PART OF THE DUTCH COCI NETWORK

COCI: Center for Open Chemical Innovation

Seven COCI-locations

1. Green Chemistry Campus, Bergen op Zoom 2. Chemelot, Geleen 3. Biotech Campus, Delft 4. Green PAC, Emmen 5. Pivot Park, Oss Groningen 6. Plant One, Botlek-Rotterdam 7. S/park, Deventer 4 Emmen Twente Zwolle Amsterdam Utrecht Deventer 3 Wageningen Delft Oss Rotterdam Nijmegen 5 Bergen op Zoom Eindhoven Vlissingen Breda il ABs 2 Geleen GREEN



BUSINESS ACCELERATOR FOR STARTUPS & FOR SCALING UP BIOBASED & CIRCULAR INNOVATIONS

www.greenchemistrycampus.com

Econom



GREEN CHEMISTRY CAMPUS: ACCELERATING BIOBASED BUSINESS

At the Green Chemistry Campus in Bergen op Zoom, entrepreneurs, governments and knowledge institutions are working on scaling up new, sustainable materials and chemicals for the building materials and packaging industry. Renewable raw materials such as elephant grass, organic municipal waste and wood residues form the basis for this. By using waste streams as a resource our customers create sustainable and profitable chemical intermediates and products that appeal to both industry and society.

The Green Chemistry Campus has got years of experience in facilitating and accelerating biobased innovations. By establishing your company on the Campus, you will easily come across opportunities that can help you as an entrepreneur. Whether your main driver for biobased innovation is the urge to contribute to a sustainable world, staying ahead of the competition or reasons of compliance, the Green Chemistry Campus can help you to achieve your company's goals. We offer access to not only facilities such as laboratories, a demo facility and office space, but also to support in the areas of financing, marketing and technology.

Companies that establish themselves on the Campus have already proven that their idea for a biobased product works on a small scale. On the Campus they want to elaborate on this idea and prove that their product can also be produced on a larger scale with a constant quality.

Thriving ecosystem that drives open innovation

The Southwest Netherlands is at the European forefront of biobased innovations. This region, called Biobased Delta, is known for its vibrant and thriving ecosystem that drives open innovation. According to Deloitte nowhere in the world is a region as suitable as the Biobased Delta for valorizing sugars into chemical building blocks for the chemical industry. Biomass is widely available, the logistic connections are excellent and the market is close by because the region is part of the largest chemical cluster of the world.

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Green Chemistry Campus

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ACCELERATING BIOBASED BUSINESS

- packaging and building materials -



UNIQUE ADVANTAGES

- **1. Synergy:** join forces with companies, knowledge institutions and governments that are keen to accelerate innovation and share risks.
- **2. Shared use:** easy access to laboratories, work spaces, trainees & (demo) facilities.
- **3. Low operational costs:** a solid eco system that's fully equipped for chemical R&D.
- **4. Identify viable opportunities:** a thriving support community in the areas of financing, marketing and technology. Make use of the BioVoice program that connects solutions provided by SMEs to challenges that have been put forward by large companies.
- **5. Easy access:** close to container water terminal. Direct motorways to Antwerp, Amsterdam, Rotterdam and the Rhine-Ruhr-Area.

BIOBASED DELTA

Top locations



1. Biotech Campus Delft



Yes! Delft Incubator



3. Green Chemistry

Campus (COCI)



4. Bioprocess Pilot Facility (BPF)



5. Bio Base Europe

Training Center

13. Plastic Application

(KATC)

and Training center



Bio Base Europe Pilot Plant

14. Biorizon Lignin

Application Center (LAC)





7. Plant One Rotterdam

Delft

 under construction il AB ZeeBra

bio based delta

Application centers



9. Nature Fibre Application Center (NAC)



10. Color Application Center (KLAC)



11. Biopolymer Application Center (BAC)

Knowledge & educational institutions



15. HZ University of applied sciences -Centre of Expertise Biobased Economy



16. Avans Hogeschool -Centre of Expertise Biobased Economy





17. CIV Biobased Economy (ROC)



TU Delft





11-02

19. Port of Rotterdam

20. Port of Moerdijk



21. North Sea Ports





22. Nieuw Prinsenland

23. Biopark Termeuzen 24. Port of Moerdijk

12. Biobased Innovations

Garden Rusthoeve

(AIKC)

18. Technical University



WHAT THE GREEN CHEMISTRY CAMPUS CAN OFFER YOU

BUSINESS DEVELOPMENT SUPPORT

Entrepreneurship Guidance, IP Expert, Compliance & Legislation, Product coach, Technology coach, Lignin expert, Pyrolysis expert, Marcom & event support, Research by trainees.

FINANCIAL SERVICES / SUBSIDY COACH

LABORATORY SERVICES:

Access to a range of specialized laboratories for upscaling biobased innovations. Not only at the Campus itself, but also at partners in the region with whom we work closely together like Cargill, Cosun, PTG and SABIC.

• Analytical analysis

- Elemental analysis
- Chemical trace analysis
- Paper testsContamination

detection

- Chemical composition analysis
- Material testing and analysis

DEMO FACILITIES:

Ready for the next step? Do you want to scale up the production of your biobased innovations? Check out our brand-new sustainable Demo Facilty.



GREEN CHEMISTRY CAMPUS NETWORK / ECO SYSTEM



TRL - TECHNOLOGY READINESS LEVELS





LOCALLY VALORIZING ELEPHANT GRASS ON WASTELAND

Vibers grows elephant grass on wasteland and processes the cellulosis and lignin from this crop into paper, biobased building materials and bioplastics.

The company is located at the Green Chemistry Campus since 2014. 'The Green Chemistry Campus points me towards interesting business opportunities,' says Jan-Govert van Gilst of Vibers. 'Recently I successfully set up a project to produce 3D-printed lightweight concrete objects out of elephant grass. The Campus provided support to fund the project and to find suitable partners.' nett*energy*

MOBILE PYROLYSIS PLANT TO LOCALLY PRODUCE OIL OUT OF WOOD

Nettenergy's Pyroflash technology converts waste biomass to liquid fuels and bio chemicals. Its unique pyrolysis plant is scalable, local and energy self-sufficient.

'We want to enable municipalities, forest managers and farmers to convert their biomass into renewable energy resources like oil, gas, wood vinegar and bio char,' founder Rob Vasbinder explains. Since the company has established itself on the Campus in 2013 it has successfully started collaborations with partners in USA, Ukraine, India and Australia.

Biorizon

ENABLE COMMERCIAL PRODUCTION OF BIO-ARO-MATICS FOR THE CHEMICAL INDUSTRY BY 2025

Ever since 2013, the Green Chemistry Campus is home to the Shared Research Center Biorizon that aims to, by 2025, enable commercial production of biobased aromatics for the chemical industry. Biorizon is well on its way and is currently scaling up with several multi-kilogram skids. Jan Harm Urbanus, Biorizon's Chief Technology Officer, explains: 'Aromatics are one of the main raw materials used by the chemical industry: 40% of all chemicals are aromatics by nature. Aromatics are currently extracted from oil. Biorizon, initiated by Research & Technology Organizations TNO, VITO and ECN part of TNO, together with partners, develops technologies to convert biomass into aromatics. This reduces dependency on oil, leads to lower CO₂-emissions and provides profitable and sustainable prospects for the chemical industry.'