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# International Webinar

# Digital Industrial Symbiosis

## Advancing Sustainability and Innovation

Date: April 24

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# FReINDs

Future-ready industries: Smart, sustainable, and circular  
resource management through **Industrial Symbiosis (IS)**

Supported by Erasmus+ KA220 HED, 10/2024 to 10/2026

## Project Presentation

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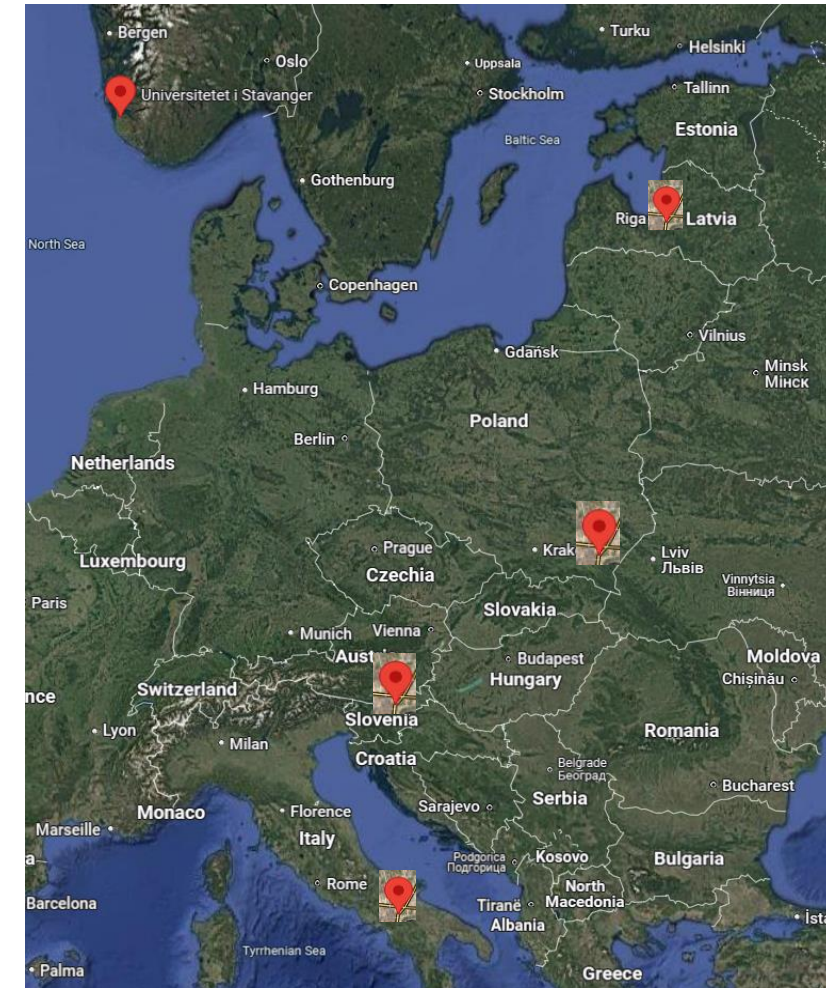
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## Project Partners

University of Stavanger – Norway (Coord.)  
International School of Social and Business Studies  
- Slovenia  
Danmar Computer - Poland  
BANKU AUGSTSKOLA - Latvia  
EXEO LAB - Italy



Mednarodna fakulteta  
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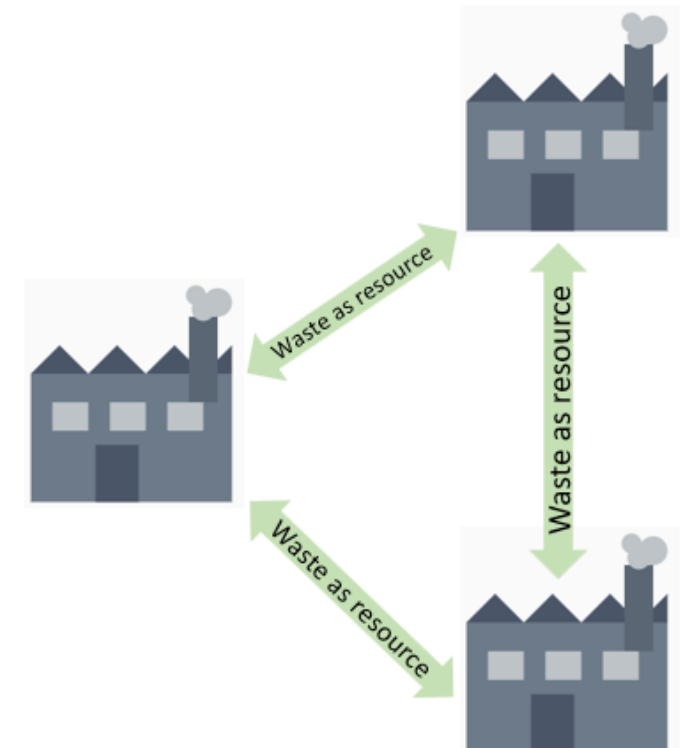


# What is Industrial Symbiosis (IS)?

*The transition to the circular economy  
... cannot be achieved by acting alone,  
... it should be systemic, deep, and transformative,  
... requiring cooperation at all levels.*

**Industrial Symbiosis (IS)** refers to the **collaboration** between industries to **exchange materials, energy, water, and by-products** to enhance **resource efficiency** and achieve mutual benefits.

A **network** of symbiotic exchanges  
(between and within organizations)





# Why Industrial Symbiosis Matters

The EU promotes **IS** as part of its **Circular Economy Action Plan**, and ***considers IS as a key tool for***

- achieving the EU's sustainability goals, including reducing greenhouse gas emissions and transitioning to a climate-neutral economy,
- reducing waste,
- extending lifetime of critical / scarce resources,
- cost savings *through shared resources* -new revenue streams from by-products-,
- job creation and fostering innovation.

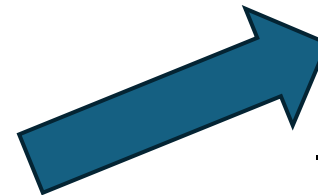


# The FReINDs project

## ***The gap:***

While IS is suggested as one of the key tools to facilitate the transition to a sustainable economic system,

***its consolidation is limited by a range of barriers***, such as environmental regulations, low cooperation between industries, economic issues, lack of IS knowledge, relevant resources and culture (such as information sharing).



## ***FReINDs goal is to***

- address this gap,
- contribute to the field of IS,
- increase IS awareness
- support sustainable, circular and green transition.



## Objectives:

- Strengthen collaborative research between HEI and industries to innovate and develop technologies or business models that advance IS.
- Helping to overcome the blocking points through innovative IS training, learning and management tools
- Ensuring the sustainability of the project results over time and after the project end date

## Planned Outputs:

- **DIS research report** based on literature, interviews, surveys and case studies
- **Curriculum Modules**: Five modules developed based on research/literature and interviews with organizations
- **Interactive course** for HEI and VET students (hybrid MOOC)
- **IS Toolkit**: Assessing IS readiness
- **Final Report**: Comprehensive project summary





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## Project Sustainability



### **FReINDs MOOC**

A powerful OER for advanced training, which will be based on the 5 modules of the tested and validated training curriculum



### **FReINDs Toolkit**

An innovative toolkit targeting future ISMs, immediately empowering them to diagnose the starting situation of digital IS and CE.



### **FReINDs Networking**

An international network offering practical examples to complement theoretical learning, exchange of knowledge, ideas, and best practices among its members





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*'If you want to go fast, go alone.  
If you want to go far, go together.'*

With FReINDs, we want to go far towards a  
smarter and more sustainable future.

Please join us on this journey!

**THANK YOU!**



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