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DEAR READERS,

How do we design a Rectorate report so that it is well received and doesn't end up languishing in drawers expression of our activities and the fulfilment of objectives. and on shelves and being relatively ignored? With this as our starting point, we broke away from the routines that were usually followed when drawing up previous Rectorate within the region or by policymakers. reports. The result is a totally new type of annual report which presents the achievements and successes of the entire University family in a clear and easily accessible way. Three typical stories have been selected as examples and give a much deeper insight into the University's work than a dry report ever could. Previously received by only a few people, the report will now reach many multipliers, friends and all the University's employees as a major publication.

I would like to take this opportunity to thank the long-standing Chairman of the Board of Trustees, Prof. Dr. h. c. mult. Clemens Klockner. In his eight years as chair, he was always a fine colleague and supporter. He is also the force behind this new and effective style of reporting to the public.

The title "Impact" has been consciously chosen as an And there is no mistaking the double meaning in that it is also about how the University is perceived by students,

I really hope that you like what you see, that this brochure makes you a little prouder of your University if this is where you work, or that you enjoy discovering how we do research and teach if you are looking at the two locations from outside. And by the way, students recently rated us Germany's most attractive campus! I look forward to receiving your feedback.

ANNE LEQUY, **RECTOR OF MAGDEBURG-STENDAL** UNIVERSITY OF APPLIED SCIENCES

HOW DOES A UNIVER-SITY BECOME A GENUINE DRIVER OF INNOVATION WHAT VALUES CAN WE **ENGENDER? HOW DO WE REMAIN A MAGNET WITH-IN THE REGION? HOW ARE WE PERCEIVED? AND WHERE DO WE GO FROM HERE?**



04 🧿

in 2014 Anne Lequy became the first woman to take the helm at Magdeburg-Stendal University of Applied Sciences. Born in France and following studies in English Language and Literature as well as German as a Foreign Language, she obtained a joint Franco-German doctorate from the Universities of Metz and Leipzig in 1999. In 2006 she was awarded a Professorship in Tech nical Communications in French (Translation) and contributed considerably towards the Univer sity's development as Prorector of Academic Affairs from 2010. Since 2011 she has also headed the "Quality Pact Teaching" project and since 2017 she has led the German-Jordanian University project on the German side That same year, Anne Leguy was nominated "University Manager of the Year".

PROF. LEQUY, WHAT IS YOUR ASSESSMENT OF THE YEAR 2018 WITH HINDSIGHT? WHAT HAS MADE MAGDEBURG-STENDAL UNIVERSITY OF APPLIED SCIENCES A **STRONG PARTNER FOR SAXONY-ANHALT?**

2018 was a successful year for Magdeburg-Stendal University of Applied Sciences, shaped by plenty of good news and events, as well as changes and new developments at both our locations. Our statistics and data confirm this:

The University was able to announce one of the key figures for the year in October 2018. Similarly to the previous year, we were able to welcome more than 1,200 new students who started their studies in the 2018/19 winter semester. Around half came from Saxony-Anhalt and more than 30 percent came from the states of western Germany and Berlin. At the matriculation ceremony, which was held on the lake stage in Magdeburg's Elbauen park, Dr. Lutz Trümper, Lord Mayor of the state capital of Magdeburg, introduced the academic hub on the Elbe in his warm welcome speech. In keeping with tradition, the Theater der Altmark opened the doors to its large hall for the Stendal matriculation ceremony. On the theatre's stage, Ekaterina Pushkareva from Moscow was awarded the 2018 DAAD prize for her outstanding commitment to her studies and her community involvement in Stendal. Following on from the Late Summer School and having experienced their first days at university with the university scouts and our

mentoring or buddy programme, these welcome events are very important for those arriving at our University for their first semester.

The University can report further successes that occurred during 2018: External funding increased compared to previous years to 9.6 million euros. The number of Germany scholarships ("Deutschlandstipendien") and the number of supported start-up entrepreneurs at the University also rose significantly. In February 2018, for example, Prof. Armin Willingmann, the Saxony-Anhalt Minister for Business, Science and Digitalisation, awarded grants to the start-up teams at tacpic and Inflotec worth 340,000 euros.

Existing major projects shaped the University's profile further in 2018: Examples include the federal and state "Quality Pact Teaching" (QPL) programme, support for startups and transfer from the state of Saxony-Anhalt and the ESF (European Social Fund) or the Saxony-Anhalt Competence Network for Applied and Transfer-Oriented Research (KAT). In addition to these ongoing major projects, there were other pioneering undertakings on social issues. In January 2018, for



example, a five-year joint "TransInno_LSA" project (transfer and innovation service in the state of Saxony-Anhalt) kicked off at both campuses as part of the "Innovative Universities" funding programme. Projects on inclusive education in Saxony-Anhalt at Stendal, as well as "Model Factory 4.0" and the state strategy for health (competence) in Magdeburg see the University researching current trends and developing innovative, practically relevant solutions. These research and transfer-oriented projects also make us more attractive to our students and alumni, as well as to partners in the region and beyond.

We presently have approx. 5,700 students at our University. They can choose between more than 50 practically oriented degree courses across five departments and can start their professional careers in fields ranging from design and engineering to journalism, social work, health management or business administration. Half of our graduates remain in Saxony-Anhalt and the surrounding area. At our University they learn the knowledge and skills that help them to advance the regional economy as specialists. Or to start their own businesses as entrepreneurs: We equip our students to

develop their own business ideas, to prepare them within the University ready for market and ultimately to create spin-offs in order to realise their ideas. This entrepreneurial spirit advances Saxony-Anhalt and creates jobs here. We also provide training for the employees of these start-ups – many of our offerings are aimed at experienced professionals. They benefit from intense practical relevance, an informal atmosphere and excellent support for students on both campuses.

These developments yet again attest to the performance, motivation and innovative strength of our colleagues in teaching, research, transfer, further training and within the administration. Together we have succeeded in positioning Magdeburg-Stendal University of Applied Sciences as an important provider of education in Saxony-Anhalt and as a driver of innovation for the economy and society.

We are sticking firmly to this path of success into the future and will continue to be a reliable partner. We see ourselves as a service provider for the region, providing our expertise for the good of the economy and to stimulate society. During 2018 we were particularly keen to expand and exchange. consolidate cooperation and projects. Here are just a few

examples: In 2018 we worked on the City of Magdeburg's application to become a Capital of Culture in 2025. In the fields of journalism and industrial design, various projects were initiated to make cultural life and artistic endeavours in Magdeburg more visible. We also concluded a cooperation agreement with the state capital as part of the EU project on "Welcoming International Talent". This project is intended to better integrate international experts, researchers and students into city society, starting with helping with administrative issues and language barriers through to social participation.

Cooperation between the City of Magdeburg and the University is also being strengthened by the EUniverCities project. This network of twelve European cities is organised so that they can share opportunities for marketing, technology transfer and economic development. In December 2018, the members met in Trondheim, Norway, to devise strategies for how universities, cities and students can work together on sustainability. As well as fulfilling climate targets, the aim was also to develop innovative technologies. Responding to issues relating to the future absolutely requires international

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Our involvement in the Hanseatic Town of Stendal and the Altmark is evident, from amongst other things, our work with the H. and H. Kaschade Foundation. The foundation supports cultural and educational projects in Stendal and beyond. At the University, international students also benefit from this. The cooperation agreement with the Sponsors Group for the Stendal site of Magdeburg-Stendal University of Applied Sciences was also renewed in 2018. One of the highlights of the events calendar on the Stendal campus was the AltmarkMaker Festival in June 2018.

New partnerships strengthen the guality of our research and teaching: Thanks to cooperation sealed in September 2018, our journalism students are able to work closely with MDR, the public broadcaster in Saxony-Anhalt. A major milestone and success was the first joint appointment with a research facility external to the university, the Leibniz Institute of Neurobiology (LIN) in Magdeburg, for our Applied Human Sciences department in Stendal. Before the end of 2018, the areas of focus for a joint European project called "RELflex" were also defined with the Fraunhofer Institute for Factory Operation and Automation (IFF) in Magdeburg. The Department of Water, Environment, Construction and Safety prepared for cooperation with the Helmholtz Centre for Environmental Research

(UFZ). In future, students of Safety and Hazard Defence will benefit from cooperation with the University of Applied Police Sciences Saxony-Anhalt in Aschersleben.

Proof of a very vibrant partnership came in the form of a donation from ZORN INSTRUMENTS, resulting from the proceeds of auctioning some equipment. Based in Stendal, the company sponsored Germany scholarships for high-achieving students in 2018, as well as awarding funding for students in the presence of Dr. Reiner Haseloff, Minister President of the federal state of Saxony-Anhalt, in December 2018.

More than 40 international cooperations and over 100 ERASMUS+ partnerships across Europe underline the University's international profile. The project office based in Magdeburg for the transnational German-Jordanian University (GJU) project in Jordan was able to successfully prepare a follow-on application for the years 2019 to 2022. In the autumn of 2018, the German Academic Exchange Service (DAAD) authorised, amongst others, measures to boost cooperation between academia and business, to enhance the GJU specialist networks, as well as to strengthen annual areas of focus relating to the profile of the German University of Applied Sciences. For 2019 the focus will be on the themes of innovation, entrepreneurship and start-ups, for example.

The GJU project received special recognition thanks to visits by the German Federal President Frank-Walter Steinmeier in January 2018 and by Vice President of the European Commission Federica Mogherini and German Federal Chancellor Angela Merkel in June 2018.

Within the University, we also renewed efforts to improve the framework conditions for teaching, learning, research and work in 2018. As a modern employer, we are currently responsible for 513 employees. We give them space to thrive and to turn their ideas into reality. One challenge that we face as the University Management is that teaching staff and administrative employees have different employment circumstances. This affects their working times, scope for action and work-life balance. To intervene here, the University Management has started to draw up management guidelines under the direction of the Chancellor and as part of re-auditing as a family-friendly university. In November 2018, around 70 employees from all departments and administrative units discussed this topic in a large group workshop. In order to prepare senior staff at an early stage for the challenges they

PERCENT **OF OUR** GRADUATES remain based in Saxony-Anhalt and the surrounding area after their degree course. We thus contribute greatly to securing expert resources

face, in September 2018 we held our annual "Welcome on board" event for all newly appointed professors

In 2018, the University Management decided to introduce a service area for equal opportunities in order to make more effective use of synergies in the fields of family friendliness, equality and diversity and to pool resources. Equality and family are intended to be implemented as cross-cutting issues in the leadership thinking of the University's policymakers. Among other issues, the intention is to address the number of women in management positions and in academia and to design the process of making appointments in a gen-

der equitable way. We are also considering the needs of students and employees with family responsibilities. To this end, we have succeeded in launching cooperations with daycare facilities near to both our campuses. Good framework conditions,

such as adequate childcare, are a prerequisite for keeping students and employees in our region. We are also keeping in mind the desire for dual careers, because taking this into consideration can be a key competitive advantage when it comes to attracting academics and researchers. As a result, the University joined Central Germany's dual career network in 2018 so that it can offer a dual-career service within the alliance of network partners.

Our University's success is and remains a team effort. That is why I thank all employees across the departments, units in administration, central facilities and on the numer-

"We see ourselves as a service provider for the region, providing our expertise for the good of the economy and to stimulate society."

ous projects, particularly my colleagues in University Management and on the Board of Trustees. Last year, the University Management was re-elected for the period from 2018 to 2022. I would like to take this

opportunity to thank the Prorectors who stepped down in March 2018 – Prof. Harald Goldau, Prof. Michael Hoffmann and Prof. Wolfgang Patzig – for their exceptional commitment to the University's well-being. We are continuing the projects that they instigated. Together with the University Chancellor, Dr. Antje Hoffmann, I have enjoyed working with the new Prorectors, Prof. Kerstin Baumgarten, Prof. Yongjian Ding and Prof. Volker Wiedemer, since April 2018. They bring a huge amount of expertise and many ideas to their respective remits. You will learn what they are doing during their appointment and which initiatives they have already launched over the next few pages.

Having been re-elected in 2018, my objectives for the period of my appointment are clear and firmly set: to increase the number of students, to further boost the level of performance, as well as to secure and expand research achievements, protect the community spirit and to set an example of openness to the world. That is how we become a stronger university that is fit for the future. We have a clear remit and are aware of the responsibility we bear. We are taking on an important role in and for Saxony-Anhalt.

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Antje Hoffmann studied law at Leipzig University where she also gained her doctorate in 2007. After completing her legal clerkship at Leipzig's re gional court, she moved to the Helmholtz Centre for Environ mental Research (UFZ) in 1999. At their site in Leipzig she was assistant to the administra tive board of management. From 2000 to 2014 she was head of HR and until July 2017 headed the legal department there. For two years now, she has managed the adminis[,] tration and budget at Magde burg-Stendal University of Applied Sciences.

DR. HOFFMANN, WHAT DEFINED YOUR WORK IN 2018?

In 2018, I saw it as my task to make our administration more modern and better performing. The foundation for this are efficient, streamlined and transparent processes with short lead times and IT support. It is the administration's understanding that it is there to support all university-related matters from a financial, HR and infrastructure perspective. For me, a high level of service orientation and service quality are of great importance.

As part of our digitalisation measures, we have made significant efforts to satisfy the requirements for efficient administration. Initially, we examined the various internal processes within the university administration for efficiency, transparency and speed. As the next step, we are optimising and digitalising processes such as travel management, electronic billing, as well as processes in HR management. We are also rolling out the HISinOne central campus management system. In 2018 we managed to fully integrate the application and registration management processes within that. Student

management is to follow in 2019 and then examination and event management. This will create a central database which encompasses the whole student lifecycle. Our objective is to design everyday university processes so that they are more transparent and easier to manage.

One challenge, of course, is the university's funding. A look at the actual outlay for 2018 shows that for material expenses of approx. 6.25 million euros only funds of approx. 5.63 million euros were available. Through the Higher Education Pact 2020 we received further funds which allowed us to ensure quality requirements were met. Furthermore, it was gratifying that our basic funding for our budget was increased in 2018. The items to be financed from these funds, however, were only partially allocated to the 2018 budgeting year. The remaining expenditure could be transferred to 2019 accordingly.



Our library on the Stendal campus took delivery of a new self-booking machine, even though books are being phased out with the increasing digitalisation of teaching materials. Our libraries are therefore undergoing an exciting transformation: Whilst more and more books are being withdrawn, students and employees are rediscovering the facilities as cultural venues and filling them with vibrancy. In 2018, the libraries served as event locations 54 times. Examples included a night of writing seminars and other activities to

help with assignments and fighting procrastination, regular writing workshops, a picture book cinema on the Reading Day, as well as comic, photographic and textile exhibitions. Whereas previous generations of students pored over their books in quiet

"Our objective: We want to cultivate the soil on which successful teaching and excellent research can grow."

solitude, they will soon be able to enjoy our new rooms for group work which are equipped with screens, making them attractive, contemporary places to learn.

To further optimise the teaching and research environment, we completed construction measures totalling approx. 3.22 million euros in 2018. This investment was spent on renewing the wi-fi infrastructure, air conditioning for the concrete labs and ongoing renovation of the university buildings. In terms of energy savings, in 2018 we renewed technical operations facilities and lighting systems. This enabled us to lower our electricity consumption and to reduce our CO_2 emissions.

The HR development of our employees is another issue that is very important to us. For example, the participatory process to develop guidelines for managers was successfully completed in 2018. We also created a network for secretaries and Dean's office assistants.

On a quarterly basis, they are informed of the latest developments so they can act as multipliers. They can also share experiences and take part in specialist training.

Going further, we want to maintain the well-being and satisfaction of our students and employees and – where possible – to boost it. A strategic approach for this involves comprehensive health management. This is about improving working, teaching and learning situations and removing individual load points. We are approaching health management holistically. This starts with the ergonomic set-up of workstations and extends to free, confidential psychosocial counselling. In June 2018, we set up a coordinating body for occupational health management. Our health working group ensures that the project is deeply embedded within the University. Members contribute their experience and ideas in order to develop new health-promoting offerings and measures.

ongjian Ding studied Electrical Engineering at the Technical University of Munich and completed his doctorate in 1998 under the Chair of Reactor Safety and Reliability. During his 17 years in industry, he worked among other places at the Gesellschaft für Anla gen- und Reaktorsicherheit (GRS) mbH, Siemens KWU-N (now Areva Deutschland) and E.ON Kernkraft GmbH. all in the nuclear sector. Since 2002 he has been the Professor of Control Engin eering and Automation Systems at the University of Applied Sciences in Magdeburg and has been Prorector for Academic and International Affairs since April 2018.

PROF. DING, WHAT DID YOU DO **IN 2018 TO MAKE ACADEMIC AFFAIRS FIT FOR THE FUTURE?**

The magic word is innovation. In 2018, for example, we worked on designing the new Bachelor's degree programme. Our new course in "Human-Technology Interaction", which we are offering from the 2019/20 winter semester, makes that clear. The course covers – very crucial – points of intersection. It is about social and cultural problems for which our students need to find technical solutions. We equip them to do this because these are the challenges that their generation and society face. This calls for interdisciplinary thinking and knowledge. The content of the programme consists guite logically of elements of psychology, electrical engineering and the social sciences. Three of our departments work hand in hand here; the transitions are fluid. That is ground-breaking. It corresponds fully with student interests both in terms of content and methodology. We are also making sure that the professional training on offer matches the profiles that are sought after. This enables us to meet a commercial requirement.

Issues of efficiency are always important: How do we use resources? How do we exploit potential? One response comes courtesy of our "Quality Pact Teaching" project, which now employs 22 people. Their task is to didactically train professors (especially newly appointed ones), tutors and mentors. Half-yearly, before the start of each semester, we take a week

out for this and conduct various workshops. The project has reached an incredible magnitude. In 2018, even professors from other universities in the region took part in the workshops. An introduction to the educational landscape in Saxony-Anhalt also took place with state politicians. Furthermore, via cooperation with the Martin Luther University of Halle-Wittenberg we are offering digital modules for university-level further education, which are available to teaching staff anytime, anywhere.

Anyone who opts to study at Magdeburg-Stendal University of Applied Sciences will enjoy our outstanding learning environment. This has been agreed in our new guidelines on teaching and learning. This project was launched back in 2017 as part of a Study and Teaching Day when approx. 140 participants took part in an open space workshop. The guidelines were drawn up in a participatory process. They form a consensus as to what students and teaching staff at Magdeburg-Stendal University of Applied Sciences understand by good teaching and good learning conditions: Efficiency, openness, professionalism, transparency create a solid foundation on which we can secure and develop the quality of our teaching.

We are adapting our quality management (QM) system to the high level of dynamism in academia, technology and the world of work. To supplement this, we are planning

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INTERNATIONAL STUDENTS

were enrolled at Magdeburg-Stendal University of Applied Sciences in the 2018/19 winter semester. Most of them, 110, studied within the Departmen of Engineering and Industrial Design.

to introduce system accreditation at our University. Previously we have had to have our degree programmes accredited individually by external agencies. This process is lengthy and tough, often determined by outside forces. Depending on the agency, the minimum standards also vary. System accreditation involves examining and accrediting the University's entire quality assurance system. Following the launch of the new QM system, we are bringing all departments under a standard quality framework. This is a challenge that we are happy to set ourselves. Following successful system accreditation of the University, all degree programmes and continuing education and professional development courses that we offer will be automatically accredited. This will streamline our administrative processes and make designing new courses more flexible for us. We are also approaching the digitalisation of teaching in

they used to, making intensive use of online offerings such as our Moodle platform. Access figures for this are rising all the time. Our teaching staff are developing more and more online modules and are running these within their programmes.

Competition for bright young academics and highly gualified specialists is becoming increasingly tough, both on a national and international level. We are implementing the University's Internationalisation Strategy 2016-2020, are encouraging the mobility of German students, teaching staff and employees, and are increasing the number of international students at the University. They currently account for six percent of the student body at our University. Increasing the number of foreign students who commence a primary or further degree with us is a promising opportunity to reverse the trend of falling student numbers and to attract specialists to Saxony-Anhalt. We are adopting various approaches to this and are starting to expand our international university partnerships. Student visits and conferences took our students to the USA, China and beyond over the past year. Everyone involved wins from this international exchange. Students used the opportunity to familiarise themselves with a foreign culture and to forge a systematic way. Young people today learn differently than private contacts as well as potential professional ones. We

> "Digital and dynamic, lifelong and international: This is how we prepare ourselves for the future as educators and provide students with an attractive offering at the highest level. It is how we guarantee that our graduates are highly technically skilled."

are expanding our English language offerings, from individual modules to complete degree programmes. For newly appointed professors, it is mandatory that they can and want to deliver their courses in English. This is how we keep foreign students in Magdeburg and Stendal. The dynamic pace of development means that specialists and managers need to engage in lifelong learning these days. That is why we are constantly expanding our academic professional development offerings.

In 2018 we stepped up our efforts in marketing directly to schools, e.g. by appealing to school pupils who might be interested in dual track programmes. For trainees, we are extending the standard period of study and making our offering suitable for the dual academic/vocational track. We tailor our modules, make them suitable for apprentices working in small and medium-sized enterprises and ensure that knowledge is transferred between the research and training sides. Young people are made aware of these opportunities

> as part of project days, which are held in their schools. The clearest example is our "Renta-Prof" event. Professors from our Institute of Electrical Engineering enthuse school pupils by conducting experiments and bringing science to the region's classrooms.

Sports scientist Kerstin Baumgarten was appointed Professor of Health Sciences specialising in the theory and methods of health pro motion in 2013. Prior to that, she spent 20 years initially as a research associate and later as an acting professor setting up and developing the degree programme in Health Promotion and Health Management. As Prorector for Research. Development and Transfer since April 2018, she has been campaigning to raise the profile of our teaching and research university.

PROF. BAUMGARTEN, HOW DID YOU MANAGE TO TRANSFER UNIVERSITY **KNOWLEDGE TO THE REGIONAL ECONOMY AND SOCIETY IN 2018?**

Firstly, by educating students. Most of our alumni pursue academic career pathways in businesses and organisations. Our degree courses are designed to be professionally oriented. This brings university knowledge into the regional economy. In research too, our main focus is on applied issues. We address specific problems facing the economy and society. To do this, we bring in outside expertise by cooperating with partners from business and forming connections with stakeholders in society. These are the very interfaces where knowledge transfer takes place. The transfer of personnel, consultancy services and joint research and development projects make regional companies, for example, competitive and boost their rate of innovation. Working with external partners opens up new perspectives for us and stimulates us in new ways.

Transfer aims to convey academic findings to practical applications. Communication and cooperation are essential for this. We are forging new links all the time. Back in 2006, we established the Competence Network for Applied and Transfer-Oriented Research (KAT) jointly with the universities of Anhalt, Harz and Merseburg. In 2018, we successfully launched the "TransInno_LSA" and "HS³ Go Europe" network projects through the KAT. The "Innovative Universities" funding initiative by the German Federal Ministry of Education and Research (BMBF) reinforces universities' social responsibility. The state-wide "TransInno LSA" transfer and innovation service secured us funding for four projects in Magdeburg and Stendal. Those involved are establishing new networks in their specialist areas, for example drawing up a state-wide strategy for health skills, renewing the educational landscape in the Altmark region and setting up an applied centre to present modern production processes.

As part of our research work, we regularly participate in invitations to tender. Project applications under the European research programme are time-consuming and appropriate resources are scarce. We are aiming to close this gap with the help of the "HS³ Go Europe" project. This allows us to pool our efforts across universities. Through federal funding, a point of contact for EU research management was created at each of the three universities involved. The new staff members support researchers and academics at the universities on complex project applications. The core



MILLION EUROS OF EXTERNAL FUNDING:

this is the new high figure we were able to attract for Magdeburg-Stendal University of Applied Sciences in 2018, great confirmation of the guality of our institutes, researchers and students.

focus is on the themes of sustainability and resource efficiency (Magdeburg-Stendal University of Applied Sciences), digitalisation (Anhalt University of Applied Sciences) and demographic consequences (Harz University of Applied Sciences). This project and the use of an EU research administrator sharpen the internal perception of the opportunities associated with EU funding and boost the visibility of our University within participating networks. We are thus creating the prerequisites that will enable us to participate in future EU invitations to tender and to establish ourselves as a network partner for international research projects.

Attracting external funding is imperative when it comes to making our University competitive and acting as a regional catalyst. We succeeded in attracting over nine million euros in external funding in 2018, a new high figure for our University. In 2018 we analysed existing structures in the area of research and regarding the

"Transfer is a competitive" factor for the University. It boosts the rate of innovation at regional companies and can shape society in a lasting way."

Technology and Knowledge Transfer Centre (TWZ) and identified potential for growing the area of research, development and transfer. All member groups of the University were involved in this process and issues relating to research and transfer were discussed in various workshop formats. We want to put sustainable structures in place and create framework conditions that are fit for the future in order to support our researchers effectively. The aim is to set up an application service, to streamline internal processes and to reduce the administrative load on researchers.

One hallmark of the guality of studying at our University is the strong practical relevance. By successfully attracting external funding we are contributing to the regional transfer of applied research findings in business and society. This also boosts the opportunities for fostering the next

> generation of academics. 20 student and research assistants work on the "TransInno_LSA" project alone. The latest research findings are used in teaching and keep our course offerings attractive. The 38 Germany scholarships – another high – that we obtained last year are excellent corroboration of the quality of our research and teaching. Existing ways of placing

gualified specialists with regional companies and organisations were successfully continued in 2018. Examples include our Career Centre's company contact fair, job placements through our online "Nachwuchsmarkt" platform, the awarding of Germany scholarships and transfer vouchers, as well as advice for start-ups.

Time and again we set ourselves the challenge of making transfer tangible. One focus of our work in 2018 was improving the public relations work we do for research. In December, the first issue of our own magazine appeared. It is called "treffpunkt forschung" and focuses on research. In it we present five particularly appealing projects which showcase the broad range of research at the University. We also bring the topic of transfer to the stage: In SCIENCE TALK on the SCIENCE COUCH, journalism students interview our academics and researchers about their current research projects. The format was premièred as part of the "day for research, development and transfer" and met with a huge response. A number of follow-up events are already planned on campus and in the region. In 2018, we had a presence at various research fairs with scientific exhibits from the Departments of Engineering and Industrial Design, and Water, Environment, Construction and Safety. These included the Hannover Messe, IFAT in Munich and Rapid. Tech in Erfurt.

Volker Wiedemer has beer Professor of Economics since 2012. Before he came to Magdeburg-Stendal Uni versity of Applied Sciences he studied economics (subsidiary subject degree), physics (diploma) and interdisciplinary environmental sciences (certificate) at Heidelberg University. In 2007 he gained his doctorate at the University of Stuttgart's Institute of Eco nomics. Since 2018 he has been active as the Prorector for University Governance and Marketing and for the Stendal Campus.

PROF. WIEDEMER, WHAT DID YOU DO **IN 2018 TO ENCOURAGE STUDENTS TO STAY IN THE REGION?**

We create a community spirit and support students from their first visit to our campus until long after they complete their course. Our experience shows that school pupils who come to the sites to gain an impression of our University are likely to study with us. Last year around 1,300 prospective students attended the Campus Days in Magdeburg and Stendal. These are key levers in student marketing. And we have made them more professional. For the first time, the events for the individual departments and degree courses took place from a central platform. Experiments and lectures showcase the breadth of our offering. An exciting programme of supporting events encourages people to spend time with us. Then the welcoming quality of our campus speaks for itself. A StudyCheck survey of 20,000 students saw us chosen as the most attractive campus in Germany.

We don't leave new arrivals on their own. The induction phase for students is a strategic element that we are developing further. And it is an opportunity to gain students' loyalty, long-term. The biggest concern that they have on arrival is that they will feel alone, lonely and lost. We immediately integrate them into the team. Numerous events during the induction phase help students to get to know each other before they even attend their first lecture and our mentoring programme brings them into contact with older students

and teaching staff. During our Late Summer School and at our orientation days, we use specialist lectures to present placement opportunities, etc. from various professional fields. We show students what opportunities they can find through their studies. Having a clear objective in sight makes students more motivated and they achieve better grades.

A proviso when it comes to developing our University is that we identify and occupy niches. For that to work, we must know what our strengths are. What do students appreciate about us? What are our unique selling points? Finding answers to these questions requires extensive quality management: asking questions, getting responses, listening to them and taking the findings seriously. Once a year we ask all our students how satisfied they are with e.g. the pastoral care they are receiving during their studies or with our workshop equipment. The results of our quality monitoring tell a success story: our students are more satisfied than the national average. They find the strong practical relevance of their studies particularly good, as well as the ease of their contact with teaching staff. Rankings by external providers confirm this. We are out in front in these, for example we are positioned second on the StudyCheck platform out of all universities in the state. In the CHE Ranking, our Department of Economics

PERCENT OF OUR GRADUATES

are satisfied or very satisfied with their studies. The strong practical focus is especially praised. There we are far exceeding the national average.

is among the top in Saxony-Anhalt and in terms of practical orientation Germany-wide. For us this is positive feedback and confirmation of the work we are doing. And one mustn't forget that, for prospective students, such online rankings are one of the first points of orientation they have when searching for a place to study.

findings each year which we supplement with interviews and focus group discussions. One task of quality management is showing decision-makers the power of this data. We have dependable results for the majority of our courses. These provide information that the heads of the departments and degree programmes can work with. We use various formats to promote the sharing of this data such as joint meet ings for the University Management and academic committees

At departmental level, discussions about the future are held to which teaching staff can bring their ideas about how the University should evolve in future. One instrument devised by the Department of Applied Human Sciences are the Days of Reflection. In open-space workshops, students and employees address teaching content and interpersonal relationships. Everyone taking part can propose a topic which is then discussed in groups. Here everyone communicates on the same level. Feedback is immediate.

We survey our graduates every two to three years. We We mustn't rest on our laurels when it comes to what are interested in how they look back on their studies at our we have achieved. Course quality monitoring gives us more University in hindsight and how the start of their professional

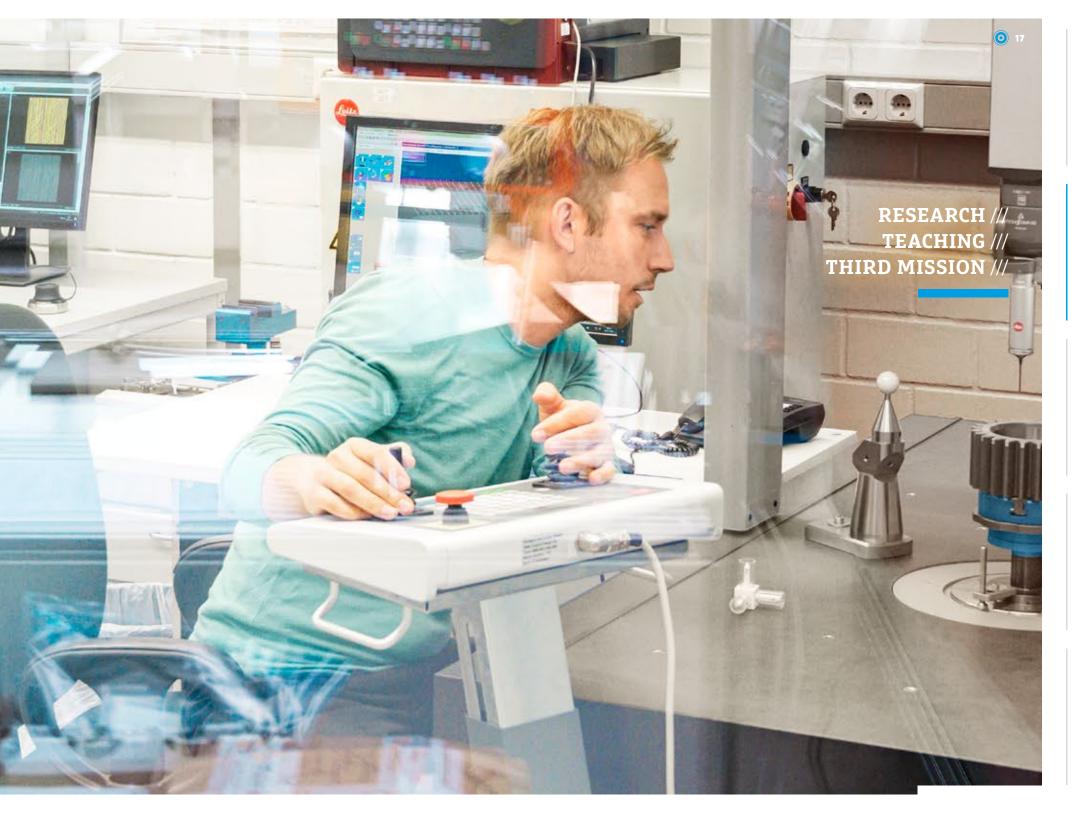
> "The figures show that our students appreciate the strong practical relevance of their studies and praise the support they receive. Our alumni are very satisfied with their education and find well-paid jobs in the region and elsewhere."

careers has gone. Almost half of the registered alumni took part in our most recent survey of graduates. This makes us proud because it shows how strongly graduates identify with their university, even years later. The concrete findings of the graduate survey confirm that 79 percent of our graduates are satisfied or very satisfied with their studies. This is significantly better than the national average. Alumni are the best ambassadors for what we offer. Their success stories speak for themselves, e.g.

in publications such as the university "treffpunkt campus" magazine, which will have a new format and modern layout from October, or at events for prospective students. Our alumni are an important connection within businesses and organisations; they are the future placement and project supervisors.

We are stepping up our dialogue with our alumni. In 2018, we held a central alumni reunion across all departments for the first time. We tied this to the Science Night to stimulate exchange between alumni, young and upcoming researchers, and students. More than 250 graduates took part. Feedback that we regularly receive is that their plan to create a solid foundation by studying at Magdeburg-Stendal University of Applied Sciences worked out. Half of our graduates remain in Saxony-Anhalt and the surrounding area. They enter the regional employment market and find appealing positions. Their starting wages are around the national average. This shows that many companies see particular added value in the strong practical relevance of our courses and reward this accordingly. Around three quarters of our graduates are permanently employed after two years. A good proportion of them enter self-employment. Our start-up and transfer centre is currently supporting around 90 initiatives and projects which emerged at the University. Our graduates contribute to value creation in Saxony-Anhalt. In their hundreds each year. Their economic potential is enormous.

HOW DOES SCIENCE TURN INTO BUSINESS? HOW DOES THE INNOVATION THAT **EVERYONE IS TALKING ABOUT BECOME REALITY?** WHERE DO THE MEANS FOR IT COME FROM? AND WHAT DO STUDENTS HAVE **TO DO WITH IT?**





Powerhouse for ideas and driver of innovation: Under the direction of Prof. Harald Goldau the teaching staff and students at Magdeburg-Stendal University of Applied Sciences are working on the technologies of the future. Unique possibilities have arisen thanks to three renowned industry laboratories. Now there is the Model Factory Economy 4.0, an overarching platform to improve transfer in teaching, research and business. The Model Factory is one of four exciting projects to emerge from the "TransInno_LSA" network project. Read on to find out more.

The industrial labs at Magdeburg-Stendal University of Applied Sciences contain the machines of tomorrow. The Model Factory team is setting new benchmarks with them, nationwide.



THE MODEL FACTORY TEAM IS MAKING MACHINES SENSITIVE AND SMES FIT FOR INDUSTRY 4.0.

"We already have the machines of tomorrow here now," reports Tobias Tute proudly during a tour of the industrial labs at Magdeburg-Stendal University of Applied Sciences. His colleague Paul Joedecke adds: "We have a unique technology at our disposal which we can use to make very special products." And Markus Petzold knows that "The regional economy can profit from this technology." It is clear that the three research associates at Magdeburg's Institute of Mechanical Engineering are passionate about their work – but first things first. Over the past few years, the team around Prof. Harald Goldau has been setting new benchmarks nationwide in finishing, a fine grinding process for workpieces. Procuring the special machinery required for this task is

not usually worth it for small businesses – the machines are expensive and are not variable out-of-the-box so it cannot be guaranteed that they will be used to capacity. Scientists at Magdeburg-Stendal University of Applied Sciences have developed KombiFin technology, which enables companies to cost-effectively convert their own standard CNC machines for finishing purposes. Three pilot users from Saxony-Anhalt participated in the development process and now benefit from an intelligent, flexible solution. "We research to meet needs and work closely with industry," emphasises Harald Goldau. As a result, pioneering finishing and friction welding processes have originated in Magdeburg, along with very special machines.



Following years of experienc in industry, Harald Goldau has been teaching at the Institute of Mechanical Engineering in the field of manufacturing and machining technology since 2002. The industrial lab that he set up specialising in innovative production processes is one of the model factories at Magdeburg-Stendal University of Applied Sciences and focuses on power-controlled machining processes. Working with businesses in the private sector, the professor has initiated and implemented numerous projects involving friction welding finishing and more. He was also Prorector for Research, Development and Transfer from 2014 to 2018.

Weighing tonnes, the grey machines contain highly sensitive sensors. "If I apply pressure to the machine from outside, no matter how small, then it feels it," adds Tute who is 34 years old. "The machines are so sensitive that they can even detect people walking by." Achieving this delicacy of feeling is the result of years of research devoted to a fine grinding process for metal surfaces.

The challenge: A grinding stone must be guided very sensitively along the surface of the workpiece at a very specific pressure. Conventional machines have air-operated superstructures which press on the grinding stone. "The present systems are big, heavy, insensitive and therefore rarely produce satisfactory results. It required too much trial and error," reports Petzold who is 32. "With our machines we manufacture components with much greater precision," continues Petzold. For this purpose, the team integrated multiple force sensors into their machines – in conjunction with tool machine manufacturers. These "nerve cords" run together to form a "brain": a microcontroller that was likewise developed at the University. The team

then use standard protocols to capture data. The machines are fast as well as sensitive, registering changes in under a millisecond and transferring this information to a connected computer within two milliseconds. "The only restriction is the speed of the internet," says Tute, laughing, and who is from Rostock originally. With the help of the data that is gathered it is possible to know precisely which process the manufactured components are undergoing. "We can show the client what force was applied by the machine to process the part and which employee was using which tool," says 29-year-old Joedecke. Preparing such data was previously a long-winded process, but now the team can ascertain right away what data might be of interest to the client, evaluates process data in real time and provides online access if needed

The industrial laboratories specialising in biomaterials, functionally optimised lightweight construction and innovative production processes have become renowned competence centres since being set up in 2008. "The Institute of Mechanical Engineering is the linchpin of our work," stresses Goldau. He goes on to say that "The whole Department of Engineering and Industrial Design contributes to our success."

Partners and clients particularly appreciate the high precision of the work in Magdeburg. Measuring sensors are an essential piece of kit.



The Model Factory is a new platform for exchanging information. It changes the University's own structures, links the Institutes of Electrical Engineering, Industrial Design and Mechanical Engineering more closely together and improves the internal

The industrial labs at Magdeburg-Stendal University of Applied Sciences contain the machines of tomorrow. They collect data and map the entire product lifecycle.

Companies from all over the world come to Magdeburg, bringing questions and requests for new machines, products and process workflows. At the same time, digitalisation is becoming a more and more important aspect of the researchers' work. The diversity of new applications and technologies makes processes more complex. Globalisation reinforces the need for action. "Industry 4.0 – that is, the digitalisation of industrial production – is securing the competitiveness of small and medium-sized businesses in Saxony-Anhalt," says Goldau. "We want to make these developments accessible to entrepreneurs and are pooling our efforts, technologies and knowledge within the Model Factory."

flow of information. Goldau: "With the Model Factory we are aiming to stimulate the regional economy, demonstrate and showcase digitalised production processes and show the possibilities that Industry 4.0 presents." To start with, the team of 15 are focusing on the competences of the Innovative Production Processes industrial lab. They want to find solutions for small and medium-sized companies in fields such as manufacturing, measurement and materials technology, as well as warehousing, logistics and material flow. The individual elements are ideally embedded in a company-wide software system for resource management.



The Model Factory is divided into three areas of application based around the lead markets in the state of Saxony-Anhalt. The machine and plant engineering section managed by Petzold builds on the state's proud industrial tradition and develops solutions for gear and conveyor systems, as well as for wind power. Joedecke is responsible for the mobility sector and here the university team is primarily helping small and medium-sized suppliers to the automotive industry. They are also tackling future-oriented themes such as electric mobility at an early stage. Tute's subsection,

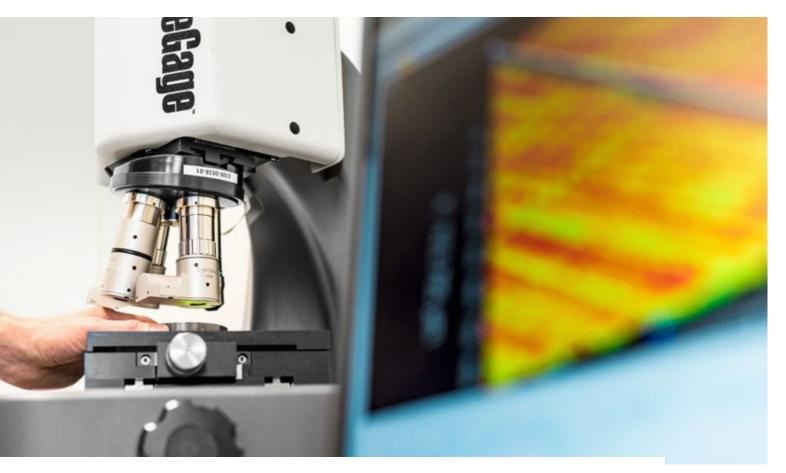
Orthopaedics 4.0, focuses on the implant of the future: hypo-allergenic, anti-bacterial and with zero wear. The final processing of artificial hip and knee implants and their components clearly demonstrates the possibilities presented by the labs at Magdeburg-Stendal University of Applied Sciences. It is also typical of the way that the university team works with external partners on projects.

The manufacturing of modern implants is very demanding. For example, the parts require a particular surface

The processes developed in Magdeburg allow companies to produce components with greater precision, faster and more cost-effectively, with fewer variations in quality.

quality to stave off bacteria or they need a certain roughness so that the implants grow into the bones better. This is no trivial matter for the manufacturers of

implants. Tute is familiar with the problem: "Implantologists frequently find that implants do not last for as long as they should." The physicians then approach the manufacturers of implants and demand better products. "The manufacturers are not always able to meet these requirements, because they cannot produce parts of the necessary quality," says Tute. The team at Magdeburg-Stendal University of Applied Sciences, however, is ahead of the curve. They are flexible and can model the required processes within the Model Factory and show manufacturers how they need to adjust their technology. The Model Factory can be used to produce a wide range of components more quickly, more cost-effectively and with fewer variations in quality. Relevant processes can also be simulated – from the head (ball) for a hip implant to high-precision components for electric cars.



Efficient control of the machine and contactles. optical measurement ensure that the surface quality of the processed workpieces is high.

The team's medium-term goal is to increase the number of requests from SMEs in the region. Communication with potential clients takes place via publications such as conference proceedings or journals, at specialist conferences and through subject-related networks. "Here we want to act as a dew point and contribute our research expertise," says Goldau. Knowledge gained through research feeds

through into teaching, meaning that students benefit from it too. They also get involved in research projects and have the opportunity to complete essays and final dissertations under the umbrella of the Model Factory. It is even possible to do a PhD. Five-year funding for the "TransInno_LSA" network project provides the security needed for planning. The Harz, Magdeburg-Stendal and Merseburg universities are all cooperating and are improving their innovation and transfer work through 14 projects. The Model Factory is a prime example of these Third Mission activities. These

complement the core activities of research and teaching, make use of the University's resources and actively shape the non-academic environment. The German Federal Ministry of Education and Research is providing funding to Magdeburg-Stendal University of Applied Sciences totalling 5.1 million euros. Implementation kicked off on 1 January 2018.



PROMOTING AND ENSURING THE EXCHANGE OF IDEAS

Another sub-project is dedicated to the consolidation of transfer processes. "We are focusing on the exchange of ideas between universities in the network, as well as communication between the University and business and society," explains Diana Doerks, Officer for Research, Development and Transfer. In conjunction with Lisa Hartmann and Christian Schache and under the direction of Prof. Kerstin Baumgarten, Doerks is modernising processes in the area of research and transfer, which are intended to simplify the exchange of ideas and communication within the University. "We want to create structures which promote interdisciplinary thinking," says Doerks. Events and lectures which help emerging researchers connect with each other and which raise awareness of their projects across the University and within the region are an important part of this endeavour. Analogue formats are to be supplemented by digital ones: The team defines the introduction of a research information system as a milestone for the sub-project. An online platform will collate all data relevant to research and make it accessible as needed to both internal and external groups of stakeholders. The software is designed to streamline processes involved in managing external funding. The next step is to give the wider public access to the research data.

Something to smile about: In Magdeburg they have even succeeded with the very demanding finishing of artificial knee implants.

BOOSTING THE IMPORTANCE OF HEALTH SKILLS

Health skills involve people finding relevant information as well as how they understand, evaluate and apply it. "More than half the German population has considerable difficulties dealing with health information," explains Tina Zeiler. She is responsible for research within the sub-project concerning the state-wide strategy for health skills. Her colleagues Nadine Ladebeck and Maria Schimmelpfennig look after networking and knowledge transfer respectively. What unites the three of them is their aspiration to improve the well-being of the population in Saxony-Anhalt. They are committed to boosting the social and political importance of health skills. In 2018, the team networked with relevant stakeholders in Saxony-Anhalt and conducted expert interviews and workshops. The idea is to raise the population's awareness with the help of action days, training, lectures and workshops. Citizens who are interested can train at the University to become health guides and to share their knowledge through associations, service centres and open meetings. The different strands – research, transfer, networking – are coming together in a municipal pilot project. The aim is to try out various methods and measures together. A suitable setting has already been found. Social area analysis is now being carried out in a residential area in the north of Magdeburg, with the wishes of inhabitants being ascertained. Health skills will then be improved by way of target group-specific offerings.

SHAPING THE EDUCATION LANDSCAPE LONG-TERM

Education takes place in various settings and is termed formal, non-formal and informal accordingly. Formal education occurs in institutions which specify what is learned and how, for example in schools. Non-formal education is targeted, but is not equally pre-structured, such as in the context of youth work. Informal education refers to the acquisition of knowledge without an explicitly formulated learning objective and takes place in everyday life. In rural areas, settings of all categories offer educational opportunities while at the same time facing specific challenges such as school closures or because they are difficult for children and young people to get to. "This is where we come in. We want to improve the quality of education and the links between different areas of education in the Altmark region" – on this Anja Funke, Miriam Pieschke and Maike Simla are agreed. The sub-project on "Educational landscapes in rural areas" sees the team launching several measures which bring university knowledge to a practical setting and which facilitate communication and cooperation between relevant stakeholders. An annual educational conference will bring these stakeholders together. On an academic basis, key players in the educational process will discuss how long-term offerings can be established. An online platform counters discrimination and helps to boosts the social participation of disadvantaged segments of the population. Deprivation due to poverty or migration status, for example, is to be explored in a selected social area. The university team is developing the project jointly with residents to encourage collective action.



O IMPARTING **HEALTH SKILLS**

Health and ageing – against the backdrop of demographic change and increased life expectancy, ageing represents a social challenge. From 2015 until 2018, a project called "GeWinn" about getting older in a healthy way was aimed at helping people over 60 to stay healthy and independent for as long as possible. A mixture of lectures, discussions and workshops gave participants tips on health, nutrition, movement and digital media. After the project ended, group programmes embedded the offering long-term within the cities and communities involved. The project, which was carried out in conjunction with Coburg University and with the involvement of the Ludwigsburg University of Education, received funding from the German Federal Ministry of Education and Research.

O CREATING INCLUSIVE EDUCATIONAL LANDSCAPES

At Magdeburg-Stendal University of Applied Sciences, six people with mental disabilities are training to become education professionals. In line with the motto "Not about us without us", the course makes participants experts in their field within three years. Their participation in university life breaks down barriers and fosters inclusion. The trainees report on their own life experiences in seminars and classes. The project on inclusive education in Saxony-Anhalt (InBiST) was launched in August 2018 and is being supported by the state of Saxony-Anhalt.



O REINFORCING BARRIER-FREE **VOCATIONAL EDUCATION**

Prof. Matthias Morfeld, Professor of the System of Rehabilitation, and Prof. Michael Herzog, Professor of Management Information Systems, are bringing inclusivity and digitalisation together in a prize-winning project. The two of them are developing an innovative digital teaching and learning environment as part of IKKE, a project to achieve educational freedom and a lack of barriers in vocational education through instruments of digitalisation. In the "Inclusive Kitchen 4.0", young trainees with and without disabilities or impairments are able to self-direct their learning and to learn with and from each other in a systematic way. The professors were awarded the Magdeburg-Stendal University of Applied Sciences research prize in 2018 for their work.

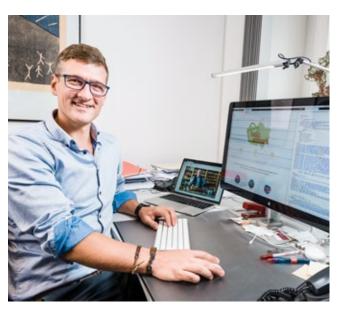
O A BALANCE BETWEEN **FLOOD PREVENTION AND UNSPOILT NATURE**

Can flood prevention be organised in an ecologically responsible way that is sustainable? The "In_StröHmung" project team is convinced it can be. They are bringing together and testing the findings of engineers and natural scientists in various small-scale tests. Their primary objective is to develop instruments for the river basin-based management of bodies of water. Innovative system solutions are intended to create synergies in a systematic way when it comes to implementing ecologically oriented measures relating to the development of waterways. The aim is also to boost public acceptance of the measures.

RESEARCH /// TEACHING /// THIRD MISSION 🧿 27

O TAPPING INTO RESEARCH **POTENTIAL MORE EASILY**

Universities and their employ ees need to maintain an overview in the complex European research landscape. To make things easier for them, the Magdeburg-Stendal, Anhalt and Harz universities have joined forces as the "HS³ Go Europe" network, secured extensive federal funding and each set up a point of contact for EU research management. Teaching staff will now receive support when making funding applications in future. The core focus is on the fields of sustainability and resource efficiency, digitalisation and demographic consequences.





O PRESERVING STENDAL'S **GDR YOUTH CULTURE**

In the summer of 2018, the much-noticed exhibition about youth culture in Stendal from 1950 to 1990 presented extensive memorabilia from a youth culture that is often reviled as "negatively decadent". For three years, Prof. Günter Mey, Professor of Developmental Psychology at Magdeburg-Stendal University of Applied Sciences, and his student team interviewed contemporary witnesses about their youth in the GDR. The gathered artefacts and reports were presented in three themed spaces – Sound, Style and Events. An extensive programme of supporting events made history accessible through readings, theatre performances and in storytelling cafés.

O MAKING ONLINE **TRADING MORE REGIONAL**

Products of all kinds can be ordered online with just a click. Where they come from is of secondary importance to most people Retailers in rural areas in particular suffer as a result of this. The ROLAND project brings retailers and customers together in a precise fit through a regional online marketplace. Following extensive preparations in 2018 during which the initiators of the project held numerous talks with retailers and surveyed potential customers, the platform went live at www.halloaltmark.de in March 2019. 22 retailers from Stendal and the surrounding area have a presence there and sell food, fashion and electronics. The project was enabled by federal funding as part of the "Land(auf) Schwung" pilot project, which is designed to boost business in the state, and was implemented by Magdeburg-Stendal University of Applied Sciences.

O STRENGTHENING MEDIA **DEMOCRACY PARTICIPATION**

Franziska Rauchut made an important contribution to the field of gender media studies in 2018 with her work "Keine Angst vorm bösen Gender" ("No fear of the evil gender"). In it the communication scientist examined anti-feminist discourse in the German media. Working at Magdeburg-Stendal University of Applied Sciences' Institute of Journalism, she analysed the debate in terms of intentions and patterns of argument and drew up a guide to raise awareness of (anti-) feminist reporting in the media.



O STIMULATING GERMAN-**CHINESE INTERACTION**

In October 2018 a delegation from Magdeburg-Stendal University of Applied Sciences visited the Chinese partner university in Qingdao. As part of a student conference, 22 junior German researchers exchanged ideas with their Chinese colleagues about current research in civil engineering, ecological engineering, as well as recycling and waste management, for example. In addition to exchanging ideas on an academic level, the students also made personal and potential professional contacts. The students were accompanied by Prof. Gilian Gerke, Prof. Rainer Monsees and two research associates, Lars Tegtmeier and Thomas Plumbohm.

O A PARTNER **OF DEMOCRACY**

Around 27 January, the anniversary of the day that Auschwitz was liberated, Magdeburg-Stendal University of Applied Sciences regularly issues an invitation to a week of communal remembering and contemplation. In 2018 the series of events was entitled "Denken ohne Geländer" (literally "Thinking without railings") and attracted some 1,400 participants to the Altmark theatre. Films, readings, theatre performances, concerts and lectures encouraged visitors to discuss tolerance, diversity and open-minded cosmopolitanism. The project was supported by the federal "Demokratie leben!" ("Live Democracy!") programme and many democratically engaged institutions in the Altmark region.

O PROMOTING LANGUAGE **DEVELOPMENT IN EARLY CHILDHOOD**

Reading stimulates children's imaginations and improves their vocabulary, especially if they get a chance to speak themselves. Prof. Lisa Schröder and 15 students of Childhood Pedagogy have together developed advanced training in dialogic reading. 14 librarians and educational specialists took part in the workshops. They learned how they can make reading out loud situations interactive by asking open questions and referring to the children's own lives and experiences. The students then followed these unconventional reading lessons for six months. The finding? There is a positive relationship between dialogic reading and childhood language development and the subsequent acquisition of writing skills.

O INSPIRING THE **NEXT GENERATION OF RESEARCHERS**

On many Saturdays, the large lecture theatre on the Stendal campus is filled with children aged between eight and twelve. In a "children's uni" they encounter real professors who tailor their lectures to be child-friendly and who inspire their young listeners with tales of the fall of the Incas or the fantastical beasts of Antiquity. During the 2018/19 winter semester, some 340 boys and girls attended the children's uni events



O ENHANCING UNDERSTANDING FOR **DEAF PATIENTS**

How do physicians communicate with hearing-impaired patients? What is of importance for hard-of-hearing people in a medical setting? Students of sign language interpreting provided the answers in several workshops at Magdeburg's university hospital. As part of the "GSD goes MED" project, students of medicine gained insights into sign language interpreting (which abbreviates to GSD in German) and deaf culture.



INVENTIVENESS

Students of various design courses at Magdeburg-Stendal University of Applied Sciences gave free rein to their creativity. They showcased the fruits of their semester projects to an impressed public at the work exhibition of industrial design. Visitors at the opening – who included Prof. Armin Willingmann and Dr. Lutz Trümper – admired handmade concept cars and interactive installations on the theme of digitalisation and visualisation, among other works, as part of the design forum. The students used the exhibition of work to engage with potential employers.

O HELPING TO SECURE EXPERT RESOURCES FOR THE FUTURE

The 16th company contact fair in June 2018 was another opportunity for numerous employers in the region to vie for the services of future alumni. The companies exhibiting ranged from global market leaders and medium-sized enterprises to start-ups. As part of this chance for students to engage with businesses, there were a total of 90 exhibitors meeting just under 750 visitors. Students could get professional photographs for their application folders and obtain individual tips on applying from experts.



O MAKING ORGAN **MUSIC VISIBLE**

In May 2018, three design students bathed Magdeburg Cathedral in magical colours. The captivating light installations were projected onto the Gothic cathedral's 30-metre high walls and accompanied a 60-minute organ concert. Entitled "Nachthimmel ("Night Sky"), cathedral choirmaster and organist Barry Jordan created a musical journey to celebrate the majestic main organ's 10th anniversary. The visual representations developed by Interaction Design students Veronika Weiß, Simon Frübis and Nils Suhr meant that the sounds of the organ could be experienced visually and audibly, as well as emotionally.

CAN A UNIVERSITY BE **AGILE? WHAT DOES A WHOLE YEAR BRING? IS CHANGE THE ONLY CONSTANT HERE?** WHAT DOES IT TAKE **TO ACHIEVE EXCELLENT SCIENCE?**

EVENTS /// AWARDS /// APPOINTMENTS ///



The Competence Centre for Early Education is where Magdeburg-Stendal University of Applied Sciences pools its efforts to improve the quality of educational facilities in the state, long-term. A collaborative project that is unique in Germany is now strengthening neuroscience expertise at the Stendal site. Prof. Nicole Wetzel has been teaching there since last autumn. The respected developmental psychologist combines applied and pure research, enabling students and adolescents alike to benefit.

Prof. Nicole Wetze has been sharing he knowledge with students in Stendal since the 2018/19 vinter semeste



NOT HIGHBROW AT ALL: THE COLLABOR ATION SHOWS HOW FRESH UNIVERSITY **KNOWLEDGE CAN QUICKLY BE APPLIED** IN A PRACTICAL WAY.

brains when we are concen-

trating? How easily are we distracted? Can children control their attention better as they get older? How do memory and perception evolve at a young age? Prof. Nicole Wetzel is looking for answers to these very questions. She is conducting experimental studies at the Leibniz Institute of Neurobiology (LIN) in Magdeburg to gain insights. She has been communicating the findings and practical applications to students at Magdeburg-Stendal University of Applied Sciences since the 2018/19 winter semester. Nicole

Wetzel has been appointed Professor of Neurocognitive Development in conjunction with LIN. It is the first joint appointment between Magdeburg-Stendal University of Applied Sciences and a research facility external to the university. The appointment further boosts the research strength and teaching quality of the Department of Applied Human Sciences. Nicole Wetzel studied Psychology at Leipzig University before completing her doctorate and post-doctoral gualification there too. She moved to Saxony-Anhalt in order to carry out research in Magdeburg and to teach in Stendal. To do so, she turned down a position at What happens in our the University of Wuppertal.

> Due to her expertise she is one of the first female academics in Germany to receive support from the Leibniz Association's programme for female professors. This funding formed the foundation of the cooperation which the University has entered into with LIN based on the initiative of managing director Prof. Eckart Gundelfinger, and which has led to the joint appointment with LIN.



In 2005, Beatrice Hungerland moved from Berlin to the University in Stendal where she is Professor of Childhood Studies and Dean of the Department of Applied Human Sciences. She studied social sciences and completed her doctorate at the University of Wuppertal. Subsequently she worked on various research and participatory projects there and at TU Berlin. Beatrice Hungerland is an expert in the field of children's rights social inequality, childhood and family sociology, as well as qualitative methods.

Early on, LIN made an outstanding contribution to the importance of neuroscience in the field of

early education through the nationwide Early Education research network, for example, which stemmed from an initiative by the Competence Centre for Early Education (KFB) in Stendal

The KFB is an in-house institute at Magdeburg-Stendal University of Applied Sciences and has set itself an ambitious target: to boost the quality of children's daycare facilities in Saxony-Anhalt. It will do this by offering continuing education and further training to employees, by training their future colleagues and through applied research. Interdisciplinarity is important in each of the three areas. For example, the study concepts of the Department of Applied Human Sciences bring together a variety of disciplines, combining research in human development with psychology, sociology, educational

management, health sciences and now neuroscience too. The students benefit from this additional expertise. Some of them have many years of professional experience and are studying while working or as an integral part of their work. The course in Managing Childcare Facilities and Childhood Pedagogy brings practitioners together. The students are gualified educators who work in childcare facilities, some of them at management level. They require and demand useful knowledge from the teaching which can be applied directly to their work.

Prof. Wetzel translates her pure research and more into teaching which is practically relevant. At the Leibniz Institute, for example, she is looking at how children's attention processes work and how they affect emotions and motivation. One typical experiment involves children solving a task while background noise distracts them. The children's brain activity is measured using an electroencephalogram. A camera additionally records their eye movements and the size of their pupils. The measurements indicate how much distraction there is and how well children can control their attention. Different age groups are being compared in order to examine how attention develops. Children diagnosed

Looking at models which explain the causes of ADHD is effective: "During the discussion with seminar participants, they said that they now better understood the behaviour of children affected," confirms Prof. Wetzel. Educators then take this knowledge with them into their daily work and adapt learning environments and task structures appropriately to suit the individual developmental status of the children. Prof.

The students have

many years of profes-

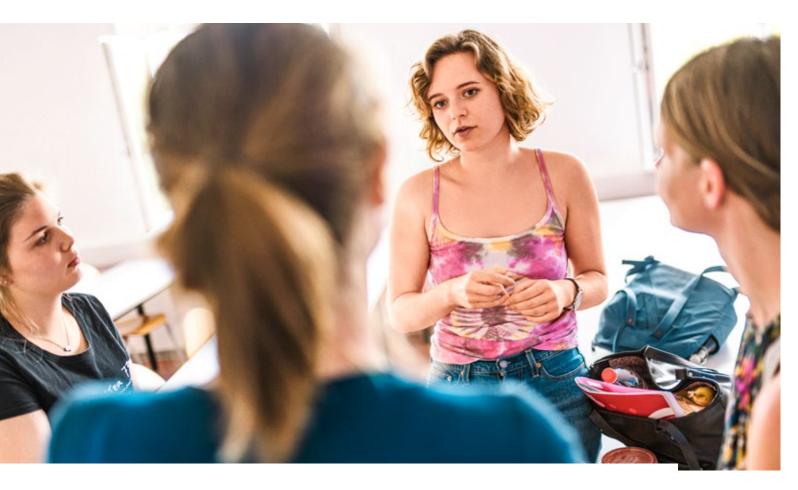
sional experience and

require and demand

practically relevant

knowledge from the

teaching.



The students are qualified educators who are often in work. They require teaching which is practically relevant.

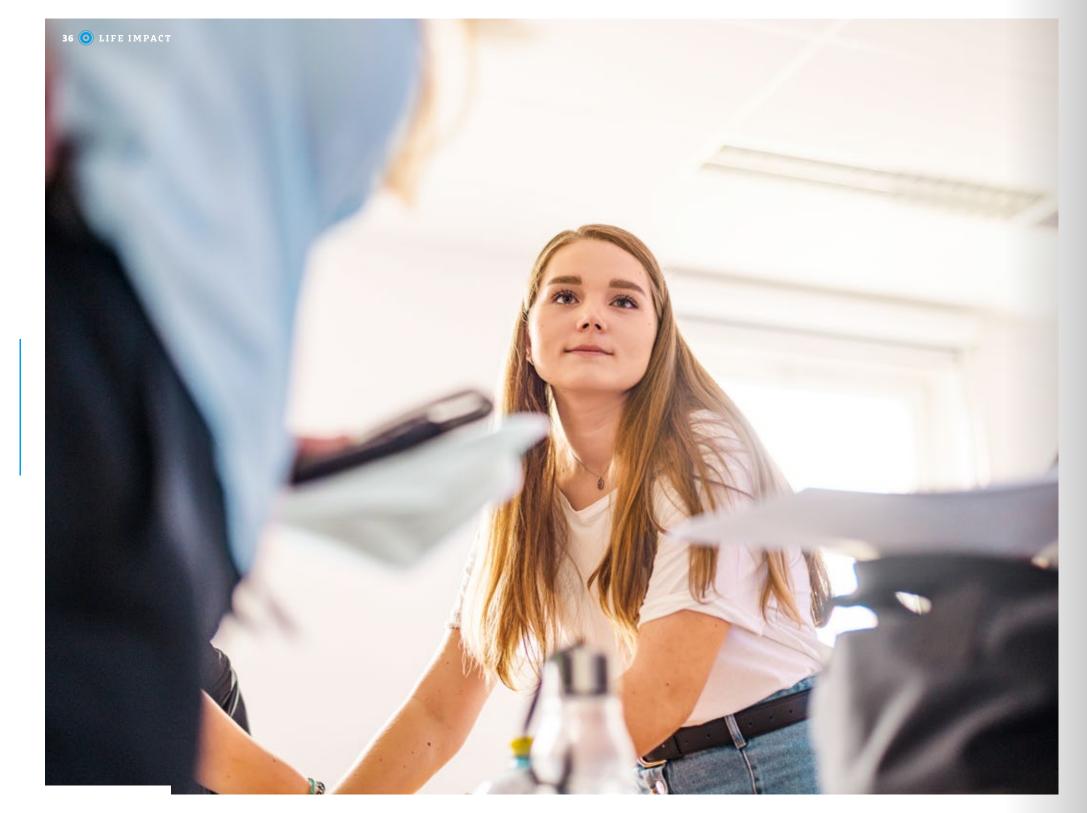
within universities, especially in this field," adds Prof. Schmitt. "We are really talking about separate worlds here." Bringing the two together is an opportunity and has the potential to boost the quality of educational institutions across the state of Saxony-Anhalt.

Virtually all the students write a dissertation on a research topic that is practically relevant. For example, they explore factors of parental satisfaction at their daycare facility or opportunities to provide education in

with ADHD are also being tested. Based on these research findings, it is possible to draw conclusions that help in pedagogic practice.

Wetzel adds that "This is nice feedback which demonstrates that we are on the right track." And it is "no one-way street" reiterates her colleague Prof. Annette Schmitt. As a member of the board of the KFB, she is dedicated to transferring knowledge between research and practice, e.g. by way of joint research projects with the providers of childcare facilities. "We are not the pointy-headed scientists explaining to practitioners what they should be doing better," says Prof. Schmitt. By contrast, guestions for researchers emerge from day-to-day practice. "This connection between applied and pure research is unusual and is found only rarely

the natural sciences. The results of training are then applied directly where they are needed, improving the quality of daycare facilities within Saxony-Anhalt. Students learn about applying science in practice at close range, such as in the form of placements and excursions. Last year, participants went to LIN in Magdeburg which gave students access to cutting-edge technology. Seeing a fMRI device in real life and feeling the magnetic field provides impressions which no textbook can replicate. Experts who work with EEGs and MEGS on a daily basis explained how the devices work.



For Prof. Wetzel, the first teaching semester was likewise a learning process. Although she had already conducted research and taught in Leipzig, Erfurt and Helsinki, in Stendal she had to familiarise herself with new structures and processes and understand how her new colleagues worked. This started with a shared language. Certain terms such as "training" have different meanings in different research disciplines, sometimes with opposing connotations. In addition to this rather informal exchange of information, as part of the research day Nicole Wetzel answered interested colleagues' questions and presented her research projects and findings. At special interest group meetings, she "brings a fresh way of looking at things which opens up new perspectives for the whole department and the students," says Prof. Beatrice Hungerland, Dean of the Department of Applied Human Sciences. "Given her expertise and experience, Prof. Wetzel is a real asset for us." The focus now is on developing and then to being applied in practice for the testing shared models to consolidate transfer processes. A continual exchange of ideas within the context of the KFB and

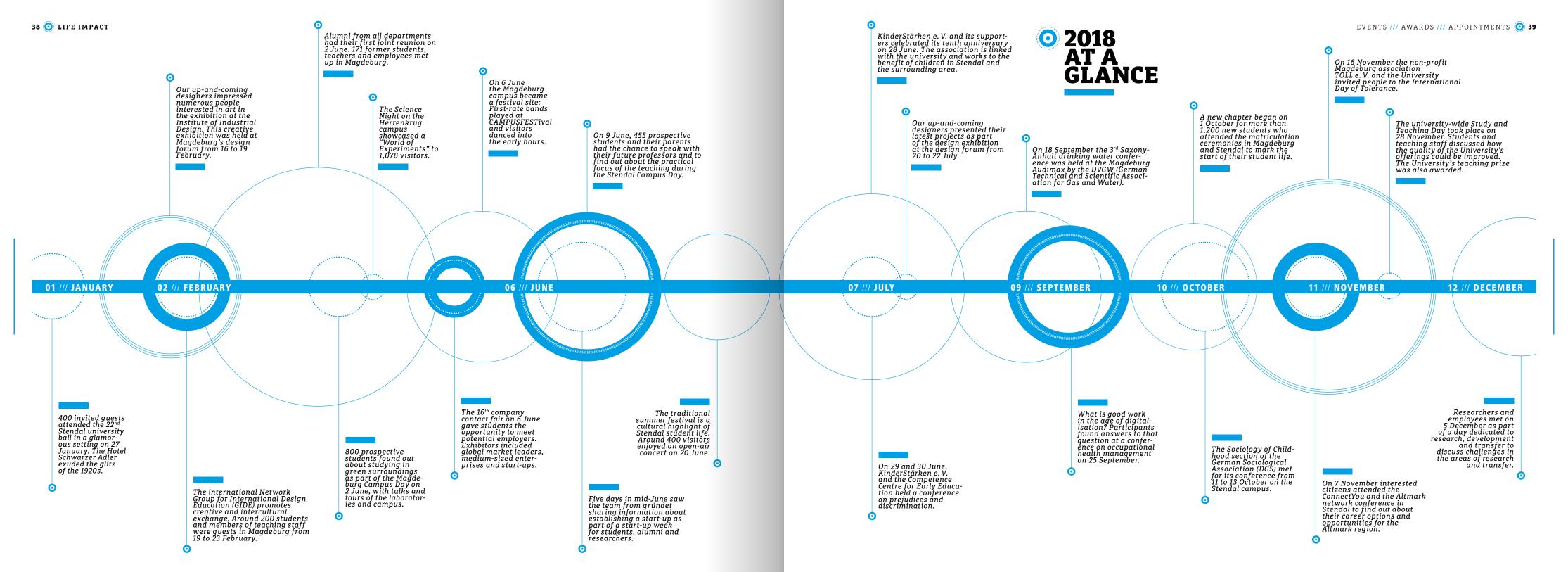
within the degree programmes is an opportunity to work out these links more clearly and distinctly. The cooperation brings together not just individual people but also their networks. Nicole Wetzel is, for example, the LIN spokesperson on educational potential within the Leibniz research association. This encompasses around 20 institutes within the association as a whole which issue recommendations on education policy.

Early Education shapes our futures, has an impact on This is what brings science to life.

educational attainment, and contributes to better health and higher lifetime income. There is no time to waste. New knowledge therefore needs to find its way quickly

There is constant exchange in Stendal between applied and pure research.

benefit of society. The KFB is dedicated to this basic idea and – on behalf of the state – has a dense network of cooperations with daycare facilities, bringing together providers and trainers. This facilitates the transfer of research findings to practical applications. The crucial multipliers for this are already enrolled. For Nicole Wetzel and her new colleagues, giving them the necessary tools for their day-to-day work is both motivation for and confirmation of what they are doing.





O JOURNALISM STUDENTS TAKE A LOOK BEHIND THE SCENES AT MDR

In September 2018, the Institute of Journalism at Magdeburg-Stendal University of Applied Sciences agreed a collaborative venture with MDR (Central German Broadcasting). In future, the University and the broadcasting organisation will cooperate on research projects and dissertations, as well as on training events and public discussions. The agreement envisages that more of the University's journalism students will complete placements with MDR and thus gain valuable insights into the work of the public broadcaster.

O DONATION FROM AUCTION **PROCEEDS TO** FUND CIVIL ENGINEERING **SCHOLARSHIP**

Based in Stendal, ZORN INSTRU-MENTS is a leading provider of high-precision test equipment. Their lightweight deflectometers enable users to test the load-bearing capacity of soils. In December 2018, ZORN INSTRUMENTS auctioned off its 10,000th lightweight deflectometer. The winning bidder for this special test equipment was OST-BAU, a company based in Osterburg, which won with a bid of 6,000 euros. This sum was donated to Magdeburg-Stendal University of Applied Sciences. The test equipment and a cheque were presented at a reception on the Magdeburg campus which was attended by Dr. Reiner Haseloff, Minister President of the federal state of Saxony-Anhalt.



O OUTDOOR GYM BOOSTS **HEALTH OF STUDENTS AND EMPLOYEES IN STENDAL**

Anyone who spends a lot of time poring over books in the library and sitting at a desk needs to do some sport to compensate for that. Students and employees at the University have access to 15 new pieces of equipment on the Stendal campus, ranging from stomach muscle and back stretch trainers to balancing equipment. The outdoor gym was officially opened on 3 July 2018 in time for summer. Another outdoor gym is set to be created on the Magdeburg campus.



O THREE MEMBERS OF THE TEACHING STAFF **RECOGNISED FOR** THEIR COMMITMENT **TO EXCELLENCE**

For the sixth time, Magdeburg-Stendal University of Applied Sciences has honoured members of the teaching staff who have contributed in an exceptional way towards the quality of teaching and the studying experience. This time three educators received the accolade simultaneously. Dr. Cornelia Breitschuh, a lecturer in mathematics, engineering mechanics and computer science at the Institute of Electrical Engineering; Prof. Nicola Wolf-Kühn, Professor of Social Medicine within the Department of Applied Human Sciences; and Dr. Uwe Breitenborn, Acting Professor of Online Journalism, convinced the jury comprising members of the departments, external jury members and prize-winners. The awards ceremony took place on 28 November 2018 to coincide with the Study and Teaching Day and was supported by Pro FH e. V., the University's development association.



O STUDENT OF ECOLOGICAL ENGINEERING AWARDED OTTO VON **GUERICKE SCHOLARSHIP**

Chinese student Qing Zhan is driven by the grave environmental problems facing the world. In order to overcome them or at least to combat them, he decided to study for a Master's in Ecological Engineering at Magdeburg-Stendal University of Applied Sciences. Due to his great commitment to the subject and his social engagement he was awarded the 6,000-euro Otto von Guericke scholarship on 8 November 2018. The City of Magdeburg awards this scholarship to foreign students who are achieving excellent academic results and who demonstrate active social commitment.

O OUTSTANDING **ACHIEVEMENTS OF TWO PROFESSORS AND THE NEXT GENERATION OF ACADEMICS HONOURED**

As part of a day dedicated to research, development and transfer on 5 December 2018, the Magdeburg-Stendal University of Applied Sciences research prize was presented to Prof. Matthias Morfeld, Professor of the System of Rehabilitation, and Prof. Michael Herzog, Professor of Management Information Systems. The prize for the next generation of academics went to Electrical Engineering students Philipp Hörnlein and Sebastian Kohrs, Rehabilitation Psychology graduate Aileen Sidorenko and Ecological Engineering graduate Lukas Folkens. The prize for doctoral students was won by Jan Binde, a researcher in the Department of Water, Environment, Construction and Safety. The award for best team performance went to the team around Prof. Bernd Ettmer.



O UNIVERSITY CONFERENCES **BOOST MAGDEBURG'S** ACADEMIC CREDENTIALS

On 20 November 2018, the City presented the OttoAwards to companies, organisations and people who have contributed to Magdeburg's status as a location for congresses and conferences. There are three categories of OttoAwards, dividing events by the number of participants. A jury selects the winners. Kerstin Tänzer of the Centre for Continuing Academic Education (ZWW) at Magdeburg-Stendal University of Applied Sciences won in the category for 101 to 250 guests for organising the annual conference of the German Association for University Continuing and Distance Education. The awards ceremony was attended by Dr. Lutz Trümper, Lord Mayor of the state capital of Magdeburg.

O SPECIAL **PRIZE FROM EMPLOYERS'** ASSOCIATION **GOES TO** UNIVERSITY **PROJECT AIMED AT INVIGORAT-ING CITY** CENTRES

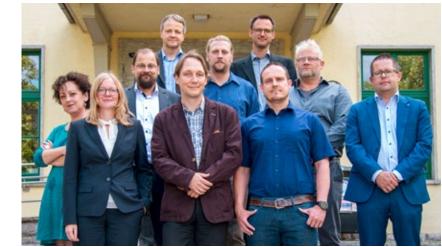
The general employers' business association for the state of Saxony-Anhalt (AVW) celebrated 25 years recently. The festivities were held on 21 September 2018 at Magdeburg's Johanniskirche, a former church. Various awards were presented at the event. Magdeburg-Stendal University of Applied Sciences received a special award from the City of Magdeburg for its successful collaboration on knowledge transfer to boost the retail industry. The "Shopping 4.0" project was singled out. It involved the University and the City developing concepts together that would boost online trade and at the same time invigorate city centres.

42 🧿 LIFE IMPACT



O JOURNALISM GRADUATE **RECEIVES MEDIUS PRIZE** FOR WORK ON 2016 US PRESIDENTIAL ELECTION

Jörn Zahlmann, a graduate of the degree programme in journalism at Magdeburg-Stendal University of Applied Sciences, examined the election for the US presidency in 2016 for his Bachelor's dissertation. His study of the ways in which Donald Trump and Hillary Clinton generated attention received the prestigious Medius prize. The prize is supported by the FSF (voluntary selfregulation television), the GMK (Association for Media Education and Communication Culture), mabb (Media Authority for Berlin-Brandenburg) and the DKHW (Children's Charity of Germany). Totalling 2,500 euros, the 2018 prize was awarded equally to three dissertations.



O AWARD FOR YOUNG TALENT GOES TO GRADUATE **OF HEALTH PROMOTION** AND MANAGEMENT

Saxony-Anhalt's competence centre for social innovation hosted an action week in November 2018, which was all about boosting health in the state in a social and innovative way. At the opening event, the competence centre and TK, the largest health insurance fund in Germany, presented the first ever "SOZIAL PHÄNOMENAL" award for up-and-coming talent to Bachelor's and Master's dissertations in the field of health and social innovation. Claudia Hasenpusch, a graduate of Magdeburg-Stendal University of Applied Sciences, won in the Bachelor's category for her dissertation about implementing a network of health-promoting universities as part of a health strategy for Saxony-Anhalt.

O RESEARCH WORK **INTO INSECT** BREEDING RECEIVES **IHK STUDY PRIZE**

As part of his Bachelor's in Recycling Management within the Department of Water, Environment, Civil Engineering and Safety, Tino Fauk completed a dissertation which won him the 2,000-euro IHK (Chamber of Commerce) Study Prize. In his study, Fauk looked at the extent to which empty supermarkets could be repurposed as insect farms. The IHK awarded the prize for his project's innovation potential, planning quality and practical relevance. The prize was awarded at a ceremony on 4 December 2018 at Magdeburg's Chamber of Commerce.

O UNIVERSITY WELCOMES **TEN NEW PROFESSORS**

In 2018 the University gained ten outstanding academics for its teaching and research as professors. They got to know each other and their new domains as part of a "Welcome on board" event. The colleagues are professors of the following subjects: /// Prof. Daniel Bachmann:

- Hydromechanics and Hydromechanical Modelling
- /// Prof. Eric Chauvistré: Editorial Management
- /// Prof. Reik Donner: Mathematics
- /// Prof. Prezemyslaw Komarnicki: Electrical Power Systems Engineering
- // Prof. Thies Krüger: Industrial Design Engineering
- // Prof. Konrad Steindorff: Gear and Drive Technology
- /// Prof. John-Glen Swanson: Machine Components
- // Acting Prof. Sevasti Trubeta: Childhood and Difference
- /// Prof. Nicole Wetzel:
- Neurocognitive Development
- // Acting Prof. Marco Wolf: Building Services Engineering



O AWARD-WINNING STUDY **PROMOTES DIVERSITY** AND INTERCULTURALITY

On 25 June 2018, the Austrian Federal Ministry of Education, Science and Research awarded the sixth "Ars Docendi" state prize for excellent teaching. One of the prize-winners was the international "Cross-Teaching" cooperation project run by Magdeburg-Stendal University of Applied Sciences and the Johannes Kepler University Linz. A jury of international experts selected the study, led by Prof. Michael Herzog, which crossed over teaching events between several universities using collaborative media. Findings on the effectiveness and functionality of different online or media-supported learning scenarios could be used to shape the design of future e-teaching offerings.





O STUDENT OF REHABILITATION **PSYCHOLOGY WINS** DAAD PRIZE

Ekatarina Pushkareva is studying Rehabilitation Psychology in Stendal and works in the International Office there where she accompanies and supports excursions for international students. Magdeburg-Stendal University of Applied Sciences awarded the DAAD prize to Pushkareva for her exceptional commitment both to her studies and to her extracurricular activities. Examples include her participation in an exhibition of artwork in the small market hall in Stendal, her involvement in the university choir and her work with a Stendal refugee initiative. The award includes prize money of 1,000 euros.

The 23rd Magdeburg domestic water management conference (TASIMA) in September 2018 saw the best dissertation on the topic of sustainability and waste management win an award. The prize and 500 euros went to Andreas Meyer, a graduate of Magdeburg-Stendal University of Applied Sciences, for his Master's dissertation for the programme in Ecological Engineering about a decentralised energy supply for urban farming covering energy supply and storage for an aquaponic system. Meyer looked at the potential for a decentralised and therefore sustainable energy supply for aguaponic facilities in Magdeburg.

O MASTER'S DISSERTATION

WINS TASIMA PRIZE

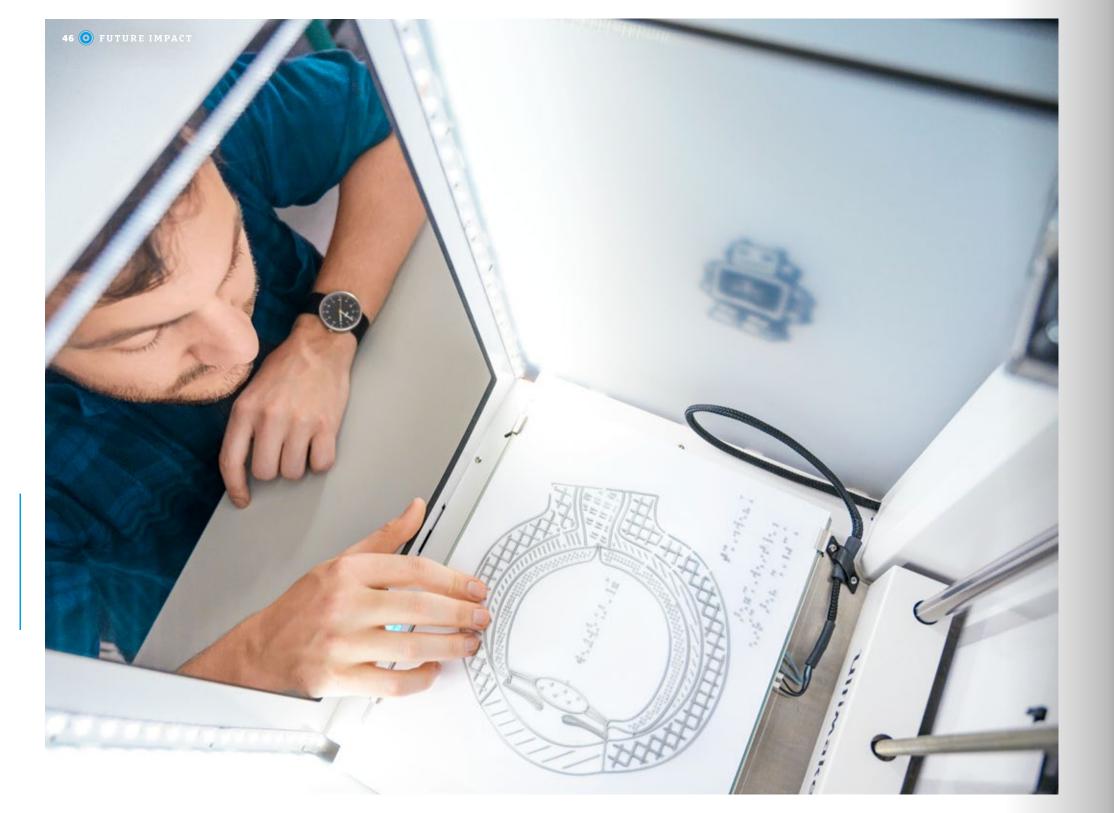
IN ECOLOGICAL ENGINEERING

O UNIVERSITY CELEBRATES **ACCEPTANCE INTO EUROPE-**WIDE NETWORK BOOSTING **CHILDREN'S RIGHTS**

The courses in Applied Childhood Studies as well as Childhood Studies and Children's Rights at Magdeburg-Stendal University of Applied Sciences have been part of the Europe-wide CREAN network since October 2018. This network comprises more than 30 academic institutions and associations cooperating on work to strengthen the legal position of children in society. Magdeburg-Stendal University of Applied Sciences is the third German institution to join the network. Its participation creates opportunities and synergies for students and teaching staff alike.

HOW DO YOU EXPAND A UNIVERSITY TO HAVE A LASTING EFFECT? HOW DO YOU AWAKEN OTENTIAL? WHAT BECOMES OF TODAY'S STUDENTS? HOW DO OU CREATE A START-PCULTURE?

INVESTMENT /// DEVELOPMENT /// EXPANSION ///



Developing good ideas is hard work and only the first step. Start-up initiatives Inflotec and tacpic are already many steps down the line. They followed their ambitions, secured funding and are about to be spun off. The teams, their mentors and our start-up coordinators explain to us how good ideas become products that are ready to market.



3D printer innovation: tacpic produces tactile graphics which are accessible to blind people as well as those with sight.

PROSPECTIVE START-UP ENTREPRENEURS RECEIVE ASSISTANCE AT NUMEROUS POINTS ON THE LONG ROAD TO ESTAB-LISHING THEIR OWN COMPANY.

The Centre for Research and Development (FEZ) on the campus of Magdeburg-Stendal University of Applied Sciences is usually a place of quiet concentration. Anyone roaming the building's unremarkable corridors will see young people scurrying from one office to the next. Visitors are amazed by what they are working on behind those big, heavy doors – and the ambition that goes with that. The FEZ is located on the north side of the Magdeburg campus, slightly away from other buildings, and also stands out from them due to its white façade. Inside is where the magic happens. The FEZ is home to several

institutes related to the University as well as to the University's own project to promote start-ups and transfer. Students working on a start-up project are able to use the co-working space at the FEZ free of charge. There are six teams

spread across three offices. The three people behind tacpic are long-time residents, as are Inflotec who regularly use the parent-child co-working space. Over the past few years, the teams have found their feet.

"In September 2019 we will be ready to establish the business," announces Florentin Förschler. Born in Pforzheim, Förschler studied Industrial Design in Munich and then came to Magdeburg to do his Master's. Here he got to know Laura Evers and Robert Wlcek who are likewise studying Interaction Design here. Together they worked on a semester project under Prof. Dominik Schumacher entitled "ConFIGURator: Digital Input – Analogue Output". As part of the project, the trio developed the online "tacpic" platform where images can be uploaded. "tacpic" stands for tactile pictures and describes



The tacpic team explored the needs of their target group and focused their business model on graphics for educational institutions.

Drewes designed a water power-based system to obtain drinking water from contaminated rivers. The system functions totally independently and can be operated without electricity and without having an impact on the environment. Various filters remove pathogens and pesticides from the river water. The system can process up to 4,000 litres of drinking water per day. "It is easy to talk about it now", summarises Drewes, "but WaVer is the product of years of hard work." Prospective start-up entrepreneurs must be tenacious, something that Prof. Christian-Toralf Weber knows from his own experience. The Professor of Steel and Lightweight Design has already got three companies up and running himself and is a mentor for Martin Drewes and Regina Martina Findling while they set up their company, Inflotec. "The founding partners must have no doubts about the validity and future viability of their product," says Weber. "They themselves must be the biggest fan of the project." That way they are able to get other people excited about their idea. Drewes found that in Findling. As a graduate of Business Administration, she is responsible for sales and marketing at Inflotec. Their initial contact came about due to a recommendation from a university employee. Other

encounters have been more spontaneous.

the platform's key feature. The software in the background produces one colour and one edge image. A print-out onto swell paper is processed using a laser cutter to create a relief structure. "One and the same picture can be seen and felt by sighted people and the blind," says Evers to explain their innovation. But why should they make a proper product out of this? This didn't even occur to the students at first until they were approached by the team from the start-up and transfer centre during the Institute of Industrial Design's exhibition of work. Suddenly, the three students' lives revolved totally around business plans, registered designs and funding applications.

"We regularly screen possible start-up ideas for potential at various events," says Claudia Meißner. Among other things, she is responsible for public relations activities at gründet, which is the catchy German name for the University's start up and transfer centre. "We want to create a start-up climate and use lecture series and themed workshops to sharpen students' awareness of how their ideas can be taken further," adds Meißner. "If they want to know more, they come to us and we test how serious they are." The road to selfemployment needs to be well considered, after all. Since 2016, gründet has been the central point of contact on campus for all prospective start-up entrepreneurs and advises them every step of the way. Martin Drewes was one of the first. A Mechanical Engineering graduate, during his Master's degree

When Christian-Toralf Weber was appointed by Magdeburg-Stendal University of Applied Sciences in 2010 he already had almost 20 years of professional experience as a researcher. The Professor of Steel and Lightweight Design studied Plant Engineering at Köthen (now Anhalt) University of Applied Sciences and completed his doctorate on the modelling, computation and iden fication of mechanical systems at the Otto von Guericke University Magde ourg. Subsequently he managed IGAM Ingenieurgesellschaft für angewandte Mechanik mbH, an engineering company specialising in applied mechanics, for seven years before joining the University on the Herrenkrug campus

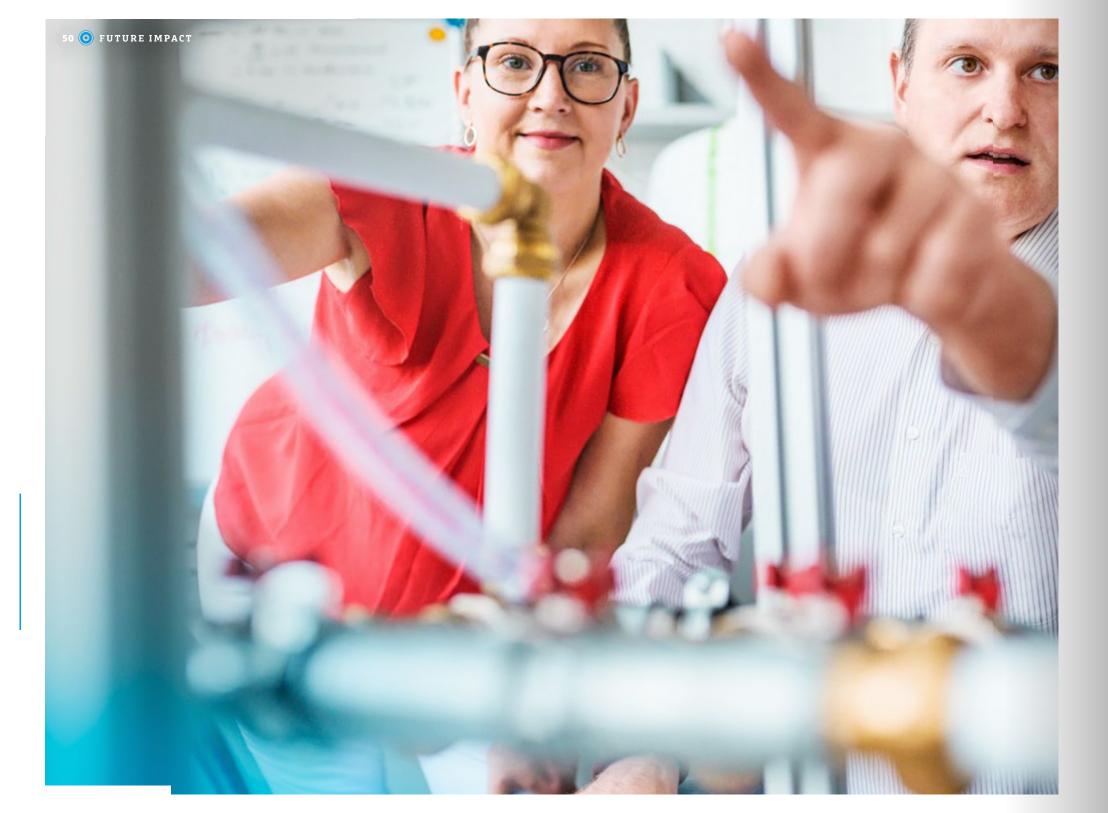
Drewes has appreciated the exchange of ideas that the University has made possible. A trained motor mechanic, when he tinkers with components

Students and teaching staff are able to build close relationships, which reduces barriers and makes it easier to make contacts. This gives young would-be entrepreneurs the courage to present and develop their ideas.

in the industrial lab or is working on his prototype in the workshop, the other students, teaching staff and employees become curious. They ask guestions and contribute their perspective and expertise. This type of collaborative working is typical at Magdeburg-Stendal University of Applied Sciences due to teaching in small groups. Contacts are made guickly and easily on campus. "Interaction is very informal which reduces barriers," reports Drewes. At Inflotec, multiple disciplines intersect: waste management, mechanical engineering, water management, economic sciences – and industrial design. Drewes presented his invention on Science Night. Martin Deutscher, Interaction Design student, was inspired and helped Drewes to arrange his machine's components in a way that saved as much space as possible. Whereas the system was previously as big as a van, it can now be carried or e.g. transported to Kenya. That connection came about when Prof. Weber visited two universities there and the Ministry of Agriculture in March

2018 and presented WaVer to them. A field trial demonstrated that farmers were using the equipment to irrigate their fields. This change of use showed Inflotec that it could be worth expanding their product offering. The market seems to confirm this. Findling: "We are already receiving two to three requests a week to present and demonstrate our system for crop irrigation."

Preparing a start-up is a dynamic process. The prime factor is the economic viability of ideas. tacpic likewise found that out. They wanted their online platform to enable sightimpaired people to capture their personal memories. However, further research made it clear to the trio that this approach was not viable. "That was sobering," admits Wlcek. "By working with schools for children with special needs and regional training organisations, we decided to specialise in educational graphics," adds Wlcek who was born in Stendal. With inclusion continuing apace, more and more educators face the challenge of needing to produce tactile teaching materials. Educational institutions lack the know-how, staff and time. This is where tacpic comes in. They developed their resulting business plan with the help of gründet. The graphics create a new norm for communication between blind and seeing people. In the medium term, the online platform will become a Wikipedia of tactile graphics. Users of the community will



interact and provide mutual support. This makes it easier for the inexperienced to get started. 3D printing and possibly going international are additional targets for the team. Prof. Schumacher is supporting them as mentor as they develop their project further. "The design approach is very different to that of mechanical engineering," explains Schumacher. "Our business is designing innovations."

But where there is no money, there is no innovation. Again, gründet helped here. The team around Prof. Christian Meisel from the Department of Economics and project coordinator Christian Kruse acted as the interface between the start-up teams and Investitionsbank Sachsen-Anhalt, the state's funding institution. Via the EU's "ego.Gründungstransfer" programme, the two teams applied for a total of 340,000 euros of funding. This is making a lot possible during the 18-month funding period, paying the entrepreneurs wages and for materials. Förschler, Evers and Wlcek have been able to make their platform ready for market while at the same time writing their Master's dissertations. Each of them decided on a specialism which creates synergies for the project. Florentin Förschler is looking at how teaching staff with sight can



Prepares drinking water and can be used for crop irrigation – without electricity or impacting the environment: WaVer by Inflotec.

understand what blind school pupils feel when they touch the graphics. Robert Wlcek, who has a Bachelor's degree in Computer Science, is programming the software. Laura Evers is focusing on didactic games, thereby developing further access to the teaching content. None of the three need access to a portal milling machine, lathe or drill bench for that –

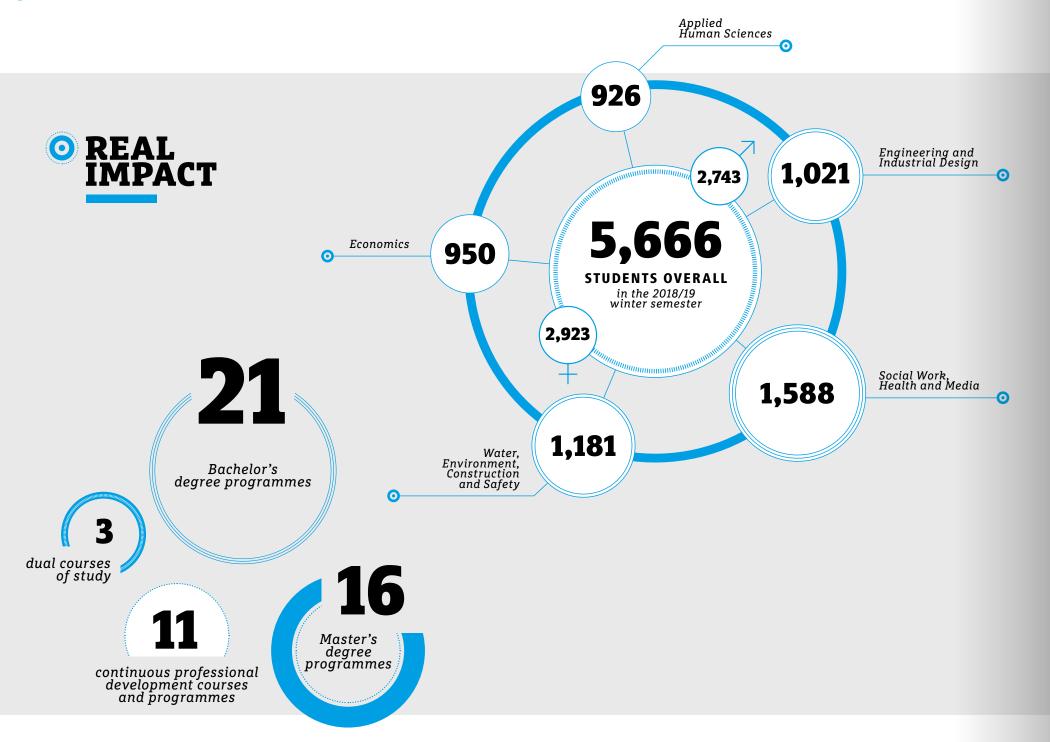
whereas Drewes does. Equipment and consumables as well as the materials he needs to develop a prototype – and therefore to prepare to launch his business – will become the property of the company when it is established in autumn 2019.

Both teams are ready to get started and to leave the University but will not be leaving Saxony-Anhalt. The funding is contingent on the companies being based in the state. Magdeburg-Stendal University of Applied Sciences equips students to think analytically and creatively and in a way that finds solutions. The structures around them enable them to channel their

Gründet, the University's own start-up and transfer centre, creates a climate on campus which is producing more and more initiatives that then become companies based in Saxony-Anhalt.

ideas into projects and to build up and expand them ready for market. The next generation is already waiting in the wings. Gründet is presently helping 13 startup initiatives, as well as numerous students who see themselves as potential solo entrepre-

neurs. In future, the topic of starting your own business will even be a firm fixture of the teaching on the degree programme in Sign Language Interpreting. This pioneering spirit is becoming more widespread. "As an educator I am noticing a cultural shift. More and more students are looking ahead and doing their project work for more than just a grade," reports Schumacher. He goes on to say that "Students are questioning their own work, thinking two steps ahead and in the process are discovering long-term market options. This boosts the quality of the course and creates innovation."



INVESTMENT /// DEVELOPMENT /// EXPANSION 🧿 53



PERCENT OF FORMER STUDENTS PRAISED

the good relationships between students

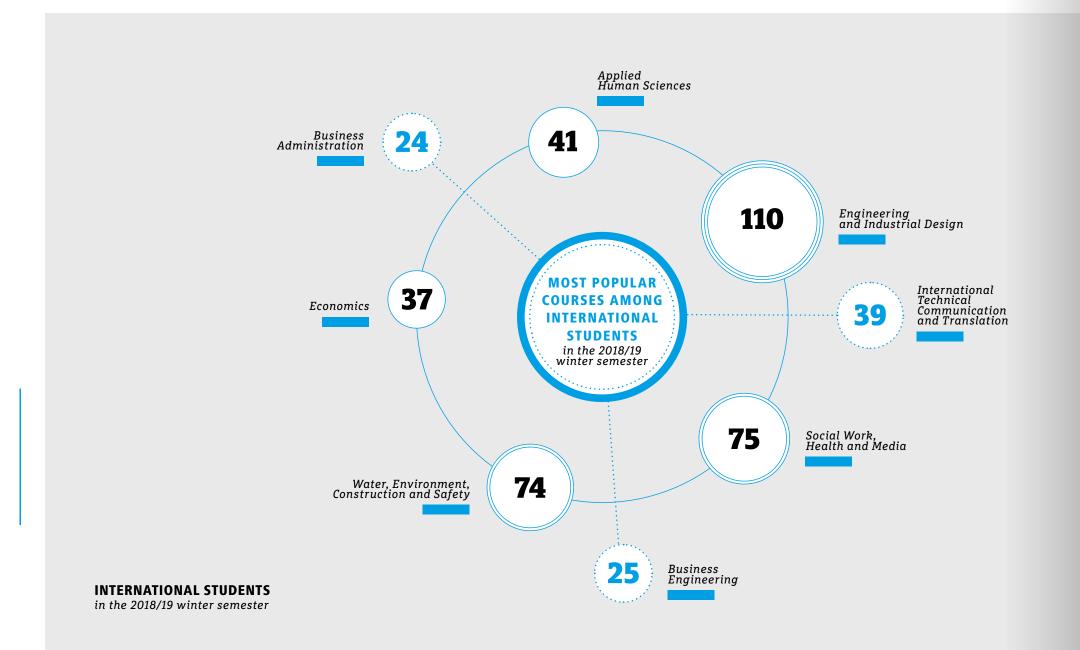
in the 2018 survey of graduates, while

86 percent liked the close contact with teaching

staff at our university.



ALUMNI



O MAKING TEACHING DIGITAL

Teaching staff and learners network: communication takes place on online platforms; work done together in real rooms draws on prepared digital resources. The University Computer Centre looks after the needs of employees and students alike on both university campuses. In 2018, touch panels in lecture theatres and the Audimax were replaced, visualisers were installed in all main seminar rooms and numerous rooms for group work were equipped with wireless presentation facilities.

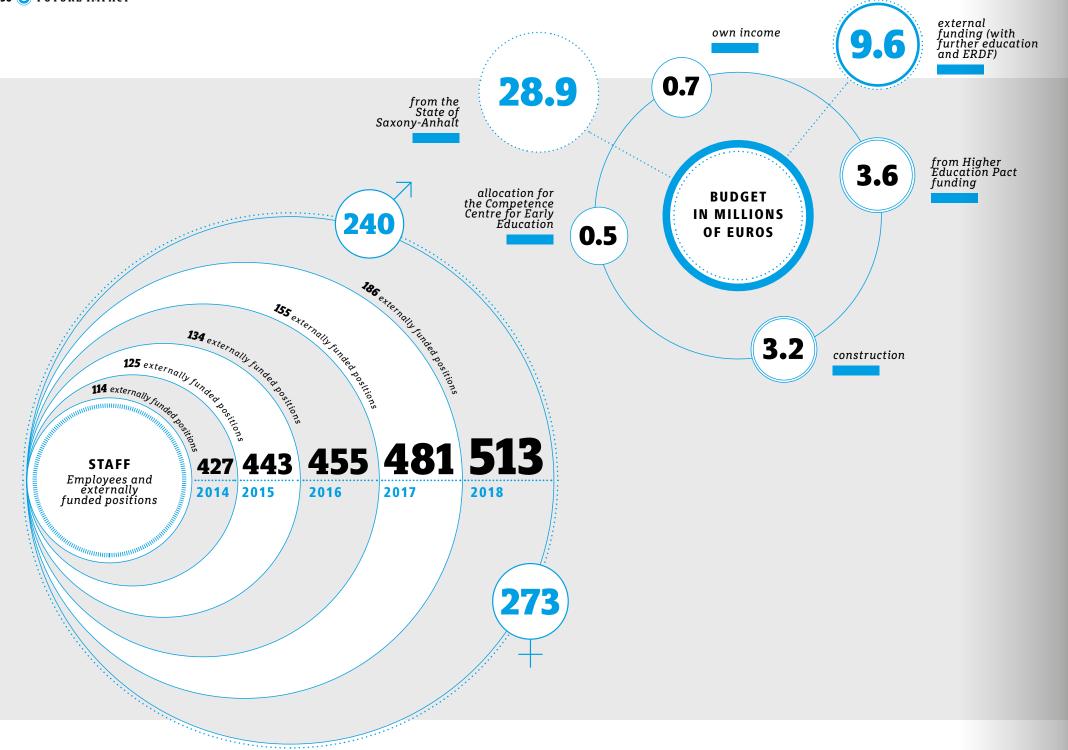
O MODERNISING FACILITIES

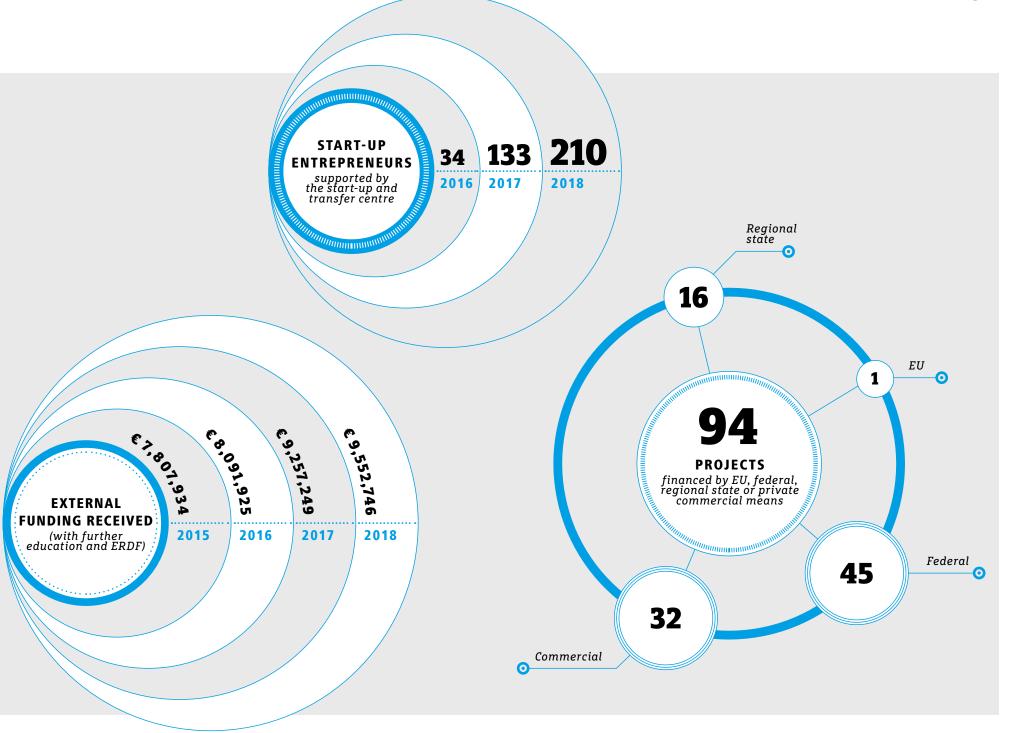
A university's rooms, spaces and technical equipment need to meet many requirements. Modern facilities and a well-maintained campus have a decisive effect on image and contribute to the quality of teaching and research. As a result, some 3.22 million euros were invested in construction measures at the two sites during 2018. Employees and students now benefit from new wi-fi infrastructure, for example, as well as air conditioning in the building materials labs in the Department of Water, Environment, Construction and Safety. On the Magdeburg campus, barriers were removed and ramps suitable for disabled students were installed, all the fire alarm systems were replaced and the roofs of five buildings were redone.

O REDUCING **ENERGY CONSUMPTION**

Magdeburg-Stendal University of Applied Sciences and the Otto von Guericke University Magdeburg cooperate on building management and employ a joint energy manager. The aim? To capture and evaluate consumption data and introduce measures to boost energy efficiency and savings. To that effect, in 2018 central operational facilities were refurbished and the lighting systems in the University's library were renewed. This made it possible to reduce the consumption of electricity by the Herrenkrug campus once again and CO, emissions were reduced on both campuses.

56 🧿 FUTURE IMPACT





WHO DETERMINES THE DIRECTION, **ROVIDES MOTIVATION AND RIVES US? WHERE DO WE MUSE, DISCUSS, CHALLENGE? HOW** WILL WE EVOLVE? WHERE DO WE WANT TO GO AND WHAT WILL **OUR PROFILE BE? HOW DO WE** SHAPE THE FUTURE OF STUDYING, **RESEARCH AND PROFESSIONAL DEVELOPMENT? AND WHO CREATES THE FOUNDATION FOR ALL THAT?**



MANAGEMENT UNTIL **MARCH 2018**

- /// Prof. Anne Lequy, Rector
- /// Dr. Antje Hoffmann, Chancellor
- /// Prof. Michael Hoffmann, Prorector for Academic and International Affairs
- /// Prof. Harald Goldau, Prorector for Research, Development and Transfer
- /// Prof. Wolfgang Patzig, Prorector for University Governance and Marketing and for the Stendal Campus

MANAGEMENT SINCE APRIL 2018

/// Prof. Anne Lequy, Rector

- /// Dr. Antje Hoffmann, Chancellor
- /// Prof. Yongjian Ding, Prorector for Academic and International Affairs
- /// Prof. Kerstin Baumgarten, Prorector for Research, Development and Transfer
- /// Prof. Volker Wiedemer, Prorector for University Governance and Marketing and for the Stendal Campus

O BOARD OF TRUSTEES (APPOINTED FOR THE **PERIOD 2016 TO 2021)**

- /// Prof. Dr. h. c. mult. Clemens Klockner (chair and member until October 2018)
- /// Elke Lüdecke (deputy chair)
- /// Prof. Anke Hanft
- /// Prof. Thomas B. Hodel
- /// Sandra Wartmann

CHAIR



O SENATE (AS OF APRIL 2019)

/// Prof. Anne Lequy, Rector

PROFESSORS

/// Prof. Manuela Schwartz

- /// Prof. Frauke Mingerzahn
- /// Prof. Jan Pinseler
- /// Prof. Michael Herzog
- /// Prof. Burkhard von Velsen-Zerweck
- /// Prof. Dieter Schwarzenau
- /// Prof. Jürgen Häberle
- /// Prof. Olaf Friedewald
- /// Prof. Torsten Schmidt
- /// Prof. Michael Rost
- /// Prof. Axel Lehmann

RESEARCH ASSOCIATES AND TEACHING STAFF WITH SPECIAL TASKS

- /// Christa Wetzel
- /// Peter Rauschenbach
- /// Jan Binde
- /// Dr.-Ing. Cornelia Breitschuh

STUDENT REPRESENTATIVES

- /// Katja Schulz /// Florian Schlomo Hetzel /// Melissa Michna
- /// Karl Künne

OTHER STAFF

/// Jana Schieweck /// Katrin Wolny

EQUALITY OFFICER

/// Angret Zierenberg

O COOPERATIONS AND PARTNERSHIPS

PLACEMENT COMPANIES FOR CIVIL ENGINEERING, DUAL STUDENTS STARTING IN THE

2018/19 WINTER SEMESTER

- /// Bauunternehmen Holger Blum GmbH, Köthen
- /// BUSSE BAU GmbH, Magdeburg
- /// DB Bahnbau Gruppe, Königsborn
- /// DB Netz AG, Magdeburg
- /// Echterhoff Bau GmbH, Dessau-Roßlau
- /// FRIEDRICH VORWERK KG, Petersberg
- /// Industriebau Wernigerode GmbH, Wernigerode
- /// ing-tec Magdeburg GmbH, Magdeburg
- /// Ingenieurbau Altmark GmbH, Stendal
- /// Magdeburg-Hannoversche Baugesellschaft mbH, Magdeburg
- /// SPOMA Parkett und Ausbau GmbH, Magdeburg
- /// STRABAG AG, Halberstadt
- /// STRABAG AG, Magdeburg
- /// STRATIE Bau GmbH, Blankenburg
- /// Tief- und Spezialbau Halle GmbH, Halle
- /// Toepel Bauunternehmung GmbH, Magdeburg

/// Zimmerei Adams, Schachdorf Ströbeck

PLACEMENT COMPANIES FOR BUSINESS ADMINISTRATION, DUAL

STUDENTS STARTING IN THE 2018/19 WINTER SEMESTER

- /// Adler Event GmbH, Stendal
- /// Autohaus Mothor GmbH, Brandenburg
- /// Avacon AG, Helmstedt
- /// Curamus Pflegedienst gGmbH, Wolmirstedt
- /// Haldenslebener Verkehrsgesellschaft mbH, Haldensleben
- /// IFA Holding GmbH, Haldensleben
- /// LVA Altenweddingen, Sülzetal
- /// Norddeutsche Landesbank Landesbank für Sachsen-Anhalt – Investitionsbank Sachsen-Anhalt, Magdeburg
- /// NORMA Lebensmittelfilialbetrieb Stiftung & Co. KG, Magdeburg
- /// NORMA Lebensmittelfilialbetrieb Stiftung & Co. KG, Nuremberg

- /// OKB Sondermaschinenbau GmbH, Schönebeck
- /// Sattler Media Press, Hornburg
- /// Segmente-Behälter-Bau GmbH, Wolmirstedt
- /// Skoda Vertragshändler Autohaus Lars Thormann Team GmbH, Stendal
- /// TCS TürControlSysteme AG, Genthin
- /// Volksbank Stendal eG, Stendal

PLACEMENT COMPANIES FOR ELECTRICAL ENGINEERING, DUAL STUDENTS STARTING IN THE 2018/19 WINTER SEMESTER

- /// Ambulanz Mobile GmbH & Co. KG, Schönebeck/// Bundesnetzagentur, Magdeburg
- /// Elektro Nebrich, Seehausen
- /// Plättner Elektronik GmbH, Blankenburg
- /// PPSV, Salzatal

SUPPORTERS OF 2018 GERMANY SCHOLARSHIPS

- /// ASSMANN BERATEN + PLANEN GmbH, Magdeburg
- /// BAU-ING.DE Ingenieurbüro Gärtner, Magdeburg
- /// EUROVIA Verkehrsbau Union GmbH, Magdeburg
- /// Falkenhahn Baugesellschaft mbH, Teutschenthal
- /// Handball Magdeburg GmbH, Magdeburg
- /// HTB Hoch- und Tiefbaustoffe GmbH & Co. KG, Könnern
- /// IFA Holding GmbH, Haldensleben
- /// igt Ingenieurgemeinschaft Thiel, Magdeburg
- /// Ingenieurbüro Lange & Jürries, Magdeburg
- /// Ingenieurbüro Schulze, Magdeburg
- /// Institut f
 ür Automation und Kommunikation e. V., Magdeburg
- /// ITB Ingenieurtiefbau GmbH, Schönebeck
- /// Konexus GbR, Melle
- /// Landgesellschaft Sachsen-Anhalt mbH, Magdeburg

- /// Micro-Epsilon Messtechnik GmbH & Co. KG, Magdeburg
- /// Niemann Ingenieure GmbH, Magdeburg
- /// OST BAU Osterburger Straßen-, Tief- und Hochbau GmbH, Osterburg
- /// PRO FH e.V., Magdeburg
- /// regiocom GmbH, Magdeburg
- /// Rotary Club Magdeburg, Magdeburg
- /// RWD Ingenieure GmbH, Magdeburg
- /// Schubert Motors GmbH, Magdeburg
- /// SCHWENK Zement KG, Ulm
- /// SPOMA Parkett und Ausbau GmbH, Magdeburg
- /// Städtische Werke Magdeburg GmbH & Co. KG
- /// Stadtsparkasse Magdeburg, Magdeburg
- /// Trinkwasserversorgung Magdeburg GmbH
- /// ZORN INSTRUMENTS GmbH & Co. KG, Stendal

	OBJECTIVE	RESULTS	STATUS
1.	Measures to achieve the objectives of the 2020 Higher Education Pact [A.1.1, A.1.6]	Student marketing, fairs, student guidance, advertising for STEM courses, for more information see the Higher Education Pact implementation report	ongoing
2.	Coordination and approval of the course offering [A.1.2]	Approvals where agreement has been reached	ongoing
3.	Compatibility of course offering with budget [A.1.3]	Internal calculations complete	completed
4.	Accreditation process and quality assurance [A.1.4]	96 percent of all degree courses are accredited or are undergoing the accreditation process /// Con- ception of a service area for quality management, see also item 30	ongoing
5.	Closure of degree courses to implement 2014 University restructuring plans [A.1.5]	Plans to make cuts in the field of Technical Commu- nication shelved /// Closure of the Bachelor's degree programme in Business Administration designed to be followed while the student is in employment and spe- cialising in Social Insurance Management	ongoing

Tasks as per the 2015 to 2019 agree-ment on objectives between the Ministry of Economy, Science and Digitalisation for the State of Saxony-Anhalt and Magdeburg-Stendal University of Applied Sciences, 29 January 2015



	OBJECTIVE	RESULTS	STATUS
6.	Procedure to recognise German and foreign academic results and degrees [A.1.7]	Procedure on university entrance: uni-assist e.V. (foreign academic results and qualifications) or departments and enrolment office (German academic results and qualifications) /// Procedure to recognise results within study programme: via departments and enrolment office and the International Office where applicable (foreign academic results)	ongoing
7.	Report on the admission of professionally qualified people to study programmes [A.1.8]	Presentation of the University at regional and pan- regional vocational and student fairs /// Student guid- ance offerings to provide support on selecting courses and matters relating to university entrance, the recog- nition of examination results and other issues relating to the organisation of degree programmes	ongoing
8.	Procedure to recognise non-university achievements and skills [A.1.9]	Checking by the examination boards of the various departments	ongoing
9.	Contribution to securing expert resources for the future and collaboration with business [A.1.10]	Network meetings, ConnectYou professional fair /// Altmark network conference /// company contact fair, etc.	completed

	OBJECTIVE	RESULTS	STATUS
10.	Concepts relating to further academic training and dual courses of study [A.1.11]	Offerings of the Centre for Continuing Education and the Magdeburg further education campus /// New Master's course in Digital Business Management /// New Master's course in Integrated Design Engineering for Business	ongoing
11.	Use of federal-regional states "Quality Pact Teaching" programme [A.1.12]	Continuation and expansion of QPL-funded projects on four levels: departments, ZHH, Prorectorate for Academic and International Affairs (QM projects, see 30), HET LSA network	ongoing
12.	Implementation of strategy arising from regional state academic and research policy [A.1.13]	Intensification of externally funded activities at the University	ongoing
13.	Intensification of knowledge and technology transfer [A.1.14]	Key role of the KAT in boosting innovation activity in the regional economy	ongoing
14.	Cooperative doctoral degrees and regional state postgraduate funding [A.1.15]	Supervision of 56 doctoral students	ongoing
15.	Third Mission [A.1.16]	Awareness of societal, social and cultural responsibility by consolidating and expanding cooperations	ongoing

	OBJECTIVE	RESULTS	STATUS
16.	Internationalisation strategy, international degree courses [A.1.17]	Use of funds to enhance image, particularly for international university marketing /// Interim evaluation of current internationalisation strategy with the result of focusing on attracting international students	ongoing
17.	Performance-oriented allocation of funds [A.1.18]	Greater management based on outputs and results	completed
18.	Implementation of Saxony-Anhalt programme on gender neutrality [A.1.19]	Active participation in the project for the duration of the regional state programme	ongoing
19.	Implementation of the UN Convention on the Rights of Persons with Disabilities [A.1.20]	Appointment of a new disabilities officer by the Senate, intensification of support for studying with a disability	ongoing
20.	Family-friendly university measures [A.1.21]	Successful interim evaluation to implement agreement on objectives for auditing as a family-friendly university	ongoing
21.	Setting up an information technology commission [A.1.22]	The University is a member of Saxony-Anhalt's universities' IT commission	completed

OBJECTIVE	RESULTS	STATUS
Expansion of digital higher education [A.1.23]	Strategic: preparation of a state-wide concept for making teaching digital; operational: development and implementation of digital teaching and learning formats (ZHH in conjunction with ZIM and ZKI)	ongoing
Pan-university and pan-regional activities relating to university marketing [A.1.24]	Active participation in the regional state marketing campaign "Studiere, was Dich wirklich weiterbringt" ("Study what really gets you ahead")	ongoing
Sustainability measures [A.1.25]	Energy management /// Connection of all meters to building technology (energy monitoring) /// Renewal of heating energy supply for Herrenkrug campus	ongoing
Updating the plan on the use and development of space, construction measures and rentals, current status of the use of space [A.1.26]	Collaboration with HIS-HE (HIS Institute of University Development) /// Calculation of planned/actual space, renewal of wi-fi infrastructure, replacement of fire alarm systems, outdoor gym and construction of paths in Stendal, etc.	ongoing
ECTS points as indicator of internal management [A.1.27]	More output-oriented management	completed
Formation of reserves [A.2.1]	State of reserves as at 31/12/2018 in full	completed
Sharper research profile, development of institutional cooperation platforms [A.2.2]	More collaboration with regional companies and organisations, more networking within the University	ongoing
	Expansion of digital higher education [A.1.23]Pan-university and pan-regional activities relating to university marketing [A.1.24]Sustainability measures [A.1.25]Updating the plan on the use and development of space, construction measures and rentals, current status of the use of space [A.1.26]ECTS points as indicator of internal management [A.1.27]Formation of reserves [A.2.1]Sharper research profile, development of	Expansion of digital higher education [A.1.23]Strategic: preparation of a state-wide concept for making teaching digital; operational: development and implementation of digital teaching and learning formats (ZHH in conjunction with ZIM and ZKI)Pan-university and pan-regional activities relating to university marketing [A.1.24]Active participation in the regional state marketing campaign "Studiere, was Dich wirklich weiterbringt" ("Study what really gets you ahead")Sustainability measures [A.1.25]Energy management /// Connection of all meters to building technology (energy monitoring) /// Renewal of heating energy supply for Herrenkrug campusUpdating the plan on the use and development of space, construction measures and rentals, current status of the use of space [A.1.26]Collaboration with HIS-HE (HIS Institute of University Development) /// Calculation of planed/actual space, renewal of wi-fi infrastructure, replacement of fire alarm systems, outdoor gym and construction of paths in Stendal, etc.ECTS points as indicator of internal management [A.1.27]More output-oriented managementFormation of reserves [A.2.1]State of reserves as at 31/12/2018 in fullSharper research profile, development of institutional cooperation platforms [A.2.2]More collaboration with regional companies and organisations, more networking within the

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	OBJECTIVE	RESULTS	STATUS
9.	Exploitation of study programme capacity based on the University's teaching profile [A.2.3, A.2.4]	Continual monitoring of capacity	ongoing
0.	Introduction of quality management by the 2017/18 winter semester [A.2.5]	Setting up a quality management service area with subsections in teaching evaluation, capacity planning, academic controlling, controlling	ongoing
1.	Assessment of the Bachelor's degree in Health Promotion and Management with a view to combining it with teacher training [A.2.6]	Conception of an innovative bridging model	completed
2.	Change to departmental structures [A.2.7]	Merger of two departments, structure in line with statutes, end of moratorium	completed
3.	Financing of the Competence Centre for Early Education [A.2.8]	Financing via additional funds from the University Pact	ongoing
4.	Report by the 2016/17 winter semester on deepening strategic cooperation within the Early Education research network [A.2.9]	The report was produced. /// Continual expansion of strategic cooperation in the field of Early Education /// Deeper cooperation with the Leibniz Institute of Neurobiology (LIN) through the joint appointment of the Professor of Neurocognitive Development /// Cooperation with Saxony-Anhalt's competence centre for social innovation	completed

	OBJECTIVE	RESULTS	STATUS
35.	Expansion of cooperation relationships with Otto von Guericke University/steering group [A.2.10]	Continuation of cooperation with Otto von Guericke University Magdeburg	ongoing
36.	Cooperation between the Department of Water, Environment, Construction and Safety and the Helmholtz Centre for Environmental Research (UFZ) [A.2.11]	Conclusion of framework cooperation agreement	completed
37.	Equality, family friendliness and diversity [A.2.12]	Participation in invitation to tender for the third female professor programme, audit as "family-friendly university", academic diversity sub-project	ongoing
38.	Internationalisation strategy [A.2.13]	Applying for funds to enhance image in order to implement 2016 to 2020 internationalisation strategy	completed
39.	Management of space, central management [A.2.14]	Further development of conjectFM system, 6 th bench- mark period (2018/19) in Facility Management	ongoing
40.	Environmental management, CHANGE campaign [A.2.15]	Employment of an energy manager /// Reduced consumption of electricity and reduced CO ₂ emissions /// Operational optimisation of technical equipment to boost energy efficiency /// Stepwise conversion to LED lighting	partially completed
41.	Pan-university reporting (HISinOne) [A.2.16]	Roll-out of business intelligence in HISinOne	ongoing

- **ECTS** European Credit Transfer System
- **HET LSA** Heterogenität als Qualitätsherausforderung für Studium und Lehre, Verbund Land Sachsen-Anhalt (Heterogeneity as quality challenge for studying and teaching, network State of Saxony-Anhalt)
 - IT Information Technology
 - **KAT** Kompetenznetzwerk für Angewandte und Transferorientierte Forschung (Competence Network for Applied and Transfer-Oriented Research)
 - **QPL** Federal-regional state "Qualitätspakt Lehre" ("Quality Pact Teaching") programme
- **uni-assist e. V.** University application service for international students
 - **ZHH** Centre for University Didactics and Applied University Research
 - **ZIM** University Media Centre
 - **ZKI** University Computer Centre

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O THANKS

The University Management thanks everyone who contributed to the creation of the 2018 annual report. Special thanks go to the professors, employees and students who are committed to the well-being of Magdeburg-Stendal University of Applied Sciences and whose work contributes to its development. The University Management also thanks the members of the jury who selected genese Werbeagentur GmbH to work with and their concept, as well as the members of the Commission for University Development and Marketing who have supported the production of the annual report.

The 2018 annual report in German of Magdeburg-Stendal University of Applied Sciences produced in accordance with Section 57 (2) (2) and (3) HSG LSA (Higher Education Act of the State of Saxony-Anhalt), in conjunction with the agreement of objectives between the Ministry of Economy, Science and Digitalisation for the State of Saxony-Anhalt and Magdeburg-Stendal University of Applied Sciences dated 29/01/2015, was discussed by the Senate in accordance with Section 67 (2) HSG LSA on 12/06/2019 and accepted by the Board of Trustees in accordance with Section 74 (1) No. 3 HSG LSA on 18/06/2019.

Magdeburg and Stendal, 24/06/2019