development/ marketing purposes.



Testing immersive technology content by different age-groups that participated the Ilomantsi event, Finland.

Therefore, a request for a testing session for technologies content to map possibilities came up. Karelia UAS organised this as a follow-up event for the target group on 2.5.2023. One of the enterprises namely STC Tuotanto Oy that offered videography and virtual 360-video solutions was also interested in VR applications potentials for tourism sector and hence collaborated with Karelia for the event. The associated partner was also involved. Participant enterprises tested VR content and reflected about possibilities for own businesses/ organization/ region. A total of 6 enterprises were represented/ supported during this event.

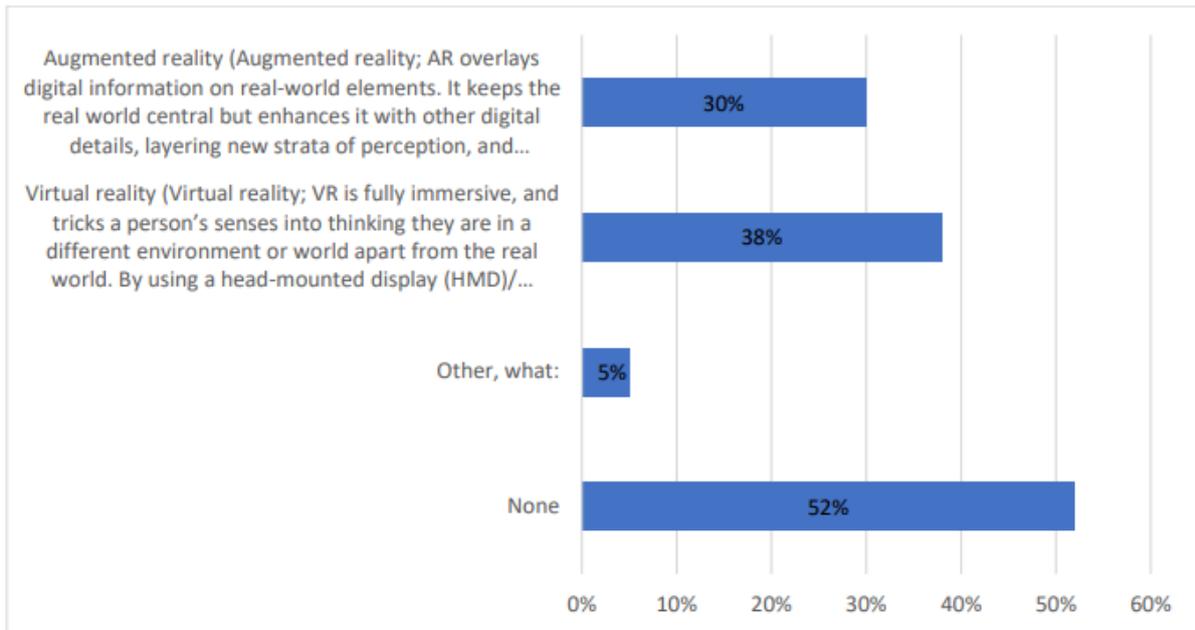
Themes included among other, how darkness could be utilised as added value to tourism, to SMEs, and tools that can be utilised in adapting actions. Information about the event was shared via Pyhä-Luosto Matkailu organisation, and the information about the event was also shared at two other events in Ivalo, via SOME, and Lapland's regional events calendar.

In February 2024, PLAKY joined Tunturi-Lapin **WYNE-project workshop**, where GLOW2.0 themes were also discussed as part of the workshop. The focus was on potential new services and products, new networks models, and challenges that need solving to enable development.

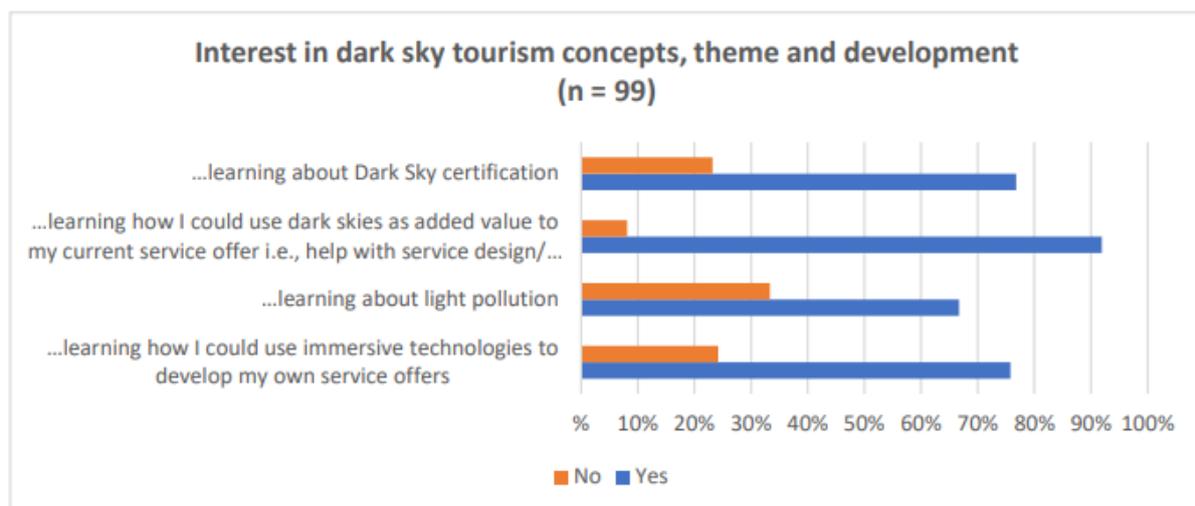


Presentations and workshop results from mapping session during workshop in Lapland, Finland.

At the same time, during the second project period, Karelia UAS used findings from period 1 benchmarking activities, joint survey results (deliverable D1.1.1), and Karelia's already organised immersive technology testing for target groups (2.5.2023) to produce a GLOW2.0 video (<https://www.youtube.com/watch?v=Ak44unijLI>). One of the results of GLOW2.0 survey (D1.1.1), was that over half of respondents (from total 99) had neither used, tested or experienced immersive technologies (n = 99), even though immersive technologies were considered an asset.



At the same time, respondents showed high interest across all regions to enhance services under the Dark Sky thematic framework, with 76 percent of respondents stating an interest to learn about and or testing technologies that could be used to improve existing service offers/ potentially result in new tourism offers.



The key challenges in adoption or implementing technology solutions in tourism were stated as financial costs for developing solutions (58%), and lack of the relevant skills in the organization

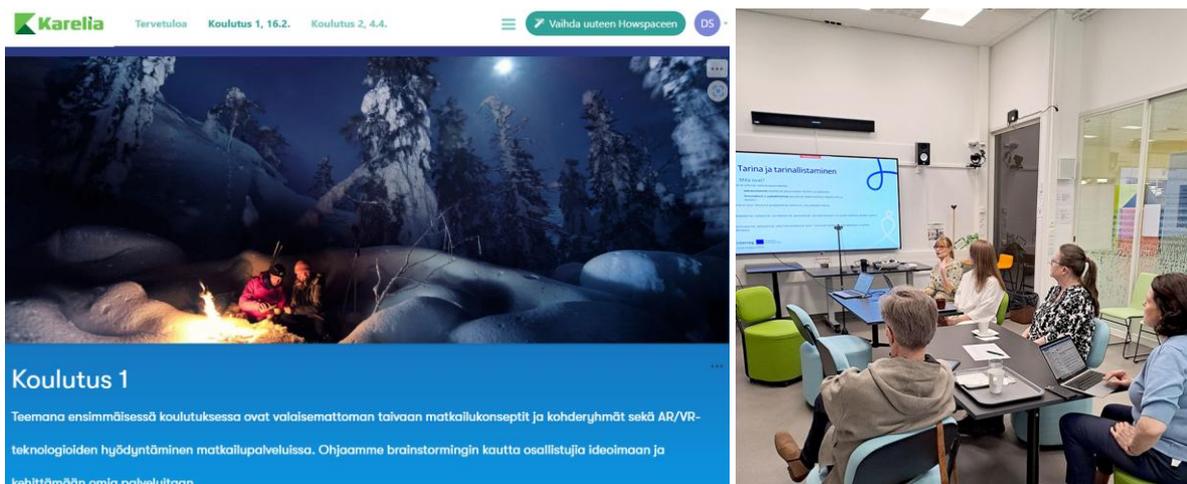
(59%). Therefore, the GLOW2.0 video would help address the issue by offering an exemplary demonstration of what immersive technologies can offer for regions and businesses.

The produced GLOW2.0 video (<https://www.youtube.com/watch?v=Ak44unjLlI>) showcases an example use of immersive technology in promotion/ marketing of tourism; it gives an idea of use in tourism for target groups for example (1) as a product on its own offering thematic experiences to visitors, (2) as a plan B in service offer where the promised/ marketed phenomenon are not visible due to bad weather, or (3) use in trade fairs jointly marketing the regional offers (phenomenon, stories, etc) which cannot be easily marketed/ understood by tour agents/ visitors (e.g. international) without the visual effect. The aim was to give insights, support /enhance understanding about possibilities of technologies uses for adding value to own offers /regions, offering concrete example about ways to develop immersive offers.



Clips from NPA GLOW2.0 produced video by Lead Partner Karelia UAS.

During period 3 of the project, Karelia engaged regional SMEs with **Immersive Technology Solutions that support the marketing or delivery of own offers as part of the workshop series** provided during the project period. The workshops covered dark skies as added value, basics of AR and VR and how these can be used to enhance tourism experience and visual marketing. One-on-one sessions were also offered to entrepreneurs who were interested in that option.



Platform used to engage participants during the series of workshops and a session in North Karelia, Finland.

The first workshop provided introduction to the background and objectives of the series of workshops. The project manager opened the event. Karelia's project specialist followed with a GLOW2.0 project presentation and theory basis of the dark skies as added value to tourism,

including also demonstrations of global case examples of dark skies uses in tourism. Karelia's Instructional Technology Specialist thereafter presented basics of the augmented reality (AR) and virtual reality (VR) technologies, and suggested how these tools can be used to enhance the tourism experience in dark skies tourism. Karelia's service design and communication specialist introduced the customer-centred way to design or improve services with the help of Visit Finland's customer segmentation models.



Presentations during the first workshop in series of workshops in North Karelia, Finland.

After the presentations, a group discussion was held. The discussion prompted participants to reflect on how they could use darkness as a value-adding element in their own current tourism products or service offers, and what kind of networking and collaboration opportunities they could pursue with other actors in the region. There were ten attendees/ enterprises in the workshop. One-on-one sessions were continued also throughout the third project period. SMEs were given assignment to describe their own service in an idea canvas template provided in the Howspace platform. Idea canvas worked as the platform of all workshop activities.

In period 4 of the project, **on 27.8.2024, Karelia organised a service design and product packaging event for SMEs**. The event focused on ways to develop, roll-out, promote and or market own dark skies offer, including use of technologies to enhance offerings.



Matkailuyrittäjien sparrauspäivä Kolilla ti 27.8.2024

klo 9-15, etäosallistuminen mahdollista klo 9-11

Koli Freetime, Kopravaarantie 27, 83950 Ahmovaara

Tule mukaan vahvistamaan kestävä matkailun osaamistasi ja saa uusia näkökulmia toimintaasi! Ajankohtaisissa asiantuntijapuheenvuoroissa teemoina STF-merkin edut, pimeys matkailun voimavarana ja matkailupalveluiden tehokas paketointi. Toiminnallisissa työpajoissa opit lisää oppilaitosyhteistyön hyödyntämisestä vastuullisuustyössä, 360-kuvaamisesta ammattilaisten ohjauksessa ja hiot tuotteidesi esittelytekstit myyntikuntoon. Pohjoinen Lakeland ja GLOW2.0-hankkeet tarjoavat kahvit, lounas omakustanteisesti. **Ilmoittaudu mukaan 20.8. mennessä!**

Ohjelma:

9-9.10 Tervetuloa, linjat auki etäyhteyksiin

9.10-9.40 Anu Ruusila, Cordial Communications: STF-polulla näkyvyyttä
valtakunnallisissa medioissa

9.45-10.15 Minna Murtonen, Äksyt Ämmät: Matkailutuotteiden paketointi

10.20-10.50 Emma Bruus, Sodankylä observatorio: Pimeän taivaan matkailu
vetovoimatekijänä

11.00-12.00 Lounas, omakustanteinen

12.00-15.00 Toiminnalliset työpajat:

1. STF-polun edistäminen oppilaitosyhteistyön avulla (Karelia-amk)
2. 360-kuvaus: videot ja valokuvat matkailupalveluiden myynnissä
3. Tuotetekstien kirjoittamistyöpaja – näin hyödynnät tarinoita

Lisätietoa:

Mari Mustonen, +358 44 977 5056, mari.mustonen(at)lieksankehitys.fi

Ilmoittautuminen:

<https://forms.office.com/e/7eYNcAZLeh>



GLOW2.0



Northern Periphery and Arctic

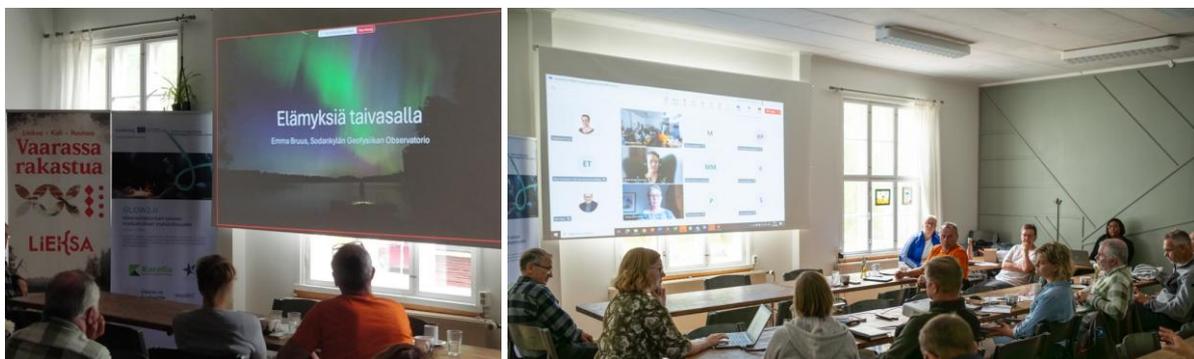
Event programme for 27.8.2024 SME sparring event that took place in Koli, North Karelia, Finland.

During the event, Business Finland/Visit Finland representative presented the Sustainable Travel Finland path to visibility of SMEs. Äksyt Ämmät Oy entrepreneur followed with the topic “packaging of tourism products”, giving case examples how products have been packaged for sale, their work with productization, including things to consider for different visitor segments.



Presentation by Business Finland/Visit Finland during Koli event.

Associated partner Sodankylä Observatory then delved into Dark sky tourism examples as attraction factors and ways to integrate these in already existing services, considering also place-based infrastructure and available support e.g., network of actors. The morning session was offered as a hybrid event so that those that could not make it to Koli on that day had the chance to take part too.



Hybrid seminar event in Koli 27.8.2024.

In the afternoon, only onsite participation was possible as rotational workshop sessions were intended for SMEs to go more into detail with issues from morning session, and have an opportunity to engage with experts onsite on ways to develop own products with discussed themes in mind.

The STF session focused on how to join the network (Sustainable Travel Finland network), ways to tackle sustainability communication, and get other support. Immersive and other technologies sessions focused on learning from successful case studies and other business models using immersive technologies to support and or enhance own offers e.g. dark sky possibilities, varied technologies costs, and required competences for various technologies. The session also offered possibility to test technologies and get one-on-one Q & A for aspects that interest SMEs.



Demonstration and testing of technological solutions during GLOW2.0 Koli event.

The service design session focused on how to create and curtail own products. SMEs were provided templates to use in ideation of own product(s) in line with darkness as added value. These were taken home with them to continue developing own offers/ use in ideation.



Event participants and GLOW2.0 project partners during Koli event.

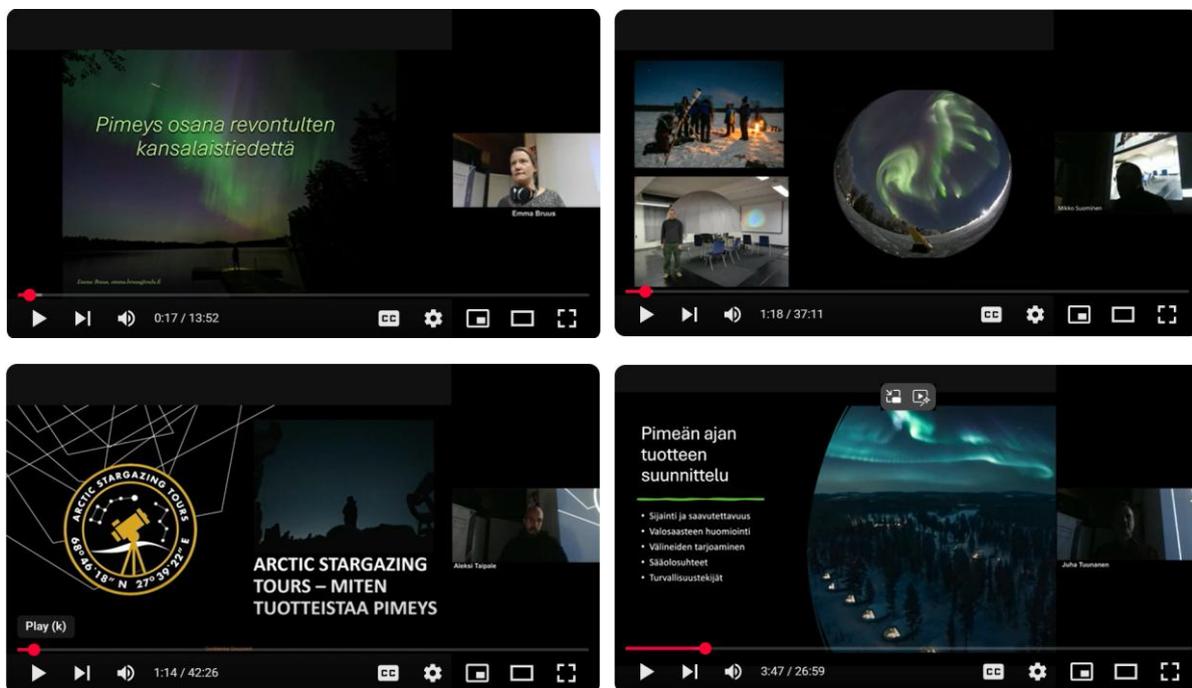
The event prompted the participants to reflect on how to integrate darkness as a value-adding element in their own tourism products or services, and what kind of networking and collaboration opportunities they could pursue with other actors in the region.

The venue also helped them know locally available actors with various support possibilities e.g. STC Tuotanto Oy with immersive technology assistance for tourism companies, Syrjävaara Oy with light pollution aspects or if need for example understanding night lighting in own premises, STF certification if SME is working on green business model development such as integration of Dark Sky values and awareness about benefits from Darkness, GLOW2.0 support for those needing

further ideation and curtailing of service offers, and Äksyt Ämmät for those who have ideas clearer/ product templates, and in need of packaging and platform for sale.

During the fourth project period, Lapland partner PLAKY, in collaboration with associated partner SGO, organised a **workshop titled "Katse Taivaalle!"**, in September 2024. It was an event for Lapland for local companies and entrepreneurs to enhance their competence about dark sky tourism and possible stargazing services. This included the demonstration of various technological applications and immersive solutions for dark sky tourism. The key technological issues discussed were:

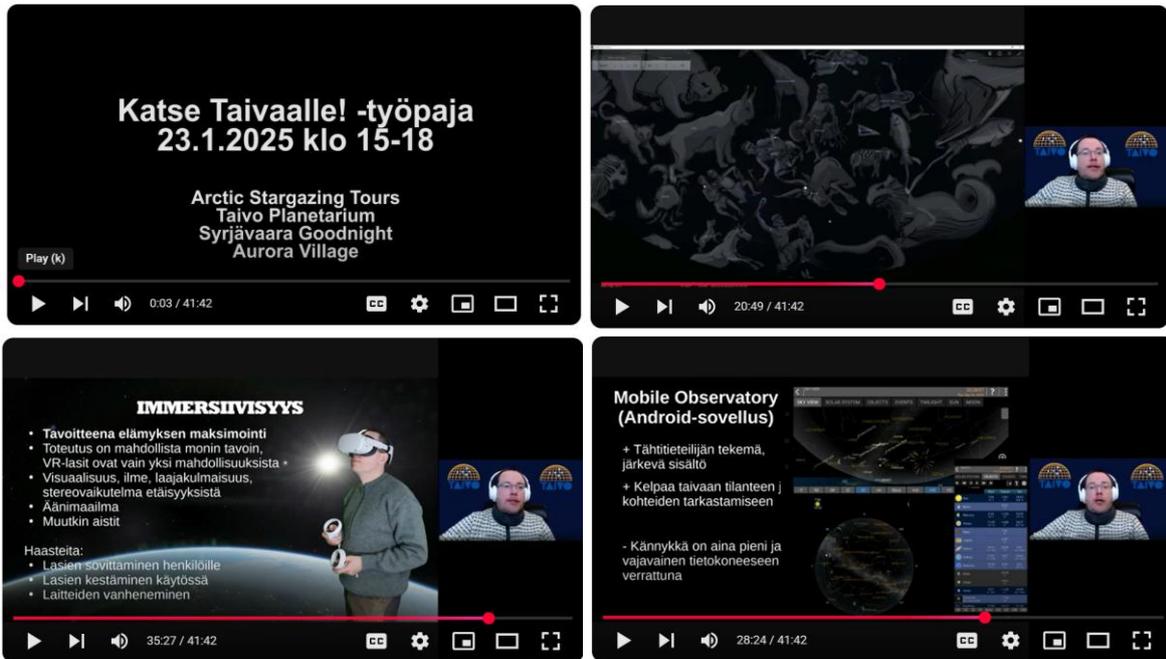
- What is darkness?
- Darkness as part of citizen science
- Planetarium technology in science tourism and immersive learning
- How to productise darkness, and
- How to plan darkness activities during dark period and in collaboration with other actors



Presentation during the GLOW2.0 regional event in Lapland on 27.9.2025.

The Lead Partner Karelia UAS, during the **fifth project period, organised, on 23.1.2025, an online workshop-seminar event for regional SMEs**. The event focused on technological and green business model solutions that support the marketing or delivery of their product/service to the Dark Sky's Tourism Economy during. The event was designed to helping companies with productization, marketing and networking needs.

The event was organised by Karelia UAS in cooperation with SMEs from the region. The SMEs, already working with or established in dark sky tourism, gave perspectives about how to make the night sky part of one's business, where and how should to kickstart actions, and whether one's skills are enough.



Presentation during the GLOW2.0 regional event in North Karelia 23.1.2025.

The event materials and recordings have been made available <https://www.interreg-npa.eu/projects/glow20/home/outputs-results/> under subtitle "GLOW2.0 Regional webinar in Finland - Katse Taivaalle! Look to the Sky!". The materials are also integrated into GLOW produced modules (ref: A1.4, O1.1).

In Finland, in March 2025, during the 5th project period, Karelia UAS & project Led Partner organised a **hybrid seminar event that focused on regional and global approaches to dark sky tourism**. During the event, participants were shared the region's development with dark sky and responsible tourism thematics. Participants also got to hear about GLOW2.0 input in development of networks, products and impact on regional strategies. Participants also got to visit the Koli National Park in North Karelia and tested the "snowshoeing under the dark sky" concept developed in the region by actor Retkipaikka Oy. Key highlights for technologies were experiencing and or learning about:

- SME Venejoen Piilo's dark sky 360-degree immersive solution and offering developed with the help of GLOW2.0 project.
- the GLOW stakeholder, Seulaset Observatory, on their science and tourism concept and their recent networking with Kolin Kajo in testing a developed astrotourism offer.
- Organisations in charge of strategies and their thoughts about dark sky potential in North Karelia region.
- the Syrjävaara dark sky centre activities, developments and their efforts to acquire dark sky certification with help of GLOW2.0.

IRELAND

In Ireland, during period 2 on 12.9.2023, 15 regional SMEs joined in a **seminar/workshop event as part of the learning journey in Ireland**. The workshop took place in Belmullet, Mayo 12.-13.9.2023. It featured case studies from local businesses providing valuable insights, a brainstorming session and knowledge exchange.

The learning journey and seminar also offered stakeholders a forum to discuss, learn from one another and network for tourism. At the same time, in a parallel session, partners were able to follow on work progress and make plans for next phases of the project. Partners and stakeholders joined up after the networking session, to explore together and learn about the tourism development opportunities and challenges in Mayo region. Stakeholders also got to test the raw version of the virtual planetarium being developed by the project.

The event included testing demo-version of immersive technology. GLOW2.0 video (ref: Finland) showcasing what immersive technologies can offer for regions and businesses was also showed during the event.



SMEs engagement networking, information & testing sessions during seminar/LJ in Belmullet, Mayo, Ireland.

This event successfully expanded SMEs network of businesses eager to explore opportunities in dark sky tourism. 3 enterprises from Finland and 1 enterprise from Iceland joined the seminar as part of learning journey event.



Photo: Project partners and stakeholders from Ireland, Norway, Finland and Iceland in Wild Nephin National Park - Páirc Náisiúnta Néifinne Fiáine.

From partner meetings, GLOW2.0 virtual planetarium testing, networking and team discussions, visiting the Blacksod Lighthouse and Solas, to listening the keynote speakers Georgia MacMillian (Mayo Dark Sky Park) and Kerem Asfuroglu (environmentally sustainable lighting designer), both partners and stakeholders left with increased knowledge and practical insights on the difference they can make regarding light pollution, ways of extending the dark sky tourism season and of course the importance of networking for tourism. The discussion feedback from stakeholders was very much appreciated. Special thanks were given to Irish partners Údarás na Gaeltachta and WestBIC for organising such a fruitful and valuable learning journey.

In addition, in period 2 of the project, Ireland partners (Údarás na Gaeltachta & WestBIC) in collaboration with Southwest Mayo Development Company, hosted an **event focused on building a sustainable tourism business**. The sessions and workshops explored into various significant topics including business grants, sustainable practices, and innovative strategies to extend the tourism season. A significant emphasis was placed on dark skies tourism and the essential knowledge around light pollution. During the event, GLOW2.0 undertaking in the development of Virtual Reality (VR) content for headsets designed to function as a 'virtual planetarium' was presented.

During the fourth project period, on 13.11.2024, Ireland partners organised a Service Design **workshop where SMEs experienced the mobile planetarium**. This helped the partners learn what types of technology, like AR, VR, and 360° videos could benefit their region's businesses. Also how they can be introduced effectively and tailored to the audience's needs. During the event, participants shared their needs for joining the event, along with tips and techniques they found most helpful. The feedback was very insightful and gave team GLOW2.0 valuable perspectives to share with SMEs during presentations. It also helped understand what customers value and how SMEs can improve their offerings.



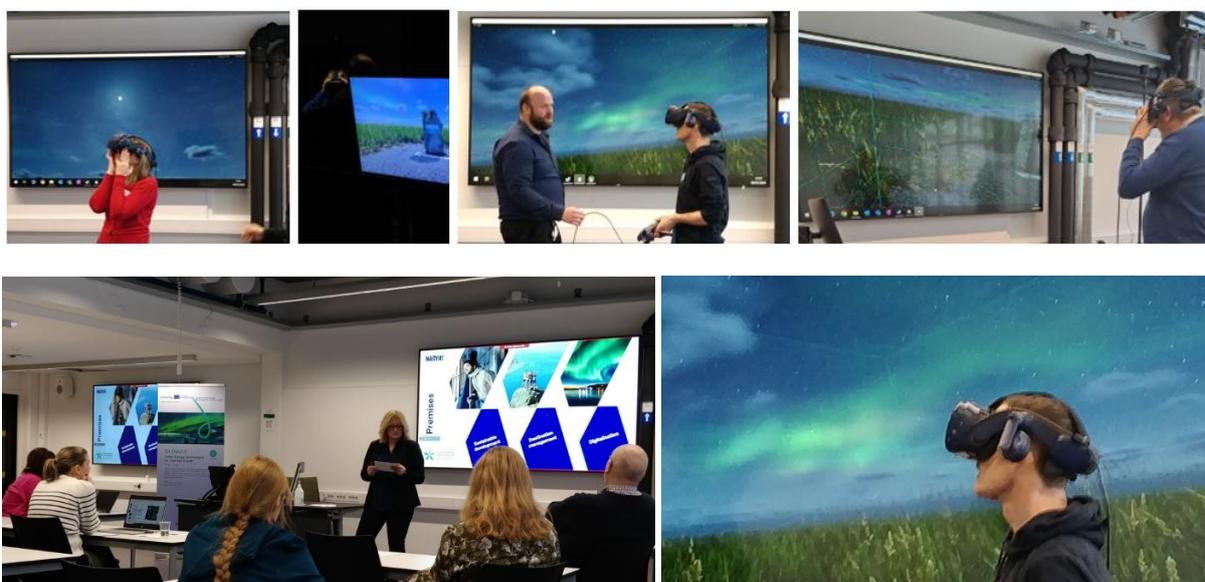
GLOW2.0 Service Design workshop in Ireland.

NORWAY

Norway partners, during third project period on 7.2.2024, realised a **regional workshop/seminar held in hybrid mode**. Stakeholders such as Nordnorsk Vitensenter, Vitensenter Nordland, Narvik Kommune, Visit Narvik, and SALT joined the seminar/ learning journey event (6.-7.2.2024) making it a dynamic platform for collaboration and knowledge exchange. The 7.2.2024 workshop featured diverse line-up of speakers considering Northern Norway's tourism industry in different perspectives. During the event, Narvik municipality CEO set the tone with a welcoming speech, emphasizing the importance of collaboration and innovation in driving sustainable tourism initiatives. Subsequent presentations covered a wide spectrum of topics, ranging from light pollution, tourism trends and challenges, business capacity in dark sky tourism, to technological innovations and their implications.

The presentations prompted considerable interest and sparked fruitful discussions among stakeholders on technical knowledge, future work, networking, and potential collaboration for sustainable tourism development. A captivating demonstration session at the UiT XR-lab, and Virtual Planetarium (VP) showing the potential applications of VR technology within the context of GLOW2.0 sparked enthusiasm among participants, stimulating further exploration of innovative solutions.

The immersive technologies testing sessions on the further developed beta version of virtual planetarium provided GLOW2.0 with more details on how the experience will be delivered. The best ways and options to enhance the experience was discussed. Additionally, types of tourists who might use the experience and the best placement options such as storytelling/ sound ambience to reach the widest audience and raise awareness about the development of Dark Sky Tourism were also considered. Participants also visited the UiT laboratory with immersive wall technology, and Narvik War Museum with immersive storytelling concept to experience and reflected on such applications in Dark Sky tourism.



Seminar session and stakeholder testings of the virtual planetarium during seminar and LJ event in Narvik, Norway.

All in all, the events prompted participants to reflect on how to integrate darkness as a value-adding element in their own tourism products or services, and what kind of networking and collaboration opportunities they could pursue with other actors in the region and transnationally.

During the fifth project period, demonstration and testing of the GLOW2.0 virtual planetarium took place in the science center in Mo i Rana (Nordland), where approx. 350 people evaluated the developed immersive technology.

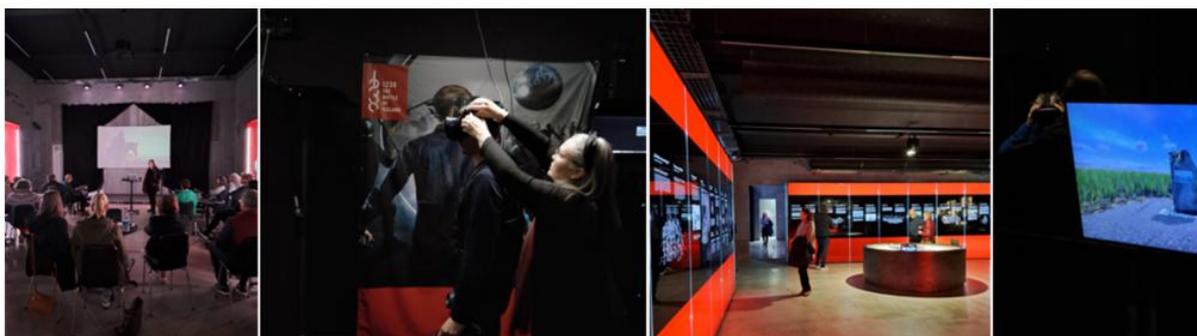


Figure. Test setup and training of the staff at the science center in Mo i Rana.

ICELAND

In Iceland during final months of project period 3, in October 2024, Icelandic partner SSNV hosted a seminar as part of the learning journey event. The hybrid seminar event offered perspectives and dark sky solutions for tourism. Learning Journey participants were also introduced to varied technologies supporting tourism in Iceland to reflect ways these can be adapted in own regions/offers. Lighting design and technologies relating to nighttime offering were presented. Participants experienced also experienced firsthand:

- 1238 - The battle of Iceland Museum experience; offered proactive ways to preserve and engage visitors with place-based histories, linking it with other offers.
- Flyover Iceland; ideas how to integrate storytelling and sensory experiences in service design.
- Perlan nature museum; ways spaces and technologies are being used to connect the outdoors indoors, market region's strengths and offers, arouse feelings of connection to nature events, and provide alternative indoor experiences as plan B during instances of bad weather or for people with mobility restrictions.
- GLOW's transnational Virtual Planetarium; VR experience for showcasing Dark Sky elements, storytelling, and marketing.



Testing Beta version of GLOW2.0 virtual planetarium at an SME's facility during learning journey (Oct 2024).

Joint webinar for SMEs and organisations across NPA regions interested in GLOW2.0 themes

Partners implemented in collaboration a joint **webinar on 30.4.2024 aimed at communicating project themes, their importance, and showcasing examples of green business models in tourism** using Darkness as added value, including immersive technologies potential. The joint event was planned in cooperation, led by Karelia UAS and Udaras/UnaG. Karelia UAS and Udaras worked on the programme and liaised to get speakers to the event. Partners commented on the programme. All partners worked together to attract stakeholders from own countries/ regions to the webinar event. The event attracted 147 registrations and 106 connections (as some participants joined as a group) on webinar day. WestBIC played a huge role in moderating the event.

INTERNATIONAL WEBINAR: Embracing Dark Sky Tourism in Northern Periphery and Arctic Region

Date: 30.4.2024

Time zones:
Finland; 12.30 - 13.30, Iceland; 9.30 - 10.30,
Ireland; 10.30 - 11.30, Norway; 11.30 - 12.30









GLOW2.0

Interreg

Northern Periphery and Arctic



Co-funded by
the European Union

PROGRAMME

- Welcoming Speech, Dr. Tarja Kupiainen, Karelia University of Applied Sciences.
- Value in Dark Sky tourism – selling, niche marketing via real case development, Dr. Tony Johnston, Faculty of Business and Hospitality, Technological University of the Shannon.
- Animation - light pollution and responsible lighting for tourism, Outi Santaniemi, Karelia UAS.
- Economic impact of darkness as added value in tourism - A real case development, Duncan Wise, Northumberland National Park Authority.
- Significance of tourism networking & collaboration for regions - Case Wester Ross Scotland, Louise Pearson, Wester Ross BR.
- QA & Concluding event.

Moderator: Niamh Considine, WestBIC Ireland.

The joint events and workshops were very successful, yielding high-quality feedback from participants. The learnings and feedback are being used to develop other GLOW2.0 activities and outputs that are/ will be available for use during the course of the project, among other, via NPA GLOW2.0 website: <https://www.interreg-npa.eu/projects/glow20/home/> (resources, outputs & results).

During period 5 of the project, GLOW2.0 collaborated with Baltic Sea project “Light in the Dark” (both Interreg projects) in organising a **webinar titled “Low season travel - Harnessing the Magic of Darkness and Dark Skies”**. The event took place on 4.2.2025, attracting almost 400 participants from at least 11 countries (Finland, Estonia, Latvia, Åland Islands, Sweden, Germany, Lithuania, Norway, Poland, Denmark and Ireland). Karelia in collaboration with Udaras partner, made a presentation and presented at the event. Recordings of both events were also made available and shared, among other, via miniwebsite and YouTube channels. By the end of this reporting period, the video (<https://www.youtube.com/watch?v=bB3kKUKUoMk>) reach was little over 300 views.

Conclusion

In summary, GLOW2.0 events and workshops aimed to provide valuable insights into how sustainable tourism cannot just be a concept but a practical reality, particularly emphasising the value of Darkness as an added value for societies, the potential of dark skies tourism, and its synergy with technological innovations in the light of Artificial Light at Night (ALAN) and Climate Change.

The regional workshops and events were important venues for tourism enterprises and organisations interested in immersive technology solutions/ possibilities that support marketing or delivery of products/services to the Dark Sky's Tourism Economy. Participants gained an understanding of available support systems or tools in own regions, from immersive technologies possibilities to ongoing initiatives and developments in the field. Participants also got introduced among other, invaluable tools such as carbon calculators, light pollution assessment and measurement tools, and immersive technologies that can support delivery and marketing of their services.

The joint workshops and events brought local businesses, communities, infrastructure providers, and policy makers together in a forum where they were able to discuss/learn ways to improve tourism while protecting the environment from excessive and misdirected artificial lighting at night (ALAN). The events showed ways actions can be internalised and advanced when everyone shares the same goal and is dedicated to it, while participation levels, comments and feedbacks showed how important the themes were for target groups/ regions. Practical examples of economic success from forerunners in this field, the exchange of actionable ideas, virtual planetarium testing, and networking possibilities during workshops and events helped advance embracing of darkness values in NPA regions and most importantly via tourism and hospitality.

Immediate impact in involving of enterprises and organisations in the design, for both scoping and testing was that enterprises learnt about importance of protecting the night sky not only for the environment, but also for business viability and wellbeing of tourism destination and its residents. Enterprises also got opportunity to envision how visual content (immersive technologies) can offer new opportunities, create value and/ or improve their current offers/ their region's offers:

- *Improved knowledge about immersive technologies potentials for enhancing/ adding value to/ increasing visibility of own enterprise tourism offers, also via storytelling;*
- *New knowledge how immersive technologies could be used as plan B in service design of enterprises when considering ALAN and climate change impacts and effects, limiting for example cancellation of events and purchased services/ visitor satisfaction;*

- *Knowledge uptake how immersive technology visual content can be used to offer impactful marketing/ in selling the product at trade fairs where themes relating to darkness phenomenon may be difficult to comprehend/ express to customers (e.g. international);*
- *Knowledge how immersive technology could be used to save time/ costs. Among other, in joint marketing of regional enterprises.*

Green business models (considering impacts & effects of light pollution and importance of protecting the night & dark sky) can attract economic benefits to enterprises (values from Darkness), while preserving resources and wellbeing of humans and the environment. The aim of GLOW2.0 project is that by the end of the project, enterprises and organisations will have adopted Service Design Methodologies in their Marketing or Innovation processes through their involvement in the project.

FURTHER INFORMATION

GLOW2.0 - Green Energy Technologies for Tourism Project has been funded by Interreg Northern Periphery and Arctic Programme.

Link to project website: [NPA GLOW](#)

Interreg



Co-funded by
the European Union

GLOW2.0

Northern Periphery and Arctic