



**Short description of the centers/
research campus on RWTH Aachen Campus**

June 2022

Brief description of the centers/research campus and contact (1/4)



Smart Logistics Cluster

CIBA	In the Center Integrated Business Applications , the development and expansion of networked IT system landscapes is being promoted in order to sustainably increase the added value of manufacturing companies. The center supports companies in the implementation of integrated business applications such as ERP, MES, CAD and PLM with connection to the Internet of Things. Furthermore, reference applications are designed, built and operated in the Innovation Labs and in the demonstration factory. The services offered and solutions developed are aimed at software vendors, system houses and users.	Katharina Berwing, +49 241 47705-415 katharina.berwing@center-iba.com https://center-iba.com
CSS	The Center Smart Services develops and optimizes data-based services. The center is aimed at companies that want to use smart services to open up new business areas or use modern data analysis methods (e.g. machine learning) to make their data useful.	Maximilian Schacht, +49 241 47705-207 maximilian.schacht@center-smart-services.com https://center-smart-services.com
E4TC	The European 4.0 Transformation Center offers members first-hand experience in the field of digital business transformation from the physical to the digital world. The e.GO Life and the infrastructure of the demonstration factory serve as show cases.	Prof. Thomas Gartzten, +49 241 47574-952 thomas.gartzten@e4tc.de https://e4tc.rwth-campus.com
CCI	With the implementation of the 5G test bed in the Center Connected Industry , the necessary infrastructure is currently being created to further research and advance the digitization and connectivity of industrial applications.	Jacques Engländer, +49 241 47705-517 jacques.englaender@eice-aachen.de https://connectedindustry.net
SCB	The Smart Commercial Building Center pursues the development and design of intelligent buildings. The use of artificial intelligence and new possibilities of human-machine interaction are used to improve the building management and efficiency of commercial properties. With the help of demonstrators, a test environment will be created in the 3rd construction phase of the Smart Logistics Cluster in order to test the functionality and interoperability of IoT components and implement them in scalable measures. In this way, new digital business models, management and usage concepts will be developed.	Dr. Gerhard Gudergan, +49 241 477050-104 gerhard.gudergan@metropolitan-cities.com https://smart-commercial-building.de

Brief description of the centers/research campus and contact (2/4)



Production Engineering Cluster

AZL	The aim of the Aachen Center for Integrative Lightweight Production is to transfer lightweight construction into mass production through close interdisciplinary cooperation between materials science and production technology in order to implement process chains suitable for mass production.	Dr. Michael Emonts, +49 172 7207681 michael.emonts@azl-aachen-gmbh.de https://azl-aachen-gmbh.de
WBA	The WBA Tooling Academy Aachen manufactures in its own demonstration toolmaking facility in the Toolmaking World of Experience, which depicts the entire process chain of toolmaking. The WBA wants to enable German toolmaking companies to master the challenges of industrial toolmaking and to make targeted use of the opportunities of a digitally networked and sustainably operating toolmaking industry.	Prof. Wolfgang Boos, +49 241 99016-302 w.boos@werkzeugbau-akademie.de https://werkzeugbau-akademie.de
CMA	The Complexity Management Academy focuses on the management of product- and process-induced complexity in companies. Through individual training programs, the CMA supports companies in understanding and mastering complexity in their environment and using it as a competitive advantage.	Dr. Maximilian Kuhn, +49 241 80-28196 maximilian.kuhn@complexity-academy.com https://complexity-academy.com
INC	The Invention Center is the contact point for fast and customer-oriented implementation of ideas into innovations. Members are offered an established network of experts and they are accompanied in their technology and innovation strategy.	Dr. Myron Graw, +49 241 51038-615 myron.graw@invention-center.de https://invention-center.de
GPM	The Global Production Management Center (GPMC) enables companies to continuously maximize their productivity. To this end, principles, methods and tools for the design and management of production networks are developed and customized. The aim is to make better decisions in production more quickly. The focus is on application-oriented methods and user-oriented tools for short-term decisions and long-term planning from the site to the network level. These solutions are consolidated in a global control center.	Dr. Jan-Philip Prote, +49 151 44131001 j.prote@gpmc-aachen.de https://gpmc-aachen.de

Brief description of the centers/research campus and contact (3/4)



Production Engineering Cluster

FCI	As an innovation hub for the hydrogen economy, the Fuel Cell Industrialization Center pursues the goal of rapidly increasing the industrialization of fuel cells, electrolysers and infrastructure components. The focus here is on materials, production processes and the design and standardization of interfaces between individual components. In order to promote solutions for the economic use of hydrogen as an energy carrier and the development of competitive products in the field of hydrogen and fuel cell technology, the Center considers, among other things, the optimization of design and production technologies and enables the construction of pilot plants and prototypes.	Dr. Henning Janssen, +49 241 8904 261 henning.janssen@fci-aachen.com Dr. Myron Graw, +49 241 51038 615 myron.graw@fci-aachen.com http://fci.rwth-campus.com
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Heavy Duty Drives Cluster

CWD	In the field of wind turbines, one focus is the development and validation of simulation models for the electrical and mechanical components and their integration into a model of the overall system. The research takes place at the Center for Wind Power Drives on a 4 MW test bench.	Dr. Dennis Bosse, +49 241 80-95662 dennis.bosse@cwd.rwth-aachen.de https://www.cwd.rwth-aachen.de
CSE	The Center for Systems Engineering networks the individual development steps and development tools used for agile and automated product development. The document-based and geometry-oriented system development prevalent today is replaced by integrated processes.	Dr. Jörg Berroth, +49 241 80-95644 joerg.berroth@cse.rwth-campus.com https://cse.rwth-campus.com

Photonics Cluster

FDPP	The research campus Digital Photonic Production in Aachen is researching new methods and fundamental physical effects for the use of light as a tool in the production of the future.	Dr. Christian Hinke, +49 241 8906-352 christian.hinke@ilt.rwth-aachen.de https://forschungscampus-dpp.de
ACAM	In the Aachen Center for Additive Manufacturing , members have access to innovative know-how, further training, process, software and system engineering as well as tailor-made services in the field of additive manufacturing technologies.	Prof. J. H. Schleifenbaum, +49 241 8906-398 j.h.schleifenbaum@acam-aachen.de https://acam.rwth-campus.com

Brief description of the centers/research campus and contact (4/4)



Construction Cluster

BIM	The BIM Center Aachen addresses digitization in the construction industry from the point of view of manufacturers and contractors. In order to develop application-optimised and certified digital processes, products and services, the entire lifecycle with processes and interfaces is considered after completion of digital planning.	Melissa Avdic, +49 241 91 999 064 avdic@bim.rwth-campus.com https://bim.rwth-campus.com
CCR	The Center Construction Robotics pursues the goal of developing the construction site of the future through digitization from pre-production through the entire value chain to the semi-automated construction site. Using the example of large-format and complex facade elements and their manufacture, the previously non-existent continuous digital chain from planning through production to assembly will be demonstrated.	Baris Cokcan, +49 241 80-98983 cokcan@construction-robotics.de https://construction-robotics.de
CBI	The objective of the Building and Infrastructure Engineering Center is to develop application-optimized materials and tailor-made construction products and systems and to digitally map the processes involved in structural engineering.	Dr. Carl Richter, +49 241 80-23650 richter@cbi.rwth-campus.com https://cbi.rwth-campus.com

Sustainable Energy Cluster

FEN	The aim of the research campus Flexible Electrical Networks is to research and develop a flexible electricity grid. This network is intended to guarantee future energy supply with a high proportion of decentralized and renewable energy sources and enable a secure and affordable energy supply in the future.	Prof. Rik De Doncker, +49 241 80-96920 dedoncker@FENaachen.net https://fenaachen.net
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Bio-Medical Engineering Cluster

TMZ	At the Telemedizinzentrum Aachen , new technologies and forms of organization are being combined to further develop existing telemedical approaches and bring new products and services into use. The center is dedicated to the technical implementation, user acceptance, organizational and structural framework conditions.	Volker Legewie, +49 241 88494 vlegewie@ukaachen.de https://www.ukaachen.de/kliniken-institute/telemedizinzentrum-aachen
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Coming soon (1/2)



Construction Cluster

CFP	The Center Factory Planning pursues Research & Development of the Factory of the Future. Central subjects are the ongoing development and digitization of condition- and maturity based factory planning concepts; the creation of an interdisciplinary platform for planners, realizers, software developers and factory operators, as well as the procedural and digital integration of factory and building design.	Dr. Matthias Dannapfel, +49 241 80-22293 m.dannapfel@wzl.rwth-aachen.de https://www.rwth-campus.com/center-factory-planning/
CMM	The Center Mobile Machinery is dedicated to questions of an automated, productive and emission-free construction site with the aim of realizing construction projects faster and with higher quality. The focus is on the networking and automation of construction machinery, which supplies data directly from the work process to digital planning systems, and the development of low-emission drive systems. The solutions are being tested at the FutureSite in Aldenhoven.	Gunnar Matthiesen, +49 241 80-47730 gunnar.matthiesen@ifas.rwth-aachen.de Stephan Neumann, +49 241 80-90853 stephan.neumann@imse.rwth-aachen.de https://mobile-machinery.de/

Production Engineering Cluster

CS3	The Center Smart Sensing Systems represents the development and establishment of a new generation of cyber-physical systems. By integrating sensor technology, a structural component and its superior system become intelligent and can monitor itself, detect damage and react to it. The center is engaged in the holistic consideration of such smart sensing systems and the development of practical solutions.	Dr. Mohammadzamaan Sadeghi, +49 241 80-96837 zamaan.sadeghi@sla.rwth-aachen.de https://www.rwth-campus.com/cs3
SIA	The Center Smart Industrial Agriculture wants to initiate a paradigm shift in today's agriculture and food industry and support it sustainably with industrially established processes, methods and tools in the sense of the circular economy. The Center is intended to shape the future agricultural value chain as a central point of contact for the entire food value chain, for soil-bound and soil-unbound production.	Dr. Michael Riesener, +49 241 80-28201 m.riesener@wzl.rwth-aachen.de Simon Storms, +49 80-27448 s.storms@wzl.rwth-aachen.de https://www.rwth-campus.com/csia
XLA	The Center XL Assembly deals with the assembly of large components in industrial manufacturing. The aim of adaptable assembly processes with freely movable products and resources, increased product quality and better process understanding is achieved through the development of new technologies for metrology-supported and model-based systems.	Dr. Guido Hüttemann, +49 241 80-20570 g.huettemann@xl-assembly.com https://www.rwth-campus.com/center-xl-assembly

Coming soon (2/2)



Bio-Medical Engineering Cluster

CIO	The Center Integrated Oncology aims to establish a patient-centered outpatient care structure. The focus is on the integrative approach, i.e. the holistic consideration of the individual tumor disease and the person suffering from it. Personalized cancer treatment including prehabilitation and aftercare with low-threshold access to innovative diagnostics and therapy is thus made possible. Companies benefit from the practical application and access to relevant data.	Dr. Jens Panse, +49 241 80-89947 jpanse@ukaachen.de Dr. Susanne Isfort, +49 80-80092 sisfort@ukaachen.de
CNC	With the Center Nursing Care a multi-professional environment with maximum practical orientation is to be created. In this way, nursing-related product and technology development is accelerated and accompanied from the generation of ideas to user evaluation and testing under real conditions. Through continuous feedback of knowledge from the everyday working life of the nursing staff with the know-how and technical solutions from the industry and the training center of the university hospital, standards in nursing are set and communicated and new fields of activity are developed.	Dr. Astrid Stephan, +49 241 80-85830 asstefhan@ukaachen.de
AMI-CARE	The Center AmiCare addresses topics in the field of cardiorenal disease. New diagnostics and therapies should increase the life expectancy and quality of life of cardiorenal patients and the aging population in general. In close cooperation with the companies involved, clinical partners and basic researchers join efforts to develop and improve diagnostics, drug applications as well as medical devices.	Dr. Heidi Noels, +49 241 80-37147 hnoels@ukaachen.de
CCC	In the Center Citizen Centered Care , citizens are empowered to better understand diseases and to actively participate in the healthcare system. A sharing economy makes data accessible to providers, financiers, patients and citizens, and promotes exchange with like-minded people. The aim of the Health 4.0 approach is to use new forms of communication and collaboration to make existing healthcare services available to every citizen at a high level of quality, independent of time and place.	Dr. Sandra Dohmen, +49 241 80-37793 sdohmen@ukaachen.de
HIC	The Center Holistic Intensive Care complements intensive care topics of the Telemedicine Center by making telemedical methods "intelligent". New technologies such as AI processes are used, among other things, for computer-assisted image evaluation, innovative treatment concepts or the analysis of continuous data streams. This makes highly individualized therapies possible, which need to be introduced into standard care.	Dr. Sandra Dohmen, +49 241 80-37793 sdohmen@ukaachen.de

Infrastructure/Service partner (1/1)



Ramp-up Factory	Building on the research results of the electric mobility laboratory, the focus in the ramp-up factory is on the producibility of electric vehicles and the reduction of start-up times on the way to series production.	Falko Fiedler, +49 160 91794274 f.fiedler@wzl.rwth-aachen.de http://anlauffabrik-aachen.de
ZBMT	The Centre for Bio-Medical Technology offers office and laboratory space for biotechnology and medical technology companies.	Dr. Robert Farkas, +49 241 80-80740 farkas@ame.rwth-aachen.de https://www.agit.de/technologiezentrum/zbmt-zentrum-fuer-bio-medizintechnik.html
DFA	The demonstration factory shows tomorrow's production. As the first 5G location in the industrial environment, the DFA presents innovations from the areas of production, logistics and assembly. All this in a productive environment in which real orders are produced under cost, time and quality pressure.	Dr. Gregor Tücks, +49 241 51031 803 g.tuecks@demofabrik-aachen.de https://demofabrik-aachen.rwth-campus.com
eLab	The electromobility laboratory offers an open infrastructure for research on electromobility - from technology development and testing to the finished prototype.	Dr. Heiner Hans Heimes, +49 241 80-27386 h.heimes@pem.rwth-aachen.de http://www.elab-aachen.de
IF	In the Innovation Factory , companies are supported throughout the entire innovation process - from idea generation to series production. The experts at the Innovation Factory are the contacts when it comes to configuring the concentrated competencies of the ecosystem in a targeted manner.	Dr. Michael Riesener, +49 241 80-27374 m.riesener@rwth-if.com https://rwth-if.com