



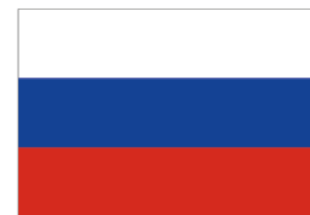
# LIVING LAB IN ST PETERSBURG, RUSSIA

EVDOKIA LOMAGINA  
TYREMAN GROUP, 2021



EUROPEAN UNION

EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND



WITH FINANCIAL  
SUPPORT OF THE  
RUSSIAN  
FEDERATION



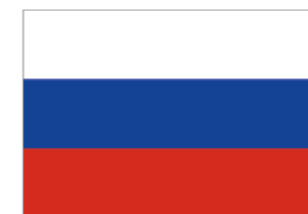
The EU Interreg BSR project Baltic Industrial Symbiosis promotes industrial symbiosis, a concept for sustainable regional development, across the Baltic Sea region. Industrial symbiosis means to connect companies from different industries in order to use one company's waste, in the form of e.g. energy, ingredients or materials, as a resource for the next company. In St. Petersburg, Russia the BIS project piloted a LIVING LAB (LL) - an on-site industrial symbiosis for the benefit of enterprises, policy makers and other interested stakeholders as well as a transnational audience interested in learning more about and participating in bottom-up development of industrial symbiosis. The Living Lab is a testbed for symbiosis development and test the applicability of project tools and approaches on the establishment of a new symbiosis. Furthermore, it represents a physical and tangible example of very early industrial symbiosis development as a source of knowledge and inspiration for those stakeholders across the Baltic Sea Region and beyond, who could consider replicating this approach locally.

This report describes the activities that took place during the project period and the learning that was achieved working with the Living Lab.



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IND. SYMBIOSIS CHAINS CREATION:

- screenings
- local and transnational match&meets
- new partners

EDUCATION:

- peer-to-peer learning
- virtual tours incl. in living lab

**LIVING LAB  
PROVED TO  
BE A GREAT  
TOOL FOR:**

RESEARCH:

- Tests of potential chains
- new green business model
- resource maps

COLLABORATION:

- Presenting LL and BIS project on other events
- new project initiatives and businesses

POPULARIZATION:

- guided tours and hosting events
- website and new requests
- communication channel

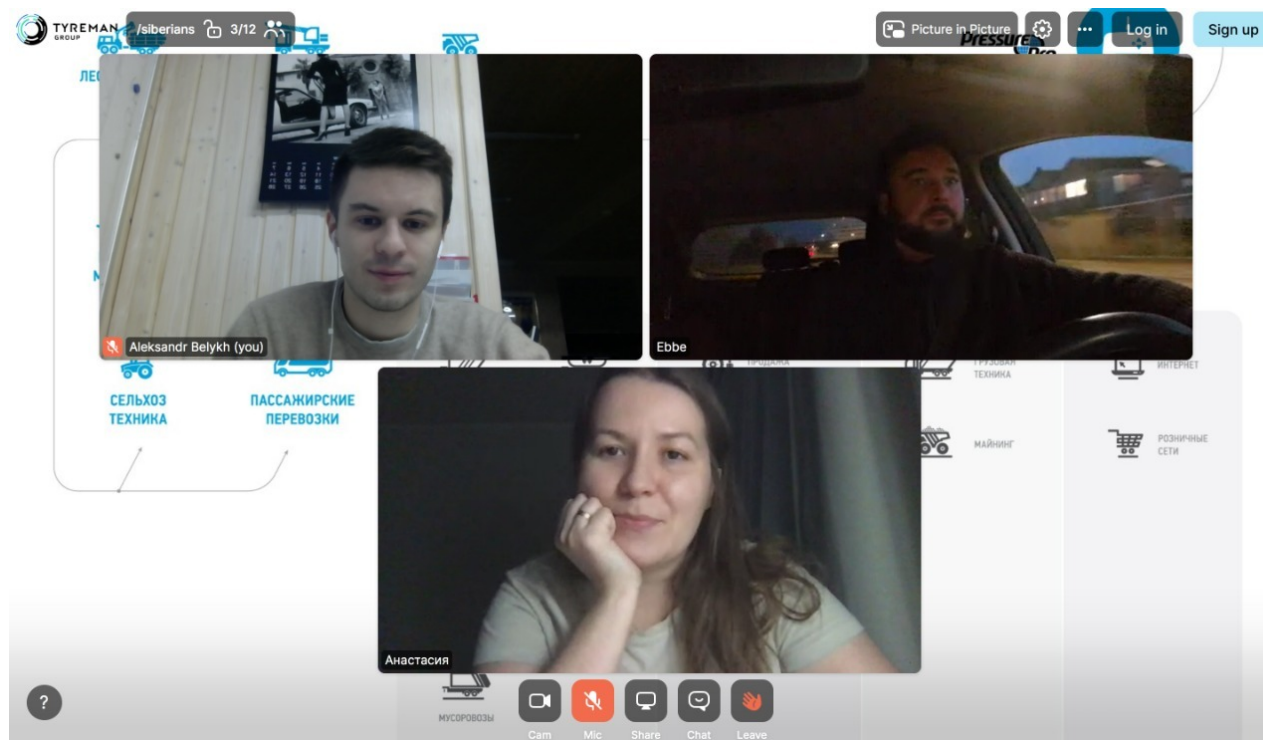
# IND. SYMBIOSIS CHAINS CREATION

15 SCREENINGS WERE PERFORMED



# IND. SYMBIOSIS CHAINS CREATION

7 LOCAL AND 1 TRANSNATIONAL MATCHMAKING EVENTS WERE ORGANIZED





# EDUCATION

PEER-TO-PEER LEARNING WAS ORGANIZED



Event's page and recordings are here:

<https://tyreman.ru/peer-to-peer>

news about the event are here:

<https://tyreman.ru/tpost/0kc2zttffl-results-of-the-first-day-of-peer-to-peer>

<https://tyreman.ru/tpost/5ng2jef8r1-results-of-the-second-day-of-peer-to-peer>

<https://tyreman.ru/tpost/z5se0b6391-feedback-on-peer-to-peer-learning>

# EDUCATION

5 VIRTUAL TOURS INCLUDING INSIDE THE LIVING LAB WERE CREATED



## **Umnaya Sreda (Smart Environment) St. Petersburg Company tour**

This tour is created within the Baltic Industrial Symbiosis project and [Peer-to-peer learning in St. Petersburg, Russia](#).

Natalya Vovdenko, owner of Umnaya Sreda St. Petersburg tells us how their company operates, what they believe in and how they plan to clean up our planet from plastic. Natalya also tells us about tests in the LivingLab St. Petersburg



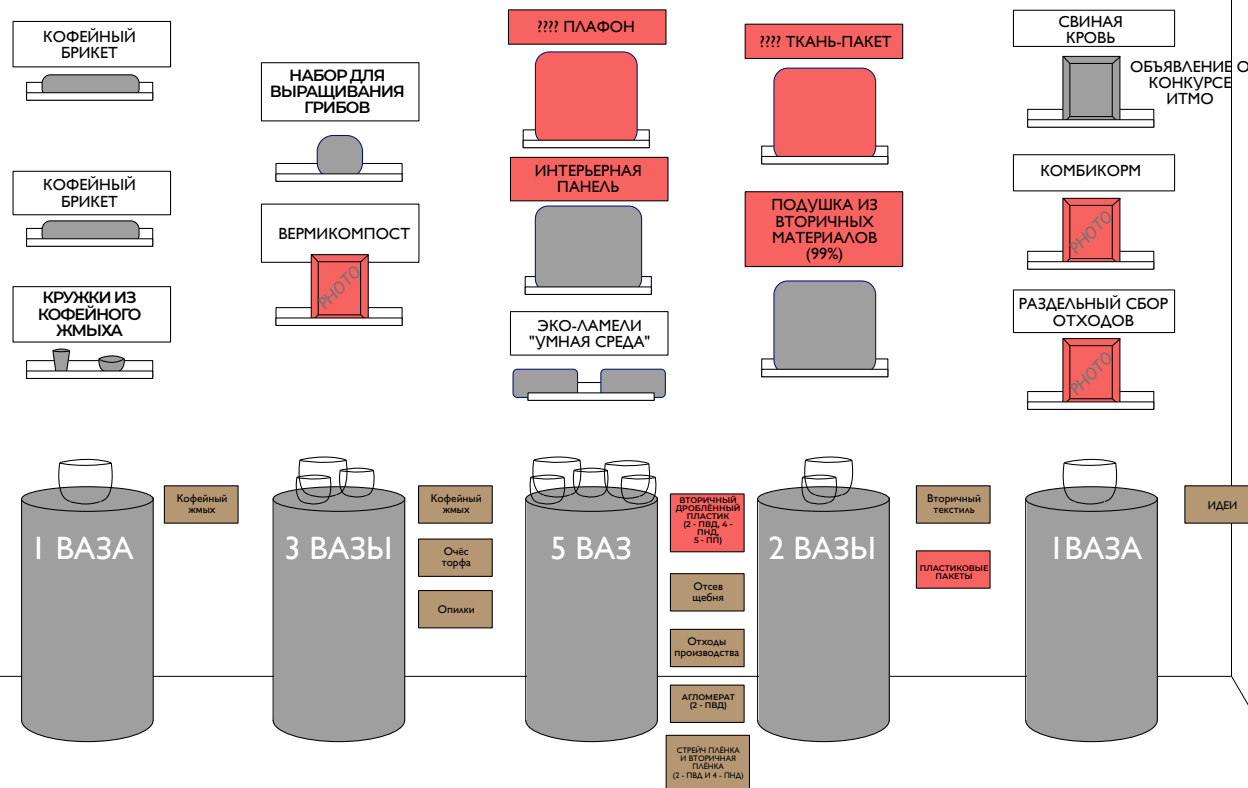
## **99Recycle Company Tour**

This tour is created within the Baltic Industrial Symbiosis project and [Peer-to-peer learning in St. Petersburg, Russia](#). Sasha Semenov, co-founder of 99Recycle together with his colleagues tells us how the company was founded, how it is developing today and what plans their team has for the future. They will also explain why BIS project is interesting to them and what was already done.

# POPULARIZATION

AN EXPOSITION RELATED TO RESOURCE STREAMS WAS CREATED AND WAS PRESENTED DURING GUIDED TOURS

## ПРОМЫШЛЕННЫЙ СИМБИОЗ





# POPULARIZATION

AN EXPOSITION RELATED TO RESOURCE STREAMS WAS CREATED AND WAS PRESENTED DURING GUIDED TOURS





# POPULARIZATION

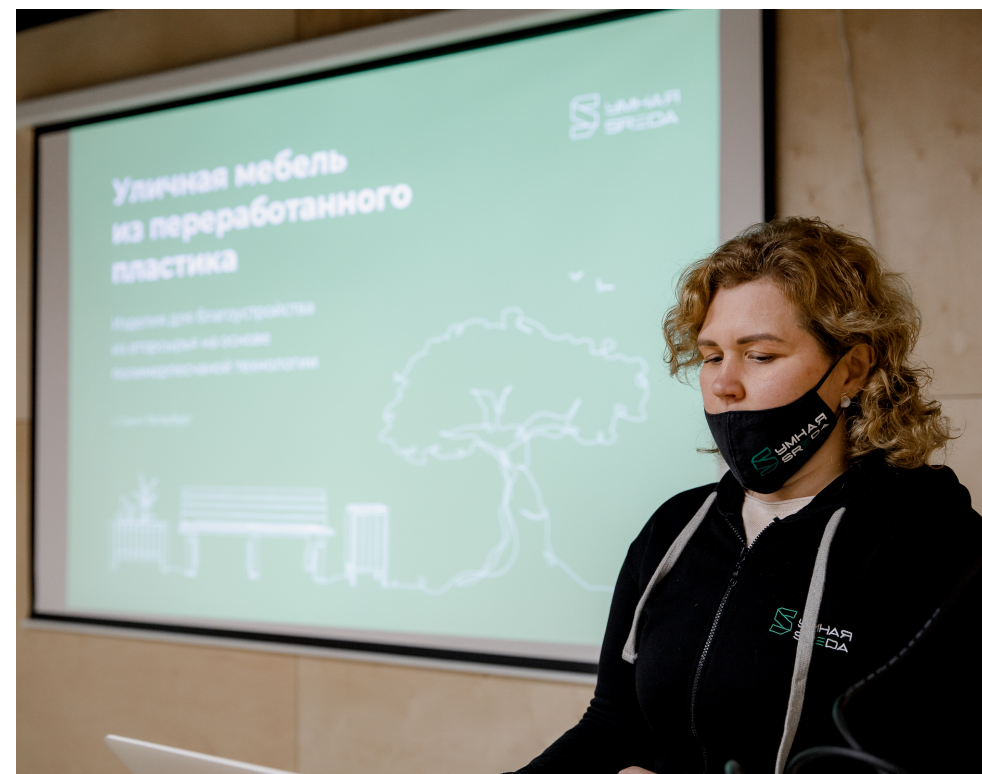
ALL NEW PARTNERS WERE INVITED TO THE LIVING LAB FOR GUIDED TOUR  
BECAUSE IT IS EASIER TO PRESENT THE INDUSTRIAL SYMBIOSIS IDEA.  
MORE THAN 250 PEOPLE VISITED THE LIVING LAB





# POPULARIZATION

3 EVENTS INSIDE THE LIVING LAB WERE HOSTED WHERE NOT ONLY TYREMAN BUT ALSO PROJECT PARTICIPANTS PRESENTED BIS PROJECT

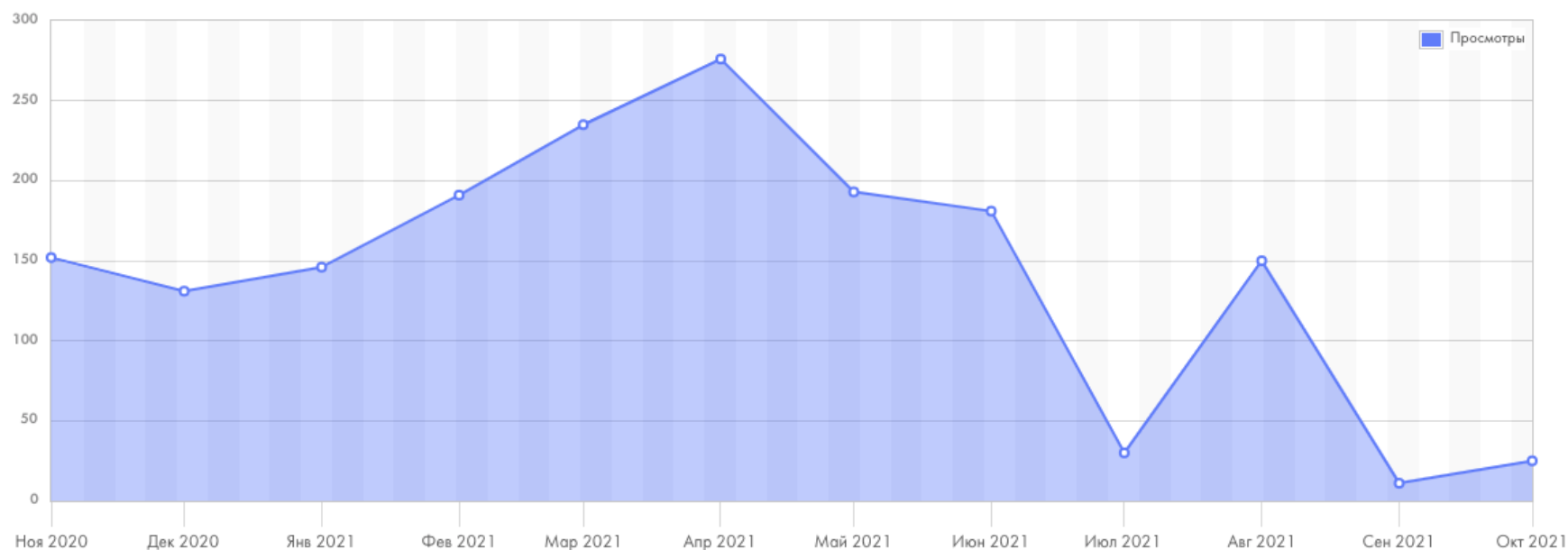


# POPULARIZATION

2 PROJECT PAGES IN RUSSIAN AND ENGLISH WERE CREATED AND RECEIVED INCOMING REQUESTS FOR COLLABORATION



VIEWS OF RUSSIAN PAGE PER MONTH

1721








# POPULARIZATION

WEBPAGES WERE USED AS COMMUNICATION CHANNEL, NEWS UPDATES, INVITATION TO OUR EVENTS

NAME OF THE CHANNEL	LAST POST	Nº OF POSTS
 НОВОСТИ БАЛТИЙСКОГО СИМБИОЗА	2021-09-29 18:00	58
 BALTIC SYMBIOSIS NEWS	2021-10-29 16:02	58

## MOST POPULAR POSTS

## VIEWS

<input type="checkbox"/>	 Промышленный симбиоз – модель эффективного будущего	2020-03-23 16:38	370	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	 Конкурс What WOOD you do (Что делать с древесиной?)	2020-04-30 16:37	300	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	 Магистры Политеха приняли участие в изучении мировых решений по переработке отхо...	2019-11-15 19:32	180	<input checked="" type="checkbox"/>	

# POPULARIZATION

3 ARTICALS WERE CREATED AND PUBLISHED



How the waste of one enterprise becomes a resource for another: the results of the work of the Living Lab for Industrial Symbiosis in St. Petersburg.

28.09.2021



THE LIVING LAB – IN THE CENTER OF SUSTAINABLE ENVIRONMENTAL COOPERATION

19.07.2021

news about that here:

<https://tyreman.ru/tpost/imos33sok1-how-the-waste-of-one-enterprise-becomes>

<https://tyreman.ru/tpost/onn6s4fmf1-the-living-lab-in-the-center-of-sustaina>

[http://ecopeterburg.ru/wp-content/uploads/2020/07/OS-%D0%A1%D0%9F%D0%95%D0%A6%D0%92%D0%AB%D0%9F%D0%A3%D0%A1%D0%9A\\_ENG.pdf](http://ecopeterburg.ru/wp-content/uploads/2020/07/OS-%D0%A1%D0%9F%D0%95%D0%A6%D0%92%D0%AB%D0%9F%D0%A3%D0%A1%D0%9A_ENG.pdf)



# RESEARCH

SECONDARY RESOURCES WERE STORED INSIDE THE LIVING LAB TO USE THEM FOR PRACTICAL TESTS



# RESEARCH

10 POTENTIAL INDUSTRIAL SYMBIOSIS CHAINS WERE RESEARCHED AND PRACTICALLY TESTED

1. PIG BLOOD (WITH ITMO UNIVERSITY)
2. CRUSHED STONE AND OTHER SECONDARY RESOURCE INSTEAD OF SAND IN CONSTRUCTION MATERIALS PRODUCTION
3. COFFEE GROUNDS FOR FUEL BRIQUETTES
4. GROWING OYSTER MUSHROOMS ON SECONDARY RESOURCES
5. WORM COMPOSTING
6. EXTENDED STUDY ON IS POTENTIAL OF A SHOPPING MALL
7. COFFEE CUPS FROM USED COFFEE GROUNDS
8. PILLOWS FROM USED TEXTILE
9. INTERIOR PANELS FROM RECYCLED PLASTIC
10. TEST SERIES OF ORGANIC WASTE AS RESOURCE FOR MIXED FEED



# RESEARCH

10 POTENTIAL INDUSTRIAL SYMBIOSIS CHAINS WERE RESEARCHED AND PRACTICALLY TESTED



# RESEARCH

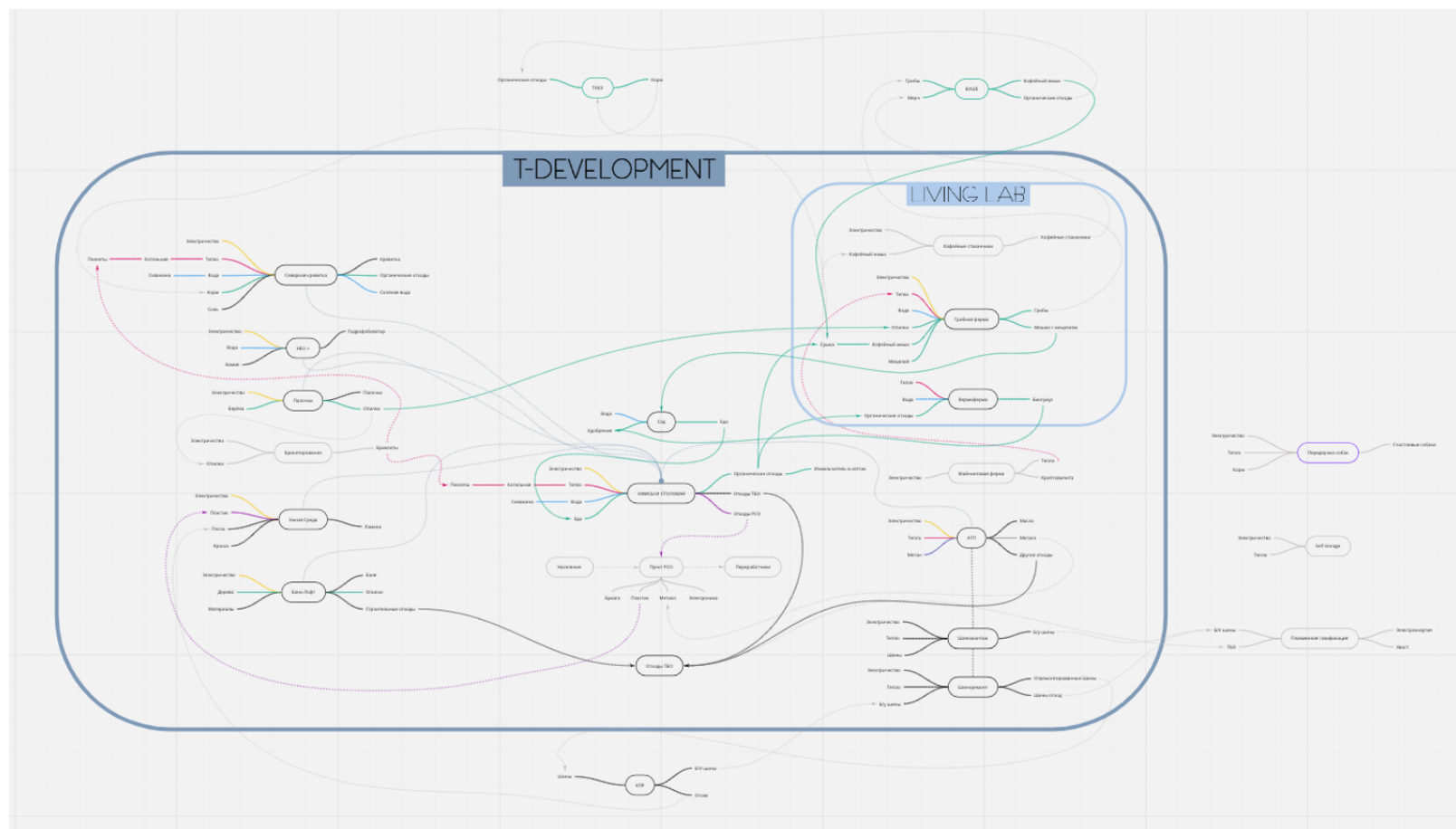
A GREEN BUSINESS MODEL WERE CREATED

SWAT ANALISYS IN GBM

PRODUCT				SWOT II
	S	W	O	T
грибные наборы	<ul style="list-style-type: none"> <li>• уникальность предложения</li> <li>• потенциально высокий CLV</li> <li>• долгий срок хранения</li> <li>• <b>высокая добавленная стоимость</b></li> </ul>	<ul style="list-style-type: none"> <li>• специфичность товара</li> <li>• <b>высокие маркетинговые затраты</b></li> </ul>	<ul style="list-style-type: none"> <li>• низкая конкуренция</li> <li>• <b>разнообразные каналы продаж</b></li> <li>• расширение продуктовой линии</li> <li>• <b>обширный рынок</b></li> </ul>	<ul style="list-style-type: none"> <li>• неприятие товара аудиторией</li> <li>• <b>сложность стабилизации технологии</b></li> </ul>
свежие грибы	<ul style="list-style-type: none"> <li>• уникальность предложения</li> <li>• <b>высокий CLV</b></li> <li>• <b>низкие маркетинговые затраты</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>короткий срок хранения</b></li> <li>• <b>высокие транспортные расходы</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>локальный рынок</b></li> <li>• расширение продуктовой линии</li> </ul>	<ul style="list-style-type: none"> <li>• <b>высокая конкуренция</b></li> <li>• необходимость увеличения масштаба фермы</li> </ul>
<u>брикетопеллеты</u>	<ul style="list-style-type: none"> <li>• уникальность предложения</li> <li>• высокий CLV</li> <li>• <b>долгий срок хранения</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>ограниченные каналы дистрибуции</b></li> <li>• высокие R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>• возможность экспорта</li> </ul>	<ul style="list-style-type: none"> <li>• высокая конкуренция</li> <li>• сложность технологии</li> </ul>



## 2 RESOURCE MAPS IN MIRO BOARDS WERE CREATED





# COLLABORATION

LIVING LAB AND BIS PROJECT WAS PRESENTED ON MORE THAN 15 EVENTS



news about that here:

<https://tyreman.ru/tpost/byke7lesz1-on-september-11-2021-we-took-part-in-the>  
<https://tyreman.ru/tpost/tx77x6lxl1-june-05-2021-we-presented-bis-at-the-st>  
<https://tyreman.ru/tpost/k6lnioudy1-on-may-26-2021-we-presented-the-bis-at-t>  
<https://tyreman.ru/tpost/utr7bo38p1-on-march-23-2021-the-russian-part-of-the>  
<https://tyreman.ru/tpost/zyq05kcz61-on-march-10-the-bis-project-was-presente>  
<https://tyreman.ru/tpost/4u4iig71e1-on-february-26-2021-the-baltic-industria>  
<https://tyreman.ru/tpost/ilkiym5111-bis-project-participated-in-forum-strate>  
<https://tyreman.ru/tpost/bl8rfq8in1-the-bis-project-was-presented-at-the-inn>  
<https://tyreman.ru/tpost/plu82s95p1-bis-project-aroused-interest-at-several>





# COLLABORATION

SEVERAL NEW INITIATIVES AND PROJECTS ARE IN DISCUSSION OR ON THE PREPARATION STAGE INCULDING WITHIN THE PROJECT CONSORTIUM

A screenshot of a Zoom meeting interface. The main window displays a presentation slide with the title "BALTIC INDUSTRIAL SYMBIOSIS (BIS) FINAL CONSORTIUM MEETING" and the date "September 28, 2021". The slide features a background image of two people in high-visibility vests standing next to large industrial pipes. Below the title, there is a row of logos for the consortium members: Symbiosis Center Denmark, Kalundborg Symbiosis, Odense University of Technology, Paper Province, and the European Union flag. At the bottom of the slide, there are logos for UNIKORP University, DIGIPOLIS, Roskilde University, Trøndelag County Authority, and Ressource City. On the right side of the Zoom window, there is a vertical list of participants in a grid view, including Evdokia Lomagina, Susanna Roesen, Bent Plougstrup, Rui-Natalia Bobyleva, and Michael Elgaard. The Zoom interface includes a top bar with "You are viewing Susanna Roesen's screen" and "View Options", and a bottom bar with controls like "Unmute", "Stop Video", "Participants", "Chat", "Share Screen", "Record", "Reactions", and a "Leave" button.



news about that here:

<https://tyreman.ru/tpost/l6ev8rdcz1-as-part-of-the-green-saturday-at-spief-t>



# COLLABORATION

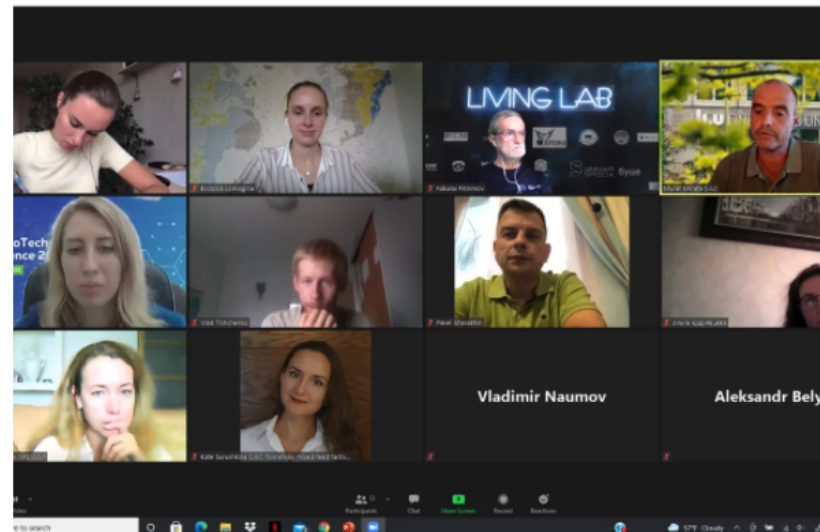
NEW PARTNERS AND INTERESTING COLLABORATIONS WERE FOUND  
NETWORK OF LIKE-MINDED PEOPLE WAS ESTABLISHED



Students of St. Petersburg State University, Faculty of Arts, Department of Graphic Design, within their practice conducted a study on the topic of partnership for sustainable development

Lilia Golub, Valeria Grigorieva, Marta Martynova and Alexandra Lomagina took the Baltic Industrial Symbiosis project and the activities of the Living Lab in St. Petersburg as the central concept for their practice.

21.07.2021



Final meeting of participants of industrial symbiosis managers training

On August 23, 2021, course participants presented the results of their homework at the second part of the online training

26.08.2021

# COLLABORATION

NEW BUSINESSES ARE PLANNED TO START IN 2022



ORGANIC OYSTER  
MUSHROOMS FARM



REUSABLE DISHES MADE FROM  
USED COFFEE GROUNDS



SEPARATE WASTE COLLECTION  
SERVICE FOR SHOPS IN ST PETE