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SCIENCE CITY ULM

Taking bold decisions to ensure success

DUZ SPECIAL
A SUPPLEMENT TO DUZ // MAGAZINE FOR SCIENCE AND SOCIETY

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A NOTE TO OUR READERS

"Necessity is the mother of invention" – looking back on the beginnings of Ulm's Science City some 40 years ago, this proverb tells it all. It confirms that out of a crisis situation, something new can emerge that will endure into the future. In the early 1980s, an economic crisis that hit Ulm particularly hard mobilised untold power and strength among the captains of local government, science and industry, not to mention the people of Ulm. The challenge that lay before them was tremendous – to halt the demise of a once prosperous region now faced with the loss of thousands of jobs in the automotive, metalworking and electrical sectors.

With the unemployment rate suddenly close to ten percent and almost daily factory closures, the population of Ulm could easily have sunk into the depths of depression and resignation. Instead, they showed amazing resilience, transforming the city and the entire region into a nationally and internationally recognised location for cutting-edge research and the transfer of knowledge between science, industry and society at large. Today, there's talk of the need to conduct applied research in universities and scientific institutes and make the findings available to society for use in solving major challenges. But back in the 1980s, this was a novel concept, as was the transformation of Ulm from a former industrial town into a science city – the first of its kind in Germany. Until then nothing similar had been seen outside of the US and Japan.

ULM UNIVERSITY PLAYED A KEY ROLE IN THAT SUCCESS. IT WAS THE HOTBED OF SCIENCE CITY ULM, ACTING AS BOTH ITS DRIVING FORCE AND ITS PACEMAKER.

It can rightly be said that, driven by an existential crisis, Ulm and its decisionmakers showed pioneering spirit back then, while those at the helm today continue to demonstrate how indispensable science is as a driver of innovation, transformation and economic success. For Petra Olschowski, Baden-Württemberg's Minister of Science, what impresses her most is the courage shown by those responsible in government, science and industry when placing their trust in science to secure a future for Ulm (see the interview on page 4).

Looking at the tremendous challenges facing both Germany and Europe in the face of global transformation, we can only encourage all those responsible – and especially Germany's new government – to trust in their abilities and have faith: It is possible to come out of a crisis stronger, break new ground and chart a different course. But to do so calls for clear vision, cohesion and commitment in achieving a common goal – and it takes courage, of course. In this DUZ Special, we reveal how we achieved this in Ulm and illustrate where our resilience lies.

We wish you an interesting and informative read.

Professor Michael Weber Dieter Kaufmann

"AN EXCEPTIONALLY WISE AND COURAGEOUS RESPONSE"

FIRST THERE WAS THE CRISIS, THEN CAME SCIENCE CITY ULM: FORTY YEARS AGO, IN RESPONSE TO THE LOSS OF THOUSANDS OF JOBS IN INDUSTRY, THE UNIVERSITY, THE CITY AND THE BADEN-WÜRTTEMBERG STATE GOVERNMENT PLACED THEIR TRUST IN SCIENCE, AIMING TO REVIVE ULM AS A BUSINESS LOCATION AND PUT THE NECESSARY CONDITIONS IN PLACE. STATE MINISTER OF SCIENCE PETRA OLSCHOWSKI AND PROFESSOR MICHAEL WEBER, PRESIDENT OF ULM UNIVERSITY, DESCRIBE THE SUCCESS STORY THAT EVOLVED FROM A VISIONARY IDEA.

| Interview: Martin Himmelheber

In the mid-1980s, Ulm was hit by a major economic crisis and sweeping structural change. The redeeming idea, to establish an innovative, sustainable, crisis-proof knowledge economy around the relatively young university, came from Professor Theodor Fliedner, the university's rector at the time. Support came from the then state government led by Minister President Lothar Späth. Minister Olschowski, how did this all come about?

PETRA OLSCHOWSKI: I only know the story from historical reports, but from today's perspective you have to acknowledge that it was an exceptionally wise and courageous response to a crisis situation. Given the difficult financial conditions, the state government had actually considered closing down Ulm University.

So what did the state government do next?

OLSCHOWSKI: The total opposite to the closure plans: The government actually took action to underpin science and research. During the crisis, Baden-Württemberg introduced an innovative collaboration model between scientific institutes, industry and the people of Ulm. Based on research priorities, a whole district was redeveloped on the Oberer Eselsberg in north-west Ulm and knowledge transfer between science and industry was promoted.

Where did the idea stem from?

OLSCHOWSKI: The idea was sparked by Ulm University and its rector at the time, with additional impetus from industry itself. The then CEO of AEG decided to take action in Ulm, thereby laying the cornerstone for the first large-scale non-university research centre. Two areas of interest came together – and at that moment, policymakers were open-minded enough to see the opportunity this presented and promote a model that was extremely innovative at the time. But even so, the Science City project did not go uncontested. A debate soon ensued around the risk of research becoming far too dependent on industry.

Professor Weber, how do you explain how science was identified as a "rescue remedy" for the region? Today, we constantly talk about the importance of science in solving the major challenges of our time. Yet forty years ago, it played a subordinate role at most.

PROFESSOR MICHAEL WEBER: When the initial ideas came up, Ulm University was less than 20 years old and offered a relatively limited range of subjects. Since the greatest share of Ulm's industry relocated to China and Japan back then, Ulm was faced with the existential question of how to reinvent itself. One answer was to establish new departments at the university that matched the city's desired new focus – these included electrical engineering and information technology, subjects of key importance for an increasing number of companies that were setting up in Ulm.

OLSCHOWSKI: One central question was: How can we create a new perspective for Ulm? The city was suffering from vast numbers of layoffs and company closures. The forward-looking approach was to build on existing strengths and partnerships, and use them to create the Science City Ulm. Additionally, successful Baden-Württemberg-based companies wanted to relocate to Ulm. This was made possible because the Eselsberg location offered ample

Petra Olschowski, Baden-Württemberg State Minister of Science, Research and Arts, and **Professor Michael Weber,** President of Ulm University

space in which to develop the Science City, space which the businesses and research institutes needed. In other words, the Science City project evolved both from its location and local policymakers showing the necessary agility and response.

WEBER: There were also several important minds that played a crucial role in driving the Science City project: Professor Theodor Fliedner, a highly visionary university rector, Lothar Späth, a politician with a thirst for innovation, and Heinz Dürr, the former AEG CEO, who sought solutions to the problems facing the company in Ulm – plus the managers at Daimler-Benz AG searching for space to set up their research centre.

Would something like that be possible given today's conditions?

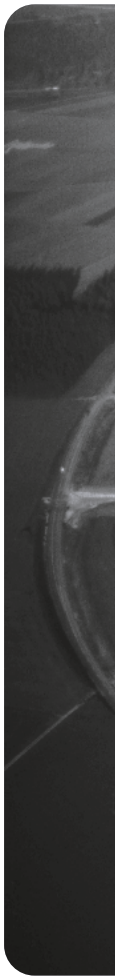
OLSCHOWSKI: We're actually taking a similar approach, but with a slightly different focus. In Baden-Württemberg we have a very broad-based university landscape with multiple locations, some of which have evolved from similar visions to Ulm's Science City project. What Baden-Württemberg now has is our Innovation Campus model, which could be considered similar in some respects. This is where we bring together expertise from science, industry and society to drive future topics such as artificial intelligence, mobility and sustainable development. One particular example from medicine and the life sciences involves our Innovation Campus Health and Life Science Alliance in the Rhein-Neckar region. And at an Innovation Campus for Quantum Technology, known as QuantumBW, we have Ulm University, the University of Stuttgart and the Karlsruhe Institute of Technology involved. This is different to the Science City Ulm in that our Innovation Campus models are both thematically-focused and interconnected rather than bound to one location.

> "THE EXAMPLE OF ULM SHOWS US THAT EVEN TODAY, WE WOULD BE WELL-ADVISED TO TRUST IN SCIENCE-FRIENDLY POLICY WHEN LOOKING FOR ANSWERS TO RADICAL CHANGE AND TRANSFORMATION."
>
> PETRA OLSCHOWSKI

What are the greatest successes to come out of the Science City Ulm?

OLSCHOWSKI: For us at the state government, the Cluster of Excellence focusing on battery storage is a great success. It certainly has its origins in the Science City idea.

WEBER: Back then, Ulm was a region that had been left behind – we had the highest unemployment rates in Baden-Württemberg and huge structural problems. But thanks to diversification across the entire region and to the Science City, we've eliminated both. We now have the lowest unemployment rates we've had for a very long time. We have a high degree of prosperity. We also rank in first place in the Prognos-Zukunftsatlas of Future-Ready Cities, ahead of Munich and other megacities. This shows that the



From farmland to high-tech location: Since 1988 (large photo), the area on the Oberer Eselsberg, about three kilometres from the centre of Ulm, has seen rapid and remarkable change. Thanks to perfectly orchestrated project development activities, there are now more than 60 companies and research institutes located on the hill.

idea that was sparked some 40 years ago has paid off for the region as a whole.

What do you think the 'science city' label has made possible that wouldn't otherwise have come about?

WEBER: It instils a strong sense of belonging. The entire campus in Ulm, with the university, the hospital, the military hospital and the companies located there – they all feel they are part of this, our Science City. There's a common identity that – as part of a like-minded community – makes it far easier to communicate with others who have the same or similar goals.

OLSCHOWSKI: I would say the 'science city' concept can only work if it is underpinned with substance. Back then, policymakers took a courageous step, but it was also the university that had to meet the high expectations that went with it. It wasn't a sure-fire success. The university had to put a lot of effort into reinventing itself and redefining what it stood for. One key aspect in all of this was opening up to include the people of Ulm as a means of securing acceptance and support for such a huge undertaking.

> "EXCELLENCE IS DEMONSTRATED NOT JUST IN OUSTANDING RESEARCH AND TEACHING, BUT IN CREATING STRONG, ROBUST STRUCTURES AND ALLIANCES LIKE THE SCIENCE CITY ULM."
>
> PROFESSOR MICHAEL WEBER

Who actually decides how things should develop where Ulm University is concerned – university management or ministry officials?

OLSCHOWSKI (LAUGHING): Ulm University, of course – and that applies to all our state universities and research institutes. But naturally, we discuss things within the state government and with scientific institutions when it comes to the direction a location like Ulm might take in the future. And in the case of larger-scale initiatives and programmes launched by the Federal Government and other German Länder (states), we support and accompany our universities wherever we can. One example involves the Cluster of Excellence applications associated with the Excellence Strategy – we provide our universities with additional funding for use in preparing initial applications or follow-up applications. In doing so, we do influence their future profiles to a certain extent, although the applications are submitted by the universities themselves. But basically, the substantive motivation for further development of the research location must and should come from science.

Professor Weber, you also laughed at the last question. Why?

WEBER: I laughed because too much is attributed to the power a university president actually has. The ways in which the Science City might develop in the future, the goals it pursues and the profile it adopts are all based on a joint effort that evolves from science. And that's because a university is actually shaped by its scientists and their research topics. The art and task of university management is to bring together those who can achieve great things and encourage them not to stay in their research silos, but to be open to greater thematic goals. In Ulm, this has enabled the development of battery research over the past twenty years and of quantum technologies in the past ten. Successes like these, which foster visibility, funding and reputation, provide a great incentive for researchers to join forces with others and forge ahead with new projects for the Science City.

Minister Olschowski: How do you and the state government ensure that things in Ulm can continue as they are?

OLSCHOWSKI: It all revolves around the funding that we as the state government provide. With the University Financing Agreement (HoFV), we ensure that Ulm University, the University of Applied Sciences and Ulm University Hospital in Ulm have sufficient basic funding. And with the new HoFV III Agreement, more funding is being provided for research and teaching. For its part, the State Ministry of Finance ensures that the new buildings needed are actually built, while the State Ministry of Economic Affairs provides support in the form of grants for non-university research institutes. In today's world, that's certainly a huge undertaking, but as we can see in Ulm, it's one that pays off.

What can policymakers learn from the example of Ulm?

OLSCHOWSKI: As the state government, we can learn to rely on science and the solutions it leads to, especially in economically difficult times. Ulm's success story testifies

to the innovation and science-friendly policy we pursue in Baden-Württemberg. Our most recent example is that we will be creating an internationally-focused State Graduate Centre for Artificial Intelligence in Heilbronn, with investments amounting to €30 million per year.

Earlier, we discussed how the Science City Ulm evolved in response to an economic crisis. Is Ulm now better equipped to cope with a crisis of that kind?

OLSCHOWSKI: There were and there still are no guarantees. And the upheaval we're currently facing is tremendous. But the Ulm model that emerged some 40 years ago has stood the test of time and there's nothing to suggest that the success story won't continue. But having said that, we shouldn't lose sight of the fact that China, for example, is very advanced when it comes to battery research – a field that, as you know, is of extreme importance in Ulm. The situation is similar as regards quantum computers. That means we need to constantly assess whether the formats and models we teach, live out and collaborate in are still competitive and in keeping with the times. There's no permanent fix and there never can be. So, we must strive to be better. Competition is an important driver of innovation for science and industry alike. But back to the beginning: In this form and with this permeability between the institutions, the Science City Ulm has laid an ideal foundation for development and growth in the years and decades to come.

Would you recommend that decisionmakers from other regions replicate the Science City Ulm model and place their trust in science as a driver of innovation and growth?

WEBER: I wouldn't say that our model and our experience can be transferred one-to-one. But I would recommend that people talk to those involved in Ulm, find out what led us to achieve such success and develop such resilience. What people can learn from Ulm is that excellence is demonstrated not just in outstanding research and teaching, but in creating stronger, robust structures and alliances. The creation of a science city in Ulm has seen science and industry consolidate their strengths, thereby finding the means and the strength to help solve both the regional and the wider challenges faced by society.

KEY MILESTONES

1969
Ulm University (Campus East)

Foundation stone laid for new buildings and headquarters of Ulm University, founded in 1967 as the University of Medicine and Natural Sciences on the Oberer Eselsberg. Gradual commencement of teaching in pre-clinical medicine and physics in leased premises.

1974
BWK

Foundation stone laid for the Bundeswehrkrankenhaus (BWK) Ulm. Largest military medical centre in southern Germany, integrated into the civilian healthcare network.

1979
Ulm University Hospital

Construction begins on the new Clinic for Internal Medicine on the Oberer Eselsberg. In 1982, the city and state sign a takeover agreement that lead to the establishment of Ulm University Hospital. The University Hospital retains its locations on the Safranberg and Michelsberg sites.

1982
RKU

Decision to build the Universitäts- und Rehabilitationskliniken Ulm (RKU), a specialist hospital for orthopaedics and neurology. Stakeholders included Ulm University, the City of Ulm, and the Baden-Württemberg pensions and occupational accident prevention agencies.

1989
Science Park I

Scientific Council approves creation of the Science City Ulm, securing Federal Government financing. The Research Centre Ulm Steering Committee approves additional funding.
Building commences on offices, laboratory and development space for university start-ups.

1990
Ulm University (Campus West)

Teaching commences in Electrical Engineering and Information Technology. New Chair of Neuro-Informatics through state-wide research alliance. Building commences for Department of Engineering Science.

1997
Science Park II

Building commences for office, laboratory and development buildings on a 20 hectare plot of land. Attracting large, renowned companies as well as SMEs and start-ups creates many new jobs and enables the region to effectuate structural change.

2001
Science Park III/1

Decision to develop a further 40 hectares for innovative businesses in research and development. First building phase commences on city-owned land.

2018
Tram Line 2

Completion of the largest transportation project in the history of Ulm. Over a distance of some nine kilometres, Tram Line 2 connects the Kuhberg district via the city centre with the university, hospitals and companies located at the Oberer Eselsberg site.

2021
Ulm University of Applied Sciences

Commissioning of the new building for energy and electrical engineering at THU, founded in 1960. The efficiency-plus building supplies its own energy and heat.

"ULM WOULDN'T BE WHAT IT IS TODAY WITHOUT THE SCIENCE CITY"

THE INTENSE COLLABORATION BETWEEN CITY AND UNIVERSITY IS A KEY SUCCESS FACTOR OF SCIENCE CITY ULM. MARTIN ANSBACHER, LORD MAYOR OF ULM, AND PROFESSOR MICHAEL KÜHL, VICE PRESIDENT OUTREACH, ULM UNIVERSITY, EXPLAIN HOW IT WORKS.

| Interview: Tina Bauer

The term 'science city' indicates a joint science and policy project. Despite their great willingness to tackle issues together, policymakers and scientists naturally have different cultures and interests. So, what is their lowest common denominator?

MARTIN ANSBACHER: It's actually a huge common denominator. We call it the Ulm spirit – an attitude towards science and research shared by policymakers and university management.

PROFESSOR MICHAEL KÜHL: The Ulm spirit is a shared awareness that science is of vast importance for a city the size of Ulm, harbouring huge opportunities for the surrounding region and greatly benefiting the university in turn.

How did the Ulm spirit come about?

ANSBACHER: It evolved from the economic crisis that hit Ulm back in the 1980s. The Science City was a game changer. Without it, Ulm wouldn't be what it is today – neither in societal nor in research-related, economic or scientific terms. Lothar Späth, the then Minister President of Baden-Württemberg, and Ernst Ludwig, the former Lord Mayor of Ulm, made the best of a bad situation. By implementing the Science City project, they set a structural process in motion from which we still benefit today – one we must protect, preserve, develop and enhance.

KÜHL: Professor Fliedner, the university rector at the time, also played a key role – he drew up the initial plans for the science city. And there was the extremely far-reaching decision to earmark the Oberer Eselsberg site above the city centre for development of the science location. To enable a science city to thrive, prosper, be future-ready and future-proof, municipal structures also have to expand.

And what has the Ulm spirit unleashed and enabled?

ANSBACHER: The Science City breathed new life into Ulm – the students and their lifestyles, the resident researchers and not to mention improved economic performance through trade tax revenue and spin-offs. The university is a key driver in the city's development overall. The City of Ulm would be very different if the Science City did not exist. Its creation was both a strategic and, first and foremost, a courageous decision. That courage is something we need to harness and retain.

KÜHL: For Ulm University, the University of Applied Sciences and other regional institutes of higher education, the Science City has served and still serves as a platform for continuous improvement. It's about more than just allocating land up on the Oberer Eselsberg site to enable some businesses to find new premises. The Science City also provides an incentive to develop further in terms of subjects and specialisations. This is why the university has added new subject areas like information technology and electrical engineering, and also

Martin Ansbacher,
Lord Mayor of Ulm (left),
and **Professor Michael Kühl,**
Vice President Outreach, Ulm University

why non-university research institutes have relocated here. The university has continuously rewritten and redesigned its profile, setting a powerful internationalisation process in motion as a result. You could say that the Science City is a kind of rejuvenation process that became institutionalised over time. This is thanks to the joint efforts of university and city, who worked hand in hand – and to the most important decision ever made in Ulm's recent urban development history.

You mentioned institutionalisation in relation to the Science City. Do you have structures and joint bodies?

KÜHL: Initially, there was a steering committee, from which a board of trustees evolved. In the meantime, there are joint structures in numerous areas where the city and the university are shareholders, such as TFU, which supports start-ups and also has other regional agencies as shareholders to promote technology transfer from science to society and help attract companies to Ulm. Another example is the Innovation Region Ulm, which was created to proactively market the employment location and attract new labour to Ulm. So, an idea that gave rise to a temporary structure has since become permanent in lots of ways. For example, various local council committees call in representatives from the science community as advisory members when planning projects related to their particular fields. This is how there came to be a test area for autonomous driving near the university. That's something that we as a university wouldn't be able to do on our own without the city's involvement.

> "THE SCIENCE CITY WAS A KIND OF REJUVINATION PROCESS THAT BECAME INSTITUTIONALISED OVER TIME. THIS IS THANKS TO THE JOINT EFFORTS OF THE UNIVERSITY AND THE CITY, WHO WORKED TOGETHER HAND IN HAND."
>
> PROFESSOR MICHAEL KÜHL

ANSBACHER: One of the Science City's strengths is that it takes in the entire value creation chain – from research to development and from product to production. We want to promote this further and use momentum to make new things possible. For example, one of Ulm's research priorities is quantum technologies, which we market as a unique selling point and are developing further. That's why we recently launched an Industry and Innovation Committee, whose members include representatives not just from the Chamber of Industry and Commerce, but from Ulm University and the University of Applied Sciences.

Which joint project makes you proud?

KÜHL: I'd like to mention the Spirit of Ulm again: The people of Ulm are proud of their city because of their centuries

New construction project at the Eselsberg site: With its new research building for Multidimensional Trauma Sciences (MTS), Ulm University is currently embarking on a lighthouse project for transdisciplinary trauma research in the immediate vicinity of the Centre for Clinical Studies. Highly specialised research and communication areas for up to 250 researchers from a wide range of disciplines – from trauma surgery to genetics and epidemiology to psychiatry – will be created on an area measuring approximately 5,000 m². Management of the construction project, which is estimated to cost around €72 million, has been assigned to the Ulm office of VBV, the Baden-Württemberg state land and buildings agency.

old tradition and because, first and foremost, they all have something in common. Throughout the centuries, the people of Ulm have repeatedly forced local authorities to take action. The university is a case in point – it evolved from an association. The building of the Ulm Minster was also largely driven by the local population. The Einstein Discovery Center is the most recent example. It's locals who are saying: Ulm is Einstein's birthplace, we have a university where physics and quantum physics are taught and researched – that's something Einstein would have pushed for, so we should have a museum. An association manages the project, while the City of Ulm provides support and a plot of land.

How do you convey the Ulm spirit to newcomers to the city, such as researchers from abroad?

ANSBACHER: Ulm's confidence shines brightly and inspires people to get involved. Up on the hill, science is never far away and the locals really value what happens at the Oberer Eselsberg site: momentum, progress and innovation. And for the first time, which I think is truly symbolic, the university ventured down into the city centre last year and held its graduation ceremony on the Ulm Minster square. That scene highlighted the connection between the two, bringing it to life. I also think that at this point, we have developed such pull that people are consciously deciding to live and work in Ulm. There's a reason that in 2024, the German business newspaper Handelsblatt declared Ulm to be Germany's most liveable and promising city. Ulm simply offers an ideal environment for people who want to work in research, have a good job and lead a good life. We have almost full employment in Ulm. With lighthouse projects like the new research building for Multidimensional Trauma Sciences (photo above), we're continuously boosting the location's image and reputation to attract researchers to Ulm.

What is it about Ulm that attracts research institutes and companies to set up in the city? What part has science played in all of this?

ANSBACHER: The agility of the Science City setting works in our favour. When companies contact us about wanting to move here, 'the Ulm machinery' kicks into gear and our city-owned project development company (PEG) immediately sets to work. The staff look at what space they can offer to meet the company's needs, whether we can help with construction and how road access can be achieved. We can quickly respond to companies' requirements and, because we're faster than others, enable them to complete their move. That's our unique selling point, our USP. And a lot also happens via networks. We know each other, we value each other and we show each other mutual respect. That's really quite a strength, being able to

build on empathy and connections to get things approved quickly – kind of via the fast track route – and make things happen fast.

Looking to the future, is the Ulm region with its Science City now better equipped to respond to a crisis – not just in itself, but also compared with regions elsewhere?

ANSBACHER: The structural diversity in Ulm makes us highly resilient in the face of crisis. There's conventional manufacturing industry in our Donautal industrial park and there's the Science City. I like to say they're two sides of the same coin.

"ONE OF THE SCIENCE CITY'S STRENGTHS IS THAT IT TAKES IN THE ENTIRE VALUE CHAIN – FROM RESEARCH TO DEVELOPMENT AND FROM PRODUCT TO PRODUCTION."

MARTIN ANSBACHER

If a crisis were to break out in the Science City, I'm confident that we'd be more than able to overcome it in no time at all. We're so diversified that I'm sure that even if one area were to suffer, the rest of the city wouldn't have to suffer as well. In fact, the opposite is true – the situation would give rise to something new. And to make sure that remains the case, we have to work to continuously to develop and improve, involving the city council in everything we do. It's not just about making land available. Expanding Tram Line 2 in order to connect the university and the Science City with Ulm city centre was a quantum leap. That might sound like an exaggeration, but it called for huge investment with an impact that was equally as great.

It's a similar situation with regards to housing, local amenities and supply. To ensure we remain future-ready and future-proof, we have to continuously review and reassess, involving both the city council and various science and industry stakeholders along the way.

KÜHL: A science city can never and should never be completed. It thrives on change and ongoing self-rejuvenation. We have to be able to create the conditions needed in a way that enables that self-renewal at any time. While the spatial development of the Science City will one day be completed, the Science City itself will never be finished.

VOICES FROM THE REGION

Regional business and government leaders outline how they benefit from Ulm's Science City status.

"The town of Neu-Ulm benefits in a myriad ways from the fact that Ulm is a science city. From a business perspective, Ulm University, the University of Applied Sciences and numerous research institutes attract a wide range of specialists, students and businesses, and that's also good for Neu-Ulm. Science-related businesses, start-ups and high-tech companies moving to the area are creating jobs, while the purchasing power of students, researchers and employees boosts local retail, the hospitality trade and the housing market.

The Science City Ulm also has a positive impact on infrastructure. Improved local transportation services, such as via joint mobility models between Ulm and Neu-Ulm, make it easier to reach the scientific institutes, benefiting the people of Neu-Ulm. Close links between the science, industry and education sectors open up numerous opportunities for collaboration. Businesses in Neu-Ulm benefit from well-trained specialists from Ulm's universities, as do schools from educational projects and innovative approaches in research.

What's more, the Science City Ulm contributes to cultural and social development in the region overall. Scientific events, specialist fairs and public presentations add to the opportunities available to our local population, making the region more attractive for families, businesses and investors. The Science City Ulm strengthens the surrounding region in economic, infrastructural and cultural terms, with numerous benefits for Neu-Ulm.

In turn, Ulm benefits from Neu-Ulm in that Neu-Ulm University of Applied Sciences (HNU) trains specialists for business and digital transformation. Many graduates work in Ulm or start businesses there. Neu-Ulm also provides space for business premises, housing and wide-ranging recreational and cultural programmes.

The greatest benefit is that the cities complement each other – Ulm as a science hub with its university and research, and Neu-Ulm with practical training, economic dynamism and space for development. Together, they form a region that is both innovative and strong."

Katrin Albsteiger,
Lord Mayor of
Neu-Ulm

"Ulm University and the Ulm University of Applied Sciences provide a robust academic landscape, with excellent research institutes and a vast pool of highly qualified graduates. Ulm also has a vibrant ecosystem with international partner businesses. For us at the Nokia Technology Center, Ulm is a city with great location-based potential.

As an international mobile communications business, we greatly value the proximity to the research institutes at Ulm University and Ulm University of Applied Sciences, and the direct access to the latest scientific findings and technologies.

We are able to work with highly-qualified scientists and experts from diverse disciplines to develop innovative solutions to complex challenges. By engaging in joint projects with partner businesses and research institutes, we can develop and implement new technologies and products faster, share knowledge and information, and create synergies.

That's why, after 26 years in the region, we are continuing to invest in Ulm as a strategically important location for us at Nokia. Our recent investment of over €180 million in the ChipDesign project to design chips for wireless communications systems underlines the importance of the city for the future development of our business, further cementing Ulm as the innovation centre for mobile communication technologies."

Dirk M. Theuerkauf,
TC Development Lead,
Nokia Technology Center Ulm

"Ulm's Science City status clearly contributes to the positive development of our industry location. The close links between research, teaching and industry provide huge opportunities for local businesses and give the economic region far-reaching appeal.

At Ulm University and other higher education institutions in the region, innovations evolve which, through successful collaborations or spin-offs, immediately translate into new products and business models, thereby boosting the economy's innovative strength.

Access to highly-qualified specialists and collaboration with research institutes also brings key locational advantages, and not just for local businesses – they also provide an important incentive for other companies that are considering relocating to Ulm.

Businesses across the various industry sectors benefit from the innovative power and vast specialist resources that the Science City Ulm and the surrounding region have at their disposal. The Science City Ulm is not just a place where research happens – it's an attractive business location for companies from across the industry sectors."

Petra Engstler-Karrasch,
Managing Director, Ulm Chamber of Industry and Commerce

Where science meets society

GEOGRAPHICALLY, ULM UNIVERSITY IS LOCATED ON A HILL JUST OUTSIDE THE CITY CENTRE. BUT EVEN SO, ENTERING INTO DIALOGUE WITH THE LOCAL COMMUNITY IS HUGELY IMPORTANT – BOTH FOR RESEARCHERS AND CITY OFFICIALS. USING VARIOUS FORMATS, THEY MAKE THE UNIVERSITY VISIBLE AND ACCESSIBLE IN THE CITY ITSELF. HERE ARE THREE EXAMPLES. | Author: Tina Bauer

Ulm-style food for thought

What has law got to do with justice? Does law provide justice? These were some of the issues discussed at the 18th Denkanstöße event, a series of talks held in Ulm in March this year. The annually held **Ulmer Denkanstöße** talks (*Denkanstöße* means 'food for thought') focus on a specific societal, political or scientific topic each year, providing a platform for the exchange of views and ideas. "The *Ulmer Denkanstöße* talks illustrate in an exemplary way how the university's expertise in the humanities can be made visible in a public setting at the heart of the city, and with no barriers to access, enabling it to be experienced and used by the interested urban public," says Ulm's Cultural Mayor Iris Mann. Called into being in 2008, the talks are designed to foster creative dialogue on the future of Ulm and the surrounding region. "This is made possible by the close collaboration between Ulm University's Humboldt Study Centre with the Ulm City Department of Culture and Spardabank BW's education and social affairs foundation," Mann continues. "By contributing their respective expertise, they produce more than the sum of their parts – resulting in a series of talks that are diverse in terms of content, programme and artistic style, and where current topics are critically discussed with the audience. The talks are scientifically sound, vivid, distinctive and always highly topical."

Graduation ceremony

The preceding example shows how science is an integral part of society and that in Ulm, it also makes its way down the hill into the city centre. The **graduation ceremony** makes young academics even more visible to the local people. Dressed for the occasion in their sashes and black caps, graduates gather on the square in front of the Ulm Minster to celebrate their success. "I think it's great that the ceremony is held in the city centre," says Emma Barth, who completed her studies in spring with a Bachelor of Science in Media Informatics. "I see it as a sign that our achievements are visible not just within the university, but also in the city itself," she adds by way of appreciation. "For us students and for our families and friends, it's special to be able to share this moment on the square in such an impressive place. Not all students get to experience a graduation ceremony like that. It brings a touch of campus life to the city, connecting our university and the people of Ulm in such a symbolic way." That's because the graduation ceremony coincides with the start of the traditional oath weekend (Schwörwochenende) – every year since the 14th century, the Lord Mayor of Ulm has sworn an oath of office, pledging to serve local citizens rich and poor.

Centre for General Academic Continuing Education

Tradition and modernity merging across generations right in the city centre. This is a concept also promoted by the Centre for General Academic Continuing Education (ZAWiW), an arm of Ulm University School of Humanities. Its overarching aim of continuing education and learning for all is put into practice with established programmes such as the Academy Weeks, Learning by Research, Ulm 3-Generation University (u3gu) and the General Study Programme (Studium Generale). "We take science out of the university and into the local community in an easy-to-understand way. In the academies, people can talk with researchers on equal terms," says Markus Marquard, Managing Director ZAWiW. "Through Learning by Research and Citizen Science, local people become researchers themselves. They investigate topics that are of interest not just to themselves, but to everyone in Ulm. The ZAWiW enables citizen participation and opens up retirement opportunities, such as serving as 'hydrogen pilots'. We're building all kinds of bridges between science and urban society in this way."

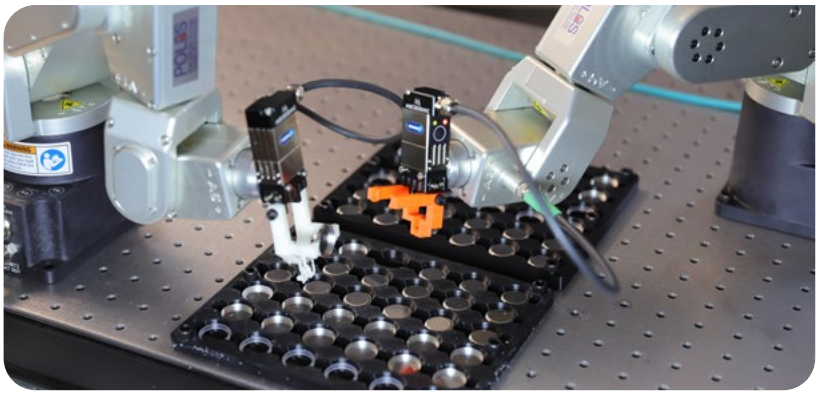
A creative ecosystem for innovation

ULM UNIVERSITY HAS GAINED A REPUTATION AS A THINK TANK AND CATALYST FOR ENVIRONMENTAL AND TECHNOLOGICAL TRANSFORMATION. WORKING WITH PARTNERS FROM SCIENCE AND INDUSTRY, IT'S SETTING NEW STANDARDS IN ENERGY AND QUANTUM RESEARCH. | Author: Veronika Renkes

While others talk about sustainability, researchers at Ulm University are actually walking the talk. One example involves Post Lithium Storage (POLiS), Germany's only Cluster of Excellence for Battery Research. The joint project, launched in 2018, includes Ulm University, the Ulm-based Center for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW), Karlsruhe Institute of Technology and the University of Giessen. In the current competition promoted by the German Federal Government and the Länder, POLiS has again proved successful, receiving funding for a further seven years. Professor Michael Weber, President of Ulm University, is more than proud of this result: "POLiS II clearly shows that Ulm is and remains the centre for German battery research, which ranks right up there with international pioneers. Working with our partners, we will continue to improve this position in the coming years, expanding our highly-specialised research from basic understanding of electrochemical processes to application-focused development of sustainable battery systems."

Ready for the energy transition

POLiS is the internationally visible flagship of the Green Energy Campus Ulm, based on close collaboration between Ulm University, the Helmholtz Institute Ulm, the ZSW, Ulm University of Applied Sciences and regional industry. Their common goal is to develop high-performance, safe and sustainable storage systems to foster the energy transition and promote mobility for the future. The ZSW Research Factory for Hydrogen and Fuel Cells (HyFaB) is a globally unique model factory. It offers stakeholders from the commercial vehicle, automotive and fuel cell supply industries and the machine and plant engineering sector a platform for joint research and development projects. "The Science City Ulm has the biggest energy research centre in existence. All of the big fuel cell companies in Germany have long been both cooperation partners and customers of ZSW. Ulm has developed a unique environment for energy research that takes in the entire value chain," says Professor Markus Hölzle, member of the ZSW Managing Board and Head of the Electrochemical Energy Technologies division in Ulm.



An incubator for the key technologies of tomorrow

Ulm also ranks among the pioneers in the quantum research arena. For example, in its 100 Quantum Locations across Germany Initiative, the German Physical Society (DPG) named Ulm as a quantum research incubator. This is due to the close collaboration between science and non-university institutions, businesses and start-ups in conjunction with the local community in Ulm. "Our quantum ecosystem has vast potential," says Professor Joachim Ankerhold, Vice President for Research at Ulm University and Academic Speaker of the Baden-Württemberg-funded Quantum Technology Initiative, also known as Quantum BW. "It sparks interest in physics and hopefully provides young people with attractive prospects for the future."

This quantum ecosystem also includes the Centre for Integrated Quantum Science and Technology, which was jointly founded by Ulm University and the University of Stuttgart together with the Max Planck Institute for Solid State Research; another is the Centre of Quantum Bioscience. Added to these come the Institute of Quantum Technologies and the Quantum Computing Initiative, both run by the German Aerospace Centre (DLR). This gives stakeholders from research, businesses and start-ups access to high-performance infrastructures and expertise, enabling them to develop products, services and applications right up to market maturity. "In this way, the DLR supports Germany's journey to becoming an international pioneer in the future market of quantum computing," says Professor Anke Kaysser-Pyzalla, Chair of the DLR Executive Board, stressing Ulm's role as a research hub.

Enabling transfer, promoting start-ups

MAKING RESEARCH FINDINGS AND TECHNOLOGIES ACCESSIBLE AND READY FOR APPLICATION ARE KEY OBJECTIVES FOR ULM UNIVERSITY. AND TO ENSURE THAT TRANSFER SUCCEEDS, IT COLLABORATES CLOSELY WITH COMPANIES – OFTEN IN CONJUNCTION WITH LOCAL SCIENTIFIC INSTITUTES IN ULM. THE UNIVERSITY ALSO SUPPORTS SCIENTISTS WANTING TO LAUNCH THEIR OWN START-UP BASED ON THEIR RESEARCH.

| Author: Veronika Renkes

Startup Arena: Where future, creativity and differing perspectives align.

As a citizen-centred university, Ulm University is especially closely linked with development in the surrounding region. It sees the transfer of knowledge and technology as a form of vibrant, diverse exchange with the local community – via research collaborations, scientific advice, promotion of start-ups and in dialogue with the people of Ulm. At the end of the day, next to research and teaching, knowledge transfer is one of the most important tasks a university performs.

Ulm University Entrepreneurs Campus

Interdisciplinary and intersectoral collaboration and transfer do not in themselves guarantee success. They must be facilitated and consolidated using the right structures and approaches. One fitting example is the Entrepreneurs Campus, which Ulm University opened in May 2022 as a central institution at the interface between research, transfer and innovation.

Birgit Stelzer, Managing Director of the Entrepreneurs Campus, explains the underlying aspiration: "We wanted a strong player in Ulm and the surrounding region, one who could represent entrepreneurship from within the university itself and serve as a reliable, independent partner for joint activities and projects." And that has come about, she adds: "The Entrepreneurs Campus has become a central platform for research-related innovation and technology-driven start-up projects in Ulm. Without it we'd have no coordinated point of contact where research ideas are developed in a structured way, focusing on application and business start-ups. We accompany that process with a sound understanding of the needs of research-based teams, customised training and strong network-based connections. Especially in the deep-tech area, this combination is vital to ensure knowledge turns into into action."

The Entrepreneurs Campus offers doctoral students, postdocs and experienced scientists a broad training and support programme where they learn how to transform their research findings and highly innovative technologies into marketable solutions and even use them to launch their own businesses. The programme takes in the entire start-up process, from the initial idea to launching the spin-off, and comprises training (entrepreneurship education), start-up accompaniment (coaching, specialist advice, assistance with funding applications, fund raising), events (with businesses and investors) – both online and face-to-face (founders' lunch, community meetings, meetups). The Entrepreneurs Campus team also oversees intellectual property management.

In everything they do, the team is driven by a crystal clear vision, says Stelzer: "We want to train not just technology experts, but innovative minds who play an active role in designing our future. And what's especially important is linking technological expertise with broader social impact. That's how we create spaces where research can give rise to entrepreneurial projects in an interdisciplinary and practice-oriented way."

Right now, the database lists sixty-six active start-ups with links to Ulm University. Nine of them are active in the technology-intensive field of deep-tech, which includes medical technology, artificial intelligence and material science – all key sectors in securing the future of Ulm. Four start-ups are officially listed as university-launched spin-offs. The teams average around eight members. Looking ahead, Stelzer is confident: "The university spin-offs help to create new jobs, making Ulm a modern and attractive place to work."

NVision Imaging Technologies GmbH

One fitting example of a successful spin-off is NVision, which is active in medical imagery in the field of quantum physics. It was founded as a start-up back in 2015 by the then Ulm-based quantum physicists Professors Martin Plenio and Fedor Jelezko together with Professor Alex Retzker from the Hebrew University of Jerusalem and Dr. Ilai Schwartz from Ulm University. The deep-tech company has translated basic research knowledge from quantum physics for use in medical applications – to the future benefit of countless numbers of people.

NVision: The NVision start-up has been located in Science Park III since 2023. It occupies some 1,000 square metres and has a workforce of 70 employees.

Using their new technology, normal magnetic resonance imaging (MRI) equipment can be used to visualise metabolic processes in real time without the need for complex and costly retrofitting. Both the course of cancer disease as well as the success of cancer treatments can be better monitored and assessed. This is because cancer cells often divide far more frequently than most healthy cells, needing significantly more sugar and other nutrients to do so. The research conducted by the NVision team enables the increased use of energy to be visualised using MRI. Neurology and cardiology are further promising fields of application.

"Back then, we conducted research on developing a quantum computer based on nuclear spins which are chemically bound to a diamond surface. To achieve a certain baseline condition for the calculation, we polarised the nuclear spins. We then applied this process to liquids and when the polarisation effect was used to strengthen the signals for MRI imaging, the idea for NVision was born," says Martin Plenio, Director of Ulm University Institute for Theoretical Physics. After a ten-year development phase, the technology was mature: At the end of January 2025, NVision put its Polaris cancer diagnostics device on the market. This should make it possible to speed up cancer diagnosis and decide if a treatment is effective just a short time after it starts.

benchANT GmbH

Deep-tech start-up benchANT can be likened to a product testing organisation for consumers in the cloud database world. It looks at the different cloud-based data storage systems and helps companies in planning data-intense applications. With its fully-automated benchmarking platform, it can compare different suppliers and make quantitative assessments regarding their performance and costs. "We help companies to find the best cloud-based data storage solutions for them. Rather than them buying-in costly IT expertise or running the risk of obtaining incomplete or false information when conducting their own research online, we offer them data-based decision making aids," says Dr. Daniel Seybold, one of the three benchANT founders.

benchANT was founded in 2022 as a Ulm University spin-off and is based on the long-standing research activities of computer scientists Dr. Daniel Seybold and Dr. Jörg Domaschka. They discovered a need for quantitative decision-making consultancy services for consumers of public cloud and database management systems. The founding team was completed by the Ulm-based economic physicist Jan Ocker, an e-commerce specialist in the field of IT project management and IT process optimisation.

For their Benchmarking as a Service (BaaS), the original project name, the founders received funding to the tune of €950,000 via the EXIST Research Transfer programme at the end of 2022. Under the programme, the German Ministry for Economic Affairs promotes research-based start-up projects which involve complex, high-risk development research. For Daniel Seybold and his co-founders, there's no doubt: "Taking the step from research into self-employment has paid off. We can implement our own ideas despite the organisational challenges it brings."

Ulm University of Applied Sciences – Energy Park plus new campus

With its new campus building (2021) and Energy Park (2024) in the Science City Ulm, Ulm University of Applied Sciences (THU) demonstrated its strong commitment to solution-oriented research that tackles the challenges of the energy transition. Both projects stand testimony to the THU's strategic profile of sustainable energy systems and the energy industry. "Our research there aims to make using renewable energy flexible to ensure sustainable electricity supply," THU Rector Professor Volker Reuter explains.

The Energy Park is an integral part of that research. The system installed across the campus covers the full range of distributed energy systems: photovoltaics, battery storage, hydrogen and supply to direct takers, such as local electricity grids. The new campus building is part of that system: built to Germany's "Efficiency House Plus" standard, it generates more electricity than it uses, is fully integrated into THU's research activities and supplies the data the researchers need to conduct them. Researchers at THU look at how energy can be generated, stored and distributed easily in a resource-saving way, completely independent of weather conditions and grid capacity. They investigate the interplay between the various methods of generating, storing and distributing renewable energy. The Energy Park puts this to the test by using those methods in everyday THU operations. "The Energy Park and the new campus building show how solutions for renewable energy generation can work not just in the laboratory, but in actual application," the THU Rector continues. "And we're especially proud that as a university of applied sciences, the THU is on site in the Science City, thereby complementing the other university programmes by providing teaching and research of a more technical, practice-related nature." The THU also plays an important role in supplying the local labour market – of its annual 700 to 800 graduates, around 500 newly-qualified engineers start their careers in the region every year.

Boehringer Ingelheim Ulm University BioCenter

The Boehringer Ingelheim Ulm University BioCenter commenced its third project cycle as "BIU 3.0" at the start of 2025. This saw Ulm University and the pharmaceuticals company Boehringer Ingelheim continuing the public-private partnership they entered into in 2011 through to 2030. Their research cooperation activities focus on neurodegenerative and cardiometabolic disease, including pulmonary (lung) disease. The aim is to transfer new findings from basic biomedical research into new approaches for diagnostics and treatments, thereby speeding up both.

At the BIU BioCenter, researchers from Ulm University and Boehringer Ingelheim conduct joint research into cardiovascular and metabolic disease, neuropsychiatric disorders and lung disease. One of the research teams has used artificial intelligence algorithms to detect patterns in complex, multidimensional neurophysiological data. Those patterns show how pharmacological substances can affect both neuronal activity and communication between the different parts of the brain. And in pulmonology, BIU researchers have succeeded in developing powerful cell models that can be used to decipher new mechanisms that lead to the development and progression of pulmonary fibrosis. As part of that work, they were also able to identify potential approaches for treatment. "The BIU BioCenter brings our complementary strengths together across the region. On the one hand, we have basic research and access to patients via the university and the hospital. On the other, we have our ability to research and develop novel treatment approaches in an efficient and effective way. We want to continue combining our strengths and benefit patients in the future. This is also why we are extending our successful cooperation in the form of BIU 3.0," stresses Professor Pamela Fischer-Posovszky, BIU-BioCenter Spokesperson, who conducts research at Ulm University Hospital into metabolism and experimental endocrinology in paediatrics and adolescent medicine.

SERVICE STRUCTURES

Artificial Intelligence Campus Ulm (KICU)

Purpose: Promote regional AI community and innovation, provide co-working spaces, event spaces and open spaces, foster collaboration between different stakeholders as well as access to new technologies, pooling of resources

Target groups: Universities of applied sciences, start-ups, companies, freelancers

Service portfolio: Provide co-working spaces with modern infrastructure, customised office solutions for AI projects and secure working, meeting rooms and workshops, highspeed internet with personalised security solutions, small kitchen/breakroom and outdoor terrace

Website: https://www.kicu-ulm.de (German only)

Transfer Centre for Digitalisation, Analytics & Data Science Ulm (DASU)

Purpose: To make digitalisation, data engineering, machine learning and artificial intelligence available for use; central point of contact for SMEs regarding digitalisation and data analysis

Target groups: Small and medium-sized enterprises (SMEs, all sectors)

Service portfolio: Needs-based, customised solutions in the fields of computer science, mathematics, medicine, economics and engineering science, numerous other disciplines such as human factors, human-machine interaction, (digital) law and industrial psychology, research, continuing education and transfer programmes, analysis and solution programmes based on companies' specific needs, funding acquisition

Website: https://www.dasu.digital/ (German only)

Scientific Computer Centre Ulm (UZWR)

Purpose: To support regional SMEs with computer-aided methodologies for applied mathematics in product development and improvement

Target groups: Small and medium-sized enterprises (SMEs)

Service portfolio: Calculations of all kinds, numeric simulations and optimisations, stability analyses, stress analyses and component optimisation, vibration analyses and simulations, flow simulations, multibody dynamics, analyses and simulations, numeric biomechanics – bone healing, musculoskeletal systems, bone implant composite, consultation and further training

Website: https://www.uni-ulm.de/en/einrichtungen/uzwr/

Ulm University of Applied Sciences: Merging theory with practice in the Science City

THU research tackles the challenges faced now and in the future. Its researchers are active regionally, nationally and at EU level in the fields of **Technology in Health and Medicine, Engineering and Modern Mobility, Digital Technologies and AI, and Sustainable Energy Systems and Energy Management**. Through cooperation with partners from industry and science, the main focus is always on practical application.

The THU promotes **young researchers**. Practical relevance is of key importance – even in the undergraduate programme. Master's programmes enable academic specialism and ambitious young researchers can achieve a doctorate degree at the THU, either in cooperation with a university or with the Association for Doctoral Studies at the Universities of Applied Sciences Baden-Württemberg.

The THU trains the **specialists of tomorrow**. Study programmes in Engineering and Modern Mobility, Media and Design, and Industry and Production prepare students for jobs in future-focused professions. Practical study components, practical semesters and final theses in cooperation with well-known companies in the region enable optimal **combination of theory and application**.

The THU puts research ideas into practice, such as in start-ups. In innovative teaching events, students train their entrepreneurial thinking and doing. The THU Startup Center supports potential founders on their path to self-employment, providing them with advice, further training and infrastructure such as laboratories, workshops and startup space.

THU
Technische Hochschule Ulm
University of Applied Sciences

Job creation driver and talent magnet

THE STRATEGY OF COMBINING SCIENCE AND INDUSTRY TO CREATE NEW JOBS HAS CERTAINLY PAID OFF IN ULM. IT SET A JOB CREATION DRIVER IN MOTION THAT SECURES EMPLOYMENT AND PROSPERITY IN THE REGION – AND ATTRACTS TALENTS FROM GERMANY AND ABROAD.

| Author: Tina Bauer

With three state higher education institutions and an increasing number of non-university research institutes between them, the cities of Ulm and Neu-Ulm offer a wide range of opportunities for top-notch training and research. This presents young people with ideal prospects for the future, while also generating innovation and economic success. Over the past 26 years, hundreds of full-time jobs have been created in the start-ups launched from Ulm University alone.

Well-trained and well-prepared: In Ulm, young researchers benefit from a research-based and application-focused education.

Research-based education

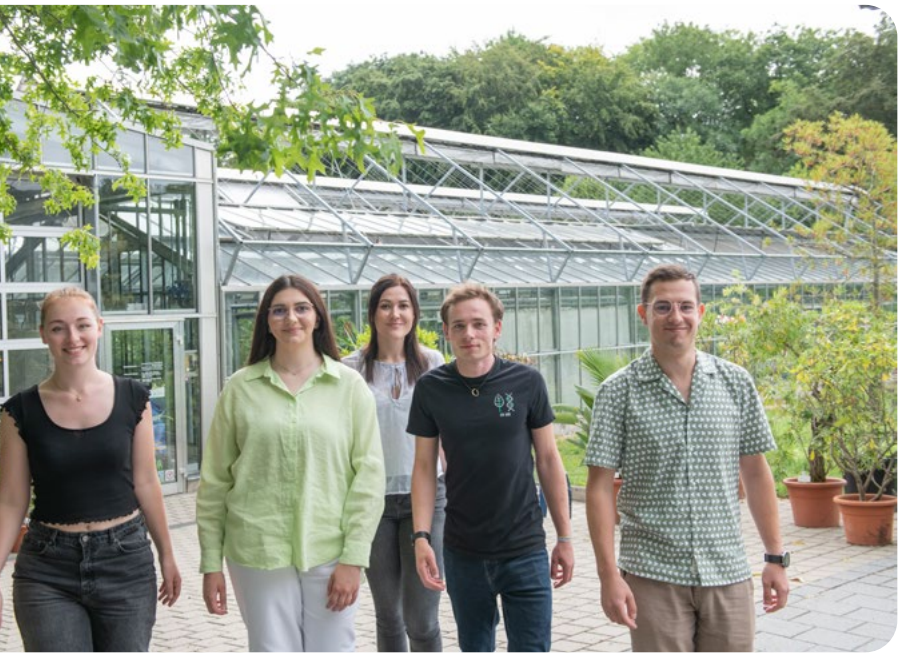
"Our students are at the core of everything Ulm University stands for: an excellent, research-based education, personalised support in a friendly, relaxed atmosphere and excellent career prospects following graduation. We take a targeted approach to preparing our students for the challenges of a rapidly changing work environment – with modern subject content, wide-ranging practical components and interdisciplinary skills. They especially benefit from the unique environment that is Science City Ulm. This is the place where the university, research institutes, hospitals, start-ups and internationally agile companies are closely connected. That close collaboration creates a vibrant innovation ecosystem that gives our students fascinating insights and useful contacts during their studies – not to mention excellent job opportunities once they receive their degrees. Ulm University is a breeding ground for young talents and, in conjunction with the Science City, a job generator for the region. Our graduates are urgently needed – as researchers, specialists and co-creators of the future. Many of them stay on in the region after their studies, highlighting the fact that those who study at Ulm University leave not just well-trained and well-prepared, but also greatly in demand."

PROFESSOR OLGA POLLATOS, Vice President for Education at Ulm University

Attractive career opportunities for young researchers

"Our teaching and research are effective, as our young researchers impressively demonstrate. With commitment and vision, we educate, support, promote and accompany them in their research-related study programmes. That way, we help to sustainably strengthen, promote and further develop science, research, innovation, industry and society in Ulm and the surrounding region. Once they have their degrees, we offer our graduates development opportunities as doctoral students or postdocs. Our Graduate and Professional Training Center (ProTrainU) provides young researchers with interdisciplinary training, paving the way to their future careers in science and industry. The extensive Science City Ulm ecosystem also offers attractive opportunities, with the university setting the pace, along with several non-university research institutions, an active start-up scene and industrial partners also on site. Those wanting to implement their own ideas and pursue research to find technological solutions in the business world can receive expert advice and practical support from our Entrepreneurs Campus. Those already in jobs can engage in continuing education at our School of Advanced Professional Studies, with flexible modules that are easily reconciled with a full-time career. This means that those wanting to do so can stay informed and up to date."

PROFESSOR DIETER RAUTENBACH, Vice President for Career at Ulm University



Attractive career prospects: The companies based in Ulm offer young researchers diverse career development opportunities.

Top-class education for healthcare specialists

"The Science City Ulm is shaping the future today. Here, healthcare research and industry go hand in hand. On the medical campus, Ulm University Hospital considers itself an active player in this innovation network. Working with our partners, we pursue the goal of ensuring top-class medical care for the people of Ulm and the surrounding region. Our Academy for Healthcare Professions and the various continuing education programmes – such as those offered at the University and Rehabilitation Hospitals Ulm (RKU) – provide a robust platform on which to train tomorrow's specialists. We are working on solutions that will be needed far into the future – in trauma research in cooperation with the Bundeswehr Krankenhaus Ulm, in medical computing where vast quantities of data are used to develop new approaches for diagnosis and treatments, and in clinical research where we translate scientific findings directly into new treatment procedures. With our industry partners, we are continuously developing and improving the processes involved in patient care. This interdisciplinary exchange enables a constant stream of innovations that reach the people who need them. This is what makes Ulm University Hospital and the Science City a real driving force in medical, academic and societal terms."

PROFESSOR UDO X. KAISERS,
Chief Medical Director,
Ulm University Hospital

Highly trained and specialised staff

"When it comes to developing innovations, a good science and industry network is vital. Digitalisation, artificial intelligence and Industry 4.0 require companies to continuously develop in line with science. In addition, managing the transformation of our operations in the metalworking and electronics industry is a huge task for which we must rely on innovative solutions. These conflicting demands benefit both science and industry alike. For companies, well-trained and in some cases highly-specialised employees are hugely important – this is where close ties with the Science City help ensure that the knowledge being taught there is in keeping with industry's actual needs. The university also attracts students from abroad, bringing additional specialist potential to the region. Fruitful collaboration between science and industry increases both the success and the attractiveness of the region, in turn making it easier to recruit specialist staff."

GÖTZ A. MAIER,
Managing Director,
Südwestmetall Employers' Association

Finding solutions to manage demographic change and digitalisation

"The Science Park – otherwise known as the Science City on the Oberer Eselsberg – is undoubtedly a great success story in Ulm and is often described as a driver for job creation. An unprecedented decline in the industrial workforce back in the 1980s sparked the need for and the beginnings of intense collaboration between the university, the university of applied sciences, the university hospital and Ulm city council – with the aim of attracting research institutes, numerous companies and start-ups, as well as global business groups.

Even today, joining forces in that way is hugely important in securing jobs and prosperity for the region. Now more than ever, we must focus on the challenges that lie ahead – such as demographic change (ageing workforces and more women in the workforce), societal transformation, increasing cultural diversity and ongoing digitalisation in the world of work. These are also the challenges faced by employee associations and trade unions concerning quality working conditions, a respectful working environment, fair pay, social security and healthy work-life balance.

The only constant in life is change – it seems the wise words attributed to the ancient Greek philosopher Heraclitus are more relevant than ever before."

MARIA WINKLER, Managing Director, ver.di Ulm-Oberschwaben district

Science City Ulm is a model for success because ...

... it was based on a crystal clear vision from the outset.

... bold decisionmakers placed their trust in science.

... the alliance between science, industry and local government has paid off.

... right from the beginning, Ulm University saw its role as a pacemaker at the core of that huge project, systematically steering, managing and driving its development along the way.

... it can rely on the people of Ulm, who identify with the project, supporting it with enthusiasm and elan.

... it continues to develop dynamically, building on the concept of perpetual self-renewal.