

FISS – Finnish Industrial Symbiosis System

– A practical tool towards Circular Economy



Ilkka Hippinen
Motiva 22.5.2019

Higher value with less natural resources

- **Practical tool for promoting Circular Economy**, bioeconomy and regional development
- Provides a systematic way to help companies and other organisations to **create partnerships and new business opportunities** through more efficient use of raw materials, technology, services and energy.
- Aims in **competitive higher value** products and services



Finnish Industrial Symbiosis System – FISS

Targets and indicators

Target 1

Creating new technology and service business/
improving profitability of
existing business

- Creating new business
- Creating/ safeguarding jobs
- Cost savings
- New investments
- New patents

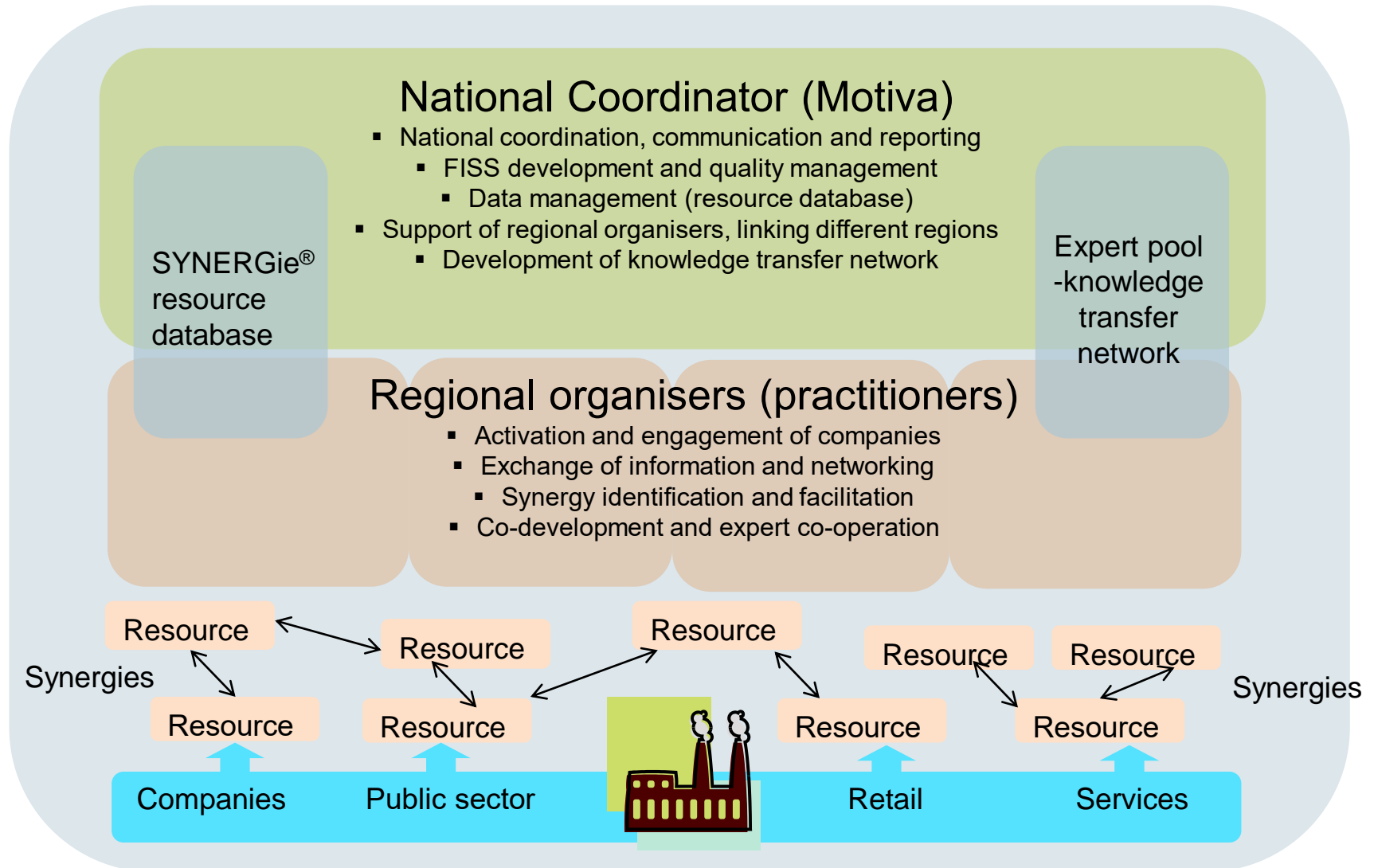
Target2

Resource wisdom and
closing cycles (following
waste hierarchy)

- Virgin material savings
- GHG reduction
- Landfill diversion
- Increase on recycled and reused materials
- Hazardous waste reduction
- Water savings

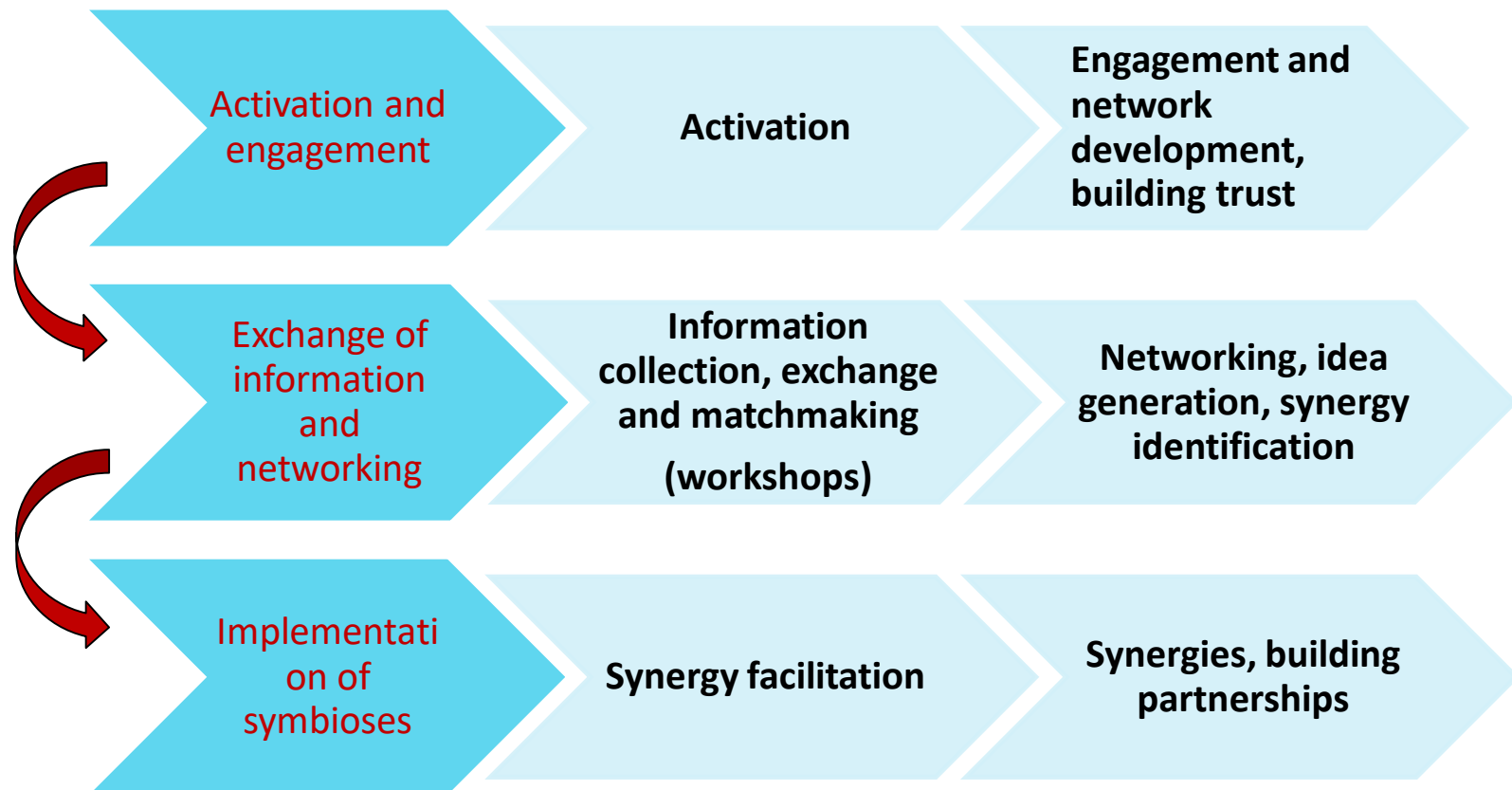
FISS:

Finnish Industrial Symbiosis System

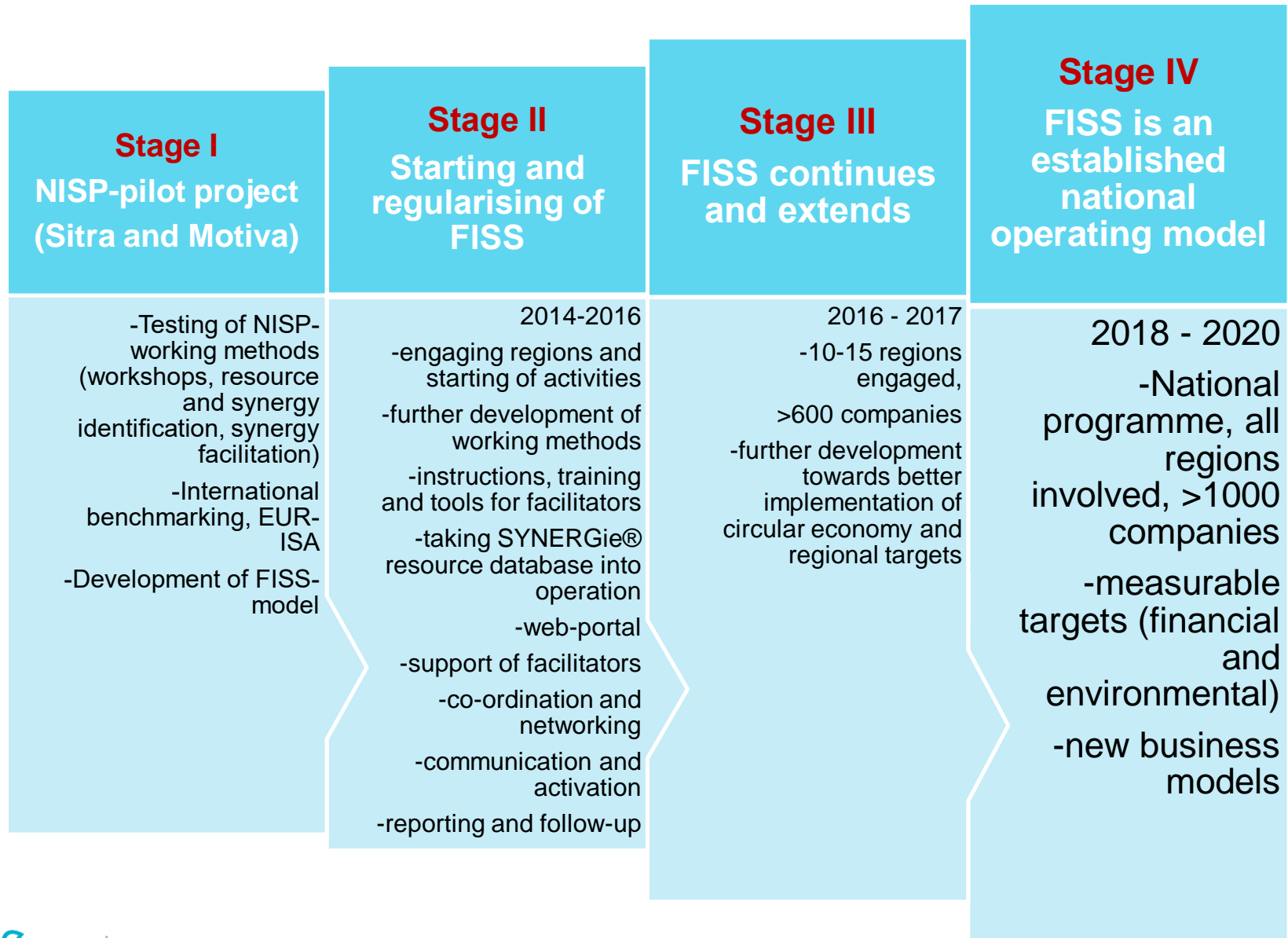


FISS operation – symbiosis creation

FISS is based on collection of resource information, matchmaking and active facilitation.



FISS progression plan



Regional coverage

- **Regional projects:**

1. Länsi-Lappi: Kemin Digipolis
2. Pohjois-Karjala: Pikes, KETI, Joensuu Science Park
3. Pohjois-Kymenlaakso: Kouvola Innovation
4. Etelä-Kymenlaakso and Päijät-Häme: Cursor
5. Keski-Pohjanmaa: Centria
6. Satakunta: Prizztech,
7. Varsinais-Suomi: Turku AMK, Valonia, Turku Science Park
8. Satakunta – Rauma: City of Rauma
9. Etelä-Karjala: Wirma, LUT
10. Etelä-Savo: Miksei Mikkeli
11. Keski-Suomi: Jyväskylä AMK, Benet Oy
12. Riihimäki-Hyvinkää-Mäntsälä: Sykli
13. Pohjois-Pohjanmaa: Oulu AMK
14. Pohjois-Savo: Navitas Kehitys, Savonia AMK, Iisalmen teollisuuskylä
15. Päijät-Häme: Lahti AMK

- **Projects under development:**

1. Kanta-Häme
2. Pirkanmaa



Kuvalähde: Motiva, Teolliset symbioosit Suomessa – FISS (Finnish Industrial Symbiosis System).

FISS – in numbers(Ilkka päivittää)

14
Regions

734
Companies

>30
FISS
work-
shops

>2500
Synergy
opportuni-
ties

5110
Resources

FISS in National Framework

- Development of a national industrial symbiosis approach was a target of the National Material Efficiency Programme (2014)
- Two audits of FISS have been carried out 2017
 - As part of auditing the National Material Efficiency Program (ordered by Prime Minister's Office)
 - National Audit Office's [audit of FISS](#) (in Finnish)
→ positive results and suggestions for continuation
- The ministries support for FISS was also mentioned in the [National Action Plan for a Circular Economy](#)
30.11.2017
- FISS is mentioned as one of three strategic tools for promoting material efficiency in the updated National Material Efficiency Programme (8.2.2018)

Resource databases

- FISS uses SYNERGie® as a resource database
 - Database owned by International Synergies (UK)
 - Licensed for Motiva Oy as the coordinator and for the regional operators of FISS
 - Resources available/wanted
 - Materials (batch/continuous), expertise, space, machinery, logistics
 - Monitoring and reporting of FISS outcomes
- The need for an open database, where companies could report their available and wanted resources and look for synergy partners, has been desired by companies and FISS regional operators
- Now an open market place for wastes and side-streams, 'Materiaalitori', has been launched and will be tested in FISS

Material market place (www.materiaalitori.fi)

Materiaalit kiertoon!

Materiaalitori on kohtaamispaikka jätteiden ja sivuvirtojen tuottajille ja hyödyntäjille.
Ilmoita materiaaleista ja palveluista maksuttomasti!

Materiaalitori on pilottivaiheessa - kehitystyö jatkuu

Palvelu on uunituore ja avattu 8.4.2019. Tämä on pilottivaihe, jossa on toteutettu ensimmäisen vaiheen keskeiset toiminnallisuudet. Kehitystyö jatkuu: jatkokehityksessä on tulossa lisää palveluja ja toiminnallisuuksia, mm. TSV-sopimuksen tekeminen. Lisäksi muutoksia tehdään käyttäjäpalautteen perusteella. Palaute: otamme mielellämme vastaan palautetta tällä [palautelomakkeella](#).

Uusimmat ilmoitukset

Etsityt materiaalit

Vastaanotetaan banderollimateriaalia

Turun ammattikorkeakoulu | Sulkeutuu 5.11.2019

Käsitlemme ja vastaanotamme erityyppisiä biojätteitä sekä lietteitä.

Sulkeutuu 30.6.2019

Etsitään maanrakennukseen soveltuvaa tuhkaa Pääjät-Hämeestä

Sulkeutuu 31.5.2019

Tarjotut materiaalit

Banderollimateriaaleja uusiokäyttöön

Muovi | Kertaerä
Turun ammattikorkeakoulu | Sulkeutuu 5.11.2019

Jauhemaalii polyesteri RAL 3020

Muu sivuvirta | Kertaerä
Mikkelin Kehitysyhtiö Miksei Oy | Sulkeutuu 30.9.2019

Vahtomuovialhion pintasilouslevyjä

Muu jäte | Jatkuva tuotanto
Sulkeutuu 2.11.2019

Tarjotut palvelut

Kierrätys- ja jätehuoltopalvelut yrityksille ja yhteisöille

Revanssi Oy | Sulkeutuu 4.11.2019

Ympäristökoulutusta ja -osaamista ihmisille

Pääkaupunkiseudun Kierrätyskeskus Oy |
Sulkeutuu 23.10.2019

Orgaanisten jakeiden käsittelyn sekä biokaasun ja kierrätysravinteiden...

Boyard Oy | Sulkeutuu 15.10.2019

Market place for wastes and side streams

- Open digital market place to face challenges of waste legislation (private/public companies) (supplementary obligation of a municipality to organize waste management)
- Need for the open market place where companies can offer their wastes/side streams
- Open for companies utilising side streams
- Available for FISS
- Ministry of Environment responsible for development and commissioning
- Opening of Market place April 2019 <https://materiaalitori.fi/>
- Motiva Oy will be the administrator of the market place

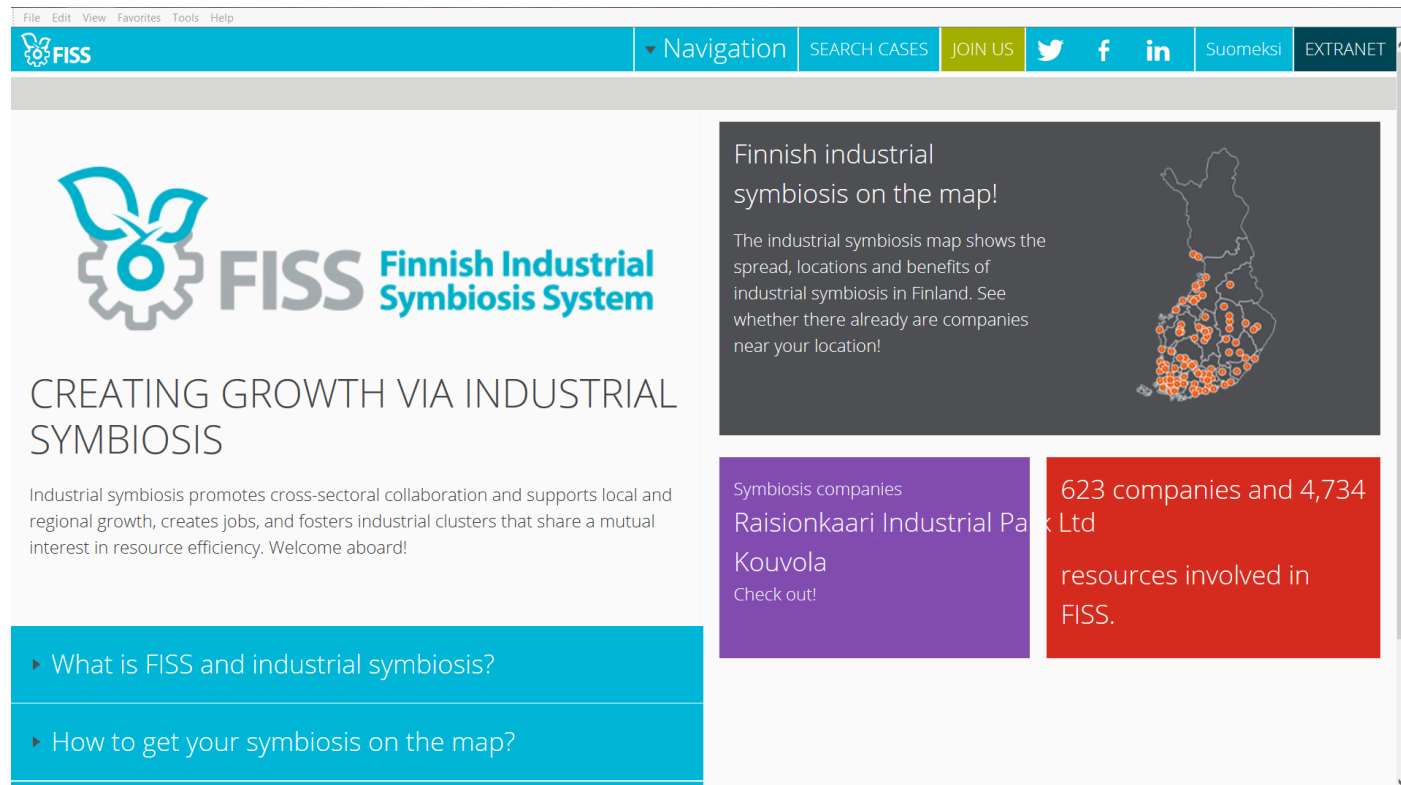
Supplementary obligation of a municipality to organize waste management

Section 33

Supplementary obligation of a municipality to organise waste management

Municipalities shall organise waste management for waste other than that referred to in section 32, if the waste holder so requests due to the lack of other services provided, and the waste is suitable in quality and quantity for transport or treatment within the municipality's waste management system. If the waste management service in question is required continuously and regularly, the municipality has to conclude an agreement with the waste holder. The duration of the agreement can be no more than three years at a time.

More information in Finnish: teollisetsymbioosit.fi in English: industrialsymbiosis.fi




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FISS

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 **FISS** Finnish Industrial Symbiosis System

CREATING GROWTH VIA INDUSTRIAL SYMBIOSIS

Industrial symbiosis promotes cross-sectoral collaboration and supports local and regional growth, creates jobs, and fosters industrial clusters that share a mutual interest in resource efficiency. Welcome aboard!

► What is FISS and industrial symbiosis?

► How to get your symbiosis on the map?

Finnish industrial symbiosis on the map!

The industrial symbiosis map shows the spread, locations and benefits of industrial symbiosis in Finland. See whether there already are companies near your location!

Symbiosis companies
Raisionkaari Industrial Park Ltd
Kouvola
Check out!

623 companies and 4,734
resources involved in
FISS.

Contact:

Ilkka Hippinen

ilkka.hippinen@motiva.fi

tel. +358-50-3541110

Paula Eskola

paula.eskola@motiva.fi

tel. +358-40-5552961

