

18 Years Food-Processing Initiative e.V.

**Connecting competences for innovative solutions!** 

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## **TASTE THE FUTURE** COLOGNE, 09.-13.10.2021

ANUGA MEAT ANUGA BREAD & BAKERY ANUGA FINE FOOD ANUGA HOT BEVERAGES ANUGA DAIRY ANUGA ORGANIC ANUGA CHILLED & FRESH FOOD ANUGA FROZEN FOOD ANUGA DRINKS ANUGA CULINARY CONCEPTS

# YOUR NEXT DATE: COLOGNE, 09.-13.10.2021

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### 18 Years Food-Processing Initiative e.V. Commitment pays off!

Each and every period has its challenges. The food industry is constantly confronted with new technology and market requirements. With the foundation of the organization on the 17th November 2000, the top topics for the companies in the sector were product and process development, quality and safety as well as flexibility and new business concepts; all of which have remained to this day.

What is new is the dynamics providing momentum through digitalization, globalization but also through rising consumer demands for more transparency and sustainability. Being able to keep an eye on the complexity of the topics, to recognize trendsetting developments and to integrate them into one's own company are some of the greatest challenges that any company has to master.

The clever minds who developed the Food-Processing Initiative at that time were aware of this and came up with the idea of offering companies a contact point for precisely these issues: a network which connects expertise in order to master challenges and to guarantee a view beyond the horizon when time is lacking. In our network we are dealing with solutions, but also with safeguarding the opportunity of getting involved, when relevant and finding the right contact person for every idea and every challenge. This is our claim.

Asking questions, developing ideas, establishing partnerships, working together to bring 'crazy' ideas to life – all of these stimulates cooperation. This commitment pays off: for the dedicated companies and research partners, for the industry, for the region and for the network!

Therefore, the board of the Food-Processing Initiative e.V. would like to thank the founders for their far-sightedness, the committed members, collaboration partners and regional, national and international partner networks for the successful time. We are looking forward to future collaboration!



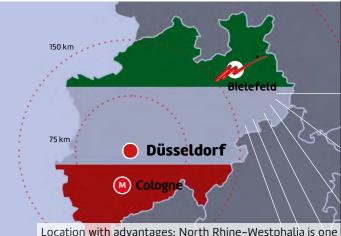
Norbert Reichl is looking for barriers that prevent companies from becoming better.



CONTENT

Prof. Dr. Andreas Pinkwart We support medium-sized companies on their way into the digital world! 7 Ursula Heinen-Esser On the way to Green Economy in the food processing industry 9 Norbert Reichl on networking in the digital era "Successful clusters are based on trusted relations!" 12 Innovation through technolog Drive for successful economic development 14 Innovations through networks Creativity grows best where people share their knowledge 24 The food industry in North Rhine-Westphalia 26 Gerald Böse on the importance of trade fairs in the digital age: "Face-to-face meetings are 28 becoming increasingly important" Process-driven innovation Innovation as a driving force in the company 32 About us! Regionally networked, globally successful 34 Innovation through talent Skilled employees are the key to success 42 Network statements! Our partners about the Food-Processing Initiative 44 References International cooperation and innovation projects from our network 52

3



Location with advantages: North Rhine–Westphalia is one of the leading economic regions.



Talking with Gerald Böse about knowledge transfer through trade fairs.

**Innovative together** 

## Members and partners of the **Food-Processing Initiative** introduce themselves

Alfred Willich GmbH & Co. KG, Versmold	17
Effizienz-Agentur NRW, Duisburg	18
Berief Nahrungsmittelmaschinen GmbH & Co. KG, Wadersloh-Diestedde	20
CSB-System AG, Geilenkirchen	22
Steinhaus Informationssysteme GmbH, Datteln	35
BÜFA-Gruppe, Oldenburg	36
Calvatis GmbH, Ladenburg	37
Fraunhofer-Institut für Molekularbiologie und Angewandte Oekologie IME, Schmallenberg	38
fjol GmbH, Münster	40
ZNU – Zentrum für Nachhaltige Unternehmensführung, Witten/Herdecke	41
Heinrich Schulze Ladencafé GmbH, Borgholzhausen	45
pbr NETZenergie GmbH, Rheine	46
Arbeitsgemeinschaft Getreideforschung e.V., Detmold	48
DLG (Deutsche Landwirtschafts-Gesellschaft), Frankfurt am Main	50
Glass GmbH & Co. KG, Paderborn	51



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The North Rhine-Westphalia Ministry of economics and mid-sized enterprises, technology and transport founds the Food-Processing Initiative.

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## We support medium-sized companies on their way into the digital world!

Digitalization and technology transfer are two topics that are currently of major concern to companies. Even the economic policy is focusing on the digital transformation, as there is one clear evidence: it is not only a major change, but also it provides new opportunities. However, it is also clear how difficult and complex it is, especially for SMEs, to deal with all the possibilities offered by modern digitalization and to establish and implement suitable processes and concepts.

We are therefore particularly pleased to support our medium-sized businesses on their way to digitization and look forward to working with chambers, trade associations, banks, academia and also networks such as the Food-Processing Initiative to support them in implementing digitalization and also in qualifying their employees.

Strong networking also helps with technology transfer - ranging from research to small and medium-sized enterprises - enabling us to participate actively with innovative ideas from one of the densest research landscapes in Europe, such as the one we have here in North Rhine-Westphalia. In addition, it is becoming a growing priority to combine the benefits of digitization with new products and processes of circular value creation.

Circular value creation means that new products, designs and processes are developed in which no more waste is generated, but the end products after use serve as the starting point for a new value creation. This reduces the consumption of resources and triggers additional growth effects. As you can see, there are so many challenges facing the food industry and you can also recognize that it is good to have access to strong networks and to be able to secure your own competitiveness through cooperation!

**Prof. Dr. Andreas Pinkwart** 

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With the support of the Ministry of Economic Affairs, the Food-Processing Initiative launched its first market exploration excursion to Russia in 1999.

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## On the way to Green Economy in the food processing industry

The food processing industry in North Rhine–Westphalia is characterised by high quality standards, a wide range of products, around 1,000 companies with almost 96,000 employees and a turnover of around 36 billion euros. Germany's top–selling food industry is represented by global players as well as small and medium–sized enterprises.

Several of them are already well on the way towards improving the efficiency and environmental compatibility of their production methods. Environmental issues such as sustainability and climate protection have already reached the centre of society. It is our responsibility to provide and apply practicable solutions to global challenges – as a federal state, as a company, as citizens.

The efficient use of resources and the transition to sustainable forms of economic activity are significant factors of successful business management for companies in the food industry. However, they are also the key to preserving our environment and the global climate whilst also expressing responsible management based on ethical principles. Due to the ongoing networking of companies and suppliers in the food industry with research institutions providing their scientific and technical expertise, the Food-Processing Initiative in North Rhine-Westphalia aims to promote the progressive process towards an even more resourceefficient and eco-friendly and processing of food.

The state government of North Rhine–Westphalia therefore welcomes and supports this highly successful initiative and is pleased to participate in joint projects – with the aim of making Green Economy a standard in the food processing industry.

#### **Ursula Heinen-Esser**



What challenges do small and medium-sized companies face? How can they be supported in solving these problems in order to remain innovative and competitive? Norbert Reichl, General Manager of the Food-Processing Initiative e.V., reveals how solutions to problems can be found on site – and how networking is evolving in the age of digital change.

Mr. Reichl, when companies are preparing for the challenges of today and tomorrow, it is inevitable to deal with the topic of innovation ... Innovations are the key for successful corporate management. After all, only those who can identify and implement the latest trends, or even better: those who set them, can survive on the market. Nowadays, being innovative no longer only means to develop new products and processes. In fact, the configuration of an internal innovation management must be the focus of attention.

Who is the more innovative, medium-sized companies or bigger corporates? In fact, due to their flat hierarchies, small and medium-sized enterprises are often more innovative than big corporations. It is no coincidence that numerous hidden champions arise from the German "Mittelstand." They are strongly oriented towards the demands of their customers, where they see a source of new ideas. But they rarely have the capacity and resources to manage everything on their own and to deal with strategic issues associated with systematic personnel and organizational development. The access

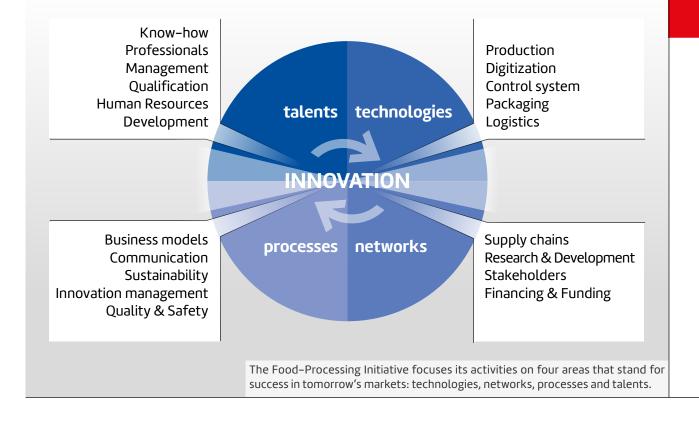
to adequate research facilities is also often lacking. The Food-Processing Initiative is open to all companies, which want to implement innovative ideas in cooperation.

Innovation management is a complex process. What are you suggesting? By connecting with each other, companies can solve the challenges they face and cooperate to develop new innovation potential. Successful clusters are based on trusted relations. The core idea of networks follows the idea of jointly improving the impact of actors, regardless of the competition, without forgetting about it. The most important thing is the willingness to cooperate. This is how on-site solutions are created for on-site challenges.

#### The individual company therefore needs partners: oth-

The association was founded on 17 November 2000. Starting from now, the topics of the Food-Processing Initiative e.V. are co-determined by the companies.





Innovations in our network are based on evolution, you never start from scratch.

er businesses, research institutions for technology transfer, business promotions. How does the Food-Processing Initiative support the quest? Systematically and from the root. In other words, we network competencies from economy, science and politics, for example by organizing conferences or initiating workshops on specific topics. And we sound out the subsidies for innovative ideas.

You compare your tasks and those of your team in Bielefeld with those of Sherpas ... Without Sherpas, even trained alpinists would not be able to reach the summit of the greatest mountains. They secure the paths for the expeditions, build bridges over the glacial crevasses and help carrying the loads. The comparison is therefore accurate to the extent that we accompany the entrepreneurs on their way to new goals and we help them wherever the need arises.

How do you proceed? How does a cooperation typically unfold? First and foremost, it is a matter of bringing together the right partners of expertise and to create the right climate so that everyone sits down at the same table: companies, universities and also politics. This allows everyone to decide together what is intended to be attained in the network as a whole or in individual projects.

Where do you see the strengths of the Food-Processing Initiative? Innovations in our network are often based on evolution, you never start from scratch. Conversations show which approaches lead to solutions and how much effort is to be expected. The central question is: What are the barriers that prevent companies from growing or improving? – then you get to the right decisions! The next step is about implementation.

Many companies are already experiencing a lack of qualified workers. Doesn't the big challenge lie in finding good people? Especially for small and medium-sized companies the search for new employees is a huge challenge. Since 2015, the focus of our work has therefore been more intensively on skills and processes. A good example of this is PerLe, a project that meets the requirements of the personnel management in times of digital change. The aim is to qualify managers from regional companies for strategic personnel management. The participants exchange



**))** The central question is: What are the barriers that prevent companies from growing or improving? "

information in regular meetings so that a transfer of knowledge can take place on the basis of good practice examples.

Keyword Industry 4.0: Numerous medium-sized companies worked intensively on what digitalization means for their companies ... The digital transformation of the food industry is a very multi-layered phenomenon, as it affects not only the digitalization of processes, but also the work environments and economic structures. Proven solutions can rarely be found here. Therefore, it is not yet clear to most people how digital technologies actually provide concrete benefits. This is exactly where our projects set to Food 4.0 begin – with the needs of companies. Together we determine suitable digital solutions

for urgent issues such as quality assurance, extended durability or resource efficiency. Here we work closely together with the "Ostwestfalen-Lippe" University, where with the Smart Food Factory a development space for digitized food processing is being created.

What are the threads that will occupy your members in the coming years? The subject of digitalization will continue to gain momentum. According to our members, the greatest challenge lies in securing their own competitiveness. Especially for small and medium-sized enterprises, the increasingly fluctuating consumer demands mean permanent time, innovation and cost pressure. Due to technical improvements and the constantly growing product range, stakeholders along the

food supply chain have to adapt to faster change and shorter product life cycles. At the same time, resource consumption must be reduced to a minimum.

#### With the increasing demands in the industry, the demands on networking are also likely to increase

... We are faced with the question of how can we network, in future, facing the digital change as efficiently as possible on behalf of all partners? This is one reason why we have recently focused on the development of virtual spaces and collaborative network development, which enable project work to be carried out regardless of time and location. Together with two other clusters, we have created CLOU5 - a platform on which members have the opportunity to exchange information in specialized groups.

Food Competence Centre: The state of North Rhine-Westphalia supports the association's first application and thus the development of the network.

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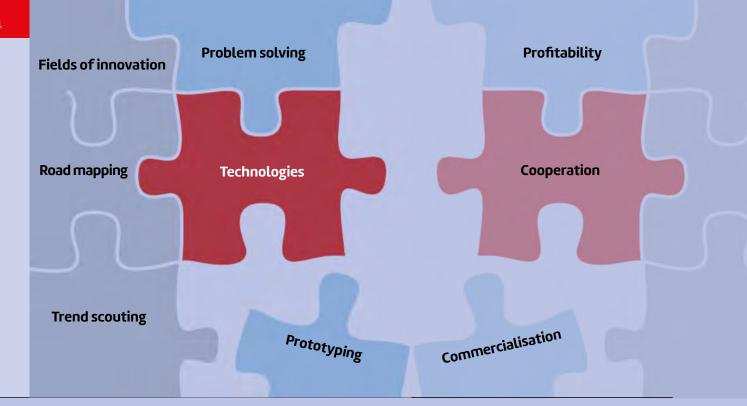
For small and medium-sized companies the search for personnel is a huge challenge. (()

How can teamwork be effective in a virtual room? The project management tools from CLOU5 and a conference system enable the secure processing of documents as well as the establishment of public and private groups for a trustful exchange. Over 300 cluster managers and members from 16 countries are already using this system for their work. Many of our EU projects are being coordinated on this platform. In this way, we create a pool of experience and knowledge that portrays the results of successful project work and can be accessed by companies at any time.

2018 was a special year for the network, as the Food-Processing Initiative e.V. was founded exactly 18 years ago. However, the roots of the initiative go back to 1996 ... The state initiative Food-Processing NRW was founded at the Bielefeld University of Applied Sciences with the support of the Ministry of Economics. We started more than two decades ago with the aim of strengthening the innovativeness of the region's food industry and thereby pushing North Rhine-Westphalia beyond its borders. With the creation of the association on 17 November 2000, we laid the foundation for our successful innovation network with over 120 members today - so now we have actually come of age.

You have been general manager of the network from the very beginning. What has changed during this time regarding innovation? Initially, the projects were almost exclusively technology or process-oriented. Over the years it became clear that innovation is more than just technology. Today, we concentrate our network activities on four central building blocks, which in our view stand for broad innovation capability: Technologies, Networks, Processes and Talents.

For the next few years, what have you set your sights on? We have a well-established network of clusters, researchers and cooperation partners in 18 European nations and want to grow further. To achieve this, we have to address a wide range of topics in order to be attractive for the versatile food industry, without getting bogged down at the same time. A further goal is to make the competencies united in the network even more visible on the national and international scale. ■



## Innovation through technology **Drive for successful economic development**

**Digitalization** is fundamentally changing the methods of industrial food production: human beings, production facilities, logistics and products all communicate and cooperate directly with one another, processes are self-regulating, individual customer needs can be implemented on industrial scale. Whole new business models become conceivable and the boundaries between the different production sectors become blurred.

**Consulting right from the start!** Innovations takes place at the junction between **market** and **technology**. Small and medium-sized enterprises in particular often do not have sufficient capacities in order to drive innovation projects forward. Would you like to know how innovative your company is and how you can improve its capacities for innovation? The Food-Processing Initiative supports companies of all sizes in ...

- ... the implementation of innovative ideas and the use of new technologies
- ... the quest for partners in economy, science and research
- ... the search for financial support for pioneering projects

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... the information sourcing on the latest technology trends

Award of the 1st NRW Cooperation Prize in the food industry. More than 100 companies and research institutions take part.

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New technologies leading to marketable products are one of the most challenging management activities because they involve a high degree of uncertainty, risk and complexity. **Are you able to identify the most promising idea and turn it into a successful innovation?** The partners in the Food-Processing Initiative's network cooperate in this process: from research and development of new technologies to market launch and international commercialization of ...

- ... process innovations
- ... product innovations
- ... innovative business-models
- … innovative service-models

### Projects of the Food-Processing Initiative Food 4.0: From digital strategy to realization





The challenges for food companies are becoming increasingly complex. With its work, the food processing initiative provides important impulses and creates sustainable solutions for the industry. (()

Prof. Dr. Ing. Ralf Hörstmeier, initiator of the initiative and honorary member of the Food–Processing Initiative e.V.

NRW tischt auf: the cross-sector congress 'Between Innovation & Tradition' is organized together with the University of Witten/Herdecke.

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## "Medium-sized companies far more innovative than big companies"

The Alfred Willich GmbH & Co. KG is located in the heart of Westphalia with its typical sausage and meat industry. The family-owned company from Versmold develops tailor-made dipping and coating compounds for the refinement of sausage and ham products. An interview with managing director Volker Willich.

Mr. Willich, what are the success factors of a medium-sized family business? Medium-sized companies are faster, more flexible and often a lot more innovative than bigger corporations. The key success factors are customer proximity and product knowledge. These factors promote corporate success, bind customers in the long term and make the company attractive for qualified employees.

In this context, what role do networks such as the Food-Processing Initiative play? They are the key to more innovative strength and competitiveness. They support small and medium-sized companies and offer a platform to report about their own activities and actions. They help to rethink everyday processes and provide suggestions for new approaches.

An important aspect of networking involves exchange, because the learning impact from and with others is usually bigger ... Other industries often face similar challenges. The Food-Processing Initiative stands for a wealth of expertise which we implement in our company in our own way. But the exchange within the network also brings acknowledgement for one's own path – a kind of benchmark that you don't get from market studies and statistics.

What are you currently focusing on in your entrepreneurial activities? We are currently focusing on innovations that fit into our portfolio and at the same time address new markets. We are continually expanding our range, as evidenced by the fact that Clarys Food Ingredients and Willich Tauchmassen have been linked since 2015. Moreover, with the slogan '4 Brands with 1 Vision', four brands have united under the CeWeCon umbrella that follow one guiding principle: developing, manufacturing and selling solutions for the food industry.



**Volker Willich** Managing Director Alfred Willich GmbH & Co. KG 33775 Versmold www.willich-tauchmassen.de



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### Consulting for resource efficiency

In the run-up to the implementation of its new, resourceefficient concept, Staatlich Bad Meinberger used the PIUS financing of the Effizienz-Agentur NRW..

The beverage producer Staatlich Bad Meinberger reduces its water consumption by more than 4,500 cubic metres per year. Zentis, the Aachen-based manufacturer of fruit spreads, uses recycled water for pre-cleaning. And plant oil producer Walter Rau from Neuss achieves greater cost transparency, higher energy efficiency and lower CO<sub>2</sub> emissions. What do they all have in common? They have all benefitted from the advice offered by the consulting services offered by the Effizienz-Agentur NRW (EFA).

Due to its strength and high relevance for resource use, the food industry is a core sector for the Duisburger Effizienz-Agentur NRW, an efficiency agency based in Duisburg that operates eight regional offices throughout North Rhine-Westphalia in addition to its headquarters based in Duisburg. But what is the task of the EFA?

"It was founded more than 20 years ago on the initiative of the North Rhine-Westphalian Ministry of the Environment as an independent service provider to boost resource-efficient management in industrial and craft enterprises," explains the EFA Managing Director, Dr. Peter Jahns. By providing resource efficiency consulting, the agency supports manufacturing companies in making their products and processes as efficient as possible and thus reducing costs and environmental pollution. In addition, it offers financial advice for research and development as well as investments and accompanies the implementation of the necessary measures. Moreover, the EFA provides regular information on current developments regarding these topics during events, training courses and workshops.

#### Innovative concept reduces water and chemical consumption

But back to the examples: Bad Meinberger reduces its water consumption with the help of an innovative CIP plant concept, which leads to energy savings of over 100,00 kilowatt hours per year and a reduction of CO2 equivalents of almost 22 tons per year. In order to reduce the need for fresh water,

More than 200 companies and institutions from all branches of the food industry take part in the competition 'Cooperation and Innovation in the Food Process Chain NRW 2004'.

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the wastewater volume and thus the costs, Zentis successfully relied on the development of an innovative membrane process to reprocess parts of the cleaning water. The recycling of the treated process water reduces the freshwater requirement and the amount of waste water by 52,000 cubic metres per year. Nowadays at Walter Rau, an improved, preventive maintenance management system ensures annual savings of 424,000 kilowatt hours of energy and 240 tonnes of CO2 emissions.

#### Resource efficiency has arrived in the sector

For Peter Jahns, these examples are only a small part of the many advisory activities of the EFA, carrying out around 250 projects and more than 200 events each year. "The fact is: In Germany, the cost of materials has fallen steadily in the past few years while at the same time the gross domestic product has increased. This shows that the topic of resource efficiency has arrived in the industry. However, it is also a fact that this is not yet happening to the extent that the urgent problems of raw material scarcity and environmental pollution caused by extraction, production and disposal can effectively be countered," states Dr. Jahns.

Neutral consulting partners such as the EFA, offering their services in the areas of production, product and cost accounting and their experience in the field of resource efficiency, truly provide valuable support in the network of the Food-Processing Initiative.

Ilona Dierschke Ressourceneffizienz-Beratung Effizienz-Agentur NRW (EFA) 47119 Duisburg www.ressourceneffizienz.de

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### "Knowing where" determines success!

For Theodor W. Berief, the Food-Processing Initiative's network is a useful instrument which enables him to think outside the box.

The Berief Nahrungsmittelmaschinen GmbH & Co. KG manufactures systems for the thermal treatment of food products in Wadersloh-Diestedde. With its machines, plants and production lines, the medium-sized company is successfully established on the international market. "Progress is born from ideas," says Theodor W. Berief. The company owner sees networks as further supporting instruments for entrepreneurial action.

Mr. Berief, you have been planning and producing high-performance machines for the thermal treatment of food for over 70 years. Which changes have taken place during this time? Theodor W. Berief: The markets work in different ways today. In the future, regions with large populations and growing incomes will only be able to meet the demand for food through continuous processes with high capacities. In Europe we notice the opposite trend, characterized by shrinking batches with an incredible range of products. As plant manufacturers, we see this as our future challenge: in the development of flexible solutions for markets with both large and small batch sizes, with increasing total capacities.

What are the demands to which a medium-sized mechanical engineering company must respond today? Consumers want fresh food with a long shelf life. To achieve this, the systems must reach the highest hygiene standards – while taking economic efficiency into account. As a result, food producers come much closer to the clean label target, which lowers raw material costs and increases product quality.

In addition, there are the aspects of gentle food processing ... Our strength lies in the production of natural flavours by braising and frying. The thermal processes of our plants are based on the gentle homemade method. The taste aromas are formed naturally. Food producers thus come significantly

For the first time, the network of the Food-Processing Initiative is involved in a project from the 6th EU Framework Programme.





closer to the Clean Label goal, which reduces raw material costs and increases the quality of the products.

What role do networks play for you? Short distances ensure fast and flexible solutions. The factor "knowing where" is decisive for success, and we find it in networks such as the Food Processing Initiative. They enable us to look beyond our own horizons and make new contacts. This is how we came across Surface4Food, a network dedicated to refining surfaces and effective cleaning.

What are the current areas of challenge? We are intensively focusing on the topic of 'Industry 4.0' and are continuing to expand our ERP system. In the future, we want to expand our services targeting food producers by providing training on our machines.

As a member of the Food-Processing Initiative, how do you benefit from the transfer of knowl-

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edge between research and industry? A funding project with the Ostwestfalen-Lippe University of Applied Sciences has been established via the network. Aim of the project is the distillation of essential oils from herbs with newly developed plant technology. We are currently working on a prototype which will allow us to develop new process parameters.

What do you expect from the results? In the end, there should be a marketable process plant capable of extracting essential oils in a very gentle and energy-saving way.

> Dipl.-Wirt.-Ing. **Theodor W. Berief** Managing Director Berief Nahrungsmittelmaschinen GmbH & Co. KG 59329 Wadersloh-Diestedde www.berief.de

> > 2017



2018

2019



## Teamwork in the heart of Asia

With its portfolio of software, hardware and services, the CSB Group has consistently specialised in the process industry and trade.

The fourth industrial revolution, the digital networking of the economy, is keeping food companies in suspense. In the future, business models will be based on the analysis of data and will function via IT and business platforms. The Food-Processing Initiative creates the platform for the food industry and CSB-System AG from Geilenkirchen successfully implements digitisation for the branch – a cooperation whose joint expertise extends as far as South Korea.

From the very beginning, the platform idea has shaped the cooperation between the Food-Processing Initiative and CSB-System AG. Back in the year 2000, around six months before the association was founded, Norbert Reichl and Dr. Klemens van Betteray contacted each other and met in Dortmund at the EuroPartner trade fair, where van Betteray gave a lecture on modern information technology and food safety. "Around 400 exhibitors, mainly from North Rhine-Westphalia, presented their performance profiles to a large specialist audience. The aim was to establish new business relationships between companies from industry, commerce and skilled trades," he remembers.

The automation solutions of the IT specialists from Geilenkirchen play a central role in the context of Industry 4.0. The joint activities with the FoodPolis technology center illustrate how the digitization of processes in the food industry is not only a topic here in Germany but receives great interest in South Korea as well. The leading Korean Food Cluster and the Food-Processing Initiative agreed in May 2017, during a visit to CSB-System AG, to strengthen cooperation in the areas of research, development and innovation.

Korea's international food hub is located in the heart of Asia, covering an area of 358 hectares and connecting ten research centres and over 160 food

The Food-Processing Initiative is partner of the EU-China Cooperation Exchange Agriculture and Food Economy in Chengdu.

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companies with 20 percent of the world's population. With this combined competence and the expertise of foreign partners, solutions are to be found for the global demand for food, whereby food quality and safety are the top priorities.

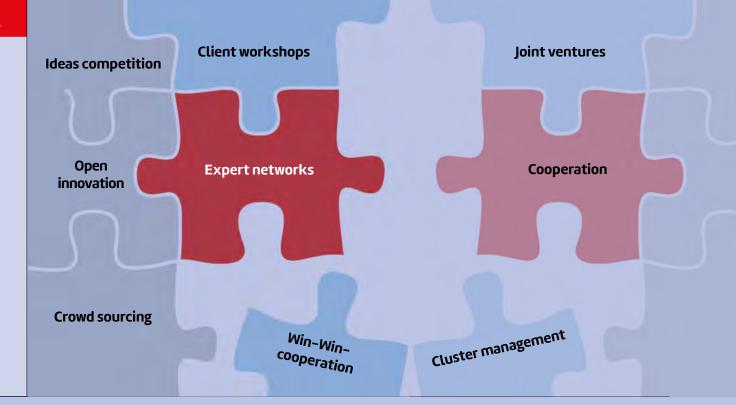
At the end of 2017, a German team of experts, including Klemens van Betteray, helped to shape the symposium 'Food Industry and the 4th Industrial Revolution' at the cluster's research centre in Iksan near Seoul. More than 200 participants attended the symposium, which was moderated by German and Korean experts. In addition to the conference and the visit to the laboratories of FoodPolis, the sausage producer S-Food and the State Control Authority for Meat Industry were visited. Moreover, a conversation was held with the representative of the German Embassy in Seoul. "Foodpolis is more than just a business platform. It is a place where experts come together to research and develop solutions for the complex issues of food production," explains van Betteray. A reunion with the Korean hosts has already taken place: The exchange continued in February 2018, this time in Germany.



**Dr. Klemens van Betteray** Vice President CSB-System AG 52511 Geilenkirchen www.csb.com



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## Innovations through networks Creativity grows best where people share their knowledge

Those who share their own skills with others and expand their knowledge remain **competitive**. This is exactly where the Food-Processing Initiative network comes in. We aim to bring the various players from economy, science and policy together. We arrange further contacts within our network in order to gain access to international markets or to establish collaborative projects with research institutions. And we support you in improving your own network – for example with our CLOU5 cluster management tool.

Are you ready for innovation? The ability to create networks will be decisive for economic success in the future. Developing relevant solutions in a methodical way is only possible within the framework of an **open innovation culture**. Thus, employees, cooperation partners and clients become innovation drivers. However, an essential part of network-based processes in small and medium-sized enterprises fails because of a lack of know-how when it comes to establishing new contacts in the longer term. The Food-Processing Initiative supports the ...

- ... innovation work in networks
- ... capacity building and technology transfer
- ... application for state subsidies
- ... organization and management of networks





Achieving something new together! Complex tasks or tasks distributed over several stages of the value chain cannot be mastered alone and in a single project. **The network of the Food–Processing Initiative brings together offer and demand for know–how and expertise.** Not only technical innovations are being considered, but also distribution processes and marketing strategies as well as personnel management are addressed along the entire value chain. In this trustworthy community we coordinate the ...

- ... development of an ecosystem of innovation
- ... transfer between research and economy
- ... exchange with experts on innovation topics
- ... use of cluster management tools

### Projects of the Food-Processing Initiative Circular economy for a future without waste

Stop the waste production! This is the vision of CirQuality OWL's partners. Energie Impuls OWL, InnoZent OWL, the Food-Processing Initiative, OWL Maschinenbau and the Verein zur Förderung von Innovationen in der Gesundheitswirtschaft OWL e.V are the five innovation networks in the region of Ostwestfalen-Lippe that combine their competences to realize this mission.

Core of the project is the circular economy and therefore products, components or materials which are designed from the very beginning in a way that they can be used in a continuous cycle – without ending up in downcycling.

If implemented rigorously, this will lead to a separation of the economic growth from the use of natural resources. Around 60 companies, universities and institutions are participating actively in the project. The Bielefeld University of Applied Sciences provides the anchor in engineering education with its Circular

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Economy study module. Dipl. Engineer Karsten Ollesch, authorized signatory and sales manager of the company Glass from Paderborn, Germany, explains: "Our future task is to increasingly



design more materials, components and complete assemblies for endless use. A task that cannot be completed by one company alone. The OWL networks enable interdisciplinary cooperation. With the support of the State of North Rhine-Westphalia, we can develop Ostwestfalen-Lippe into a model region for circular economy."

2017

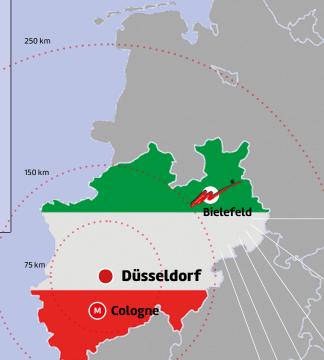
2018

2019

2020

## More information:

www.die-innovationsnetzwerke-owl.de



## Business location in the heart of Europe

The region of North Rhine-Westphalia is one of the leading economic regions as well as the most populous federal state in Germany. Its 17.9 million inhabitants generate over a fifth of Germany's total gross domestic product with around 705 billion euros and is therefore clearly at the leading edge of all federal states.

In a radius of 500 kilometers around the state capital of Düsseldorf are living approximately 160 million people. No other European metropolis has such great purchasing potential. The food value chain stretches from the input sectors of agriculture, over the food industry and the food craft up to the diverse consumer interfaces in food retailing or gastronomy.

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## The food industry in North Rhine-Westphalia

With its world-famous large-scale enterprises as well as small and medium-sized enterprises, the food industry stands for the power of innovation and high productivity. Especially medium-sized companies with up to 250 employees form the heart of the food industry. The strengths of this sector lies in its proximity to millions of customers all over Germany and overseas, a well-diversified industry and the availability of efficient suppliers of all kinds.

#### ■ Over 1.000 food processing companies with more than 109.000 employees are located in North Rhine-Westphalia.



■ With a turnover of **41** billion euros per year, this sector generates almost a quarter of all German turnover.

North Rhine-Westphalia is home to half of the 50 top-selling companies in the German food industry.

 More than 4,500 Young Professionals study and do their doctorate in more than
 40 study fields linked to the food industry.



■ The **three** leading international trade fairs Anuga, Anuga FoodTec and ISM are housed in Cologne.



The technology suppliers from North Rhine-Westphalia provide excellent food processing and packaging machines worth around **two** billion euros.



.....

500 km



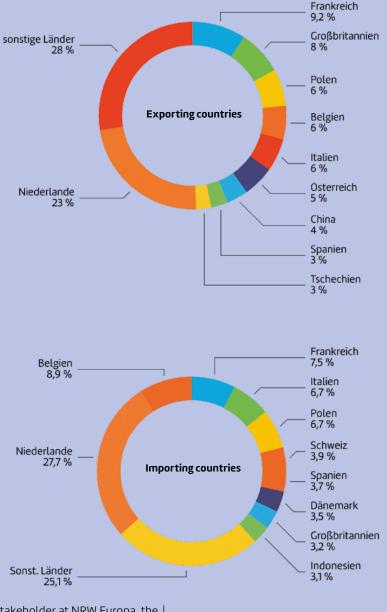
internal market is the focus of foreign trade.

Quelle: IT.NRW, VDMA NRW, Außenhandelsstatistik Nordrhein-Westfalen, Stand: 2017

## Market, trade and exports

An outstanding infrastructure, a central location and a highly qualified workforce make North Rhine-Westphalia the economic metropolis of international importance. The state ranks amongst the global leaders in numerous parameters.

In 2018, the North Rhine-Westphalian food and animal feed industry generated over 36 billion euros and exported goods worth 8.5 billion euros. North Rhine-Westphalia is the home of four of the ten top-selling food retailers in Germany: Rewe (3rd), Aldi Group (4th), Metro (5th) and Lekkerland (6th).



The Food-Processing Initiative network becomes stakeholder at NRW.Europa, the platform for Zenit's EU markets and the development bank for North Rhine-Westphalia.

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In 2008, Gerald Böse took over the position of head of the Cologne Deutz Exhibition Centre. The business economist is responsible for around 80 events each year, including world-leading trade fairs for over 25 sectors.

Gerald Böse on the importance of trade fairs in the digital age

## "Face-to-face meetings are becoming increasingly important"

Koelnmesse is the flagship of the entire region and the showcase of the global food industry. Gerald Böse is convinced: "In the age of digitalisation, leading international trade fairs such as Anuga or Anuga FoodTec are not only important, they are also becoming increasingly important." In an interview, the CEO of Koelnmesse GmbH reveals how he intends to keep the trade fair experience attractive for exhibitors and visitors.

Mr. Böse, with its 100 years, Anuga is the oldest marketplace for industry – and still at the cutting edge ... Anuga is without any doubt the world's largest and most important trade fair for food and beverages. It offers inspiration and networking at highest level, making it a must-attend event for many decision-makers. There is no comparable platform on which supply and demand and the entire business community as well as the entire innovative power of the respective sectors come so closely together.

How do you explain this success? Over the years, Anuga's consistent expansion into a trade fair, its qualitative selection and the constantly refined bundling of product categories, as well as its clear focus, have made it what it is today: an unrivalled event in terms of the breadth and depth of its offerings. On top of this comes the impressive concept, which has constantly been perfected and stands for the diversity of the food industry: ten trade fairs under one roof, each of them unique in its respective product segment.

B2B decision-makers today are able to obtain up-to-theminute information. Why are

#### trade fairs still needed in times of digital information exchange? Our aim is to connect people – and even in digital times, networking works best in analogue settings. Trade fairs are industry meetings to

Trade fairs are industry meetings to strengthen personal contacts with customers, distributors, business partners and journalists. Same is valid for trying out and experiencing different products, which becomes obvious to every visitor at Anuga or ISM. However, we also know that in a ten-year time the trade fair business will no longer function as it does today. Our mission is to combine both: The digital aspect and the personal aspect.

Trade fairs only last a few days. What effect does the combination of digital and face-toface offerings have? We offer services with which our customers can improve their trade fair success – such as the recording of

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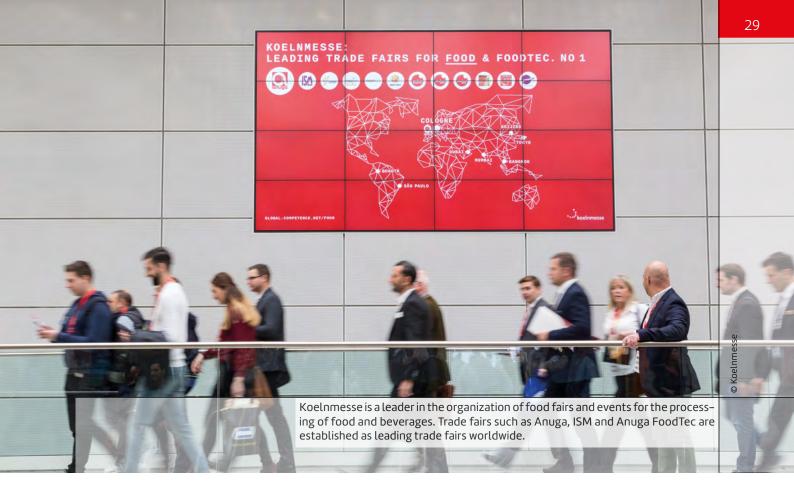
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visitor data using lead tracking. In addition, we invest a lot of energy in digital offerings, with which we are able to provide the unique selling proposition of our trade fairs 365 days a year. One example is ambista, a global B2B portal for the furnishing industry. We intend to establish similar platforms for other industries.

Koelnmesse has proven expertise in the food and food technology sectors. How do you rate their importance as innovation drivers? Anuga, Anuga FoodTec, ProSweets Cologne and ISM are leading international trade fairs with an extremely high percentage of foreign visitors. The development cycles of many companies are adapted to the rhythm of these fairs. Exhibitors profit from the platforms to present their innovations to a wide audience. At a trade fair like

#### We strengthen our core competencies in the areas we know something about. These include Food and FoodTec.

Anuga FoodTec, decision-makers can find everything in one place and experience plants in action without having to travel halfway around the world ...

This means that exhibiting companies do not necessarily have to go abroad? Absolutely. Especially small and medium-sized food producers use Anuga or ISM as an entry into international business. Koelnmesse is the only host to offer both trade-oriented formats and the appropriate capital goods platforms. The vertical orientation of our portfolio within the food industry is a strategic advantage with many synergies, since the exhibitors are also visitors to Anuga FoodTec and ProSweets Cologne.

The success of these trade fairs benefits not only you as organizer, but also the entire region. After all, almost 90 percent of Anuga exhibitors and well over 70 percent of the visitors come from abroad ... Cologne is home to two fields of competence: nutrition and nutrition technology. The geographical and economic factors also favour the trade fair location. We are located in the heart of Europe and are very well connected to the German and international transport network. In addition, there are numerous economic hubs in the catchment area.

Anuga' s supporting programme addresses many aspects of a broad societal discussion ... Today, nutrition is

Work on the Food2Market project begins. Together with partners from Germany, the Netherlands and Belgium, a unique competence region for food production is created.

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at trade fairs? How important are networks in this context? Trade fairs where people get together are always places of knowledge transfer. Networks such as the

more individual than ever. Anuga reflects the wishes of consumers for a healthy diet. On the occasion of the 100th anniversary of the trade fair, a special area entitled 'Anuga Horizon 2050' has been used to sharpen our focus on tomorrow's nutrition. A major trend is personalised nutrition.

Are we talking about a vision or already about marketable products? This is exactly the question we are asking at the Anuga: How can I create a diet



#### **))** The community between the trade fairs will continue to exist through networks such as the Food-Processing Initiative. "

tailored to my needs on the ba-

sis of my own genetics or specific

intolerances? With the Newtrition

X innovation summit, we have in-

troduced new trends in this area.

Anuga also has shown the first

examples from industry of what an individually tailored diet can

Speaking of knowledge

transfer: What role does it play

look like.

one of the Food-Processing Initiative ensure that the community between trade fairs continues to exist. On top of this, we have new offerings such as the digital platforms mentioned earlier or analogue initiatives such as incube8, where we bring together young companies and start-ups with established companies. Our aim is to promote the transfer of knowledge to a greater extent, regardless of trade fair dates, in order to consolidate the branch community.

The exhibition industry reflects global trade better than almost any other sector. How do you value internationalisation? Events abroad are an increasingly important support for our core business. Our trade fairs cover the entire value chain - not only in Cologne, but worldwide under the heading 'Global Competence in Food & FoodTec'. We specifically

promote synergies between inbound and outbound internationalisation, strengthen ourselves in our core areas of competence and create uniform brand appearances.

Which regions are you attracted to? In addition to further developing established markets in China, Southeast Asia and India, we focus on 'the Americas'. In March 2019, we celebrated the premiere of ANUFOOD Brazil, our own food fair in Brazil. The internationally oriented platform offers Latin American countries access to the world market.

What trends do you see with regard to the digital transformation of the trade fair business? It is about more efficient processes for registering and booking services, customer portals and much more. Our mission should be to offer visitors an experience that they are familiar with from the online world. These can be digital offers that make the preparation and follow-up of a visit less complicated, such as mobile tickets or matchmaking. In addition, the way exhibitors present their products and services plays an important role. Video mapping, virtual reality presentations or augmented reality provide fresh impulses.

What is your vision for the coming years? We have defined our goals for digital transformation. Koelnmesse 3.0, the largest investment programme in the company's history with around 700 million euros, is on schedule. Our vision is to expand our core business by 2025 with the business model 'Business Matchmaking-as-a-Service' and thus successfully transfer the marketplace principle into the digital age.

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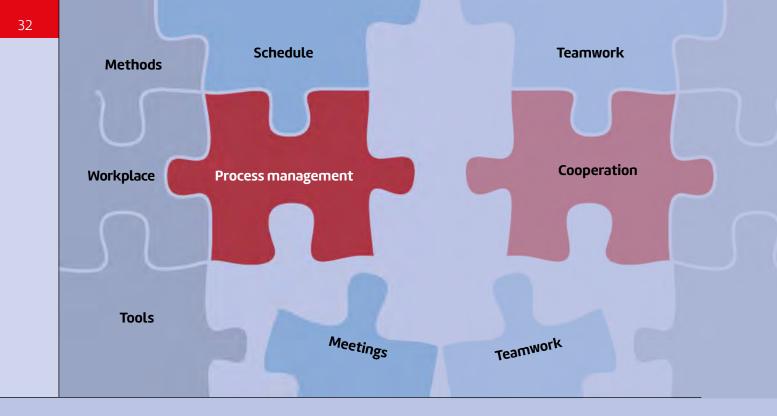
2006

## Members and partners of Food-Processing Initiative e.V. Working together for innovations in the food industry

AcanChia UG & Co KG	Kümmersbruck
agaSAAT GmbH	Neukirchen-Vluyn
ALBA-Gewürze Gehring & Neiweiser GmbH & Co. KG	Bielefeld
Alfred Willich GmbH + Co.KG	Versmold
amfora health care GmbH	
	Freystadt
Arbeitsgemeinschaft Getreideforschung e.V.	Detmold
aTmos Anlagenbau GmbH	Iserlohn
Berief Food GmbH	Beckum
Berief Nahrungsmittelmaschinen GmbH & Co.KC	
Bio-Security Management GmbH	Bönen
Biotec Klute GmbH	Borchen
BOGE Kompressoren Otto Boge GmbH & Co. KG	Bielefeld
BÜFA Reinigungssysteme GmbH & Co.KG	Oldenburg
Bureau Veritas Certification Germany GmbH	Hamburg
Calvatis GmbH	Ladenburg
ChainPoint GmbH	Bonn
Condio GmbH	Werder (Havel)
CSB-System AG	Geilenkirchen
Cysal GmbH	Münster
Danish Food Cluster	Aarhus/Dänemark
Deutsche Landwirtschafts-Gesellschaft e.V. (DLG	
Deutsches Institut für Lebensmitteltechnik e.V. (DIL	) Quakenbrück
Die Effizienz-Agentur NRW	Duisburg
Döinghaus cutting and more GmbH & Co.KG	Salzkotten
DrIng. Jochen Brose Sachverständigenbüro	Dortmund
Düpmann GmbH & Co. KG	Borgholzhausen
Eggelbusch GmbH & Co KG	Harsewinkel-Greffen
Energie Impuls OWL e.V.	Bielefeld
EXTRACHEM GmbH	Bielefeld
Felten GmbH	Serrig
Fjol GmbH	Münster
Flander's Food	Brüssel/Belgien
Food – Made in Germany e.V.	Hannover
FOOD Freshly AFC – Agriculture & Food Consulting GmbH	g Bielefeld
Food Information Service (FIS) Europe	Bad Bentheim
Food Professionals Köhnen GmbH	Sprockhövel
Food Valley NL	Wageningen/
	Niederlande
Foodjobs GmbH	Düsseldorf
FoodPolis	Iksan/Südkorea
Frankenförder Forschungsgesellschaft mbH	Luckenwalde
Fraunhofer Institut für Molekularbiologie und	
Angewandte Oekologie (IME)	
GEA Hilge Niederlassung der Tuchenhagen GmbH	Bodenheim
GIQS – Grenzüberschreitende Integrierte Quali-	
tätssicherung e. V.	
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Göring Hygiene Beratung GmbH	Hamm
	Hamm Meckenheim
Göring Hygiene Beratung GmbH	
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Göring Hygiene Beratung GmbH Grafschafter Krautfabrik – Josef Schmitz KG GS1 Germany GmbH	Meckenheim Köln
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Institut für Laborsmittaltashaalagia NDW @	Lomgo
Institut für Lebensmitteltechnologie.NRW @ Technische Hochschule Ostwestfalen-Lippe	Lemgo
Institut für nachhaltige Ernährung (iSuN),	Münster
Fachhochschule Münster	Mullstei
Interroll Trommelmotoren GmbH	Hückelhoven-Baal
Jüde GmbH & Co. KG Bäckerei und Lebensmittel	Hövelhof
Jürging GmbH	Versmold
Kahmann + Ellerbrock GmbH + Co.KG	Bielefeld
Karlchen's Backstube GmbH	Löhne
Kompetenznetzwerk Ernährungswirtschaft	Weinfelden/Schweiz
LI-Food – Landesinitiative Ernährungswirtschaft Niedersachsen	Quakenbrück
	Wise (Östernsisk
LVA Lebensmittelversuchsanstalt	Wien/Österreich
Magurit Gefrierschneider GmbH	Hückeswagen
Matiss Feinkost GmbH	Enger
MODUS Consult AG	Gütersloh
möhrings foodservice-Kompetenz	Waldesch
MPF GmbH	Telgte
mts Consulting Partner	Werl
Neoplas GmbH	Greifswald
Netzwerk Bioaktive Pflanzliche Lebensmittel	Stuttgart
@ Steinbeis2i GmbH	
NRW.Europa @ ZENIT GmbH Zentrum für	Mühlheim
Innovation und Technologie NRW	
OWL Maschinenbau e.V.	Bielefeld
pbr Netzenergie GmbH	Rheine
Point of Food GmbH	Recklinghausen
PPVT Industrieprojekte	Taunusstein
QFC – Quality Food Consult Dr. von Wiese	Bad Oeynhausen
QM Hygiene-Beratung Kathrin Oertel	Versmold
Rheinische Friedrich-Wilhelms-Universität	Bonn
Bonn, Institut für Tierwissenschaften	
RIELA Karl-Heinz Knoop e.K.	Riesenbeck
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After one year of development, the 'Innovations-Atlas Ernährung.NRW', the showcase of North Rhine-Westphalia's scientific competence, goes online.



### Process-driven innovation Innovation as driving force in the company

In times of **digital transformation**, executives are looking for methods, tools and models that help them overcome complexity and at the same time are suited to a new corporate culture. To achieve this, it is necessary to adjust personnel responsibilities, team structures and management tasks to the innovation processes. For that reason, it is crucial to know which leadership styles, which organizational structures and which methods succeed, what successful companies are doing differently and why.

**Opening the organization** both internally and externally is of strategic importance for innovation and competitiveness. Those who increasingly think in terms of partnerships and networks must refocus their company's corporate culture in the long-term in a way that enables them to respond with more flexibility to the market. It is therefore essential to integrate the ideas of all employees at any level and from each department. The Food-Processing Initiative supports your company...

- ... on the way to an agile and innovative organization
- **...** in the **development** of structured innovation processes
- ... in the **implementation** of new organizational forms
- ... in the incorporation of market, technology and societal trends

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The way you approach and structure your innovation strategy depends very much on your company and your ambitions. **Only a practice-oriented innovation procedure, structured according to different stages, allows sufficient room for creativity.** Through the shared use of resources within the network of the Food-Processing Initiative, you influence ...

... time to market

- ... cost to market
- ... risk to market
- ... fit to market

### Projects of the Food-Processing Initiative Successful cluster management with CLOU5

While classic social media platforms discourage small and medium-sized companies from answering sensitive questions because of their large public, CLOU5 provides the solution. CLOU5 stands for Cross-cLuster Open innovation GroUps. CLOU5 is a confidence-based open innovation platform that combines a variety of web-based tools for organizing projects, video conferencing and searching for experts. CLOU5 offers the opportunity to develop new innovations spanning several industries while also being a tool for the realization of shared projects.

The involved partners BalticNet-PlasmaTec, Inno-Zent OWL and Food-Processing Initiative involved in the project bring their expertise in a wide range of disciplines onto the platform, including plasma technologies for surface modification or disinfection, information technologies for the development of interconnected products, as well as knowledge relating to all aspects of food production.

## With CLOU5, cluster managers and cluster

members can collaborate internationally, regardless of individual hardware and software constellations, by providing access to the know-how of all participants with minimal effort. This enables members to organize virtual in-house seminars in private or shared groups using a video conferencing tool directly on the platform.

More information: www.clou5.net

In the go-cluster programme, the Food-Processing Initiative connects with the 100 best networks in Germany.

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Innovation

Groups



Beate Kolkmann

Dr. Klemens van Betteray Sabine Höfel

Prof. Dr. Mark Bücking

Norbert Reichl

In this section you will find videos and statements that give you an insight into our work. Prof. Dr. Mark Bücking and Dr. Klemens van Betteray from the board of directors of the Food-Processing Initiative e.V. and Beate Kolkmann, Sabine Höfel and Norbert Reichl from the Bielefeld team explain what successful networking is all about. Simply scan the QR code.

> Join us and become a member! Get involved in the Food-Processing Initiative and become part of our powerful industry network. Our association is open to all companies involved in the value chain of the food industry. Contact us and learn more about the advantages of membership.

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### Quick access to relevant information

Pressures and temperatures, flows and voltages, currents and state values: process data are the vocation of Steinhaus Informationssysteme GmbH. With the systematic consideration of relevant data within production processes, the family-run IT company from Datteln provides this data more efficiently than ever – since it was founded in 1980.

Steinhaus Informationssysteme GmbH was originally founded in Datteln as an energy consulting company. "It quickly became apparent that not only energy efficiency but also the entire production process has enormous optimization potential," says Marc Steinhaus, business development and authorized signatory. For him, the information in the process data is crucial in order to identify and exploit the potential for value creation in the processes.

The process chain in the food industry is long: from harvesting, breeding or production through processing to packaging and presentation on the shelves, the products pass through numerous stations. "Today, manufacturers not only have to produce as quickly and reliably as possible, but also as high-quality as possible and adapted to individual customer requirements. With our many years of experience in the assessment of industrial processes, we offer a comprehensive range of services around our central TeBIS system," says Steinhaus. Quickly accessible and sensibly visualized data allow food producers to react quickly – "but the backlog demand in the industry is massive in many places. The smaller the company, the greater the demand for industry 4.0 solutions," explains Steinhaus.

For him, the Food-Processing Initiative is a well-connected starting point for small and medium-sized companies to work out concrete solutions for digitization and networking. The short distances in the network mean that people know each other, which makes it easier to solve problems along the value chain. "Ultimately," so Steinhaus, " as solution providers, we have to be just as well networked as the facilities in the food industry."



Marc Steinhaus Business Development, authorised officer Steinhaus Informationssysteme GmbH 45711 Datteln www.steinhaus-informationssysteme.de



The 'Ideenfeuer' continues the success story of the cooperation award. More than 250 partners submit 52 entries to the competition.

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### Sustainability begins with head and heart

Chemistry and sustainability are not opposites for the BÜFA Group. As a company with a long tradition and high ethical corporate values, the Oldenburg company cultivates a fair, partnership-based cooperation with customers, suppliers and the public – a philosophy that is reflected in its commitment to the Food-Processing Initiative.

What does sustainability mean? Armin Schröder sees it as the continuous development of products and processes that protect and conserve resources. "As a medium-sized company, we have to react innovatively, quickly and flexibly to our customers' requirements and the changing markets as well as to ecological challenges," says the head of sales department for the food industry. He and his colleagues in Oldenburg rely on new chemistry and modern process technologies that harmonize economic efficiency with social responsibility.

The challenge: to minimize the impact on the environment through sophisticated system solutions in conjunction with optimum use of chemicals, water, energy and tailor-made application technology. This is illustrated by the example of the 'BÜFA power by nature' product series.

The active substance mixtures of these formulations are made up of natural, renewable raw materials and comply with the criteria for the award

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of the EU eco-label. "In this way, we also help our customers to achieve their sustainability goals," clarifies Schröder.

Thinking from the customers' point of view and developing innovations together with them is the central challenge for Schröder in the food industry. The integration of network partners into this process plays a decisive role: "This is how new products and services can be developed that are tailored precisely and successfully to the wishes and needs of the customers". And those who think at an early stage about what form of cooperation should be implemented in the company "are actually prepared for the future and secure their competitiveness sustainably."



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Armin Schröder Sales Manager BÜFA Reinigungssysteme GmbH & Co. KG 26133 Oldenburg www.buefa.de



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## "It's worth taking an interdisciplinary look!"

What influence does the construction of plants have on resource efficiency and what possibilities are there to make food production more sustainable? The eight partners of the network 'Sustainable Processes in the Food Industry' (NeNa Food) were looking for answers to these questions. Among them: the Calvatis GmbH. The cleaning and disinfectant specialists from Ladenburg were responsible for supporting the hygienic safety of the production facilities and eliminating risks in advance.

The cooperation project started in April 2012 with manufacturers and suppliers of the food industry and focused on the development of new technologies in the areas of emulsification, plant and equipment cleaning as well as process control. "The topic of sustainability, which is currently affecting the food industry and will continue to concern it in the future, has been aligned within the network to the optimisation of existing processes," explains Andreas Kuczera, marketing team manager at Calvatis. At the same time, the aim was to implement resource-saving processes within the respective supply chains as best practice approaches.

The Food-Processing Initiative coordinated and moderated the network activities between the individual partners. Due to its expertise, Calvatis took over the technical leadership in the area of hygiene

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On behalf of the Effizienz-Agentur NRW and the EnergyAgency.NRW, the Klimabäckerei (Climate Bakery) project is launched.

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management. This is an important aspect that has a significant influence on sustainability, because "the use of cleaning agents, water and energy can be planned in advance to conserve resources if the optimum cleaning processes are selected and all relevant measures in the supply chains are taken into account," points out Kuczera.

As a conclusion of the cooperation he states that "it is worthwhile to take a joint and interdisciplinary look at the respective process stage with all partners in order to become aware of the potential for resource-efficient food production" – not only in the supply chain 'from farm to fork', but also in the lifecycle chain of investment goods, plants and equipment.

> Andreas Kuczera Team leader marketing Calvatis GmbH 68526 Ladenburg www.calvatis.com

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## Food Chain Management for medium-sized businesses

The Fraunhofer Food Chain Management Alliance offers solutions for industrial partners, small and medium-sized enterprises and institutional sponsors on a national, European and global level.

The Fraunhofer Institute for Molecular Biology and Applied Ecology IME employs more than 500 people at locations in Schmallenberg, Aachen, Gießen, Münster, Frankfurt/Main and Hamburg. Prof. Dr. Mark Bücking, Head of Environmental and Food Analytics at Fraunhofer IME and speaker of the Fraunhofer Food Chain Management Alliance, sees the Institute's activities as closely linked to the Food–Processing Initiative's network.

Prof. Bücking, what questions are you currently dealing with? First and foremost we deal with the evaluation of food safety and consumer protection. Another aspect is the sustainable production of agricultural substances. The Fraunhofer IME is also a network of the Fraunhofer Food Chain Management Alliance - a cluster of currently nine Fraunhofer Institutes. The aim is to develop new approaches in food safety, microelectronics and logistics which can be integrated into the food chain and should enable high added value at low costs.

Since its foundation in 1949, it has been a traditional task of the Fraunhofer-Gesellschaft to fill the gap between science and industry ... Together

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with their clients, the institutes develop solutions that reach all the way to prototypes. The results are then passed on to the technology producer, who uses them to produce a marketable product.

Especially smaller food producers are wondering how they can cooperate with the Fraunhofer Institutes ... The easiest way is of course an industrial order, directly by the company to an institute. And the Food-Processing Initiative is also an ideal partner for initial contact. Then you sit down directly with the researchers. The bilateral discussions determine the scope of work, the costs and possible financing models. It should always be considered to what extent funding programmes can be used to address small and medium-sized enterprises.

© Fraunhofer IME

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How can the right institute be identified to initiate this dialogue? The Fraunhofer-Gesellschaft brings together 72 institutes and research units. Anyone interested in a project can easily get lost. There are 22 alliances for orientation and making contact, such as the Fraunhofer Food Chain Management Alliance. Here, institutes or departments of institutes with different competencies cooperate in order to work together on a business field. The alliances are the right contacts for companies.

What role do regional innovation clusters such as those initiated by the Food-Processing Initiative play? In fact, increasing complexity is a problem, especially for small and medium-sized companies. Here the experience and portfolio of the Food-Processing Initiative are an excellent opportunity to support companies with their network of food manufacturers, equipment industries and scientific institutions. The initiative is not only a first point of contact, but can also be a competent companion and advisor over the entire duration of the project.



**Prof. Dr. Mark Bücking** Head of Department Environmental and Food Analysis Fraunhofer-Institut IME 57392 Schmallenberg www.ime.fraunhofer.de



Work on SUSMILK begins. In the EU project for the green dairy industry, the Food–Processing Initiative is responsible for the transfer of results.

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### Implementing sustainability in a sound manner

fjol GmbH emerged in 2011 as a spin-off from the ZNU - the Centre for Sustainable Management - of the Private University of Witten/Herdecke. The combination of science and business offers customers a special combination of new scientific findings and high practical relevance. Ten employees at the Münster location cover a broad spectrum of knowledge and breathe life into the motto 'Implementing sustainability in a sound manner'.

fjol GmbH was founded by Dr. Axel Kölle and Dr. Christian Geßner, the two institute directors of ZNU, who have been successfully researching, teaching and advising on the subject of sustainability for over 16 years. Dr. Michael Raß joined fjol GmbH in 2016 as managing partner and has since strengthened the practical relevance of the company with his entrepreneurial expertise.

For him, sustainability has not become a fashionable topic, but an obligation for all participants along the value chain. "We enable companies to operate more sustainably and support them in the implementation of middle- to long-term strategies - from stakeholder analysis to successful sustainability audits," is how Raß explains the philosophy behind it. The special focus is on getting everyone in the company excited about the topic and taking it with them, in order to "generate the competitive advantages of sustainable management".

The core competencies of fjol GmbH include the development of an individual, holistic and long-term sustainability strategy as well as the accompanying monitoring of effectiveness. The introduction of the sustainability management system ZNU-Standard Nachhaltiger Wirtschaften, with or without certification, the measurement of ecological (and social) sustainability, climate and resource management and the accompanying support of organisational development are also part of the portfolio.

"Our services have led to innovative and successful solutions in numerous companies, from medium-sized family businesses to global players," says Michael Raß.



Dr. Michael Raß Managing Director fjol GmbH 48165 Münster www.fjol.de

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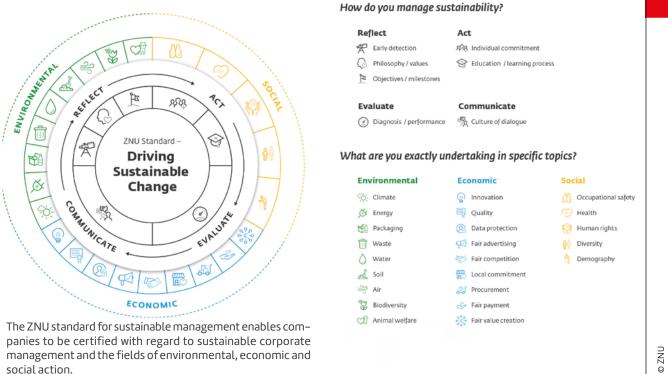
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#### **Rethinking corporate responsibility**

The ZNU – Centre for Sustainable Corporate Management – sees itself as a scientifically neutral platform with the aim of promoting and implementing sustainability holistically within the company and along the value chain, particularly in the FMCG sector. The application–oriented research institute within the Faculty of Economics at the University of Witten/Herdecke is headed by Dr. Axel Kölle and Dr. Christian Geßner.

With its interdisciplinary team, ZNU has been active in teaching, research, qualifications and consulting for more than 16 years. "The partner network now comprises around 70 members – including wellknown medium-sized food manufacturers, logistics and service companies, as well as scientific institutions and foundations," explains marketing director Patricia Kief.

The ZNU standard for sustainable business was developed in 2013 in order to be able to measure the changeover to sustainable management and to accompany enterprises step by step in their transition to sustainable management. "It is the only standard in Germany that has been tried and tested in practice and which can be certified, integrating sustainable corporate management in addition to the three sustainability dimensions environment, business and social affairs," says Kief. The possible, voluntary certification promotes and demands the

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development of an integrated management system for a more sustainable economy. In this way, the ZNU standard enables systematic and continuous improvement of performance, building on existing systems in companies ranging from small organic companies to global corporations.

By 2022 at the latest, the ZNU partner network has set itself the goal of achieving net climate neutrality at all its German locations. The partners commit themselves to a step-by-step process to demonstrably avoid, reduce and offset greenhouse gas emissions and to implement additional projects under the motto 'Education, Soil and Trees'. "However, the compensation only takes effect when all existing energy efficiency potentials have been exhausted. With this initiative, the partners not only commit themselves clearly to climate protection, but also act accordingly," emphasises Patricia Kief.



FPI goes Africa: Study on food processing in

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Tanzania and Zambia.

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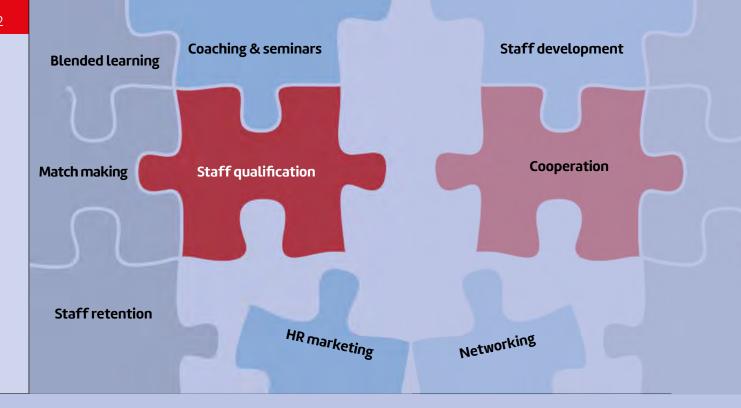
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Patricia Kief Marketing Director ZNU – Zentrum für Nachhaltige Unternehmensführung 58448 Witten www.znu-standard.de



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#### **Innovation through talent** Skilled employees are the key to success

Talent and innovation are interconnected. Small and medium-sized companies attach great value to professional personnel work and assign it a high strategic importance. With innovative talent management, they can determine which competencies and skills they consider key to their success and pinpoint creative minds who have them. Rather than just finding talent, it is important to hold on to it in the long run, since this is an active decision being made by the employees.

Finding and binding talents! For human resources managers, this task is not only a challenge in terms of content, but also an administrative one, which can hardly be mastered with traditional office tools. The main need for action in medium-sized companies is primarily to emphasize their own attractiveness on the labor market on the one hand and to improve the recruiting channels that accompany the recruitment process on the other. The Food-Processing Initiative assists companies with issues such as ...

- ... what do I need to recruit and keep qualified people?
- ... how do I communicate my profile as employer both inwards and outwards?
- ... which new approaches to recruiting can I take?
- ... which human resources development tools are best for my company?

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Early talent management is crucial in order to avoid shortages and to have enough time to find really suitable employees. **The ongoing interaction of the partners of the Food–Processing Initiative provides clear advantages here.** The goal is always to deepen the knowledge base for innovations in recruiting, employer branding and employee commitment by involving all actors from politics, sciences and economics, through ...

- ... innovative change management
- ... innovative concepts for e-learning & continuous qualification
- ... innovation-oriented HR development
- ... innovation competence in Human Resource management

#### Projects of the Food-Processing Initiative Successful HR development in the food industry

How do I attract and bind creative skilled workers and how can I effectively improve the qualifications of my employees? This question is answered by PerLe - a project of Food-Processing Initiative, which has been coordinated in collaboration with the Duisburg consulting firm innowise GmbH. The pioneering pilot project has been funded by the state of North Rhine-Westphalia and the European Social Funds.

PerLe stands for personnel management in the medium-sized food industry North Rhine Westphalia. For two years, twelve pilot companies took up the challenge and worked intensively to counter the current shortage of qualified workers and the demographic change. Extensive qualification offers were developed to cover the various areas of HR management. These include solutions for recruitment, personnel development and personnel loyalty as well as for the creation of a sustainable working environment in the companies.

Even after completing the two-year project period, members of the 'Personnel Manager Group' still meet regularly to exchange their experiences. The Food-Processing Initiative and the innowise GmbH experts keep on being the contact persons for HR management in the food industry.

More information: www.perlenrw.de

Excellent networking: The Food-Processing Initiative receives the silver label of the European Cluster Excellence Initiative.

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Klaus Meyer

Prof. Hans–Jürgen Danneel Markus Schroll

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Dr. Sylvia Pfaff

The diversity of our members is one of our greatest strengths. What can companies do to contribute their resources to and benefit from the network? Cooperation partners and members from different sectors had the opportunity to present their views on the Food-Processing Initiative network in video statements. Simply scan the QR code.



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**Perfectly networked!** Since 2011, the Food-Processing Initiative has been a member of the 'go-cluster' programme of the Federal Ministry of Economic Affairs and Energy, which, together with the European Secretariat for Cluster Analysis (ESCA), examines the member clusters. In 2015, the Food-Processing Initiative was one of only three food clusters to receive the silver label, which was reconfirmed in 2018.

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#### **Employee motivation as corporate vision**

When the scent of ginger, cloves and nutmeg spreads through the small town of Borgholzhausen in the Teutoburg Forest, everyone knows why it is called the gingerbread town. Filled hearts, gingerbread nuts or custom-made gingerbread hearts: Heinrich Schulze Ladencafé GmbH produces around 700 tons of pastries a year.

The specialities are sold in the company's own shop and in the adjoining café. Trading houses are also supplied. Together with their employees, Arne Knaust and his father Peter Knaust ensure that traditional baking and craftsmanship is preserved under the brand name 'von Ravensberg'. For almost 190 years, the family-run business, now in its sixth generation, has successfully faced the challenges of the present.

Several projects have been realised with the Food-Processing Initiative. "In 2012, in order to reduce material and energy consumption in our production, we partnered with the FOOD-ProMat material efficiency network," recalls Arne Knaust. Thanks to the network's support, a analysis of saving potentials of processes was carried out helping to optimise data collection. A PIUS check supported by Effizienz-Agentur NRW identified further potential savings. In order to improve resource efficiency, the two managing directors invested in heat recovery from furnace exhaust gases. "Today, the energy obtained in this way heats the spraying mass, the liquid sugar and the hot water storage tank," adds Knaust.

In times of digital change, Knaust considers the recruitment of skilled personnel to be a central key to competitiveness. Together with eleven other partners in the project PerLe, Knaust was able to achieve a lot in this area. Throughout the project, a systematic qualification matrix was created and, building on this, employee motivation was placed in the foreground. Arne Knaust concludes that the approach of "motivating through inclusion" is a successful corporate vision. The project had led to "our employees opening up and working together more successfully through increased commitment".

> Arne Knaust Managing Director Heinrich Schulze Ladencafé GmbH 33829 Borgholzhausen www.schulze-ladencafe.de



Regio.NRW project in East Westphalia–Lippe starts: Lebensmittel 4.0 takes a close look at the opportunities of digital transformation.



### Ahlan wa Sahlan – Welcome to Jordan!

In the Jordanian capital of Amman, Tobias Peselmann met with the project managers from the Ministry to coordinate the stages of his journey.

Jordan offers numerous natural wonders. But the country's greatest attraction, the legendary rock town of Petra, was unfortunately not on Tobias Peselmann's itinerary in August 2016. The current managing director of pbr NETZenergie GmbH from Rheine was on the road for one week in the Hashemite Kingdom to support food producers in converting their energy supply.

Not a single cloud in the sky, the weather is truly reliable: "Jordan's best resource is the sun. The average direct irradiation lies between 1,400 and 2,300 kilowatt hours per square meter a year", says Tobias Peselmann, who manages the business of pbr NETZ energie GmbH with Dietmar Hesse. The young company based in Rheine develops innovative concepts for the energy, environment and process engineering sectors – and "often risks a completely different approach", emphasizes Mr. Peselmann.

And it was precisely this new approach, which led the graduate engineer to Jordan. "The trip came about at the invitation of UNIDO, the United Nations Industrial Development Organization," he recalls. The United Nations sub-organisation was looking for an

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energy expert for the food industry and turned to the Food-Processing Initiative, which put them in touch with Peselmann. His task: to obtain a comprehensive overview of the fields of application in the energy efficiency domain and to advise selected producers on site.

#### Expansion of wind and solar energy

In the capital Amman, the Ministry of Water and Environment is responsible for coordinating climate policy at national level and for managing its implementation. The Arab nation has set itself ambitious goals and wants to generate at least one fifth of its energy needs from wind and sun in the future." Until 2022, the Jordanian government has launched a reform programme that will push the expansion of renewable energies," says Peselmann. In the meantime, the country has become one of the frontrunners in the region when it comes to introducing

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such technologies. Numerous pilot projects for energy-efficient construction have been successfully completed, ranging from public buildings such as the Queen Alia Airport to small residential buildings.

#### Greater efficiency in production

"In Jordan, as everywhere in Arabia, desserts are written in capital letters. So it was to be expected to see pastry manufacturers on the list of visitors," says Peselmann. Among them was Habibah Sweets, the largest Kunafa baker in the country. Kunafa, a popular dessert and specialty, is a cake made from baked vermicelli, nuts and syrup. Together with plant manager Waleed Hisham Habibah, Peselmann inspected the production and identified potential savings in the areas of compressed air and heat utilisation. The visit resulted in a follow-up project. Tobias Peselmann is still in regular contact with Waleed Hisham Habibah, who wants to invest in an in-house cheese factory: "With GEA, we were able to integrate a plant manufacturer from the dairy segment into the project for the engineering part". For the managing director, this is proof of how companies from Jordan and Germany come together through the network of Food-Processing Initiative.

> **Dipl.-Ing. Tobias Peselmann** Managing Director pbr NETZenergie GmbH 48432 Rheine www.pbr-netzenergie.de



Networks 4.0: Together with Innozent OWL and BalticNet-PlasmaTec, the platform Clou5 is being developed.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020

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For more than 70 years, Detmold has been building a bridge between the world of science & research and the players in the bakery industry.

The small town of Detmold in the region Ostwestfalen-Lippe is considered a Mecca for the bakery industry. This is where the Arbeitsgemeinschaft Getreideforschung e.V. is based. With more than 400 member companies from 20 nations, the scientific-technical association offers concentrated know-how on all aspects of grain technology. CEO Tobias Schuhmacher explains in an interview where the main focus of the activities lies.

Mr. Schuhmacher, the Arbeitsgemeinschaft Getreideforschung e.V. was founded in 1946 with the aim of linking business and science ... Which is true then and now. Our goal is to find ways to connect these two players. In Detmold, we benefit from the nearby Max-Rubner-Institute for Grain Safety and Quality, with which we have been working together for many years.

They organise numerous conferences and seminars. What are the key topics? The events cover the entire value chain of grain technology, from raw material procurement to product development and process optimization.

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However, advanced training is not everything you offer. Since 2003, you have been responsible for quality testing at the Detmold Institute for Grain and Fat Analysis ... We cover a wide range of relevant examination parameters for cereals and flours, such as the determination of protein and wet adhesive contents. Further focal points are baking trials on behalf of customers and participation in projects with partners from science and industry.

What are the advantages of working with the Food-Processing Initiative? As the Food-Processing Initiative has access to cooperation partners in the entire food and supplier industry, we are expecting new impulses from this cooperation. In this way, our members from the milling, baking and pasta processing industries can network with players from other industries and learn from each other, for example on the subject of digitalisation.

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This term is on everyone's lips. Is there a trend towards digitalisation in the crafts sector? Strategies for implementation do not only play a role in large companies. In traditional bakeries, the focus is set on the use of digital tools for the B2C sector and on the question of how machines can be networked and traditional manual processes further automated. Many companies want to make offensive use of the opportunities offered by modern information technologies: The goal is Bakery 4.0.

This is a topic that many projects of the Food-Processing Initiative are sheding light on. Is there any exchange of ideas here? Together with Food-Processing Initiative, we have currently submitted a project application. The project aims at networking with international knowledge providers in the field of digital transformation of the food industry. Together with other partners and the Ostwestfalen-Lippe University of Applied Sciences, we want to attract workshops and conferences to the region and design qualification programs for professionals in in order to support SMEs in implementing new technologies.



Quality of network activities confirmed: The Food-Processing Initiative is awarded the silver label of the European Cluster Excellence Initiative for the second time.

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#### Platform for the food industry

The Food Centre of the DLG (German Agricultural Society) with its network of experts is an important driving force for the entire food industry as well as the upstream and downstream sectors. The aim of the DLG centre of expertise is to develop future-oriented solutions for the challenges of the sector.

Independent technical committees of the DLG for food, food technology, meat, milk technology and food sensor technology as well as committees such as the Working Group Robotics in the Food Industry and the Working Group Packaging in the Supply Chain, ensure the scientific topicality and high practical relevance of the technical work.

The DLG Food Centre also offers a wide range of events, symposia, seminars and training courses on current industry topics. In addition, it organises the annual meeting of the German-speaking food sensor technology industry, the DLG Food Sensor Technology Day (" DLG-Lebensmitteltag Sensorik"). As the technical and conceptual sponsor of Anuga FoodTec – the leading international supplier fair for the food and beverage industry – DLG is responsible for the technical orientation of the fair.

Scientific research is supported by the International FoodTec Award for Food Technology, the DLG Sensor Technology Award and the 'DLG Innovation

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Award – Young Ideas'. The 'Junge DLG' offers a platform for the next generation of food producers. Young professionals and students organise themselves in this platform with the aim of giving fresh impetus to the food industry.

The DLG Academy thematically unites the entire value chain of the agricultural and food industry under one roof, making it unique in this form. It has established itself as a learning and knowledge platform for the topics of food sensor technology, quality assurance and food technology. The offer includes seminars, workshops, advanced training as well as in-house training in companies. In publications such as trade journals, expert knowledge, studies and newsletters, the DLG regularly provides information on current topics and developments in the food industry.



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Simone Schiller Managing Director DLG e. V., Fachzentrum Lebensmittel 60489 Frankfurt am Main www.dlg.org



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### Networking, a success factor in medium-sized businesses

The Glass GmbH & Co. KG from Paderborn has been manufacturing special machines for food processing since 1972. The company started with the construction of meat processing machines for craft businesses. Today the portfolio includes a comprehensive modular system with which everything from simple mixers to customer-specific process plants can be realised.

"From the very beginning it was important not only to plan our machines but also to build them at our own location with a high vertical range of manufacturing", explains Dipl.Ing. Karsten Ollesch on the philosophy of the special machine manufacturer. The direct contact to our worldwide customers as well as various research projects, which are regularly carried out in the network of the Food-Processing Initiative, stimulate these processes. While the large-scale industry is still busy with market research, the Paderborn-based company recognizes market trends at an early stage and transfers the knowledge gained into solutions for other regions – "in this way we are able to show off our strengths as a medium-sized company: flexibility and rapid implementation".

For him, contact with mechanical engineers and research institutions is equally important as with food producers. There is no need to reinvent the wheel, because "many questions can be clarified pragmatically in the network. Often, ideas for both sides emerge at the end of such discussions," says Ollesch. This allows important resources to be used differently and innovations "do not bypass the market". An example of this is a project with the Institute of Food Technology at the Ostwestfalen-Lippe University of Applied Sciences, which resulted in a cleaning process for intensive mixers.

"In the course of Industry 4.0, our plants are increasingly being measured in terms of their operability, software and degree of networking. In the future, we will have to collect even more data, such as engine power, vibrations and sounds, which will enable us to assess the machine status directly." For Ollesch, this is a way of evaluating what experienced operators have always felt – the heartbeat of the machine.



Karsten Ollesch Sales Manager and Authorized Officer Glass GmbH & Co. KG 33106 Paderborn www.glass-maschinen.de



The EU project S3Food supports medium-sized companies in the implementation of digitisation projects.



#### References

52

### International cooperations and innovation projects from our network

Whether quality, safety, resource efficiency, digitalization of processes, qualification, personnel development or new markets – the challenges of the industry are manifold. As a network of food industry, we address these issues, network competencies, design projects and thus create innovative solutions. A large number of different cooperations and projects have been successfully initiated and implemented.

**Redesign of dairies:** The objectives of the SUSMILK project were to analyse and optimise the entire process chain for dairy products. With the aim of saving energy, water and carbon dioxide emissions, the Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT and 21 other partners, including the Food-Processing Initiative, developed components for use in existing dairies.



**Future offensive FOOD2020:** In the first phase of FOOD2020, the Food-Processing Initiative together with eight partners supported companies in the German-Dutch border region. Two innovation projects were dedicated to the development of biobased

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barrier films and an app for employee training. Two feasibility studies dealt with the nutrition of elderly people and sustainable shrimp breeding.

Looking for new opportunities across borders:

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Food2Market is an initiative of the Food-Processing Initiative and four other cluster organisations in Flanders and the Netherlands. Together they support food producers who want to approach new (neighbouring) markets or gain knowledge from the networks of the regions. The instruments developed were integrated into day-to-day business at the end of the project period.



**Benefits for bakers and the environment:** The Climate Bakery Project supports bakeries in making their processes more resource- and energy-efficient. The Food-Processing Initiative supported the project of the Effizienz-Agentur NRW and the Energy.Agency.NRW as technical consultant. FPI moderated and coordinated the working groups and carried out analyses of saving potentials. Thanks to targeted advice on site and inter-company exchange, major effects were achieved.

ACKEREI

#### Sustainable improvement of energy management:

The aim of INDUCE2020 is to establish the INDUCE method in companies located in Spain, France, the Netherlands and Germany. With this method, food producers can improve their energy management in a sustainable way. The partners are working intensively with 15 pilot companies to develop the methodology. The INDUCE Tool Kit will be transferred and evaluated by 60 trainers in 300 companies.

# CAPACITY BUILDING ON EFFICIENCY IN THE AGRO-FOOD INDUSTRY

**Networking in the digital age:** How can cross-cluster project management be designed to facilitate networking? This question prompted the Food-Processing Initiative and two other network partners to found the online platform CLOU5. Both international and national projects as well as regional events of the



Food-Processing Initiative are communicated, planned and organised via CLOU5.

**Start of the digital journey:** 13 partners have joined forces in the S3FOOD project to improve the sustainability of the food industry in the EU by enabling small and medium-sized enterprises to adopt digital technologies. S3FOOD will assist in the transition to



industry 4.0, so that companies do not run the risk of losing important knowledge when collecting and evaluating process data.

**Efficient use of resources:** The efficient use of resources is an ecological and economic necessity and a success factor for climate policy. VIDA supports the realisation of innovations with the aim of increasing efficiency in small and medium-sized enterprises in order to counteract future resource shortages. VIDA stands for Value-added Innovation in fooD chAins and is part of the EU Framework Programme Horizon 2020.



**Opening up new markets in Africa:** The economies of the sub-Saharan nations are growing steadily. The demand for processed food is rising, as are the demands for safety and convenience in the growing middle class. On behalf of the "Gesellschaft für Internationale Zusammenarbeit" (GIZ), the Food-Processing Initiative developed a market study on trends and demands for processed food in the markets of Tanzania and Zambia.

Emancipated! The Food-Processing Initiative e.V. celebrates its 18th birthday during the general meeting 2019 at the Sparrenburg castle in Bielefeld.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020



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