

Trends and evolutions / Cleantech in Flanders

Cleantech in Flanders is comprised of Flemish companies and organisations actively working on innovative cleantech solutions. This summary shows the evolution of the following indicators since 2012: number of companies and organisations, number of FTEs and EBITDA.

Data is only available on the number of companies and organisations up to 2022. The annual reports produced by the National Bank were used for the FTE and EBITDA. The most recent reports available are from 2021 and concern 92% of Flanders-based organisations. Consequently, the figures mentioned in this report are more than likely underestimated. Following Europe's lead, this edition includes natural gas and nuclear energy in the taxonomy.

 **1.849** bedrijven en organisaties (2022)

The cleantech ecosystem in Flanders is made up of companies developing innovative cleantech, companies deploying this cleantech in their production and business processes, and also companies and organisations accelerating the development and facilitating the implementation of cleantech through their services.

594 Technology providers

develop, create and sell innovative cleantech solutions (e.g. cleantech start-ups and scale-ups)

799 Implementors

help companies deploy cleantech (e.g. engineering firms)

291 Enablers

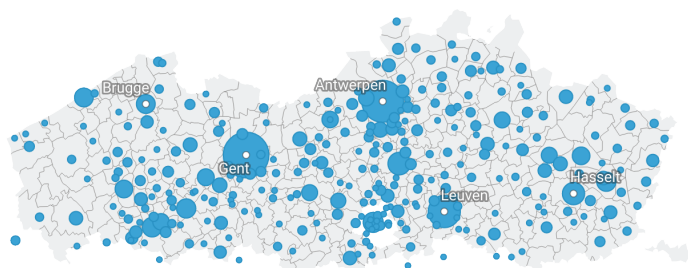
make the innovative cleantech ecosystem possible by providing services or research (e.g. research centres)

165 Pioneers

integrate cleantech solutions into their production and business processes (e.g. manufacturing companies)

Implementation of sustainable technology is proportionally more common in larger businesses. This, along with a broader perspective of the ecosystem, has led to an increase in 'enablers'.

Cleantech organisations are spread right across Flanders...

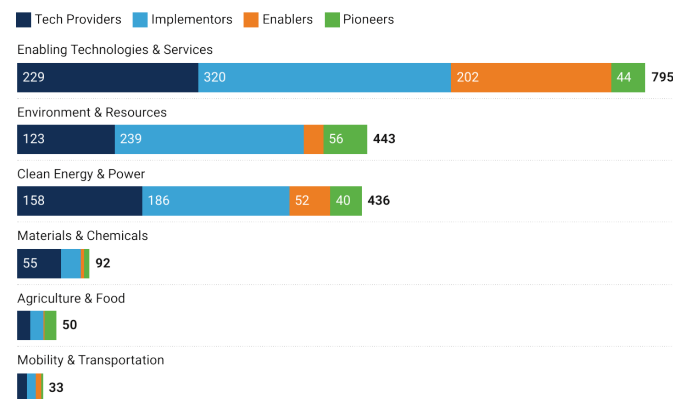


.... however, it is the university cities of **Ghent, Antwerp and Leuven** that are host to the majority of them.

ranking '22	#22
1	Gent 198
2	Antwerpen 164
3	Leuven 109
4	Mechelen 41
5	Hasselt 41
6	Brugge 32
7	Oostende 30
8	Kortrijk 29
9	Genk 28
10	Waregem 23

The provinces of West Flanders and Limburg also boast many cleantech organisations in a wide variety of facilities. In West Flanders, they are mostly in Bruges, Ostend, Waregem, Roeselare and Harelbeke. Cleantech in Limburg is located in the university city of Hasselt and also often in the former coal mining communities of Genk, Houthalen-Helchteren, Beringen and Winterslag.

Cleantech in Flanders can be divided into **six sectors**.



'Enabling technologies & services' refers to technological innovations that enable the deployment and implementation of specific clean technology. Examples include artificial intelligence, drones, sensors and blockchain technology, all relevant to a range of cleantech solutions.

The 'clean energy & power' sector has seen the strongest growth in recent years due to the increasing focus on energy and climate solutions.

Sector descriptions:

Enabling Technologies & Services

Tech-enabled innovation or services that support the rolling out and spread implementation of clean technologies.

Environment & Resources

Tech-enabled innovations that help support clean processes and management, carbon capture and utilisation, water efficiency, soil remediation and management, circular economy, and green building

Clean Energy & Power

Tech-enabled innovations in renewable energy, energy efficiency and storage, natural gas, nuclear energy and alternative fuels.

Materials & Chemicals

Tech-enabled innovation in advanced materials such as biobased materials, coatings and composites, and chemicals that reduce or eliminate the use of hazardous substances ('green chemistry').

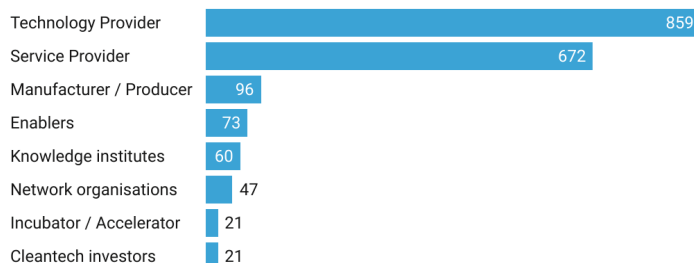
Agriculture & Food

Tech-enabled innovations that promote and encourage clean and sustainable agricultural activities, such as avoiding or minimising the use of synthetic fertilizers and pesticides. Tech-enabled innovation in the area of newly developed food and sustainable food production processes.

Mobility & Transportation

Tech-enabled innovations that span all modes of transportation and mobility, for example making use of alternative fuels, or advanced technology for supply chains or air traffic.

In Flanders, most of the organisations involved in cleantech are **technology or service providers**.

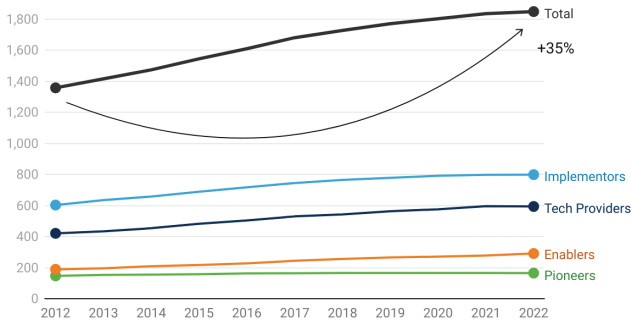


Cleantech activities are mainly concerned with providing technology, however those offering services are also increasing.

Research institutes, investors, incubators, networking organisations and other 'enablers' are important for further developing and accelerating cleantech implementation in Flanders.

Trends and evolutions / Cleantech in Flanders

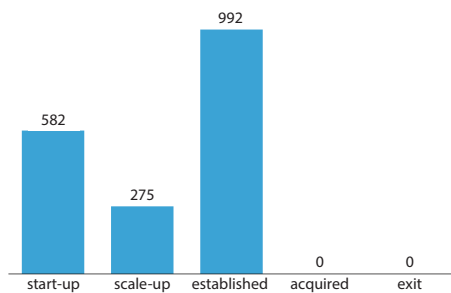
In Flanders, between 2012 and 2021, the number of organisations involved in cleantech increased by more than 35%.



In this period, the increase is gradual and generally spans the entire ecosystem. The increase in 'enablers' was the highest proportional increase (54%). 'Pioneers' saw a less pronounced increase in numbers (12%).

The number of 'technology providers' rose from 421 in 2012, to 594 in 2022 - an increase of more than 40%. There were almost an additional 200 'implementers', which was an increase of roughly 33%.

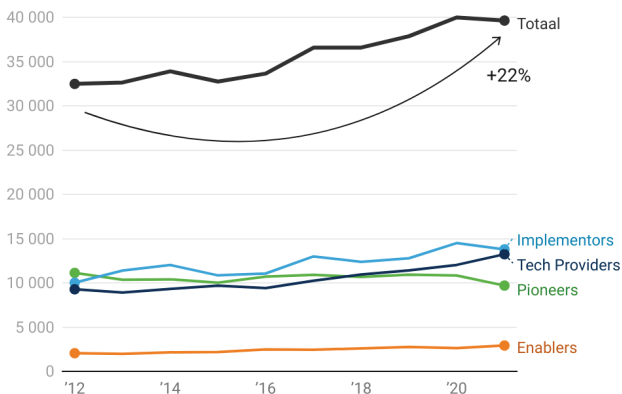
Cleantech in Flanders is comprised of numerous young businesses. In 2022, 46% were start-ups or scale-ups.



992 cleantech organisations are established businesses, however the large number of start-ups shows the innovative nature of the cleantech ecosystem. With 582 start-ups in cleantech (31%), the future of this sector in Flanders looks promising. 275 businesses (15%) have already progressed to the scale-up phase.

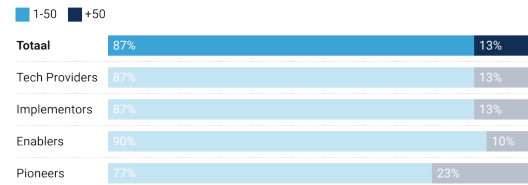
~40.000 FTEs in cleantech in 2021

Over the last 10 years, the number of jobs in cleantech has grown by 22%.



The increase in the number of cleantech organisations corresponds to the increase in cleantech FTEs. This relates only to full-time equivalents directly linked to an organisation's cleantech activities. For large organisations, a conversion factor must be applied.

Almost 90% of the organisations have fewer than 50 cleantech FTEs (2021).

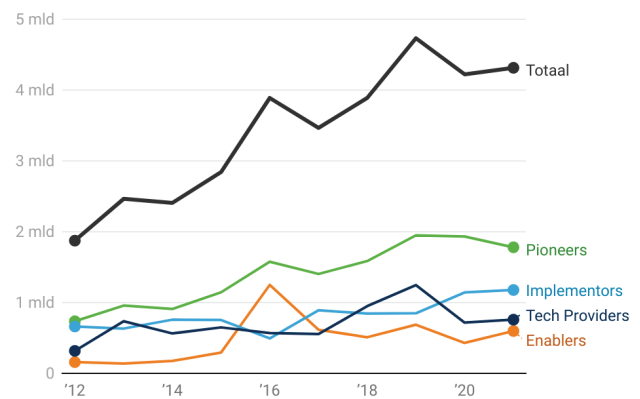


Cleantech in Flanders consists mainly of small dynamic companies with fewer than 50 employees. Only in the pioneers do we see that almost a quarter of the organisations have more than 50 employees.

In the majority of the sectors, the average number of employees remained stable from 2012 to 2021. The average number of employees fell by almost 20 FTEs only in the pioneers. This is partly due to the increasing share of start-ups and scale-ups.

~4.5 bln euros EBITDA (2021)

EBITDA related to cleantech has seen a sharp increase since 2012.



Cleantech-related EBITDA grew strongly between 2012 and 2019, then dipped in 2020 during COVID-19, followed by a modest increase in 2021.

The largest organisations are found among the pioneers, which also explains their major stake in the economic contribution.

Only 0.39% of cleantech companies filed for bankruptcy in 2021.

This number is similar to previous years. Cleantech in Flanders is therefore slightly above average compared to the other companies located in this region. In 2021, 0.5% of all companies in Flanders filed for bankruptcy.

+40M euros early stage funding

This cleantech report focuses on 'early stage funding', i.e. from crowdfunding through to series B funding. In 2021 and 2022, this resulted in roughly 40 million euros for each round. The focus in 2022 was primarily on seed funding. In 2021 however, the major share was Series A funding. Funding is mostly technology-driven and 98% of funding was approved for 'technology providers'.

	2021	2022
Total	40.3M	40.1M
crowdfunding		1M
Seed	100K	31.6M
Series A	32.6M	7.5M
Series B	7.7M	