

The Biobased Transition

Opportunities and chances for Sino Dutch co-operations

Wednesday 12th December 2018, Groningen

Purpose

Connect, inspire and network in order to create sustainable and long-lasting relationships within the Triple Helix between the Netherlands and China.

Dealing with Biobased Chemistry changes for Sino Dutch co-operations. Biomass is diverse; from agricultural crops to (animal) residues. The chemical industry is still dependent on fossil fuels and petroleum. Whereas biomass can in many cases serve as raw material for green (bulk) chemicals, bioplastics or even being used for medical applications. During the conference we table the chances that might arise for partnerships.

Triple Helix

- Chinese and Dutch businesses and organizations
- Governmental bodies, led municipality of Groningen
- Educational institutes:

State University of Groningen (RUG)

Hanze University of Applied Sciences Groningen

Saxion University of Applied Sciences

Van Hall Larenstein University of Applied Sciences

Expertise & Experience combined

Combination of expertise and experience companies, business development managers, senior managers, R&D professionals, professors, researchers and lecturers.

Ambition

Ambition to have this conference annually in a growing number of different participants.

Committee of Recommendation

- P.E.J. den Oudsten – Mayor city of Groningen
- Prof. Dr. J. de Vries – Chief Executive Officer State University Groningen
- H.J. Pijlman, MA – Chief Executive Officer Hanze University of Applied Sciences Groningen

Content of Binder

- General information – front page
- Program & outline of the day
- Comprehensive descriptions of today's companies & institutes
- Comprehensive descriptions of today's research lines
- Comprehensive information on new Professorship Biobased Business Valorization

Program & Outline of the Day

The conference takes place in the Auditorium Conference Room

Room Auditorium – AUD

- Morning Session
- 13:00 – 13:50 hrs. Workshop – Sino Dutch business culture
- 15:00 – 16:00 hrs. Workshop – pitches
- Closure

Conference Room – CONF

- 12:00 – 13:00 hrs. Walking Lunch – Research Lines
- 14:00 – 14:50 hrs. Workshop – Matchmaking 11 research lines

Lunch & Refreshment

- In the lobby opposite of the Auditorium

Organization/Contact during day:

- Jan Klerken – organization ☎ +31 6 24 98 15 08
- Uno Sissingh – day's chairman

08:30 – 08:55 hrs. Registration & Coffee

08:59 – 09:01 hrs. Welcome by Uno Sissingh, Senior lecturer & day's chairman

Welcome Triple Helix of Chinese/Dutch Businesses, GCI, City Groningen and different knowledge institutes. Purpose of day: Sino Dutch co-operation. Mission: to become an inspiring Sino Dutch platform facilitating the entrepreneurial and exploring student.

09:00 – 09:10 hrs. Opening Henk Pijlman, Chief Executive Officer Hanze University of Applied Science Groningen

Providing historical background and opportunities to further explore, investigate and invest in the opportunities for Sino Dutch collaboration. Focusing on businesses, governmental bodies and knowledge institutes. With the latter one a need and desire to have the entrepreneurial student develop a right mindset and focus to become successful in meeting today's and future's challenges.

09:10 – 09:20 hrs. Victorine de Graaf, Dean Institute for Life Science & Technology

Leading towards the framework contract, stressing out the importance of a strategic collaboration within the Triple Helix. Opening doors, to bundle and streamline Dutch-China-related activities in the area of research and valorisation.

- 09:20 – 09:30 hrs.** **Xuefei Cao, Director of Groningen Confucius Institute**
 Groningen Confucius Institute plays an important role in the desired collaboration between governments, companies and education. GCI's role as liaison-officer will help accelerate results.
- 09:30 – 09:40 hrs.** **Signing Framework Contract**
 Victorine de Graaf (Dean Institute for Life Science & Technology at Hanze); Caroline van de Molen (Dean of the School of Human Resource Management and Applied Psychology at Saxion); Yijin Ren (Director of W.J. Kolff Institute for BioMedical Engineering & Biomaterials); Mark Qu (Tianjin University); Novamedik.
- 09:45 – 10:25 hrs.** **KEYNOTE**
Creating new business opportunities based on bioconversion technology
- 09:45 – 10:05 hrs. **Prof. H.J. Heeres & Dr. A. Heeres:** *Chemical conversion to green chemistry*
 10:05 – 10:25 hrs. **Dr. D.J. Binnema & Prof. G.J. Euverink:** *Bioconversion*
 Substantive positioning and explanation towards chemical conversion and bioconversion. Short exploration of possibilities and opportunities for Northern Dutch business in relation to and with China.
- 10:25 – 10:45 hrs.** **BREAK**
- 10:45 – 11:30 hrs.** **KEYNOTE**
Sharing 3 best practices in Biobased Business
- 10:45 – 11:00 hrs. **Daan Levy – New Marble:** *Production of tiles made from plastic waste*
 11:00 – 11:15 hrs. **Steven Bruyninckx – DMO:** *Car bodywork made from hemp*
 11:15 – 11:30 hrs. **Heinrich Wörtche:** *Sensor Technology in Agro Processing: Agriculture 4.0*
 11:30 – 11:45 hrs. **Mark Qu – Novamedik:** *Earthworm line*
 Inspiring examples of developments of which the market may not even know yet, which are promising and can be seen as leading examples towards the future.
- 11:45 – 12:00 hrs.** **KEYNOTE**
Best practices in Sino Dutch co-operation
- 11:45 – 12:00 hrs. **Yufang Guo - JOMEC:** *Strategic co-operation with China*
 Chinese-Dutch entrepreneur with extensive experience in the Sino Dutch business. His vision on how to set up a good Sino Dutch collaboration.
- 12:00 – 13:00 hrs.** **WALKING RESEARCH LUNCH**
- Reach out to researchers from different educational institutes.
 Gain understanding on exciting developments and opportunities which are conducted by professors, researchers and students.

- 13:00 – 13:50 hrs. **Workshop**
Sino Dutch business culture
GCI – Xuefei Cao, MSc
- 14:00 – 14:50 hrs. **Workshop**
Matchmaking
 Matchmaking with joint research lines with Dutch and Chinese partners. Opportunity to gain some deeper understanding and possible interactions between the companies and the research lines presented during the walking lunch. For more details see below.
- 14:50 – 15:00 hrs. **Break Coffee/Tea**
- 15:00 – 16:00 hrs. **Workshop**
Pitches, *The added value of business platforms*

 - **Dairy Valley – Joep de Vries:**
Innovative platform to stimulate dairy business, today USA, tomorrow China?
 - **Chemport – Errit Bekkering:**
Incubator for green chemistry – triple helix
 - **Bio Portal by Triade - Ronald Hesse:**
Supporting companies' transition via educational institutes
 - **ZAP/FACT – Rob van Linschoten & Sytze Wiegersma:**
Facilitates testing environment for tasting
 - **RUG & Business Development – Wanli Zheng:**
Combining innovation businesses and opportunities with a PhD
- 16:00 – 16:20 hrs. **Wrap-up Victorine de Graaf and Q&A**

 - **Intentions for the future:**
 - *Let's further explore Sino Dutch co-operation and find more matches*
 - *Let's organize a conference like this once a year to meet and to explore the chances for Sino Dutch co-operations, for business, research and knowledge. There are so many stories, examples and interesting themes to be shared*
 - *Let us make ourselves more visible as a platform. We need to be clear about what we do and what we can do for Chinese and Dutch companies*
 - **Time for questions from the audience**
- 16:20 hrs. **Closure Uno Sissingh & Jan Klerken**
Thank you & invitation for a drink or follow up with you
- 16:30 – 17:30 hrs. **Mingle, Socialize and Network**

Company descriptions

New Marble

New marble is a brand-new material made from old plastic bottles in new marble looking wall tiles. New Marble tiles are produced from 100% recycled PET plastic waste. They can be used for wall applications like conventional ceramic tiles, using conventional tile glue and grout. It's 40% lighter than normal tiles and has a warm feel that makes it a perfect fit for bathrooms and other surfaces you touch. New marble launches in 3 colors that reflect the 3 main streams in PET bottles; blue, green and white. In the near future new colors and custom colors will be released.

Website: <http://www.newmarble.nl/>

Contact: Daan Levy

DMO Sport Cars

DMO Sports Cars is a British manufacturer of high-performance sports cars who supplies vehicles fully built or in component form, ready for home assembly. In 2017 DMO acquired the rights to manufacture the Legend. The first Seven-inspired roadster to utilize the high-quality mechanical donor components from the award-winning BMW 3-series. Currently DMO Sports Cars is one of the partners of the Hanze University of Applied Sciences Groningen where the use of Hemp as biobased material for car bodies is being researched. The objective is a biobased 3D printable car. 3D printing will offer new creative opportunities for car design and bespoke customer design wishes. The only limit is your imagination.

DMO is also involved in the development to apply CNG technology for Hydrogen Combustion Engines in collaboration with Auto Special and Hyde Motor Works. It is a climate adaptive remediation project with a roar!

Website: <http://dmosportscars.com/> <http://www.newmarble.nl/>

Contact: Steven Bruyninckx

Novamedik

The private company Novamedik Bio research B.V. is located in Groningen and is active in the sector Biotechnological research and development work in the field of agricultural products and processes. The aim is to create business opportunities for Chinese and Dutch SME's, therefore Novamedik holds network with venture capital as well.

Website: <http://novamedik.com/>

Contact: Dominic Schiller

Bio Portal B.V.

Bio Portal aims to identify, co-develop and help fund young ideas and projects in the field of Biobased Economy. Bringing SME, industry, educational institutes and funding together.

Website: www.biocooperative.nl

Contact: Ronald Hesse

JOMEC

Jomec is a leading independent investment bank for global China-related businesses. They provide comprehensive support and advisory services for corporate finance practice specializing in China-related M&A, capital-raising and IPO, strategic development, investment management and introduction of European capitals and resources for China regional development. Jomec's team consists of highly experienced financial and legal professionals with both Chinese and European educational and career experiences.

Website: <http://www.jomec.nl/en/>

Contact: Yufang Guo

Dairy Valley

Dairy Valley located at Dairy Campus in Leeuwarden aims to become within 10 years the leading innovative and sustainable dairy chain of the world. A true example of Tripple Helix where agricultural/dairy companies (over 80 companies) are strongly collaborating with governmental bodies and educational institutes.

Website: <https://www.dairycampus.nl/en/Home.htm>

Contact: Joep de Vries

Chemport Europe

The incubator for green chemistry located in the region well known for its chemical character: Eemshaven, Delfzijl and Emmen. These three clusters have bundled their powers, connections and expertise in Chemport Europe offering a dynamic ecosystem for companies committed to a greener chemical sector.

Website: <https://www.chemport.eu/>

Contact: Errit Bekkering

Northern Application Centre (ZAP)

The Zernike Advances Processing facility is a semi-industrial environment where knowledge institutions and businesses collaborate on innovative solutions for the Biobased Economy. Entrepreneurs can contact ZAP facility with applied research questions, where ZAP uses the experience and network of these entrepreneurs to market new biobased products or to make (chemical) processes more sustainable.

Website: <http://www.zapgroningen.nl/en-gb/about>

Contact: Rob van Linschoten

Northern Application Centre (FACT)

The Food Application Centre for Technology, (FACT) is a pilot research and demonstration facility where knowledge institutes and businesses collaborate on innovative solutions for food and dairy processing. Entrepreneurs can contact FACT for applied research, demonstration and special Food Processing courses. FACT has a network in science and industry to make innovations happen.

Website: <https://www.vhluniversity.com/research/fact>

Contact: Koos Oosterhaven

Municipality of Groningen

Groningen is the main municipality as well as the capital city of the eponymous province in the Netherlands. Groningen is a lively university city, with an estimated 30,000 students at the RUG and estimated 25,000 at the Hanze University of Applied Sciences Groningen. The city council of Groningen recognizes and endorses both educational institutes to expand locally and cross-border with different initiatives in order to support and further develop the Northern Netherlands economically and socially. Already the city of Groningen is internationally recognized as an innovative start-up hub. Ranked 2nd of the Netherlands after Eindhoven

Website: <https://gemeente.groningen.nl/english>

Groningen Confucius Institute

The Groningen Confucius Institute (GCI) is a partnership between the Communication University of China (Zhōngguó Chuánméi Dàxué) and the GCI Foundation, which consists of the Hanze University of Applied Sciences Groningen, the University of Groningen and the city of Groningen. GCI is part of a wide network of Confucius institutes all over the world and is supported by Hanban China. Our goal is to strengthen mutual ties between China and the Netherlands and north-western Germany. By combining our strengths and knowledge at GCI, we offer services in the areas of language (Chinese courses, HSK Tests and English/Dutch-Chinese translations), culture (cultural courses, tailor-made training and cultural events) as well as business (business training, networking activities and consultancy).

Website: <https://www.confuciusgroningen.nl/en>

Contact: Xuefei Cao

Faculty of Science and Engineering, University of Groningen

The Faculty of Science and Engineering harbours a kaleidoscope of disciplines and research strengths. Our programmes in research and education range from nanomaterials and biomachinery to astronomy, from mathematics to pharmacy, from neurosciences to computer science, and from molecular and evolutionary biology to marine biology. Our researchers pursue fundamental key questions while collaborating with partners from industry, the medical world and other realms of society. Frontline research groups explore new fields such as synthetic biology and sustainable energy use. To fully harness the opportunities for interdisciplinary research in a broad faculty and to play to the faculty's research strengths, research is profiled by four themes: Advanced Materials, Molecular Life and Health, Adaptive Life, Data Science and Systems Complexity. Research at the faculty is done in a number of research institutes, for instance, ENgineering and TEchnology Institute Groningen (ENTEG) and Zernike Institute for Advanced Materials (ZIAM).

For international collaboration, China is one of the focus countries. The faculty is currently developing a Sino Dutch network for science industry co-operation, which is open to new academic and industrial partners.

Website: <https://www.rug.nl/fse/>

Contact: Bart van de Laar

Van Hall Larenstein

The most sustainable University of Applied Sciences in the Netherlands, with a focus on the domains Delta Areas and Resources - Food and Dairy - Animal and Business. As a university of applied sciences, they conduct high-quality practice-based research which enhances both their teaching and their position as a research institute. Located in Leeuwarden

Website: <https://www.vhluniversity.com/>

Contact: Koos Oosterhaven

W.J. Kolff Institute for BioMedical Engineering & Biomaterials

The institute is named after Willem Johan Kolff, who developed the first functioning artificial kidney in the 1940th and saved lives of millions of patients ever since. The use of biomaterials implants has become an integral part of modern health care in the Western world. Modern health care could not even exist without biomaterials and the restoration of function after oncological surgery, trauma or simply wear due to advanced age would be impossible. The mission statement of the W.J. Kolff Institute is to establish a centre of expertise for the entire stage of biomedical materials science and its application involving basic materials science, medical product development and clinical evaluation that will contribute to the long-lasting well-being of patients in need of biomaterials implants and extra-corporal support systems.

Website: <https://www.umcg.nl/EN/Research/InstitutesProgrammes/WJKolff/Paginas/default.aspx>

Contact: Prof. dr. Y. Ren

Saxion University of Applied Sciences

University of Applied Sciences, one of the largest institutions of higher education in the Netherlands. Recognized as an important center of expertise at regional, national and international level.

At Brain and Technology, the research group of Prof. J.W. de Graaf, is involved in the connection of Technology and human behavior. By taking into account learning processes such as those known from human cognitive science, technical interventions can gain enormous in psychological relevance. This creates much better control options and a flexible and especially scalable human-machine interaction. To this end we develop mental and psychological “grids”.

Website: <https://www.saxion.edu/site/>

Contact: Caroline van de Molen

Hanze University of Applied Sciences

Hanze University of Applied Sciences Groningen, is located in the vibrant student city of Groningen. They have a wide variety of international Bachelor’s and Master’s programs, Certificate and Exchange courses, the Hanze Summer School and Preparatory courses.

Applied research and innovation is highly integrated in their academic programs. Within the Knowledge Centre Biobased Economy a new Professorship Biobased Business Valorization (BBV) is being developed. Making the crucial connection towards commercialization. The Hanze University of Applied Sciences Groningen has various modern facilities on campus to offer its students. A strong start with the new Professorship BBV has been made together with 15 companies (MNE’s and SME’s) an overview can be found of at the end of this document.

Website: <https://www.hanze.nl/eng>

Contact: Jan Klerken & Uno Sissingh

The following companies are open to matchmaking, next to the organizations mentioned in the previous pages:

Greenferm

Greenferm focuses on the processing of livestock manure (cattle, calves, pigs and sow manure). Their business model is based on the new fertilizer legislation of 2014 that obliges farmers to process 52% of their manure surplus. Core activity of Greenferm is processing and upgrading these residual flows to high end quality products being used in agriculture. Greenferm is allowed to process 350.000 metric ton per year. For this a large-scale manure treatment Ecofactorij in Apeldoorn is realized and manure volume is reserved by contracts with farmers. The final product is dried manure, in raw powder form, which is exported mainly to France and Germany.

An additional opportunity arose with a new processing step after the drying process, via conversion by worms. Manure of worms forms high quality compost substance. In addition to a higher quality end product, the large-scale cultivation of worms also seems to be an activity that can be integrated into the value chain. The condition is that research must be carried out to determine whether the worms can actually take up the manure drier.

Website: <http://www.greenferm.nl/>

Mobacc Aerosol Technologies

Mobacc Group, consisting of Mobacc, Eurofill and Rust Control International, is one of the leading players in the European aerosol industry, developing and filling technical aerosol products, rust-resistant coatings, lubricants and paint. Mobacc produces tens of millions of aerosol products every year on the twelve production lines in their fully equipped and state-of-the-art factories in Veendam and Zaandam. These products are distributed worldwide under their clients' own labels (private label).

Product and production safety are the spearheads of Mobacc's policy.

Website: <https://www.mobacc.com/>

Syncom

Syncom is a global leader in providing the pharmaceutical and biotech industries with custom synthesis solutions. Syncom has an excellent track record dating back to the foundation of the company in 1988. They count both leading global pharmaceutical companies as well as small virtual start-up companies among their clients. In addition to the pharma activities they serve the diagnostic, fine chemical, electronic and pigment industries as well. Syncom has a world class reputation when it comes to chiral technology. This is exemplified by their "Dutch Resolution" technology, their "Chirality First Time Right" service and Syncom's publications in leading peer reviewed scientific journals.

Website: <https://syncom.nl/>

Evabits

The kickstart of your embedded product development. EVAbits' engineers apply their expertise to assist companies in developing and realising their ideas for new products and services. We keep up with the latest developments in embedded systems design, software and hardware, to be able to empower our customers with optimal advice and products. Generating reliable data is integral to the whole chain, all the way from data generation to presentation. With our broad knowledge of product innovation, we can take care of the entire development, from inception to production and maintenance, or co-develop it close collaboration with the clients' own team.

Website: <https://www.evabits.com/nl/>

Bioclear Earth Groningen

Bioclear Earth is a company with expertise in the areas of innovation and technology for the circular economy, biological soil contamination and soil health. Bioclear Earth specializes in providing ecological solutions for environmental and environmental problems. Bioclear Earth focuses on creating value with the power of nature.

Website: <https://bioclearearth.nl/>

Eurofins Heerenveen

Eurofins Scientific is an international life sciences company which provides a unique range of analytical testing services to clients across multiple industries. The Group believes it is the world leader in food, environment and pharmaceutical products testing and in agrosience CRO services. It is also one of the global independent market leaders in certain testing and laboratory services for genomics, discovery pharmacology, forensics, advanced material sciences and for supporting clinical studies. In addition, Eurofins is one of the key emerging players in specialty clinical diagnostic testing in Europe and the USA.

Website: <https://www.eurofins.nl/nl/>

ESKA Hoogezand

Eska is the leading global manufacturer of recovered paper based substrates for a wide variety of industries and applications, including hardcover books, stationery, luxury packaging, puzzles and games and many more. Our mission is to provide high quality materials and solutions, while utilizing the best in sustainable technologies, that inspire creators to develop captivating and durable products for a better life experience. Today Eska produces more than 250,000 tonnes of solid board per year. This equals some 500,000 pallets. This board is sold to customers all over the world, who turn it into hardback books, files, notebooks, puzzles, games, luxury packaging and more.

Website: <https://www.eska.com/>

BioBTX

BioBTX is developing a technology to convert non-food biomass and end-of-life feedstock materials into cornerstone aromatic chemicals, with a focus on Benzene, Toluene and Xylenes ("BTX"), which drop-in chemical intermediates are widely used for the production of plastics. By using renewable carbon sources, a significant contribution to the circular economy will be made, reducing the use of fossil feedstocks and lowering emission of greenhouse gases.

Website: <https://www.biobtx.nl/>

Research Lines

BIOMASS RESEARCH TOPICS

1. Biomass Gasification

Use new technology (such as Metal catalyst from UG) to improve biomass gasification process.
By Yue Jun; University of Groningen, Feng Zhiyuan, Qin Jianguang

2. Syngas

A product of gasification that can be used for direct heating or can be liquefied into liquid products at small scale.
By Dong Renjie, China Agricultural University, Yue Jun, He Fang

3. Tar

Tar is a byproduct of gasification and is rich in many chemicals such as Benzene, Toluene and Cyanine and it would be interesting to derive-out some chemicals from it.
By Erik Heeres, Dong Renjie

4. Biochar

Innovative method of Biochar preparation and its application i.e. soil conditioner, C sequestration, and adsorbent.
By Han Kuihua, Du Jing, Feng Zhiyuan, Heeres Erik, Jin Hongmei, Li Jinxiao, Shah Ghulam Mustafa, Xiao Liang, Zhang Yanru, Yuan Guodong, Qin Jianguang

5. Biobased hemicals to Biodegradable Polymers

By Francesco Picchioni; University of Groningen, Wu Jing; Donghua University Shanghai, Fan Yiwei MSc; University of Groningen, Ton Broekhuis; University of Groningen

6. Lignin Separation, Conversion and Modification

By Fang Xu; Shandong University, Jinan/Qingdao; Kong Xiangping, Jiansu Academy of Agricultural Science, Nanjing, Erik Heeres; University of Groningen, Ton Broekhuis; University of Groningen

7. Enzyme Immobilisation for Polymerisation

By Liu Chun-Zhao; Institute of Process Engineering, CAS, Beijing, Peter Dijkstra; University of Groningen, Wu Jing; Donghua University Shanghai, Ton Broekhuis; University of Groningen

8. Pretreatment

Focusing on cellulosic feedstock pretreatment for biogas
Storage: by Guo Jianbin; China Agricultural University; University of Groningen
Hydrothermal pretreatment: by Luo Gang; Fudan University, Erik Heeres; University of Groningen

9. Solid Waste to Compost

Carry out research related to site-specific fertilizer development based on local Chinese feedstock and agricultural regional application

- a. Solid waste from crop residue & solid animal manure:
- b. Digestates

By Du Jing; Jiangsu Academy of Agriculture, Julius de Jong; Orgaworld Asia B.V.

10. Liquid waste for biogas

The liquid waste would be treated in two ways, storage lagoon and anaerobic digestion. In order to produce the green product, mitigation and pathway of heavy metal and antibiotics would be focused on in this research.

Storage lagoon: by Kou Wei; Liaoning Institute of Bioenergy Research Co., Ltd University of Groningen

Anaerobic digestion: Jin Hongmei; Jiangsu Academy of Agriculture, Luo Gang; Fudan University, Gert-Jan Euverink; University of Groningen

11. Cropland application

From the perspective of nutrient recycling, most of the products should be applied in the cropland. In this case, the risk assessment of products application and the nutrient recovery technology would be studied in this research.

Risk assessment of products application: by Yang Shoujun, China Agricultural University, University of Groningen

Nutrient recovery via membrane technology: by Julius de Jong, Orgaworld Asia B.V., Ye Xiaomei, Jiangsu Academy of Agriculture, Zhu Ning, Jiangsu Academy of Agriculture

12. A novel bio-based transition opportunity

Supercritical fluids applications performable , by Yu M, Miao & Kai Kniepkamp

Companies supporting and Involved in new Professorship Biobased Business Valorization

Research lines

1. **Companies' internal transition:** Research & Development, Marketing & Sales to develop eco-systems of partners with whom to create solutions
2. **External transition:** From producer to end-user developing eco-systems of partners with whom to create healthy and sustainable solutions
3. **Consumer Transition:** Create pull and increase willingness of consumer to pay for biobased value

Company name	Description
Akzo Nobel BV – Amsterdam	Experts in the craft of making paints and coatings, setting the standard in colour and protection since 1792.
Avebe – Veendam	Starch manufacturer and produces starch products based on potato starch and potato protein for use in food, animal feed, paper, construction, textiles and adhesives.
Corbion – Amsterdam	Food and biochemical company, produces bio ingredient-based foods, chemicals derived from organic acids, and lactic acid-based solutions for food, chemical and pharmaceutical.
Darling Ingredients – Son	Global leader in creating sustainable food, feed & fuel solutions from organic by-products.
DSM – Heerlen	Active in the fields of health, nutrition and materials
ESKA B.V. – Sappemeer	Global manufacturer of recovered paper-based substrates for a wide variety of industries and applications, including hardcover books, stationery, luxury packaging, puzzles, games, etc.
Koninklijke Euroma B.V. – Wapenveld	Europe's foremost partner of taste, providing food businesses with a total range of spice-based solutions.
Friesland Campina – Amersfoort	A global dairy company, one of the world's largest dairy cooperatives
HZPC – Joure	An innovative global market leader in potato breeding, seed potato trade and product concept development.
Bunge Loders Croklaan – Amsterdam	A leading producer of premium quality vegetable oils and fats.
Nedmag – Veendam	Extracting the magnesium salt using it for producing magnesium-products. European market leader with Dead Burned Magnesia
QSIL – Winschoten	A leading producer of fused quartz products, which are sold under the trademark ilmasil® and PH.
Royal Buisman – Zwartsluis	Using naturally caramelised sugars to strengthen the signature of – among others – coffee, cocoa drinks, bread and fine bakery products. Ingredients which improve flavour, colour and texture without gluten, acrylamide or E numbers being added.
Scelta Mushrooms – Venlo	Processor of mushrooms into a wide range of products, from freshly frozen and sustainably preserved mushrooms to healthier appetizers and natural taste enhancers.
Ten Kate Vetten B.V. – Musselkanaal	Produces sustainable animal fats and proteins for producers of food and animal feed, for the oleochemical industry and for use in a range of consumer products.