

# ***ACCELERATING REED-BASED BUSINESS FOR A HEALTHIER BALTIC SEA AND SUSTAINABLE MATERIAL PRODUCTION (2024)***

Accenture and the John Nurminen Foundation have partnered on a project aimed at scaling up reed harvesting in the Baltic Sea region. This initiative seeks to establish a robust value chain for reed-based products that can effectively remove nutrients from coastal waters, support local biodiversity, and offer a low-carbon alternative to traditional biomaterials.

## ***ROADMAP FOR A SCALABLE, SUSTAINABLE REED INDUSTRY***

Reed is an incredibly versatile raw material that can be used in many products from substrates to building materials, but its full potential has yet to be realized. Scaling up reed utilization enable nutrient removal from the sea, reduction of greenhouse gas emissions and supporting local entrepreneurship.

With John Nurminen Foundation, Accenture has identified key stakeholders and barriers, leading to the development of a detailed roadmap that outlines essential actions required from each stakeholder throughout the reed-based production process. These steps aim to enable the reed industry to reach competitive scale and economic viability as a sustainable raw material source.

## ***KEY CHALLENGES IN SCALING REED HARVESTING***

Stakeholder interviews conducted during the value chain assessment revealed ten significant challenges that currently hinder the commercial scalability of reed harvesting. Primary obstacles include:

- **Complex Permit and Tendering Processes:** Regulatory requirements and unpredictable public tendering processes complicate entry into the market for reed-based products
- **Limited Technical Maturity:** Currently available harvesting equipment lacks the efficiency needed for economically viable reed collection and processing at scale
- **Cost Competitiveness:** The high cost of reed relative to alternative biomaterials poses a major hurdle, highlighting the need for additional funding and efficiency improvements to bridge the cost gap

To mitigate these challenges, the project recommended several targeted strategies, including financial incentives to support harvesters and innovation grants for developing advanced equipment. For example, a proposed “bonus framework” would reward harvesters based on acreage, reed volume, or nutrient removal metrics (phosphorus and nitrogen), thus incentivizing both ecological and economic outcomes.

### *OPTIMIZING REED-BASED SOIL AS A USE CASE*

Reed-based soil emerged as a promising application due to reed’s beneficial properties, such as its nutrient content and its ability to replace peat in soil products. Through scenario analysis, the project developed a model to estimate the cost structure of reed-based soil, identifying key drivers such as harvesting, collection, logistics, and composting-related shrinkage. Crop yield, specifically the quantity of reed harvested per hectare, was found to be a critical variable affecting both price and material availability.

To make reed-based soil cost-competitive, the project suggests reducing costs by enhancing process efficiency in cutting, collection, and transportation while securing additional funding to support commercialization. This could enable reed to become a viable raw material option within the gardening sector, potentially replacing peat and contributing to reduced carbon emissions.

### **STRATEGIC RECOMMENDATIONS:**

#### *A ROADMAP FOR STAKEHOLDERS*

The project’s roadmap prioritizes concrete, actionable steps to improve reed-based businesses. Five short-term solutions have been identified where non-profit organizations (NPOs) like John Nurminen Foundation can play a pivotal role:

1. Training Public Buyers in best practices for sustainable tendering
2. Developing Industry Guidelines to standardize and promote sustainable reed harvesting
3. Securing External Funding for reed-based initiatives to close the funding gap and support commercialization
4. Raising Public Awareness about the ecological benefits of reed products to drive market demand
5. Advocating for Peat-Free Gardening Products to align with broader environmental goals

These steps aim to provide a stable, supportive framework for reed-based production, address current market barriers, and foster collaboration among stakeholders.

## *THE HIGH IMPORTANCE OF INTER-ORGANIZATIONAL COLLABORATION*

To create a successful and scalable reed industry, different organizations need to collaborate and leverage synergies. Public agencies, harvesting companies, logistics providers, and manufacturers should form partnerships to use resources more efficiently, share costs, and maximize environmental benefits. Non-profit organizations have a central role in this collaborative structure, offering coordination, advocacy, and technical support to drive the reed value chain forward.

## *POTENTIAL FOR REED AS A SUSTAINABLE RESOURCE*

Accenture and the John Nurminen Foundation recognize the substantial environmental and economic potential of reed as a circular, renewable resource. Reed harvesting not only mitigates eutrophication through nutrient removal – but also binds carbon and preserves local biodiversity by creating a mosaic landscape. In replacing high-impact biomaterials like peat, reed-based products could serve as a significant driver of the circular economy, aligning with rapidly advancing sustainability agendas both on local and international level.

## **CONCLUSION:**

### *PATHWAY TO LONG-TERM REED-BASED BUSINESS VIABILITY*

The findings of this project emphasize the need for ongoing collaboration among public and private sectors to develop a viable reed value chain that can meet environmental and commercial objectives. With a clear roadmap and targeted strategies, the Baltic region stands poised to establish reed as a critical resource that supports both ecological health and economic growth. This approach, rooted in science and sustainability, presents a compelling opportunity to transform reed into a competitive, renewable material that offers wide-ranging benefits for the environment and regional economies.