

# FAQ Symbiosis

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# 1 What is the online symbiosis platform?

The symbiosis platform is a meeting place between the demand for and supply of materials. Together they look for high-quality valorisation of their industrial waste and by-products. Other resources (residual heat, infrastructure, space, etc.) will be added at a later stage.

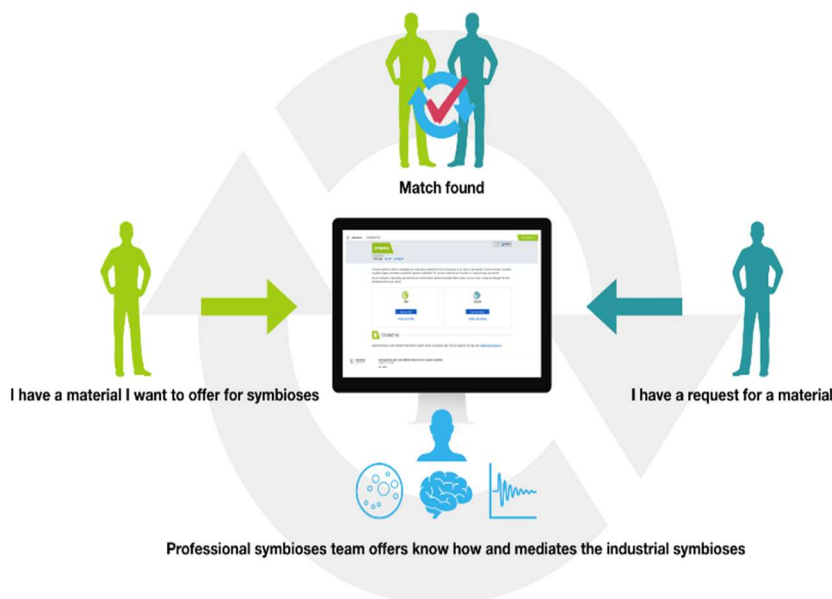
The online symbiosis platform can be used to develop profitable business cases. We therefore target business managers, environmental coordinators, production engineers, commercial profiles, SMEs and multinationals, manufacturing and distribution companies, knowledge and research centres, technology suppliers, consultants (e.g. who fill in IMJV at companies), waste collectors and processors,...

The online symbiosis platform shows you the interest in your questions or offers at other companies, centres of excellence, technology suppliers or other research centres.

The ultimate goal of the online Flemish symbiosis platform is to create a dynamic through which companies will actively share their information about their residual flows with each other in order to search, together with the Symbiosis team, for profitable business cases that also represent important added value in the environmental field, because cycles are closed and the economy is evolving towards a circular economy.

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## 2 How the online symbiosis platform works



Do you have a valuable bypass stream that you have recently produced? You are convinced that this value can be valorised in another company, instead of destroying the bypass by incineration? You know about an interesting bypass in a company and you are still looking for technology to purify the stream?

Or are you looking for a specific byproduct, and you want to know who offers such a byproduct? The online symbiosis platform shows you the interest in your questions or offers from other companies, knowledge centres, technology suppliers or other research centres.

Our guarantees:

- Symbiosis pays off! You expand your knowledge network with other organisations in order to find high-quality solutions for your bypass.
- You will receive free help and expertise from an experienced symbiosis team. This includes technology, logistics and legal matters.
- You always decide with whom you share your information.
- Your collaborations are an economic added value: you limit your waste costs and go in search of 'new' material yields.
- We offer guidance towards legal certainty and workability to all actors involved, while at the same time ensuring maximum protection of people and the environment.
- The environmental impact of your company will be reduced.

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### 3 Is symbiosis platform an economic marketplace?

No, the objective of symbiosis is not to achieve pure economic profit in an economic marketplace. The Symbius team advises users, in collaboration with relevant knowledge and research centres, on the feasibility of potential symbioses with attention to the company's interests and maximum protection of people and the environment. If Users enter into a symbiosis, they determine the financial component of that agreement completely autonomously.

The online platform is not responsible if incorrect information about a processing method is placed on the platform. If it turns out afterwards that the new proposed processing is still of a lower quality than the current processing, the organisation concerned will be removed from the platform.

The symbiote team can never be held responsible for legal irregularities or inaccuracies regarding the quality of the exchanged flows.

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### 4 Who is on the symbiosis team?

The symbiosis team is an independent, neutral team of organisations that already have experience with symbiosis (info@smartsymbiose.com). For the period 2019-2020, this team is composed of people from VITO, namely

- Johan Gemoets, 0477 412109, [johan.gemoets@vito.be](mailto:johan.gemoets@vito.be)
- Yannick Dylst: [yannick.dylst@cleantechflanders.com](mailto:yannick.dylst@cleantechflanders.com)

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## 5 What is the role of the symbiosis team?

The role of the symbiosis team is crucial for a well-functioning symbiosis platform.

You can contact the symbiosis team at any time for help or advice, the symbiosis team is a facilitator for it:

- advice and support in the field of technology, law, logistics,...
- Networking during symbiosis workshops: During these symbiosis workshops, the symbiosis team is ready to provide advice and support to companies that wish to do so.
- management and follow-up of individual company data via an online symbol database
- networking with relevant knowledge and research institutes for in-depth technological ad hoc advice, with relevant authorities for legal advice,...
- evaluation of the symbiosis achieved in Flanders (environmental benefit versus economic benefit),

The online symbiosis platform brings companies together if a potential match is detected. As soon as two companies have found a potential match, they can jointly seek advice from knowledge and research institutes, in order to investigate the technical, legal, economic and logistical feasibility of the match. The symbiosis team can, if the companies so wish, support them as facilitators by involving the relevant partners in a specific symbiosis.

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## 6 Who can use the online symbiosis platform?

The online symbiosis platform can be used to develop profitable business cases. We therefore target business managers, environmental coordinators, production engineers, commercial profiles, SMEs and multinationals, manufacturing and distribution companies, knowledge and research centres, technology suppliers, consultants (e.g. those who fill in IMJV at companies), waste collectors and processors in a very broad way,

The online symbiosis platform shows you the interest in your questions or offers from other companies, knowledge centres, technology suppliers or other research centres.

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## 7 Who manages the individual symbiosis data of companies?

The symbiote team is committed to the operational management of individual company data, with a guarantee of confidentiality. The team calls on all relevant knowledge and research institutions to seek advice and to involve the broadest possible knowledge network in the symbiosis operation.

The symbiote team is independent and neutral and will at no time use the company data for commercial purposes. It is important that legal certainty and workability can be offered to all actors involved, while at the same time ensuring maximum protection of people and the environment.

The symbiosis team reports the aggregated symbiosis data to OVAM on an annual basis, at the level of material flow, sector or region. OVAM has no insight into individual company data to guarantee confidentiality.

We refer to the terms and conditions in annexe.

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## 8 Role of OVAM in the online symbiosis platform?

OVAM fully supports the symbiosis platform because it can make an important contribution to achieving more circular behaviour in companies.

OVAM stimulates companies to exchange knowledge and information about reuse, recycling and sales of material flows, as well as about (innovative) material technology that companies can apply. OVAM therefore provides the necessary financial resources for the development of the online symbiosis platform.

The symbiote team is committed to the operational management of individual company data, with a guarantee of confidentiality. The symbiosis team reports the aggregated symbiosis data to OVAM on an annual basis, in terms of material flow, sector or region.

**OVAM does not have access to individual company data to guarantee confidentiality.**

### What does OVAM do with the aggregated symbiosis data?

On the basis of the aggregated data, OVAM may in due course

- prepare targeted policy advice, at sector or regional level, aimed at stimulating specific outlets or specific virgin raw materials from waste.
- making links with other European projects, such as Urbanrec, where research is being carried out into the recycling of specific material flows from the fraction of bulky waste and the marketing of recyclates.
- streamlining the legal aspects associated with symbiosis, such as the provision of raw material declarations. More info click [here](#).

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## 9 Symbiosis: What is meant by high-quality material valorisation?

In the case of symbiosis, this is about high-quality material valorisation, so a potential match is only possible if the new processing method is an improvement on the current processing method. High-quality is defined as 'climbing the ladder of the processing hierarchy': see Article 4 of the Materials Decree:

- a) the prevention of waste and a more efficient and less environmentally damaging use and consumption of materials through adapted production and consumption patterns;
- b) the preparation of waste for re-use;
- c) material valorisation: the recycling of waste and the use of materials in closed material cycles;
- d) other forms of waste recovery, such as energy recovery and the use of materials as a source of energy;
- e) the disposal of waste, with landfill as a last resort;

Companies that are looking for a high-value valorisation of their material flow always mention the current processing method. All proposed processing methods that score worse on this hierarchy are not shown in the online symbiosis platform.

The symbiosis team strives for local symbiosis, if available.

After all, sustainable production is not only determined by what we do with materials (recycling, re-use, smart design, etc.), but also by where the production and symbiosis activities take place. Is a match found close to home or on the other side of the world? The symbiosis team naturally strives for local symbiosis, which leads to shorter transport distances with less CO2 emissions.

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## 10 Symbiosis in the bioeconomy: high-quality material valorisation cf. the cascade: how?

The cascade principle in the [bioeconomy](#) applies these priorities: **food-feed-material-energy**.

This cascade means concrete:

- Biomass (residual) flows produced for the purpose of **(livestock) feed** will be given priority. used in **human food and, in the second instance, in animal feed**.
- The next step in the cascade are the **other material applications**, such as applications as a raw material in chemistry and the use of processed Biomass (residual) flows as a soil improver.
- **Energetic valorisation via incineration** is the last step in the chain.



Figure: The cascade of value retention for the use of biomass (residual) flows from the Recycle agriculture and food

## High-value valorisation via cascade of value preservation:

Prevention: prevent food loss

Use for human food, e.g. food banks

Convertible for human food: processing, reprocessing and reworking food

Use in livestock feed

Raw materials for industry (other than food and livestock feed)

Processing to fertiliser by fermentation and/or composting

Use for sustainable energy: aim is energy generation

Incineration as waste (without energy generation)

Dumping in landfill (prohibited in Flanders)

Companies that are looking for a high-value valorisation of their biomass (residual) stream always indicated the current processing method. All proposed processing methods that score worse in this cascade are not shown in the online symbiosis platform.

Opportunities for symbiosis in the bioeconomy:

- **Selective collection:** by means of a highly selective collection of available and increased the number of mobilisable biomass (residual) streams for which a useful use is desirable the chance that these residual flows can be used optimally in a cycle and the materials hierarchy and the cascade principle can be implemented.

- **Material Recycling:** by optimizing the technology, more

Biomass (residual) streams remain in the production chain for longer and we can recycle them.

...close. It also includes policy initiatives to improve the quality and marketing of the products concerned. Recycled material can be guaranteed.

- **Energy:** Biomass (residual) streams can be used for energy applications. The combination with the production of one or more high quality products is also given as in the case of fermentation. In doing so, the applicable sustainability criteria are respected.

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## 11 How is data confidentiality guaranteed?

The symbiosis team reports the **aggregated** symbiosis data to OVAM on an annual basis, at the level of material flow, sector or region. **The OVAM therefore has no insight into individual company data to guarantee confidentiality.** The independent symbiosis team also ensures that the individual company data will not be used for commercial purposes.

The online symbiosis platform has been developed in such a way that it is easily accessible and confidential for participating companies.

The platform is not responsible for incorrect information from users of the platform. Users who distribute incorrect information will be removed from the platform immediately.

The platform brings together companies that want to exchange by-products. They can give advice on this on the symbiosis team.

The platform is not responsible for any agreement that users may have with each other. Users are responsible for compliance with the basic conditions of the Materials Decree. This states, among other things, that the solution must not pose a risk to people and the environment. The companies themselves are therefore responsible for the acceptance criteria and requirements regarding composition, origin and lawful use (see also the checklist below). The symbiosis team can never be held responsible for legal irregularities or the quality of the exchanged flows.

For more information on this subject, see the Guide to waste raw materials, final version 01042016(1).pdf.

See also terms and conditions in annexe.

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## 12 What about your privacy?

Every supply and demand contains public and private data.

- The basic information about your supply/demand is always public. Think of a raw material description and quantity.
- Your company name and details are private by default. You choose which data you share with interested companies.

No company will have access to your private data, unless you give them permission to do so.

The **symbiote team** is an independent team of material experts. They have access to the individual company data. Only in this way can they provide the support that is crucial for the success of this platform.

**OVAM** supports the symbiosis in Flanders as part of the circular economy. It has no access whatsoever to the individual company data. OVAM only receives periodic reports with global results for the follow-up of symbiosis in Flanders. The symbiosis team takes care of this reporting and guarantees the anonymity of each user.

See also terms and conditions in annexe.

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## 13 Is my symbiosis agreement in accordance with the regulations?

Flanders has chosen to use both by-products and the Committee of the Regions is of the opinion that a uniform assessment framework should be developed for end-of-waste materials. This can be found in chapter 2 of the VLAREMA (<http://www.ovam.be/einde-afval-materialen>).

For specific material applications, the VLAREMA contains specific end-of-waste criteria (Annex 2.2). For other applications, the general assessment framework referred to in Articles 36 and 37 of the [Materials Decree](#) applies.

We have created a simple checklist that you can go through for yourself, so that you can check whether the symbiosis agreement that you want to make is in accordance with the regulations. This is to raise awareness for you, to know what you have to comply with.

If you still have doubts about the relevance of your symbiosis agreement, or if you expect a 100% guarantee of legal certainty, you can request a raw material declaration from OVAM so that the people in charge can check the regulations for you. You can always call on the symbiote team to help you with this.

More info about raw material declarations, click [here](#). and online web counter raw material declarations!

More info about end-of-waste materials click [here](#).



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## 14 Interesting information to stimulate symbiosis?

Interesting websites:

- [Circletips](#)
- Info on 'specific waste and material cycles': see <https://www.ovam.be/afval-materialen>
- [Emis-VITO overview](#)
- ....

List of knowledge centres with expertise, such as [Sirris-afvalorisatie](#), [Flanders'Food](#),....

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## 15 Symbiosis: who finances the symbiosis?

Currently, the symbiosis effect is 100% publicly funded. The Flemish Government and OVAM are funding the online symbiosis platform in the period 2019-2020. The government will therefore finance the operation of the symbiosis team in 2019-2020. OVAM specifically appoints a number of people from VITO; these people will have access to the online symbiosis tool in order to build up support from industry and knowledge institutions. The long-term goal is to realise a public-private partnership.

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## 16 Symbiosis: experiences pilot project 2012-2015

The partners during the pilot phase were Go4Circle, FISCH/Essenscia, VITO and OVAM.

Realisations of pilot project 2012-2015:

- Expansion of the NISP database in Flanders (developed by International Synergies) with more than 300 companies and almost 2000 material flows that were offered (as residual/by-product) or requested (as secondary raw material),
- 13 matches were achieved, representing annual savings of around 1 million euros in waste and raw material costs.
- 11 cases were identified as "high potentials" to provide an effective match on condition that the necessary guidance can be provided.
- 5 streams have been identified for which collective solutions can be worked out (streams that are released in several places in smaller quantities, but can be recycled cost-effectively provided they are bundled and the right technological support is provided).

Improvement points:

- The symbiosis via an offline NISP database is very time-consuming and the active involvement of companies is very low.

Recommendations:

- Flemish industry needs a platform to make more symbiosis between companies comparable, realising both environmental benefits (more material recycling, lower transport distances) and economic benefits (savings on primary raw materials, lower waste processing costs and transport costs, higher value of recyclates).
- the platform can identify innovation opportunities for new recycling techniques and markets for recyclates
- success factors for the future: a) building up a very extensive set of data (the more data, the greater the chance of an interesting match) in an online available platform and b) intensive personal coaching of companies.

**From 2016** OVAM will continue the (basic) operation of the symbiosis platform in cooperation with VITO, in order to create a fully-fledged structural online symbiosis platform. From 2016 to 2018, further use was made of an (offline) NISP application.

Since 2016, OVAM and IMEC have been investigating how we can evolve in Flanders towards a user-friendly, neutral and confidential online symbiosis platform, in which companies can actively participate and thus experience the economic added value of symbiosis.

Only by making the added value visible online, companies and other private organisations will be prepared to join Symbiosis and possibly even to contribute financially to the symbiosis in order to achieve structural public-private financing in the long term.

The final report of this pilot project 2012-2015 can be found on [www.smartsymbiose.com](http://www.smartsymbiose.com). Add a link!

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## 17 Symbiosis 2019-2020: development of online tool

OVAM is fully committed to a digitally linked data infrastructure in order to be able to provide quality feedback to companies on an aggregated basis, for example via the Circle tips and the online symbiosis tool.

We meet the recommendations of the pilot period. Since 2018, we have been working on the development of a symbiosis platform available online, combined with intensive personal support for companies by the symbiosis team.

For the operational symbiosis operation by the symbiosis team, OVAM has concluded an agreement with VITO for the period 2019-2020. This agreement comprises 3 research tasks:

- symbiosis via online symbiosis platform: roll-out in Flanders
- data mining: analytical results with added value for symbiosis
- research into private co-financing

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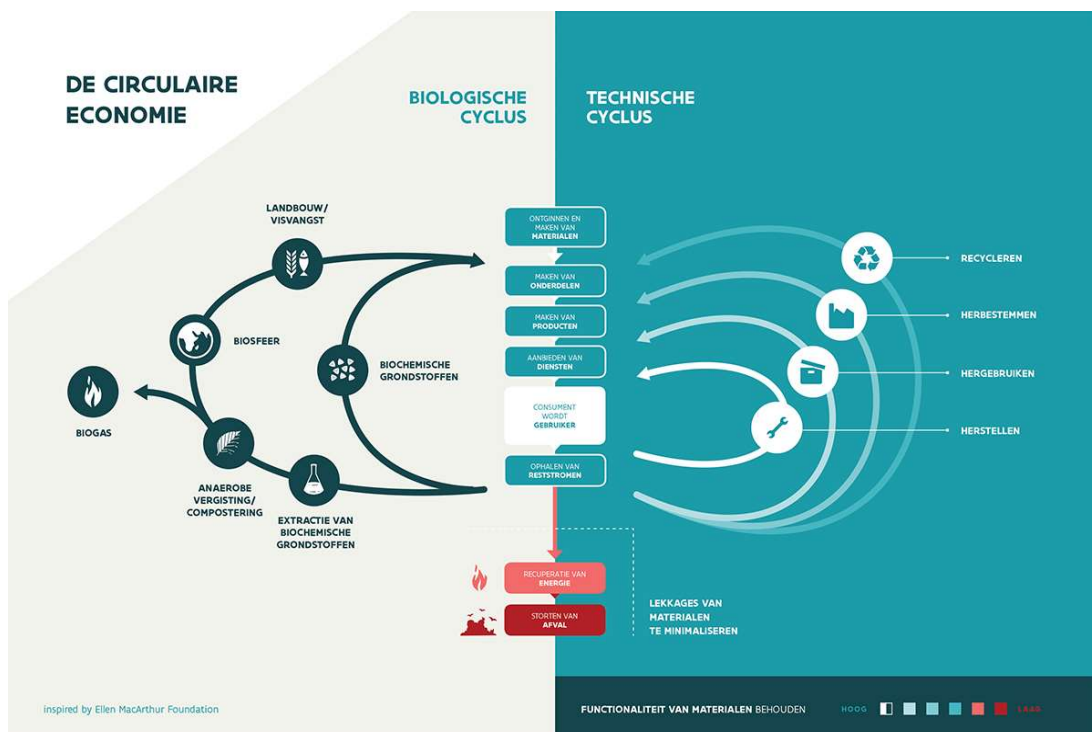
## 18 What is the link between Symbiosis and climate/CE?

Symbiosis is an essential part of our transition to a circular economy. After all, symbiosis leads to savings on primary raw materials and *thus* less exploitation and transport. This is how we reduce CO2 emissions in Flanders.

The Ellen McArthur Foundation sees the circular economy as follows:

- All materials released in the technical cycle can be reused through recovery, reuse, re-use and recycling. In this way, we avoid the exploitation of primary materials.
- In the biological cycle, the circles are also proposed, in order to reduce the waste of renewable raw materials.

With the symbiosis platform, we link supply to demand in both cycles, and vice versa. We reduce CO2 emissions by **avoiding** the extraction of primary material.



More info see <https://www.ovam.be/circulaire-economie-belangrijk-wapen-in-strijd-tegen-klimaatverandering>.

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## 19 Practical tips to increase the success rate of your symbiosis

- In general: the more detail you enter, the higher the success rate of your search. You can enter this detail info as private confidential information. This information is only visible to another company once you have invited a company for symbiosis.
- For an offer: keep the information about the specific production process - where the material flow originated - at hand, you will need it when describing your material.
- For a question: if relevant: have you thought about a specific origin for which you have a preference? The origin may be important if specific substances should NOT be included.
- Also discuss a possible symbiosis opportunity internally. Involve different people from various relevant departments within your company (e.g. manager, financial services engineer and a production engineer).

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