UNIVERSITY OF APPLIED SCIENCES

THM
TECHNISCHE HOCHSCHULE MITTELHESSEN

PRESIDING COMMITTEE REPORT 2016/2017

In the winter semester 2016/17 the University of Applied Science has reached important milestones. As a result of a market- and future-oriented development of the range of courses, we were able to welcome over 4,000 new enrollees during the introductory week in Giessen, Friedberg, and Wetzlar. The highest number of beginners in the history of the THM.

Of historical significance is also the signing of the contract in which the universities of Giessen, Marburg, and the THM institutionalized their cooperation on the "Research Campus Central Hesse" in November 2016. This cooperation will strengthen the structural potential as well as the future competitiveness of the entire region.

In January we were able to celebrate the structural expansion of our university twice. In Friedberg's former Housing Area we officially opened the new building for three departments. On the same day in Giessen we laid the foundation for the Laboratory and Technology Center in the Gutfleischstrasse, our biggest construction project so far.

The present "Presiding Committee Report" documents how the THM developed in the different performance fields in the recent years. The reporting period 2015 to 2017 not only shows that in teaching, research and infrastructure a lot has happened, the management team of the THM has also changed.

I thank Prof. Dr. Günther Grabatin, whose succession I took on April 1st, for his ten years of work as the President of the THM. It goes without saying, but neverthess we want to note it once again: many of our current progresses are based on initiatives and decisions of his presidency.

On behalf of the Presiding Committee I would like to thank all cooperation partners of our University as well as all faculty members for their constribution.

Prof. Dr. Matthias Willems
President

Summer semester 2015

The Federal Ministry of Education and Research grants the three Middle Hessian universities for the period from April 2015 to September 2017 about 3.5 million euros for research and stabilization of concepts for new demand-oriented offers that include extra-occupational courses and certificate courses. This was preceded by an application of the Marburg and Giessen universities as well as the THM at the Bund-Länder competition "Rise through Education: Open Universities". The three partners will receive the initial funding for the project, the first project phase ran from October 2011 to March 2015. The overall coordination of the interdisciplinary collaborative project will change from Giessen to the University in Marburg with the start of the second funding phase.

At the founding ceremony of the Department of Health at the THM, its dean Professor Dr. Henning Schneider,


Minister

explains that they want to establish a "nationwide academic training location for the health care system". The aim is to academically train "young people, who support medical processes and work at interfaces in the health care". Hessen's Minister of Science Boris Rhein explains, "The new department combines the many facets of health care. The students are dealing with health care and care policy, but also with patient care, financing and management. They learn which economic and legal knowledge is important for their future job".

Nationwide number one – place seven in Europe: the student team of TH Mittelhessen returns with this record in June from the 31st "Shell Eco Marathon" in Rotterdam. The task is to drive with a self-constructed vehicle as energy-efficient as possible. The vehicle of "THM Motorsport Efficiency" achieved a distance of 1,283 kilometers with one liter of gasoline. Mechanical Engineering, Mechatronics, Industrial Engineering, and Computer Sciences are the subjects of study of the 18 student team members from Friedberg. For the first time the THM car, the "Streamliner V3.3", launched with a 69-cubic centimeter engine, which was entirely developed by the students and built in their own workshop. A number of sponsors supports the team.

Familiengerechte Hochschule

The THM is committed to the claim to arrange the organization of study and daily business for the employees family-friendly. For the fourth time, it completed the "Audit Family-Oriented University". In 2005 the "berufundfamilie gGmbH" funded by the Hertie Foundation examined the THM for the first time, and recognized it as a particularly family-friendly university. Larissa Weber, coordinator of the family-oriented university project at the THM accepted the new certificate in Berlin.

With a third place among 43 participants, "THM Motorsport Racing" finished the racing season in Varano de Melegari in September. The Formula Student team from the TH Mittelhessen is thus the best German

starter. In July 2010 the THM racing team participated for the first time in this competition in Italy. The task is to build a single-seater racing car. In the competition not the fastest car wins but the group with the best overall package of construction, driving performance, financing concept, organization, and sales presentation.

Winter semester 2015/16

"It's almost routine: when the new semester begins at the THM, the Presiding Committee of the university announces a new record", reports the "Wetterauer Zeitung" on 6 October. The unbroken appeal of the THM

to students becomes apparent in the introductory week of the winter semester in impressive dimensions. The statistics of the new enrollments in Giessen, Friedberg and Wetzlar again show high. The total number of students also rises by about 3 percent to the new peak of 15,979. The first semester number increases by the same percentage as the winter semester 2014/15. Of the 3,672 beginners 1,877 decided for Giessen, 1,343 for Friedberg, and 452 for StudiumPlus in Wetzlar.

The Senate elects Professor Dr. Matthias Willems as President of the TH Mittelhessen. A total of three internal candidates and two external candidates ran for office. Matthias Willems has a doctorate in medical informatics and also qualified with an MBA degree. Since joining the faculty and staff in 2003 he is a professor for business informatics at the THM Department of Mathematics, Natural Sciences and Data Processing in Friedberg. He gained experience in university administration as a long-standing member of the Faculty Council and the Senate. Since 2012 he was Managing Director at the Center for Dual University Studies in Wetzlar.

Professor Dr. Frank Runkel welcomed approximately 70 participants to the third interdisciplinary doctorate colloquium at the THM in Giessen. The Vice President for Research reports that about 85 young scientists at the THM are gaining further qualifications with the doctorate. The university is taking the path of cooperation, explained Runkel. In doing so, the THM is particularly committed to the universities in the neighborhood: "The cooperation with departments from the universities in Giessen and Marburg is now well established. Currently more than half of the THM's cooperative doctorates are done with the two Mittelhessen universities.

The central information point of the THM in Giessen has a new domicile. The pavilion on Campus in Wiesenstrasse, in which it now resides, is open to visitors, employees, but especially to all students. On 85 square meters the university offers its services in a central on campus location. The oval building was planned by the Giessen architectural company "aplus". The Facility Management Department at THM was responsible for the interior construction. Previously, the "Info" was located in the foyer of the main building of the university.

Professor Dr. Katja Specht is elected Vice-Ppresident of the THM. The economist receives 29 out of 33 votes in the first ballot. Her term of office is three years. Katja Specht is a professor for statistics, operations research and logistics at the Department of Industrial Engineering at the THM in Friedberg since 2011. From 2012 to 2015 she was vice-dean there, at last she managed the department as the dean.

The Hochschulinformtionstage (HIT) offer pupils an informative program on courses of study, university and professional per-

spectives. A total of 2,400 young guests visit the three locations on two days in January, about 1,500 in Giessen, 500 in Friedberg and 400 in Wetzlar. In the departments the young people were expected by an expert presentation on studies, that is followed by a laboratory tour and the opportunity for individual counseling. The focus is on the necessary previous knowledge, the main emphasis of studies, possible international semesters, career prospects but also on the practical relevance and the cooperation with companies.

For the third time, the Ludwig-Schunk-Prize is beeing awarded at the THM. Six graduates receive the prize of € 1,000 each for outstanding study achievements and their voluntary commitment.

The awardees are David Buhren from Giessen, Lisa Ranold from Lahnau, Markus Schnell from Reichelsheim, Volker Daniel from Lahnau, Jan Arne Pfeiffer from Grünberg and Samuel Herbert from Dillenburg. "The Ludwig Schunk Prize is a sign that willingness to perform and voluntary commitments are compatible and rewarded", said Ernst Steiner, CEO of the Ludwig Schunk Foundation, at the award ceremony.

Summer semester 2016

Professor Dr. Matthias Willems is the new President of the TH Mittelhessen. His six-year term begins on 1. April. He succeeds Professor Dr. Günther Grabatin as the head of the university, who resigned from office after ten years upon reaching retirement age. As the

focus of his future leadership, Willems named the further development of teaching and study, research and further education, the establishment of an appreciative university culture, and the expansion of the infrastructure. Professor Dr. Katja Specht is also new to the Presiding Committee. As vice-president, the habilitated graduate economist will be responsible for studies and teaching. Also in Office are Professor Olaf Berger, who performs the tasks of the chancellor, and Professor Dr. Frank Runkel, whose areas of work include among others research, transfer and young scientists.

"The institutionalization of communication in both directions has succeeded", praises Giessen's mayor Gerda Weigel-Greilich at the opening of the "Giessener Unternehmenstag" (GUT) at the THM. When a trade fair is held on campus for the sixth time, one can speak of a tradition. "Most company representatives come here to make contacts with students," explains Professor Dr. Jens Minnert, Dean of the Department of Civil En-

gineering. As topics of the talks, he mentions internships, projects for graduation work, the career entry, and notes: "for our students these are great prospects!"

At the symposium of the 10th anniversary of the Institute of Medical Physics and Radiation Protection (IMPS) at the THM, Dr. Christian Greipl from the Federal Environment Ministry emphasizes the institute's role in imparting scientific insights into politics and to the public. Professor Dr. Joachim Breckow, Managing Director of IMPS, describes the "bundling of existing competence to become more visible and more effective" as the motive for the establishment of the institute. With the merge of professors from the Giessen departments

of Life Science Engineering, Mathematics, Natural Sciences, and Informatics they had been successful. Originally founded by four professors, the IMPS currently employs around 50 scientific staff and students.

The State of Hessen will invest around 20 million euros in two new THM buildings in Giessen. With funds from the University Pact 2020 new buildings with a total of 3,200 square meters will be built on the corner lot Ringallee/Eichgärtenallee for the Civil Engineering and Mechanical Engineering and Energy Systems departments. Schulz and Schulz Architekten (Leipzig) emerged as the winner from a realization competition with 17 participants. The jury, chaired by Professor Ulrike Lauber, awarded the second prize to AWB architects from Dresden. THM President Professor Dr. Matthias Willems rates the construction project and the outcome of the

competition very positively: "Mechanical engineering, energy technology and civil enigneering are traditionally among the core disciplines of our university. With the new buildings, we create additional space for them and signal that these thriving fields of study are of great importance for the campus development."

The THM receives an official confirmation of its research strength in July by a parliamentary inquiry at the Hessian Landtag that was aimed at funding practical research at the Universities of Applied Sciences (HAW). Boris Rhein, Minister for Science and Arts, focuses in his answer on the LOEWE initiative (LandesOffensive zur Entwicklung Wissenschaftlich-ökonomischer Exzellenz). In the LOEWE Funding Line 3, which supports research cooperation between HAW and small or medium-sized companies in Hessen, the THM is clearly in a top position.

In both sectors of this program, the THM received by far the majority of the project fundings, namely 20 with a total funding sum of around 1.4 million euros in module A, and 25 financings with a total amount of 5.5 million euros in module B. Rhein's balance sheet for the „Research for Practice Program", which is intended as an initial-funding shows that the THM is the most active HAW with 22 projects.

Two conferences at the THM have a great response: 320 participants from all over the Germany, Spain, Denmark, and the Netherlands came to Giessen for the two-day conference "Digital infrastructure planning and building 4.0". For the event, the university cooperates with Deutsche Bahn and partners from other com-

panies. The BIM method (Building Information Modeling) is the focus of the advanced education program. This includes the optimized planning, execution and management of buildings with software.

More than 100 guests accept the invitation to "Physical Stress – make an appropriate assessment" at the THM in Giessen. The audience includes mainly specialists entrusted with safety issues from various companies as well as employees from accident insurance providers. More than half of all employees in Germany work mainly sitting in front of screens. The main cause of many health problems and lifestyle diseases is not sitting itself but the lack of movement, explains Professor Dr. Dieter Lorenz from the Department of Management and Communication at THM.

Winter semester 2016/17

With the new record number of 17,052 students the introductory week at THM begins in October. This is six percent more than in the previous year (16,044). The number of first semester students also reaches a peak and increased by 14 percent compared to the winter semester 2015/16. Of the 4,144 beginners (previous year: 3,635) 2,508 (1,853) decided for Giessen and 1,179 (1,330) for Friedberg. Wetzlar reports 457 (452) first semester students. Two new bachelor courses in Giessen proved to be particularly attractive: Medical Management with 321 and Social Media Systems with 186 beginners. President Professor Dr. Matthias Willems acknowledges this as evidence that the THM has once again succeeded in conceiving courses of study for occupational fields in which the need for academically trained specialists is emerging. The THM was well prepared for the many new students. "The number of our students has been rising for 15 years. We have learned how to deal with it so that everyone can get a good start to the studies," the president said.

"Welcome to Hessen's youngest university location!" With these words, Professor Dr. Harald Danne, Senior Director of the THM's dual study program, welcomed the twelve first semesters at the newly opened branch office of StudiumPlus in Limburg. There StudiumPlus now has four lecture rooms, including a computer lab as well as office and lounge areas, on 400 square meters. The bachelor's programs in Business Management and Business Engineering will be offered at the start. More than 60 partner companies from the Limburg region, who previously sent students to Wetzlar, can now offer their employees the opportunity to continue their academic qualification close to home. In addition to its headquarters in Wetzlar, StudiumPlus now has six branch offices in Bad Hersfeld, Bad Vilbel, Bad Wildungen, Biedenkopf, Frankenberg and Limburg.

Professor Dr. Frank Runkel is being re-elected as Vice President at the THM for the second time. He will be in office for three years. In the Presiding Committee he will continue to be responsible for the areas of research, transfer and young scientists as well as for facility management. In his presentation to the Senate he described the systematic development of application-oriented research as one of his main tasks. Today the THM is already the most research-oriented Hessian University of Applied Sciences. The "cooperative graduate platform", which his university of applied sciences would like to set up together with the two universities in Mittelhessen, offers an institutionalized way to graduation for THM graduates.

The Justus-Liebig Universität Giessen, the Philipps-Universität Marburg and the THM are celebrating the founding of the "Research Campus Central Hesse" in the Marburg Castle. Its goal is to establish Mittelhessen as a region of top level research. The "Research Campus Central Hesse" is supported by the State of Hessen with a total of 7,3 million euros during the five-year set-up and establishment phase. Minister of Science, Boris Rhein, said in his opening speech: "This

project is the result of a long-lasting partnership of mutual trust between the two universities in Marburg and Giessen, as well as the THM." THM president Matthias Willems states: "The 'Research Campus Central Hesse' offers scientists from the three universities the opportunity to work on new projects in which their different professional competences are complemented. With the cooperative graduate platform the THM will have an institutionalized access to graduation. And with the establishment of an engineering science graduation center, the Dr. Ing. will come to Mittelhessen."

With twelve recipients TH Mittelhessen launched the award of the Deutschlandstipendium in 2012. After the fifth round of application, 64 students receive the certificates. THM president Matthias Willems says at the awards ceremony in November: "In the last quarter of

the year, this ceremony is also one of the highlights at the TH Mittelhessen because we were able to expand the circle of sponsored students by more than 50 percent compared to the previous year. Of the 32 donors, 19 are here once again, 13 are newly acquired." He congratulates the 64 scholarship holders who study in Giessen, Friedberg or Wetzlar, thanks all donors and confesses: "We want to expand the donator culture at the THM!"

Two ministers visit the THM Department of Health in December. During the "Weeks of Science", Minister of Finance Dr. Thomas Schäfer comes to Giessen to get informed about a breath testing process. He is followed by Health Minister Stefan Grüttner. His interest

is in research projects in the field of e-health and telemedicine. During his visit, Minister of Finance Schäfer pointed out the Landes-Offensive zur Entwicklung Wissenschaftlich-ökonomischer Exzellenz (LOEWE) and sums up: "About half a million of this program benefited the development of a breath test in the years 2015 and 2016. Among others, researchers from the THM have worked with great commitment and very successfully on the development."

With a view to the presented digital media for medical applications, Grüttner summarized: "The technology offers enormous opportunities for safeguarding health care in rural areas and can help to overcome sectoral boundaries as well as to optimize supply processes."

The project team "Klasse in der Masse" (KiM) of the THM celebrates the end of the first and the transition to the second funding phase in December. For the follow up project (KiM II), the THM is again receiving € 6.4 million funding from the Federal and State Program for Better Study Conditions and More Quality in Teaching (quality pact teaching). Project manager Gisa von Marcard reports on the results of the first funding phase, and gives an outlook on the KiM II project, which runs from 2017 to 2020. Some of the measures are consistent – including the Center for Development of Study Programs – others have

ended since the objectives have been achieved. There will also be new areas of work. In principle, the follow-up project focuses on the self-assisted learning of students, for example through game-based learning and crowdsourcing.

With two events the TH Mittelhessen celebrates its expansion in January. In Friedberg, the university is officially commissioning the building, which was completed in 2016, for three departments in the former Housing hosts Area. The new building has primarily laboratories, but also offices, seminar and group rooms. The costs of five and a half million euros are borne by the Federal Government and the State of Hessen from funds of the University Pact II.

On the same day the guests, including members of the State Government, senior employees of the Hessian Construction Management and the executing companies travel to Giessen to lay down the foundation stone for the Laboratory and Technology Center (LTZ) in Gutfleischstrasse.

THM President Matthias Willems points out that this is the biggest construction project of the THM so far. The LTZ will provide 4,600 square meters of space for research and teaching for the areas of Life Science Engineering, Mathematics, Natural Sciences and Informatics faculties. The project, which is due to be completed in 2018 and is financed by state funds (HEUREKA program) with just fewer than 56 million euros, includes three buildings, a cafeteria and underground parking.

The University Council of the THM bid farewell to three of its members. Professor Dr. Dr. Udo Meissner, Wilfried Schmied and Ernst Steiner leave the committee.

The three councils expressed their pleasure in contributing to the University's structural development. With Wilfried Schmied, former district president, the last remaining founding member of the Council is leaving. Since its establishment in March 2002 he was a member of the council. His colleagues Udo Meissner, President of the chamber of engineers Hessen, and Ernst Steiner, chairman of the Ludwig-Schunk Foundation, were active on the panel for about six years.

When Hessen's Minister of Science Boris Rhein presents in March the funding agreement for three THM research projects, he emphasizes: "In research the TH Mittelhessen works on university level." The funds from the LOEWE-3 program of the regional government go into the projects for the development of new software, which offers customers purchasing recommendations in the online trade, analysis about the influence of cosmetics on the health of the skin, and the development of a solution for the recycling of photovoltaic modules.

Development of the student numbers 2011-2017

	WS 11/12	SS 12	WS 12/13	SS 13	WS 13/14	SS 14	WS 14/15	SS 15	WS 15/16	SS 16	WS 16/17
Campus Giessen											
New students	1.321	620	1.528	672	1.780	787	1.849	875	1.853	1.080	2.544
Students in standard course lenght	5.266	5.033	5.505	5.243	5.900	5.468	6.161	5.888	6.513	6.367	7.505
Total Students (incl. those on leave)	**7.679**	**8.285**	**8.123**	**7.679**	**8.285**	**8.123**	**8.689**	**8.436**	**9.021**	**8.981**	**10.060**
Campus Friedberg											
New students	971	294	969	390	1.002	410	1.270	485	1.330	445	1.187
Students in standard course lenght	3.304	3.264	3.334	3.141	3.323	3.212	3.810	3.536	4.045	3.641	3.981
Total Students (incl. those on leave)	**4.927**	**4.751**	**5.162**	**4.993**	**5.307**	**4.991**	**5.636**	**5.280**	**5.797**	**5.520**	**5.906**
Campus Wetzlar*											
New students	394		433		449		422		452		462
Students in standard course lenght	828	821	1.010	997	1.184	1.170	1.186	1.170	1.194	1.186	1.236
Total Students (incl. those on leave)	**838**	**827**	**1.028**	**1.003**	**1.193**	**1.174**	**1.198**	**1.192**	**1.226**	**1.206**	**1.261**
THM total											
New students	2.686	914	2.930	1.062	3.231	1.197	3.541	1.360	3.635	1.525	4.193
Students in standard course lenght	9.398	9.118	9.849	9.381	10.407	9.850	11.157	10.594	11.752	11.194	12.722
Total Students (incl. those on leave)	**13.198**	**12.760**	**14.000**	**13.675**	**14.785**	**14.288**	**15.523**	**14.908**	**16.044**	**15.707**	**17.227**
Division of students in %											
Campus Giessen	56%	56%	56%	56%	56%	57%	56%	57%	56%	57%	58%
Campus Friedberg	37%	37%	37%	37%	36%	35%	36%	35%	36%	35%	34%
Campus Wetzlar*	6%	6%	7%	7%	8%	8%	8%	8%	8%	8%	7%
Graduates											
Campus Giessen	536	510	444	681	584	658	518	616	530	654	
Campus Friedberg	269	290	337	342	471	275	373	335	351	274	
Campus Wetzlar		227		256	5	361	4	357	8	397	
THM total	**805**	**1027**	**781**	**1.279**	**1.060**	**1.294**	**895**	**1.308**	**889**	**1.325**	
New students, female											
Campus Giessen	382	183	544	212	564	239	614	256	600	395	971
Campus Friedberg	173	44	201	76	189	67	256	97	309	95	262
Campus Wetzlar*	89		109		118		110		115		135
THM total	**644**	**227**	**854**	**288**	**871**	**306**	**980**	**353**	**1.024**	**490**	**1.368**
Total percentage of new students	24%	25%	29%	27%	27%	26%	28%	26%	28%	32%	33%
Students total, female											
Campus Giessen	1.993	1.948	2.256	2.239	2.448	2.382	2.623	2.577	2.775	2.824	3.329
Campus Friedberg	803	777	883	857	923	861	1.014	998	1.158	1.080	1.172
Campus Wetzlar*	203	199	246	240	298	294	317	317	321	315	343
THM total	**2.999**	**2.924**	**3.385**	**3.336**	**3.669**	**3.537**	**3.954**	**3.892**	**4.254**	**4.219**	**4.844**
Total percentage of new students	23%	23%	24%	24%	25%	25%	25%	26%	27%	27%	28%

* Wetzlar is being statistically recorded as a campus since WS 2010/11.

In the winter semester 2016/17, the Technische Hochschule Mittelhessen experienced a student influx as never before. At the three locations in Giessen, Friedberg and Wetzlar 4,193 students began their academic education. This represents an increase of around 15 percent compared to the previous year. Even with the total number of 17,227 the THM has reached in fall 2016 is the highest number so far in the history of the university.

2,544 beginners chose Giessen and 1,187 Friedberg as the place of study. StudiumPlus in Wetzlar which combines university studies with company based training received 462 newcomers.

Due to the extent of the current growth, the TH Mittelhessen has a special position nationwide. According to a statement by the Statistical Office in Wiesbaden in November 2016, the number of newcomers to the Hessian universities rose only slightly (1 percent) compared to the winter semester 2015/16. The total number of students in Hessen (roughly 250,000) was only slightly (about 2 percent) higher than in the previous year.

Looking at the list of the most requested study programs at the THM, it is striking that a remarkable number of first-year students have selected two new bachelor programs: 324 young men and women chose Medical Management, 192 chose Social Media Systems for the winter semester 2016/17 in Giessen. We see this strong demand as a confirmation of our way to develop the range of courses market and future-oriented.

At the same time, it is evident that classical engineering disciplines are still far ahead in the selection process at our university: mechanical engineering and civil engineering in Giessen as well as industrial engineering in Friedberg. The interest in business administration in Giessen and the dual economics program

Available courses at the Technische Hochschule Mittelhessen

Courses	Campus	Degree
Electrical Engineering	Friedberg	Bachelor of Engineering
Architecture	Giessen	Bachelor of Engineering
Architecture (consecutive)	Giessen	Master of Engineering
Railway Engineering	Friedberg	Bachelor of Engineering
Civil Engineering	Giessen	Bachelor of Engineering
Civil Engineering (consecutive)	Giessen	Master of Engineering
Civil Engineering (experience integrated, dual)	Wetzlar	Bachelor of Engineering
Vocational Education and Training	Cooperation with JLU Giessen	Bachelor of Education
Business Administration	Giessen	Bachelor of Arts
Business Administration (experience integrated, dual)	Wetzlar	Bachelor of Arts
Business Administration (professional advanced education)	Giessen	Master of Business Administration
Bioinformatics	Giessen	Bachelor of Science
Bioinformatics und Systems Biology	Cooperation with JLU Giessen	Master of Science
Biomedical Engineering	Giessen	Bachelor of Science
Biomedical Engineering (consecutive)	Giessen	Master of Science
Biotechnology/Biopharmaceutical Technology	Giessen	Bachelor of Science
Biotechnology/Biopharmaceutical Technology (consecutive)	Giessen	Master of Science
Elektrical Engineering for renewable Energy Systems	Giessen	Bachelor of Engineering
Electrical Engineering and Information Technology	Giessen	Bachelor of Engineering
Electrical Engineering and Information Technology (consecutive)	Giessen	Master of Science
Energy Efficiency Management (professional developmemt)	Wetzlar	Master of Science
Energy Systemes	Giessen	Bachelor of Engineering
Energy Management	Giessen	Bachelor of Engineering
Event Management and Technology	Giessen	Bachelor of Science
Facility Management (correspondance course)	Friedberg	Master of Science/Certificate
Computer Sciences	Giessen	Bachelor of Science
Computer Sciences (consecutive)	Giessen	Master of Science
Information and Communications	Friedberg	Master of Science
Infrastructure Management (consecutive)	Cooperation with FRAUAS	Master of Engineering
Computational Engineering	Giessen	Bachelor of Science
Electrical Engineering (experience integrated, dual)	Wetzlar	Bachelor of Engineering
Mechanical Engineering (experience integrated, dual)	Wetzlar	Bachelor of Engineering
International Marketing (consecutive)	Giessen	Master of Arts
Hospital Hygiene	Giessen	Bachelor of Science
Hospital Planning Technology	Giessen	Bachelor of Engineering
Hospital Planning Technology	Giessen	Master of Engineering

as per: winter semester 2016/17

Courses	Campus	Degree
Logistics (correspondance courses)	Friedberg	Master of Science/ Zertifikat
Logistics Management	Friedberg	Bachelor of Science
Mechanical Engineering	Friedberg	Bachelor of Science
Mechanical Engineering	Giessen	Bachelor of Engineering
Mechanical Engineering and Mechatronics (consecutive)	Friedberg	Master of Engineering
Mechanical Engineering and Energy Systemes (consecutive)	Giessen	Master of Science
Mathematics for Finance, Insurance and Management (consecutive)	Kooperation mit der Hochschule Darmstadt	Master of Science
Mechatronics	Friedberg	Bachelor of Science
Media and Computing	Friedberg	Bachelor of Science
Media and Computing (consecutive)	Friedberg	Master of Science
Medical Informatics	Giessen	Bachelor of Science
Medical Informatics (consecutive)	Giessen	Master of Science
Medical Physics (consecutive)	Giessen	Master of Science
Medical Physics and Radiation Protection	Giessen	Bachelor of Science
Medical Management	Giessen	Bachelor of Science
Communication Engineering and Computer Network	Friedberg	Bachelor of Engineering
Optotechnics and Image Processing (consecutive)	Cooperation with Hochschule Darmstadt	Master of Science
Organisation Management in Health Service (experience integrated, dual)	Wetzlar	Bachelor of Arts
Physical Engineering	Friedberg	Bachelor of Science
Process Management (dual, consecutive)	Wetzlar	Master of Science
Social Media Systems	Giessen	Bachelor of Science
Supply Chain Management (consecutive)	Friedberg	Master of Science
Systems Engineering (dual, consecutive)	Wetzlar	Master of Engineering
Computer Engineering	Friedberg	Bachelor of Engineering
Technical Editing and Multi Media Documentation (consecutive)	Giessen	Master of Arts
Technical Sales and Distribution (dual, consecutive)	Wetzlar	Master of Egineering
Environmental-, Hygiene- and Safety Engineering	Giessen	Bachelor of Science
Environmental-, Hygiene- and Safety Engineering (consecutive)	Giessen	Master of Science
Executive Management (consecutive)	Giessen	Master of Arts
Business Information Systems	Friedberg	Bachelor of Science
Business Information Systems (consecutive)	Cooperation with FRA UAS	Master of Science
Business Administration and Engineering (correspondance courses)	Friedberg	Master of Business Administration and Engineering/Certificate
Business Administration and Engineering Real Estate	Friedberg	Bachelor of Science
Business Administration and Engineering Industry	Friedberg	Bachelor of Science
Business Administration and Engineering (consecutive)	Friedberg	Master of Science
Business Administration and Engineering (experience integrated, dual)	Wetzlar	Bachelor of Engineering
Business Mathematics	Friedberg	Bachelor of Science

in Wetzlar, as well as the courses in Friedberg in business and media informatics, remains high.

In the winter semester 2016/17, the TH Mittelhessen offered a total of 69 study programs. 41 of them were awarded to the bachelor's degree and 28 to the master's degree. For further scientific qualification with a master degree, about 600 graduates decided at our university in fall 2016. About 550 people were enrolled in distance learning courses.

Labor Market

In 2016, the "Ingenieurmonitor", that is prepared regulary by the Association of German Engineers (VDI) and the Institute for Economic Research, reports an "employment record in engineering professions". In February 2017, the publication reports: "The demand for engineers remains unabated. In the fourth quarter of 2016 the vacancy rate rose again, surpassing the value of the previous quarter by 70,220 vacancies. (...) The main booster of this development is the ongoing construction boom as well as the consistently high demand in the fields of mechanical and vehicle engineering respectively energy and electrical engineering."

The Federal Employment Agency concludes in December 2016 with the following assessment: "Despite the strong increase in vacancy time and narrow job vacancies, a nationwide deficit in skills shortage is not expected."

For individual professional category and regions, the Federal Agency recognizes a lack of academically qualified specialists and mentions among others, engineers for metal construction, automotive engineering, mechatronics and automation engineering as well as

university graduates in the areas of IT user consulting, software development, and programming.

The THM Presiding Committee welcomes the steady influx of interested students especially with regards to the regional demand for professionals and economic development. This also applies to the high number of qualified graduates who left the university last year with a certificate to take up the professional life. A total of 2,215 students completed their academic education at the TH Mittelhessen in 2016, and thus earned a professional qualification. Among them were around 1,400 engineers, 250 graduates of computer science and their application subjects as well as over 400 business economists.

The high percentage of engineering disciplines in the course offer has the consequence that male students at the TH Mittelhessen are traditionally in vast majority. The current graduate statistics also show a male proportion of about 70 percent. But when comparing the different courses, significant fluctuations can be determined. In the classical engineering sciences, mechanical engineering, Giessen and Friedberg recorded a total of 190 graduates in this period; the proportion of women is around 6 percent. The architectural studies at the THM, on the other hand, attracts more women; the proportion of graduates is 67 percent. Traditionally, women have strong interests in studies in business management, which is reflected in a women's share of about 60 percent in 2016. A similar distribution among the sexes is the course Biotechnology/Biopharmaceutical Technology, and Medical Informatics. The facts that study programs with a business management and medical orientation are particularly attractive to women are also confirmed by the number of students enrolled in the newly established study program "Medical Management". It started with over 70 percent female students in the winter term 2016/17.

First Semester top 10

Medical Management (Gi)	324
Mechanical Engineering (Gi)	254
Civil Engineering (Gi)	232
Business Administration (Gi)	193
Social Media Systems (Gi)	192
Business Information Systems (Fb)	192
Media and Computing (Fb)	164
Business Administration (dual, Wz)	158
Industrial Engineering – Industry (Fb)	156
Computer Science (Gi)	153

First Semester students in the WS 2016/17
All listed study courses are bachelor programmes.

Foreign students at the TH Mittelhessen*

Total	1,202
Cameroon	367
Morocco	114
Indonesia	86
Turkey	50
Tunesia	45
Syrian Arab Republic	41
Russian Federation	31
Nepal	28
Ukraine	28
India	24

as per: WS 2016/17

* Students that have not obtained their higher education entry qualifications in Germany

The Justus-Liebig-Universität Giessen, the Philipps University Marburg and the THM celebrated the founding of the "Research Campus Central Hessen" in the winter semester 2016/17 with a ceremony. Its goal is to establish Mittelhessen as a region of top level research. The Research Campus is supported by the State of Hessen with a total of 7.3 million euros during the five-year set-up and establishment phase.

Minister of Science, Boris Rhein said when signing the cooperation agreement in the castle of Marburg: "I am particulary pleased for the next generation of scientists. We offer them safer future perspectives. The established cooperation structures, such as the cooperative graduate platform, and the corporate emphasis in research, will continue to exist even after the end of the funding phase."

THM President Professor Dr. Matthias Willems emphasized the cooperative graduate platform as an integral part of the Research Campus, and welcomed the fact that the THM thus had an institutionalized access to the doctorate.

With this corporate initiative the three Mittelhessen universities, which are connected by a long-standing history of cooperation, are entering a new quality level of cooperation. Already in 1991 they established a corporate transfer institute and concluded a contract in 2005 that involved cooperation in almost all areas of the universities. Professor Dr. Katharina Krause, President of the University in Marburg, pointed out the complementary professional orientation of the partners and concluded: "We are stronger in the network than each of them alone."

LOEWE & Co.

The nationwide importance of the TH Mittelhessen in the field of application-oriented research was illustrated by a parliamentary enquiry at the Hessian Landtag. The subject of the interest was the funding of practical research at the Universities of Applied Sciences (HAW). For the answer Boris Rhein, Minister for Science and Art, focused in the summer 2016 on the LOEWE program ("Landesoffensive zur Entwicklung Wissenschaftliche-ökonomischer Exzellenz").

The Minister informed about the various LOEWE funding lines, the number of projects funded, the funding totals, and the distribution of funds among universities in the state. In the LOEWE funding line 3, which supports research networks between HAW and at least one small or medium-sized Hessian company, the THM ranks in the top position. In both modules of this program THM has by far the most successful applications for funding. In Module A, which addresses to companies as applicants, a total of 43 approvals were

What are the benefits of the Research Campus?

"The Research Campus is designed as a long-term strategic alliance between the universities in Mittelhessen and its partners. Objectives of the "Research Campus Central Hessen" are the strengthening of regional network formation, especially in research and graduation of young researchers, the creation of pioneering structures to promote top research and the establishment of a cooperative graduate platform.

Thus, the "Research Campus Central Hesse" offers a structural and strategic added value for the participating partners, the region, the country and leading research. This is the preamble of the cooperation agreement between the three Mittelhessen universities.

An important means of funding for the collaboration of scientists are the so-called "FlexiFunds", for which half a million euros are available annually.

This supports research projects involving scientists from at least two universities, and that have the potential to lead to a nationally or internationally visible collaborative research project with a third party funding provider.

A cooperative graduate platform offers highly qualified THM graduates a transparent path to doctoral degrees. Research-oriented professors at the THM can be co-opted by university departments. They have the same rights as the regular members of the department in the doctoral examination procedure. For the first time, an engineering graduate center should offer the possibility of a doctorate in technical courses in Mittelhessen.

granted since 2008, of which 20 went to the THM with a total subsidy amount of around 1.4 million euros. In Module B, in which the universities are applicants, 25 of the 50 subsidized projects were accounted by the THM. The total subsidy was 5,5 million euros. In the recent past the THM received from LOEWE 3, for example, subsidy amounts for collaborative projects in the fields of energy technology, disposal engineering, computer science and pharmaceutical research.

Rhein's outcome for the "Research for Practice" program, which is intended as start-up financing to enable HAW to cooperate with the economy and to generate further third-party funds, also showed the THM as the most active university. Thus, in the period from 2009 to 2015, the THM received about 760,000 euros of subsidies for 22 projects.

The TH Mittelhessen is also included in the support given by funding line 1 of the State's program. Our university is part of the Giessen Research Group "LOEWE

Center for Insect Biotechnology", which is funded by the State of Hessen until the end of 2019. Besides the Justus-Liebig Universität (leadership), the THM Competence Center for Biotechnology and Biomedical Physics, and the Fraunhofer Institute for Molecular Biology and Applied Ecology are involved.

Currently various research and development projects from THM teams are funded by federal programs. They are concerned, among other things, with tasks in the fields of construction engineering, biotechnology, electrical engineering and materials engineering. In July 2016, the Federal Ministry of Education and Research (BMBF) presented a THM project as the "Project of the Month" on its website. Under the title "OnkoVir", a research group at the Institute for Bioprocess Engineering and Pharmaceutical Technology (IBPT) focuses on the cultivation of measles viruses that can be used in cancer therapy. The BMBF supports this work with around 430,000 euros.

In a co-operative European project a research group from the THM Nanotechnology and Photonics Competence Center is working on the development of electronic circuits made of synthetics. Partners are Spanish, French and English universities, research institutes, and software companies. The European Union finances the project with 750,000 euros from its "Horizon 2020" program.

"The universities of applied sciences have a positive effect for the scientific community of Hessen, but also for the State's prosperity, employment and affluence. They encourage the innovativeness of Hessian companies and, in particular, strengthen regional structural policy." In June 2016 Minister of Science Boris Rhein assessed the development of the State's HAW as a success story. In this context, he called the 'Hochschulpakt 2016-2020' a milestone for the science community in Hessen."

In their public statements the universities of applied sciences (HAW) acknowledged the financial planning security ensured by this. However, they also made it clear that the great social importance, which is now universally attributed to the academic qualification of young professionals, must be permanently reflected in the budget of universities. In this sense, Professor Dr. Ralph Stengler, spokesman of the Hessian Universities of Applied Sciences, commented on the new record demand for study places in October 2016 to the press, and called "transparent and sustainable financial resources" with view to the years after 2020 for.

The agreements of the current "Hochschulpakt" bring a moderate continuous increase in basic funding. The State Government has indeed once again fixed a benchmark for the calculation of the basic budget of the THM – a statistically average number of students enrolled within the regular study period – that is significantly lower than the real current figure. However, as in previous years, this deficit is largely compensated by allocations from the University Pact, which is jointly supported by the Federal and State Governments. The

THM has received a further 21.59 million euros from these funds in 2016 that are intended to improve teaching and studies , but are also partially used for investment measurements.

In the winter semester 2016/17 the THM had a total of 1,126 employees, which represents a plus of 23 percent compared to the level five years ago.

Particularly notable is the increase from 75 to 195 employees in the group of scientific and artistic staff. This represents an increase of 160 percent since 2012, and is a result of the university management's strategy to strengthen the midlevel academics.

The university's structural expansion continues to be a priority in the development of the THM. This leads to new qualitative dimensions both for teaching and application-oriented research. In January 2017 important progress was made on the way to redesign the university's buildings so they meet our demands. In Friedberg the THM officially commissioned the module building in

Budget of the Technische Hochschule Mittelhessen

	2012	2013	2014	2015	2016
Total Budget	**48.031.198**	**53.652.254**	**55.535.350**	**56.790.570**	**62.142.034**
State Budget grants	47.166.579	51.578.800	53.460.000	54.901.800	59.785.000
Other funds	864.619	2.073.454	2.075.350	1.888.770	2.357.034
Total grants	53.144.100	58.035.100	59.916.300	61.125.500	61.125.500
Budgeted payroll costs	36.278.847	39.004.116	43.059.501	44.836.548	47.170.832
Budgeted material costs	11.752.351	12.574.684	10.400.499	10.065.252	12.614.168
Funds for the improvement of the quality of conditions of studying and teaching	5.977.521	6.456.300	6.456.300	6.223.700	6.440.400
Funds from the University Pact 2020	7.087.855	18.500.00	22.000.000	19.800.00	21.592.835

Development of third party funds at the THM

		2013	2014	2015	2016
Third party funds total, based on revenues		8.273.712	9.749.450	9.482.548	10.909.870
Third party funds that are eligible for performance oriented allocation		4.586.305	5.051.095	4.515.128	4.564.705
Third party funds w/o State funding	**w/o professional development**	2.679.975	3.633.565	3.753.277	4.924.168
	with professional development	3.687.407	4.698.355	4.967.420	6.345.165

Data in euros (Research in total, professional development and others)

the former Housing Area, that was completed in 2016, for three departments; Information Technology-Electronics-Mechatronics, Mechanical Engineering, Materials Technology, Mathematics, Natural Sciences and Data Processing. The new building houses mainly laboratories but also offices and seminar rooms on an area of about 750 square meters. The costs of 5.5 million euros were equally shared by the Federal Government and the State of Hessen from funds of the University Pact II. THM President Professor Dr. Matthias Willems explained the requirement situation at the ceremony: "Today we have around 5,900 students in Friedberg. That is two and a half times more than at the end of the 1990s. The enhancement of the area has by far not kept up. The new building is a relief, but we need a rapid expansion at the Friedberg site". He emphasized that the university needed not only space for teaching but also for applied research. In this context he named the planned technology center to be built in the neighborhood with a usable area of 1,800 square meters, and announced the architects' competition for the summer of 2017.

On the same day the foundation stone ceremony for the Laboratory and Technology Center (LTZ) in Gutfleischstrasse was held. The LTZ will provide 4,600

square meters of space for research and teaching for the Life Science Engineering and Mathematics, Natural Sciences and Computer Science departments. The project, which is scheduled to be completed in 2018, is financed by State funds (HEUREKA program) with just fewer than 56 million euros and includes the construction of a cafeteria, and underground parking.

Giessen's urban development also benefits considerably from the new Technology Campus between Gerichtsviertel and Wieseckaue.

At the ceremony mayor Dietlind Grabe-Bolz rated the Science Center "as a new heart of inner-city life".

State Secretary Ingmar Jung from the Hessian Ministry of Science and Art explained: "Projects like the new Laboratory and Technology Center help Hessen to a prosperous academic landscape, and research-oriented universities such as the THM, to offer excellent location conditions for expanding departments."

Employees at the Technische Hochschule Mittelhessen

	Employees in the faculties				Administration	Total
	Professors	Research assistants	Administrativ-technial employees	Total employees in departments		
2014	219	139	308	666	417	1.083
2015	236	169	296	701	405	1.106
2016	239	171	304	714	412	1.126

Indicated is the number of persones, not the position in full time equivalents!

Development of the main usable area at the Technische Hochschule Mittelhessen

Campus/Year	2010	2011	2012	2013	2014	2015	2016
Giessen	34.679	39.456	41.084	41.081	43.132	45.257	45.258
Friedberg	15.406	15.545	15.454	16.414	16.414	16.568	17.314
THM total	**50.085**	**55.001**	**56.538**	**57.495**	**59.546**	**61.825**	**62.572**

The THM entered a new development phase in 2016. In both, the University Pact 2016-2020 and its internal objective agreements, the THM had defined the basics of its course for the near future. Guiding concept is still "University of a new type". It stands for overcoming of the "binary typology" – here universities of applied sciences there universities – by characterizing a new profile that is linked by science with a high applicability and the unity of research and teaching.

This change also manifested itself by the fact that in the Hessian Laws of Higher Education Acts, the generic term Fachhochschule was replaced by the designation Hochschule für Angewandte Wissenschaften (HAW). Substantial changes that were introduced by this include the possibility of granting a right to award doctorates for research-oriented areas of HAW.

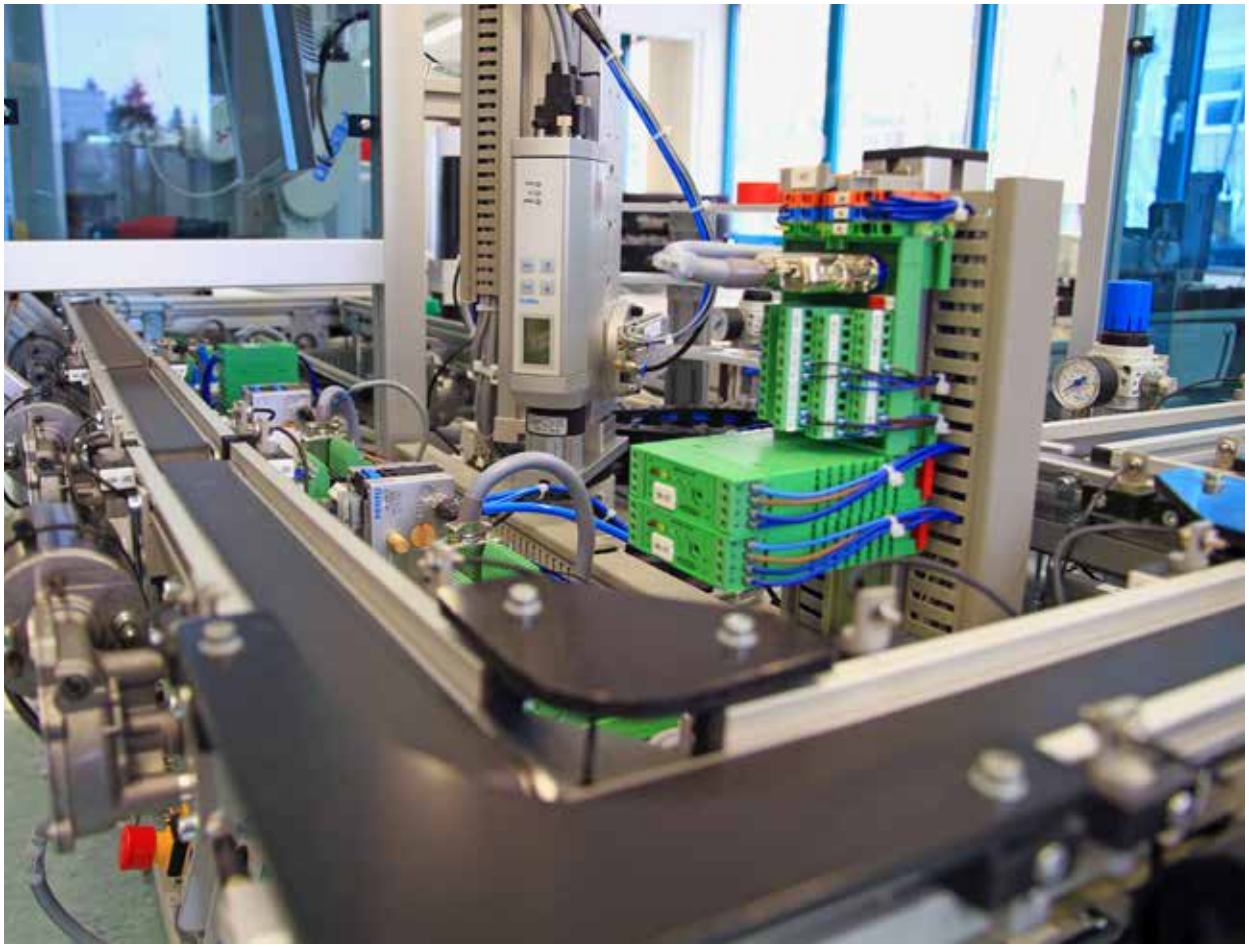
The TH Mittelhessen has decided for a cooperative way to enable its graduates the scientific qualification with the doctorate. The previous cooperation with the Justus-Liebig Universität in Giessen and the Philipps-Universität in Marburg has led to the establishment of the "Research Campus Central Hessen" in 2016, that includes an integrated graduate platform and thus entered a new level of cooperative partnership. The de-

velopment of the entire Mittelhessen region will benefit from the cooperation between the three local universities that complement one another. The THM is primarily responsible for the engineering, technological and practical competences. The aim is to promote the transfer of innovative results to local companies and also to contribute to the retention of highly qualified young people in the region.

Two large construction projects in Giessen and Friedberg not only reveal the ongoing spatial expansion of the THM but also signal their willingness to focus on application-oriented research and joint projects with local companies as a "new type of university". The Laboratory and Technology Center on the new campus in Giessen's Gutfleischstrasse is scheduled to be ready for use in 2018. The development of the former Housing Area in Friedberg will be continued; the invitation tender for the architectural competition for the local technology Center will be open soon.

Further construction projects in Giessen's Eichgärtenallee and Moltkestrasse will create more than 5,000 square meters of new space for the departments of Civil Engineering, Mechanical Engineering and Energy Systems are in preparation and are to be completed by the end of this decade.

The THM understands the market-oriented development of study spectrum as a permanent task. The



founding of the Department of Health in 2015 and the remarkable demand for the new Medical Management bachelor program shows the success potential of the future-oriented concept of interdisciplinary study programs.

If one asks for future trends that represent a challenge and an opportunity for academic education the digital revolution of the working world that is known as "Industry 4.0", is at the forefront. The TH Mittelhessen has the range of subjects and the expertise to help arrange this comprehensive development in teaching, continuing education and research.

The networking of the THM in the region is proceeding. Pacemaker is StudiumPlus in Wetzlar, who have established with dual, practice-oriented programs a network to which more than 750 partners belong. Limburg has been the sixth branch office in 2016, and other communities are interested in establishing a dual study site.

The TH Mittelhessen acts as a university of the region, and at the same time committed itself to the principle of internationalization in the development planning. Those responsible at the THM understand internationality as a long-term and sustainable strategy that is socially and economically an asset for the region.

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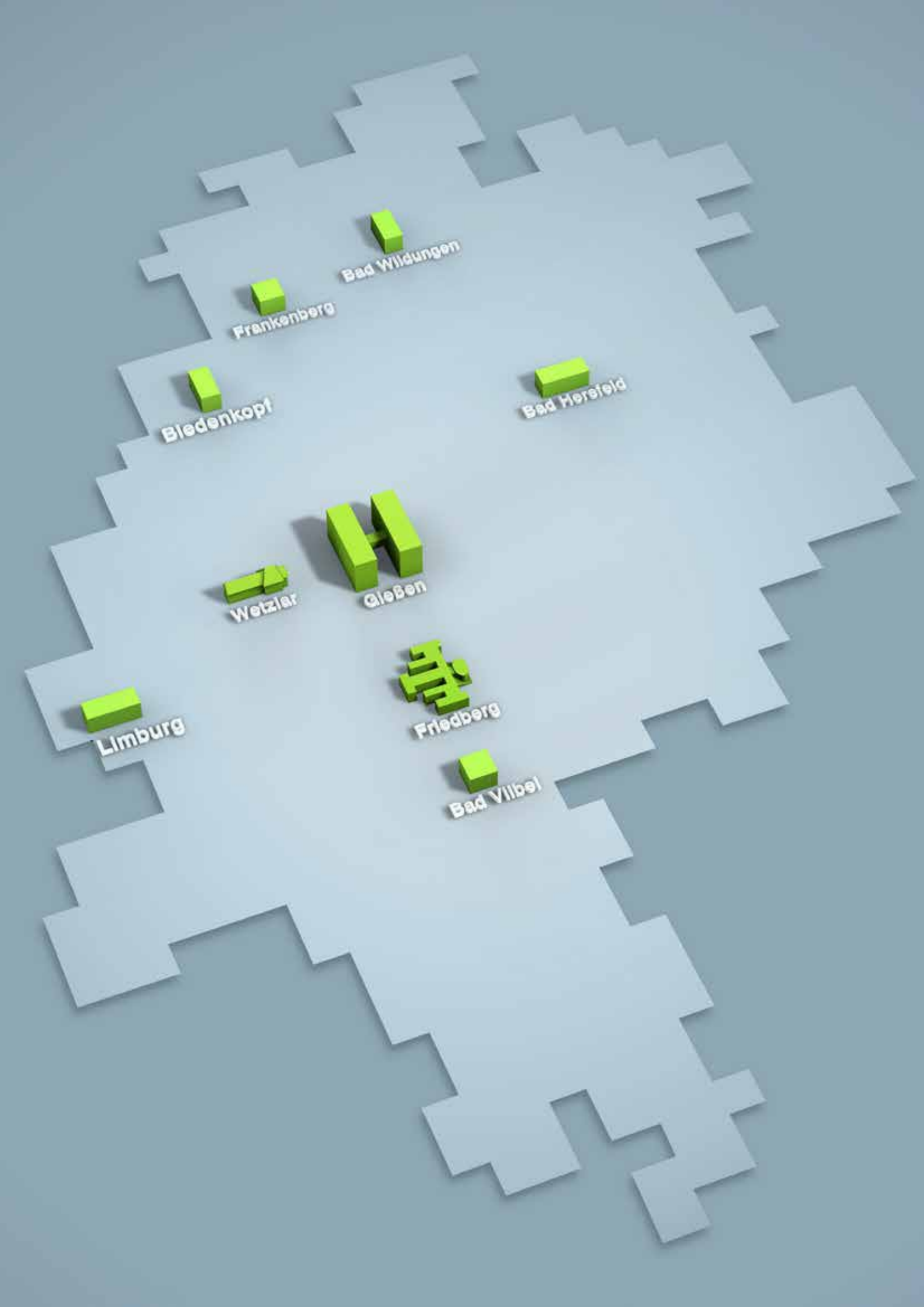
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