

Bavarian research & innovation



Bavarian Research Cooperation for Efficient Use of Resources in Food Production and Distribution

CUSTOMISED, RELIABLE, FLEXIBLE – FROM THE PRODUCER TO THE CUSTOMER



efficient and high-quality manufacture and packaging of food products, covering the whole supply chain from food production to packaging, while also paying close attention to individual core processes used in food processing. In developing strategies and processes for innovative, traceable food production, the aim is to increase reliability and minimise use of resources. The development of environmentally friendly, flexible and adaptive solutions for food packaging completes the process chain for food manufacturers while at the same time enabling the potential for optimising quality and use of resources to be fully harnessed.

The FORFood Research Cooperation is concerned with the whole supply chain of food production, industrial processing and distribution to customers. It comprises six groups of researchers at Bavarian universities and research institutes and many industrial partners. The aims of the Cooperation are to increase quality and efficiency in manufacturing and distribution of foodstuffs through optimum use of resources.

The key themes that drive today's food industry are health, convenience and enjoyment. Consumers demand healthy food products that are easy to prepare and adapted to their individual needs. In parallel with

these requirements, manufacturers need to reduce cost, to enable them to sell their products on the market.

The focus of the research, therefore, is on resource-

FORFood is run by the Project Group for Resource-efficient Mechatronic Processing Machines (RMV) of the Fraunhofer Institute for Machine Tools and Forming Technology (IWU).

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Control technology as an important factor in the food supply chain



Transport box in the demonstration system for cooking at the push of a button

RESEARCH TOPICS

SP 1: Use of high-frequency heating for fast pasteurisation or sterilisation.

SP 2: Automatic food production in batch size 1.

SP 3: Strategies for more flexible packaging equipment in the food industry.

SP 4: Rationalisation of the handling and further processing of fruit and vegetables.

SP 5: Sustainability for the packing of fresh products.

SP 6: Reliable supply chain using intelligent containers.

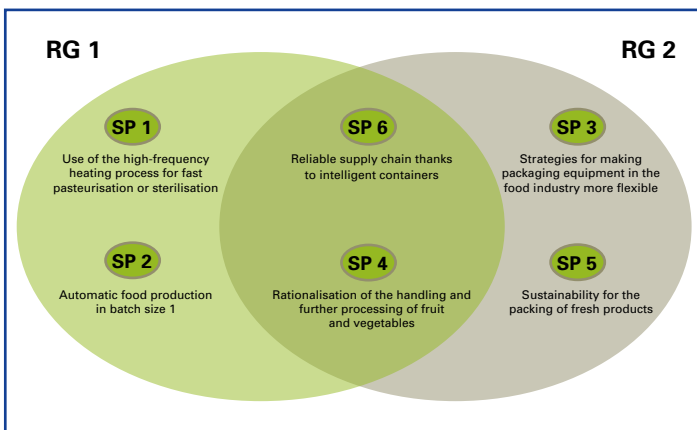
The cooperation's thematic focus results in a series of tasks, that affect all partners

equally, some of which can only be resolved on a cross-subproject basis. Two research groups (RG) working on different interdisciplinary topics ensure a networked approach:

RG 1: Increase in quality thanks to traceable, carefully executed processes

RG 2: Flexible packaging technology for conservation of resources

The research groups form a platform for the exchange of information and experiences between the subprojects and all project partners of the research cooperation.



Academic Partners:

Fraunhofer Gesellschaft

- Project Group for Resource-efficient Mechatronic Processing Machines (RMV) of the Fraunhofer Institute for Machine Tools and Forming Technology (IWU)
- Fraunhofer Institute for Process Engineering and Packaging IVV

Technische Universität München (TUM)

- *iwb* Application Center for Production Engineering Augsburg
- Institute for Machine Tools and Industrial Management (*iwb*)
- fml – Institute for Materials Handling, Material Flow, Logistics
- hot – Institute of High Frequency Technology

Friedrich Alexander Universität Erlangen-Nuremberg

- Henriette Schmidt-Burkhardt Chair of Food Chemistry

Industry Partners:

Bosch Rexroth AG

data-net-solutions GmbH

Dynamic Systems GmbH

EDEKA Handelsgesellschaft Südbayern mbH

eloma GmbH

ES-Plastic GmbH & Co. KG

EURO-LOG AG

GEBHARDT Food & Retail Solutions GmbH

Hipp-Werk Georg Hipp OHG

HÜTTINGER Elektronik GmbH + Co. KG

ifp – Prof. Dr.-Ing. Joachim Milberg Institute for Production and Logistics GmbH & Co. KG

Klinikum Augsburg

Kraft-Foods R&D Inc.

Kronen GmbH

Krones AG

KUKA Roboter GmbH

Leeb GmbH & Co. KG

LEIPA GEORG LEINFELDER GMBH

Mettler-Toledo GmbH

MULTIVAC Sepp Haggenmüller GmbH & Co. KG

Robert Bosch GmbH Packaging Technology

SCHUNK GmbH & Co. KG

STEMMER IMAGING GmbH

TECCAD engineering GmbH

Töpfer GmbH

Unternehmensgruppe Theo Müller GmbH & Co. KG