



WP1

Joint strategy and concept plan for E-Campuses

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**ROBUST & SMART
ECONOMIES**



Summary

This Strategic Concept Plan outlines the development of four joint E-Campuses across energy transition (ET) pioneer islands and coastal regions: **Ameland (NL), Samsø (Denmark), Borkum (Germany), and Il d'Houat/Belle-Île-en-Mer (France)**. The E-Campus initiative builds upon regional feasibility studies and existing ET infrastructures to create **physical and digital learning environments** that enhance vocational training, workforce development, and interregional collaboration.

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1. Introduction

The energy transition needs a skilled workforce capable of implementing and maintaining sustainable energy solutions. The NESSIE E-Campus initiative aims to establish regional training hubs that provide Short Advanced Courses (SACs), traineeships, and knowledge-sharing opportunities for installers, craftsmen, students and energy companies. A unified digital platform, hosted by Samsø's online E-Campus, will connect these regional hubs, enabling extensive interregional exchange and collaboration.

A key strength of this initiative is the cross-border collaboration, allowing regions with different approaches and infrastructures to share insights, best practices, and training opportunities. Although the E-Campus models vary across the islands, the shared online platform ensures that knowledge and expertise flow between the regions, enriching each local implementation and fostering a stronger European ET workforce.



2. Feasibility Study Approach

To understand the needs and opportunities of each region, a series of one-on-one conversations and regional assessments were conducted with local stakeholders, including vocational schools, municipalities, businesses, and installers. These discussions helped map:

- Existing ET training infrastructures and gaps.
- Pilot projects and technical specializations in each region.
- The demand for traineeships and skill development opportunities.
- The availability of physical training spaces.
- Supervision possibilities for trainees.
- Opportunities for interregional collaboration and knowledge exchange.

These feasibility studies form the basis of this concept plan and ensure that the **E-Campus model aligns with local needs while benefiting from international cooperation**



3. Results of Feasibility Studies

3.1 Ameland

- **(a) Knowledge Infrastructure & Best Practices:** The region has a strong municipal engagement in energy transition efforts, with a focus on **practical, hands-on training**. Learning is structured around **real-world applications**, such as home battery storage and hybrid heat pumps.
- **(b) ET Pilot Projects:** Ongoing projects focus on **home energy storage, micro- grid technology, and smart energy management systems**. These projects serve as practical case studies for trainees.
- **(c) Traineeship Needs:** There is a strong demand for **structured apprenticeships and technical training**, particularly in energy management and sustainable construction. Training needs to integrate **vocational students with experienced professionals**.
- **(d) Physical Infrastructure & Learning Spaces:** At present, no dedicated training center exists, but **workshops and masterclasses are held in local venues**, such as the nature center.
- **(e) Supervision Possibilities:** The region relies on **experienced installers and energy experts** to provide mentorship and supervision in hands-on learning environments.
- **(f) Interregional Collaboration:** Ameland will leverage Samsø's digital platform to **exchange training materials, best practices, and case studies**, ensuring that learnings are applied effectively.

3.2 Samsø

- **(a) Knowledge Infrastructure & Best Practices:** Samsø has a well-developed **ET knowledge hub (E-Campus)** at the Samsø Energy Academy. The island has been an early adopter of **wind energy, district heating systems, and smart grid solutions.**
- **(b) ET Pilot Projects:** Key projects focus on **smart harbor grids, sustainable construction, and community-driven energy initiatives,** making the island an ideal living lab for trainees.
- **(c) Traineeship Needs:** Training opportunities are structured around **self-employment and entrepreneurship,** targeting graduates and craftsmen who want to enter the renewable energy sector.
- **(d) Physical Infrastructure & Learning Spaces:** The Samsø Energy Academy serves as a **dedicated training center,** with ongoing development in digital learning and online resources.
- **(e) Supervision Possibilities:** The Academy provides **direct mentorship** through a network of industry experts and experienced craftsmen.
- **(f) Interregional Collaboration:** Samsø is the **host of the joint digital learning platform,** ensuring that all E-Campus participants can **benefit from shared content, online courses, and webinars.**

3.3 Borkum

At the moment of conducting the research for this output, it became clear that **BBS Borkum would leave the NESSIE project**. As a result, input is lacking, and the remaining Borkum partners were unable to contribute information at this stage.

- **(a) Knowledge Infrastructure & Best Practices:** Borkum has an **advanced technical knowledge base** focused on **hydrogen integration, cooling technologies, and tidal energy solutions**.
- **(b) ET Pilot Projects:** Current efforts include **renewable energy storage solutions, electrical vehicle charging infrastructure, and H2 innovations**.
- **(c) Traineeship Needs:** There is a growing demand for specialized training in **battery storage, grid integration, and digital communication for energy systems**.
- **(d) Physical Infrastructure & Learning Spaces:** While there are no dedicated training centers, partnerships with **vocational schools and technical institutes** could fill this gap.
- **(e) Supervision Possibilities:** Borkum has a **strong network of professional electricians and engineers** who could provide hands-on training in specialized fields.
- **(f) Interregional Collaboration:** Despite lacking dedicated E-Campus infrastructure, Borkum's expertise in **smart grid and energy storage** makes it a valuable contributor to interregional training efforts.



3.4 Il d'Houat/Belle-Île-en-Mer

- **(a) Knowledge Infrastructure & Best Practices:** The region benefits from a **technical and regulatory knowledge base**, with a strong focus on **renewable energy policy and solar technology**.
- **(b) ET Pilot Projects:** Plans are underway to establish a **150m² technical training platform** near IUT Morbihan, which will focus on **solar energy, smart grids, and storage systems**.
- **(c) Traineeship Needs:** There is a demand for training in **grid connection standards, battery storage solutions, and self-consumption energy models**.
- **(d) Physical Infrastructure & Learning Spaces:** Existing digital learning platforms (Moodle) are in use, with plans to **expand physical training facilities by 2026**.
- **(e) Supervision Possibilities:** Supervision will be provided through **partnerships with IUT Morbihan**, local municipalities, and energy experts.
- **(f) Interregional Collaboration:** Il d'Houat will **exchange digital learning resources with Samsø** and contribute insights into **policy and regulatory aspects of energy transition**.

4. Strengthening Collaboration

To ensure the long-term success of the joint E-Campus model, **ongoing collaboration** will be facilitated through:

- **Regular interregional meetings** between partners to align training efforts and share updates
- **Workshops and conferences**, allowing for hands-on exchanges of best practices and new teaching methodologies.
- **Cross-border traineeship opportunities**, enabling students and professionals to gain insights from different regional approaches.
- **Joint development of SACs**, ensuring that all training programs benefit from shared expertise and are adaptable to local needs.

5. Conclusion

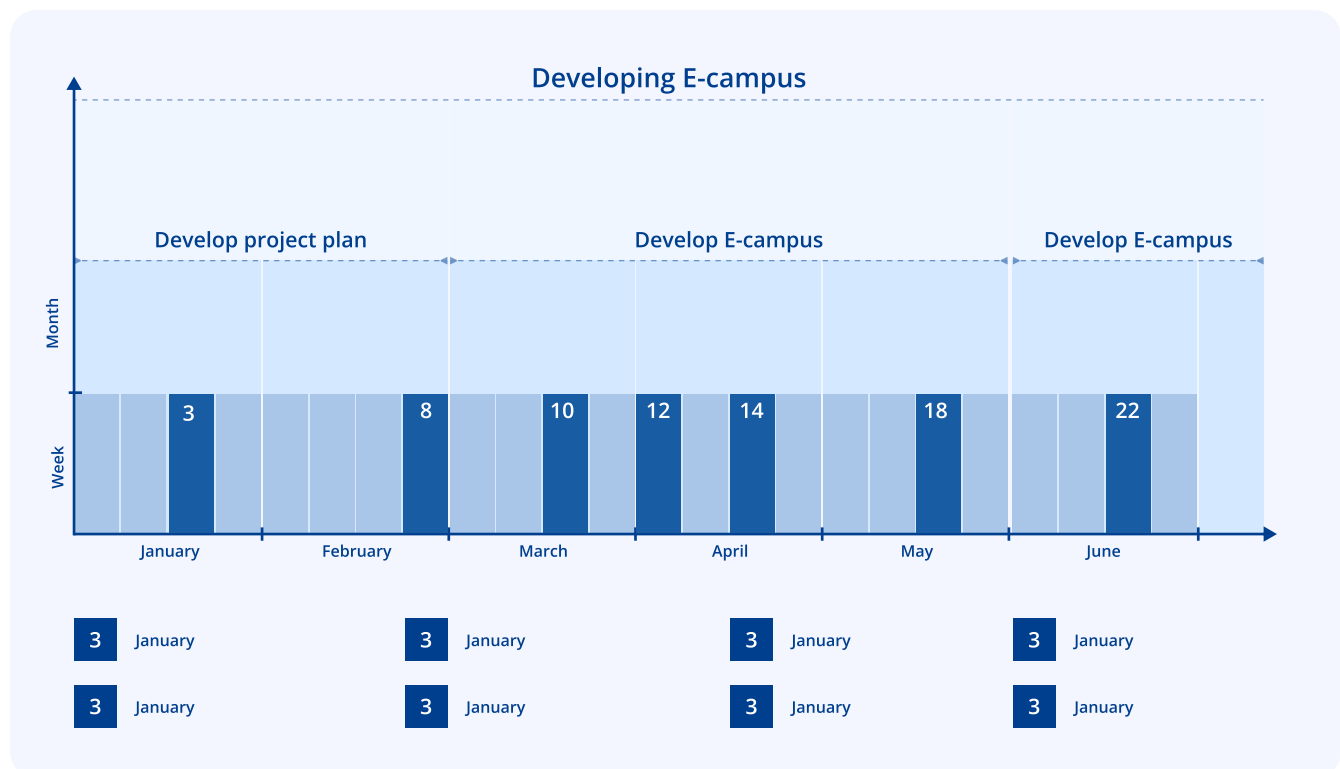
The NESSIE E-Campus initiative offers a structured and collaborative approach to building the skills needed for the energy transition across European islands. By combining **regional training hubs with a joint digital learning platform**, the initiative ensures that vocational students, craftsmen, and energy professionals gain access to high-quality, practical training tailored to their specific regional challenges.

Through **Short Advanced Courses (SACs), traineeships, and interregional exchanges**, professionals will receive hands-on experience in **renewable energy systems, smart grids, energy storage, Sustainable Development and sustainable construction**. While each region has developed its own approach, the **shared learning ecosystem** strengthens cooperation and enhances the scalability of the training model across different geographical and technical contexts.

Regular meetings, knowledge-sharing workshops, and coordinated digital learning activities will help reinforce collaboration and long-term impact. This initiative **not only meets the immediate need for skilled ET professionals** but also lays the foundation for a **sustainable and adaptable training network**, ensuring a skilled workforce that can drive the green transition across Europe.

6. Visualizing the Next Six Months

Here is a visualization of the coming period that shows the **convergent and divergent phases** of the E-Campus development. This timeline includes key milestones such as the **next physical consortium meeting**, the **first trial of Samsø's new Short Advanced Course (SAC)**, and the **use of the Double Diamond framework to structure the development process**





Annex:

1. Connection to Other NESSIE Tasks:

The E-Campus concept is closely linked to:

- **Task 1.1** – Research on ET-installers' needs and demands.
- **Task 1.2** – Research on vocational school opportunities.
- **Task 1.3** – Exploration of E-Campuses.
- **Task 1.4** – Development of potential traineeship projects.

These task findings provide the foundation for understanding the requirements, opportunities, and challenges of the E-Campus initiative and ensure alignment with industry and educational needs

2. Morbihan reasearch

Project presentation

**01**

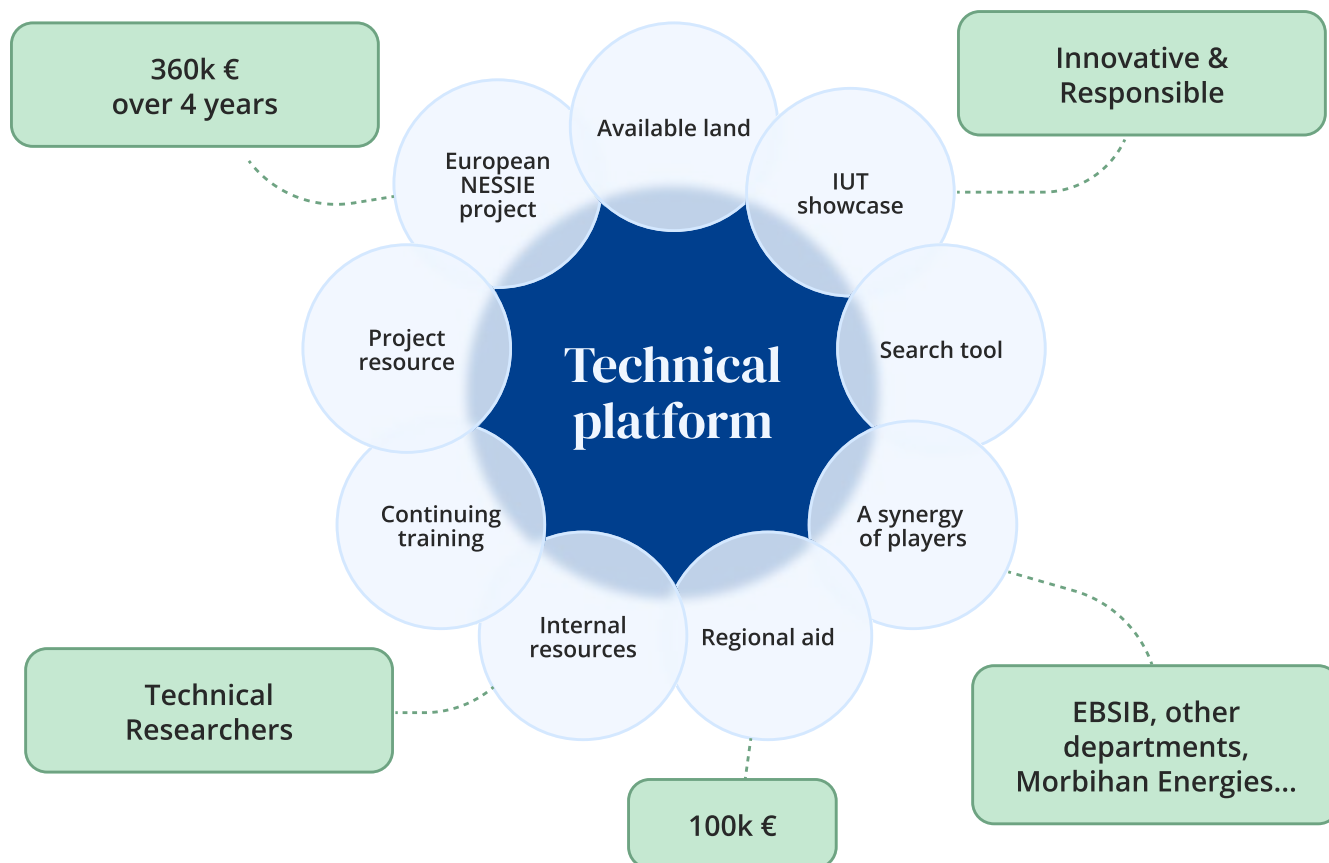
Photovoltaic

02Underground thermal
storage**03**

Solar Thermo

04Experimentation room: monitoring
innovative solutions, research**05**Technical room for hydrogen
energy storage and batteries

Synergy of Opportunities



SWOT Analysis

Internal

Forces

- Available human resources (design and production)
- Experimental equipment already in place covering 80% of requirements
- Synergy and internal dynamism
- UBS is a member of European project to develop continuing education in renewable

Weaknesses

- Non-consolidated budget

External

Opportunities

- 100k Region
- Potential EU support via NESSIE
- Provision of lead
- Development of ... training offers with this new tool
- Improved attractiveness of the MT2E course
- New ... for industrial research

Threats if the project is abandoned

- Loss of regional aid
- Loss of attractiveness MT2E GOAL
- Continuing training courses less attractive

3. Buisness model canvas for E-campus

Purpose To boost the energy transition	Impact • Capacity Building • More clean energy that today	Impact Metrics • More people consider ET-education/training • More projects than now for energy communities
Key Partnerships • Twenty-Three Platform • Christian Frost (film and editor) • Experts to interview	Key Activities Podcast, Videos, Webinars	Key Ressources • A Video-hosting Platform • An online Platform to gather all SAC's
Value Propositions • A Collection of diverse insights into the ET-Field • UVP - Pioneer Samso a unique collection of interviews NGO (independant, giving)	Customer Relationships Professional, intuitive, organized (easy to use, accessible)	Channels • SoMe • Aarhus Tech, DTU, Euroskills • Primary schools, studievaig
Customer Segements • ET-employed people (make access to knowledge easier, UPSKILL & INSPIRE) • General public (how to optimizem INSPIRE & INFORM)	Cost Structure • Eguipment • Staff Hours • Potential pay to experts and other interview partners • TwentyThree subscription	Revenue Streams Nessie • Podcast free to listen to • Webinars free Other Webinars - cost to participate in furure Nessie Budget to cover most cost