



GREEN FINANCE FOR INDUSTRIAL SYMBIOSIS IN RUSSIA

AS A POTENTIAL FINANCIAL SUPPORT INSTRUMENT

Tyreman Group
St. Petersburg

Aleksandr Belykh

26/05/2021



INTERNATIONAL CONSORTIUM “SAINT-PETERSBURG CLEANTECH CLUSTER FOR URBAN ENVIRONMENT”



EUROPEAN UNION
EUROPEAN
REGIONAL
DEVELOPMENT
FUND



Revenue in St. Petersburg
in 2019
20 billion 784 million rubles

58 members

6 regions

5 participating
countries



WITH FINANCIAL
SUPPORT OF THE
RUSSIAN
FEDERATION

Total budget for sustainable development and
circular economy projects € 11.87 million

10 urban cluster projects

6 international projects

11
participants

3 countries: Russia, Denmark,
Finland





АВТОНОМНАЯ НЕКОММЕРЧЕСКАЯ ОРГАНИЗАЦИЯ AGENCY FOR STRATEGIC INITIATIVES (ASI)



The founder of the Agency is the Russian Federation. The powers of the Founder on behalf of the Russian Federation are exercised by the Government of the Russian Federation

The mission of the Agency for Strategic Initiatives (ASI) is to create opportunities for the personal fulfilment of ambitious leaders who are able to propel Russia to an advanced global position and build a country where one wants to reside and work.

Crowd-platform "Strong Ideas for the New Time":

- 145 thousand participants,
- 15 thousand initiatives
- 300 ideas-finalists
- TOP-100 ideas of the crowd platform "Strong Ideas for a New Time" for the Agency to take into account Strategic Initiatives in its updated development strategy
- TOP-8 in the direction of "Green Economy"

Cooperation agreement between the Cluster and ASI dated 21.01.2021

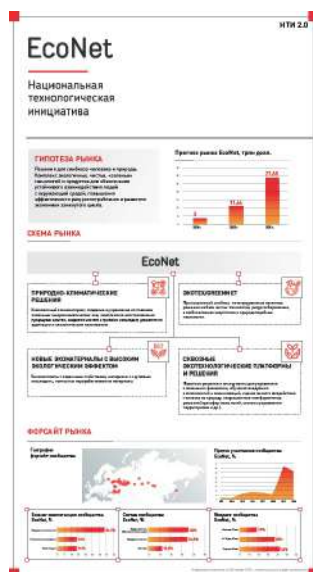


AUTONOMOUS NON-PROFIT ORGANIZATION "PLATFORM OF THE NATIONAL TECHNOLOGICAL INITIATIVE" (NTI)

20.35
НАЦИОНАЛЬНАЯ
ТЕХНОЛОГИЧЕСКАЯ
ИНИЦИАТИВА

Founders:

- MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION,
- Agency for Strategic Initiatives



Uniting business representatives and expert communities for the development of promising technology markets and industries in Russia that can become the basis of the world economy

EcoNet market of the National Technology Initiative:

- Cleantech
- Industrial Symbiosis
- Green Finance

The development potential of the EcoNet market by 2035 was estimated by NTI experts at \$ 27.65 trillion

ECOSYSTEM OF INDUSTRIAL SYMBIOSIS IN RUSSIA

The formation of the ecosystem is based on cluster projects and ideas from the Strong Ideas for the New Time crowd platform by members of the St. Petersburg Clean Technologies Cluster for the Urban Environment international consortium:

- Center of industrial symbiosis in Russia
- The network of regional clusters of clean technologies for the green economy of Russia
- Internationalization of startups through export acceleration using the SmartUp Accelerator Network
- Green Crowdfunding
- Cluster of Sustainable Development 2030
- Finnish Russian PPP catalyzing new green business
- Effective light
- Energy storage devices for home and business VOLTS
- Pskovskaya GRES - center for the development of environmental technologies and industrial symbiosis in Russia

СОЗДАНИЕ ЭКОСИСТЕМЫ ПРОМЫШЛЕННОГО СИМБИОЗА В РОССИИ ЧЕРЕЗ РАЗВИТИЕ ЦЕНТРОВ ПРОМЫШЛЕННОГО СИМБИОЗА

- ЦЕЛИ:**
- Сформировать первую инновационную промышленную экосистему в области промышленного симбиоза к 2025 году.
 - Создать к 2022 году национальную цифровую платформу промышленного симбиоза, обеспечивающую рабочие процессы в реальном времени.
 - Создать к 2025 году эко-индустриальные парки в 50 из 85 регионов.

- Сформировать современные перспективные промышленные симбиозы.
- Подключить лучшие практики для использования отходов и побочных продуктов в различных регионах России.
- Внедрить в России лучшие международные технологии промышленного симбиоза.
- Создать бизнес-модели промышленного симбиоза в России.
- Создать сеть центров в России для поддержки новых эко-индустриальных парков, обеспечивающих промышленное производство ресурсами и энергией от других регионов и индустриальных парков.
- Поддержка цифровой платформы промышленного симбиоза в России для формирования партнерства между компаниями, эффективного размещения и использования ресурсов, продуктов вторичной переработки.

АВТОРЫ

Николай Петрович
Продюсер проекта
Кирилл Савицкий/Империум

СТАДИЯ РЕАЛИЗАЦИИ

Инициация проекта в области промышленного симбиоза. В настоящее время проект реализуется в виде пилотных проектов в нескольких регионах России. В рамках проекта работают центры промышленного симбиоза с участием индустриальных парков. В настоящее время проект реализуется в виде пилотных проектов в нескольких регионах России.



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OPPORTUNITIES FOR GROWTH

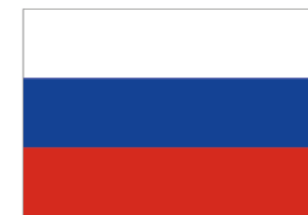


- Compile a list of innovative and breakthrough technologies in the field of industrial symbiosis by 2021;
- To create a national digital platform of industrial symbiosis by 2022, displaying the by-products of companies;
- Create eco-industrial parks in 50 out of 85 regions by 2025.



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https://tyreman.ru/bis_en



About the project International partners Russian partners Blog and news RU EN

TYREMAN GROUP

Baltic Industrial Symbiosis

as a sustainable development model in the Baltic Sea region

Contact us →

Give wastes a new lease of life – make them an asset for another productions. Find an available resource for your production among the wastes of other businesses.

The project is being implemented with the support of:




BLOG AND NEWS

See more news by hashtag # EUProjectBIS



Word

Received
its of their



Tyreman Group continues to organize meetings of the "Baltic Industrial Symbiosis" project (BIS) participants in Match & Meet format.

We continue to organise meetings of the "Baltic Industrial Symbiosis" project (BIS) participants and discuss cooperation in order to establish circular economy.

24.05.2020



Secondary resources exchange with the new participant of the Project – 99Recycle

How wheels and tires covers became pillows and Living Lab got panels made out of recycled plastic.

04.09.2020



Webinar dedicated to the Living Lab project realization in Sweden – progress, sources flow, implementation was held.

17.06.2020



The second session of the Baltic Sea Region Industrial Symbiosis Council took place on May 22nd, 2020. Tyreman Group participated in the online session of Council within the Baltic Industrial Symbiosis

Industrial Symbiosis Council is a platform for best practices studies and growth points creation for municipal, regional and national authorities, agencies and other facilities supporting a development of industrial symbiosis.

08.06.2020



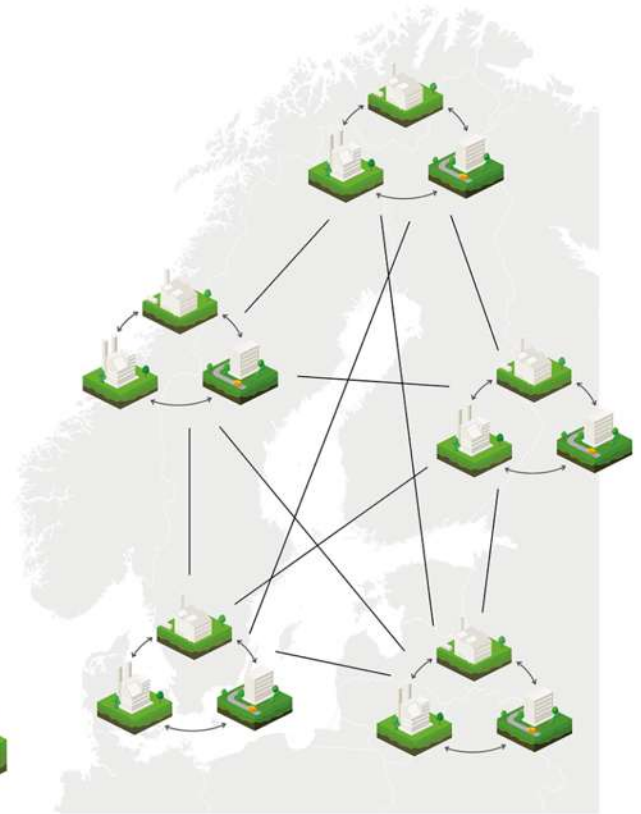
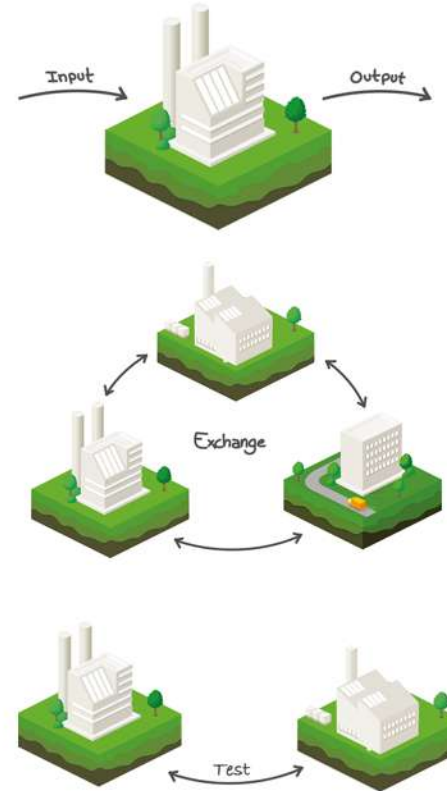
Steering committee of the "Baltic Industrial Symbiosis" project took next scheduled Zoom meeting on June 4th to update a running status of the Project.

08.06.2020

TYREMAN GROUP IN BIS.

Responsible for WP2 – Accelerating Symbiotic Business Development

1. IDENTIFY business opportunities
2. CREATE new business opportunities
3. BUILD CAPACITY among Industrial Symbiosis practitioners
4. CREATING NEW SYMBIOSIS through living lab



1. IDENTIFY BUSINESS OPPORTUNITIES

15

PARTICIPANTS
=
SCREENINGS
IN RUSSIA



(DANONE)

Milk production in StP



(Severnaya Krevetka - Northern Shrimp)

Shrimp production in Telmana, Leningrad region



(BIOCAD)

Biomedical company with production in StP



(Umnaya Sreda - Smart Environment)

Eco-friendly benches production in Telmana, Leningrad region



(Fazer)

food production in StP



(Tosnensky Mixed Feed Factory)

Mixed feed production in Tosno, Leningrad region



(Nordpall)

Garden soil (turf) production in Leningrad region



(ENVIRO)

Green engineering company (i.e. pyrolysis)



(Münchell)

beer production in StP



(Tosnensky meat processing plant)

Meat (pigs) production in Telmana, Leningrad region



(Solomon – Grand Canyon)

development of Grand Canyon mall in StP



(99Recycle)

production of accessories and panels made from recycled plastic and leftover textile in StP



(Bushe)

chain of coffee shops in StP and Moscow



(Kronidov)

canned food production in StP



(Karelpriodresurs)

production of crushed stone in Karelia



BALTIC INDUSTRIAL SYMBIOSIS

- 1 Münchell (Münchell)
- 2 КРОНИДОВ (Kronidov)
- 3 DANONE ONE PLANET. ONE HEALTH (DANONE)
- 4 ГРАНД КАНЬОН (Solomon – Grand Canyon)
- 5 буше (Bushe)
- 6 99 RECYCLE (99Recycle)
- 7 ENVIRO green engineering (ENVIRO)
- 8 Fazer (Fazer)



PETROZAVODSK

- 15 000 «Карелприродресурс» (Karelpriodresurs)

- 9 BIOCAD Biotechnology Company (BIOCAD)
- 10 Тосненский мясоперерабатывающий завод (Tosnensky meat processing plant)
- 11 СЕВЕРНАЯ КРЕВЕТКА (Severnaya Krevetka – Northern Shrimp)
- 12 УМНАЯ СРЕДА (Umnaya Sreda – Smart Environment)
- 13 НордПулп (Nordpulp)
- 14 ТОСНЕНСКИЙ комбинированный завод (Tosnensky Mixed Feed Factory)

2. CREATE NEW BUSINESS OPPORTUNITIES

7

MATCHMAKING EVENTS

TESTS:



Resource for mixed feed production



Ready meals with shrimps with a long shelf life



Shrimps



Water with yeast



Shrimps



Production of the shrimp feed made

NEGOTIATIONS:



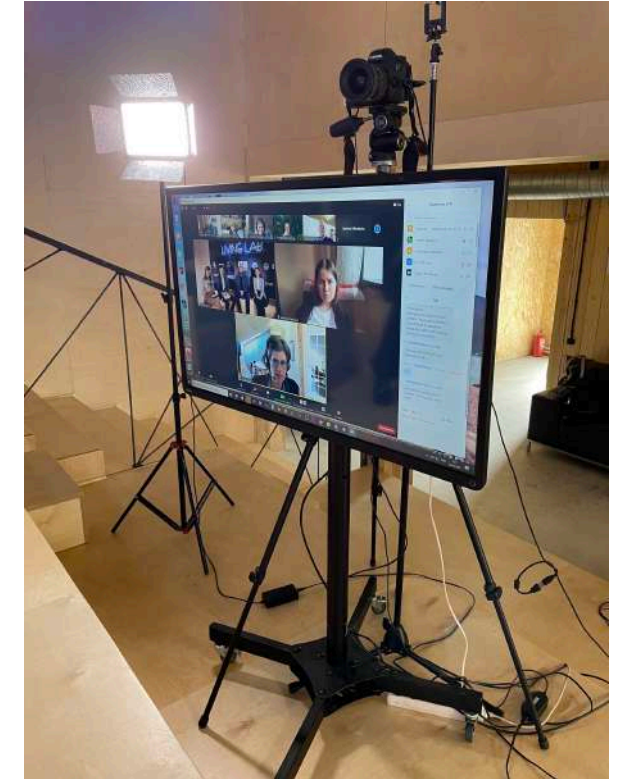
MATCHMAKING EVENTS



3. BUILD CAPACITY = PEER-TO-PEER IN ST. PETERSBURG

22-
23.04
2021

HOSTED PEER-TO-PEER EVENT IN ST. PETERSBURG



4. CREATING NEW SYMBIOSIS THROUGH LIVING LAB

*Living lab in St. Petersburg – place for popularization
and practical testing of industrial symbiosis ideas*

Coworking area for
residents of the
Living Lab

Presentation and
educational zone with
eco-lecture hall



Production area for
practical tests incl.
warehouse

Demonstration area



LIVING LAB ACTIVITIES.

Coffee grounds = fuel briquettes or cosmetics

буше
(Bushe)



 **TYREMAN**
GROUP
(Tyreman Group)



LIVING LAB ACTIVITIES.

Coffee grounds = fuel briquettes or cosmetics



LIVING LAB ACTIVITIES

Coffee grounds = mushrooms



LIVING LAB ACTIVITIES.

Usage of crushed stone leftovers in eco-friendly benches production (sand substitution).

000 «Карелприродресурс»
(Karelpriodresurs)



УМНАЯ
SREDA
(Umnaya Sreda –
Smart Environment)



LIVING LAB ACTIVITIES.

Usage of crushed stone leftovers in eco-friendly benches production (sand substitution).



000 «Карелприродресурс»
(Karelpriodresurs)



УМНАЯ
SREDA
(Umnaya Sreda –
Smart Environment)

LIVING LAB ACTIVITIES.

Recycled plastic panels.



99 RECYCLE
(99Recycle)



LIVING LAB ACTIVITIES.

Upcycled textile pillows.



(Tyreman Group)



99 RECYCLE

(99Recycle)





KEY ACTORS OF THE GREEN FINANCE IN RUSSIA

VEB.RF

VEB.RF participates in the implementation of projects for efficient use of natural resources, environmental protection and improvement (green economy) in Russia as a part of its investment activities.

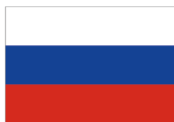
The goal of VEB.RF is to help Russian companies attract about RUR300 bln. (\$4.3 bln.) for environmental projects.

SberBank

SberBank proposes to consider green bonds issued to finance green projects as a pilot product. The Register of Green and Social Bonds of Russian Issuers in 2020 included 16 green and social bonds of 6 issuers for RUR170 bln.



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KEY ACTORS OF THE GREEN FINANCE IN RUSSIA

Industrial Development Fund

Aim of the Fund is to provide loans for the development of new high-tech products, technical re-equipment and the creation of competitive production facilities based on the best available technologies.

To implement new industrial projects the Fund provides targeted loans of between RUR 5 mln to RUR 2 bln at the rate of 1% and 3% p.a. for up to 7 years stimulating investment process of the real economy sector.

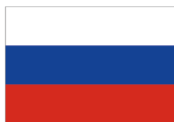
Foundation for Assistance to Reformation of Housing services

Since 2013, the Fund have been financing the modernization of utilities infrastructure, including the facilities solid municipal waste management.



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KEY ACTORS OF THE GREEN FINANCE IN RUSSIA

Insurance companies

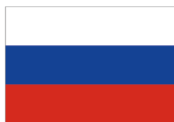
According to the Federal Law "On Environmental Protection " of 10.01.2002 No. 7-FZ, environmental insurance is carried out in order to protect the property interests of legal entities and individuals in the event of environmental risks. In the Russian Federation, mandatory state environmental insurance can be carried out. A number of Russian companies offer civil liability insurance for environmental pollution.

Skolkovo Foundation

Environmental program GreenTech Startup Booster. The program was organized with the support of the Ministry of Natural Resources and Ecology of the Russian Federation and the Ministry of Construction, Housing and Utilities of the Russian Federation together with environmentally oriented Russian and international companies. The goal of the program is to introduce "green" technologies in key industries, support startups and mature developments of companies working in the field of ecology, consolidate business, science and the state in solving environmental problems, but most importantly-the implementation of a global model of sustainable development of society.



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CLUSTER AND GREEN FINANCE

Pilot Project in Crowdfunding of Energy. Efficiency Projects in Russia
(Letter of Intent for an implementation of a project was signed 26 May 2018 within St. Petersburg International Economic Forum).

The project develops the concept of Norwegian company Green Energy One (GEO) in St. Petersburg that consists of investment companies whose goal is to participate in investments in renewable energy sources and the energy-efficient sector in Russia. Green Energy One AS presents a Concept adapted for St. Petersburg with the participation of the management company of the investment fund Nordic Commodities AS and the St. Petersburg house property owners association (a specialized organization of the "St. Petersburg Cluster of Clean Technologies for the Urban Environment").

The concept have been developing over several years with the support of the Norwegian Ministry of Foreign Affairs, the Norwegian Ministry of Oil and Energy, the Nordic Council and in cooperation with the Government of St. Petersburg.



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