

Visionaries for the topics of the future. Strategic foundations and goals



Intelligent systems for a sustainable society

Vision



on quality and holism.

The University of Stuttgart implements innovative concepts in research and teaching in order to provide knowledge and strategies for a meaningful and sustainable development. It focuses on basic research that is both knowledge oriented as well as application related and is actively part of regional, national and international research networks.



The Stuttgart Way

The University of Stuttgart is one of the leading technically oriented universities in Germany with global significance. Located centrally in an economically strong region with vast cultural integration, the University sees itself as a hub of university-based, extramural and industrial research. Furthermore, it takes a role as a guarantor of research-based teaching, focused

The University is dedicated to researching and strengthening the interfaces between technology, society and culture in an interdisciplinary manner, defined as the Stuttgart Way. This means integration of engineering, natural sciences, humanities and social sciences based on the fundamentals of cutting-edge research at a disciplinary level.

The University of Stuttgart is committed to the principle of unity between research and teach ing. Students acquire knowledge, expertise and the power of judgement, in accord with the quidelines of scientific research and awareness. The University fosters fascination for the sciences, supporting its students and junior researchers at all stages of their careers. It promotes independent thinking and provides an environment for responsible action. In doing so, the University educates individuals into exceptional experts who think integratively and globally and act responsibly in sciences, economy and society.

Founded in 1829, at the beginning of the Age of Industrialization, the University of Stuttgart continues to prepare the way for innovation within an economically and scientifically powerful region and contributes to the economic success and prosperity of our society. This process combines with the requirements of a social and cultural change, which allows an early and extensive input of social interests in research and design, as well as teaching and further education.

As an employer, the University provides support for all of its employees and enables individuals to reach their full potential. The University strives for a healthy work-life-balance as well as equality and diversity.

It is committed to a leadership style of cooperation and esteem and to dealing with one another fairly - independent of status, age, origin or gender. In its decisions and administrative procedures, the University aims for greatest possible transparency and promotes lovalty to its alumni, partners and sponsors.

The University of Stuttgart stands for openmindedness, individuality and community spirit. It brings together students that are eager to learn, highly motivated employees, outstanding teachers, excellent researchers as well as visionary thinkers and inventors. By means of its culture of integration, the university creates and conveys knowledge for shaping the future of our society.



Six strategic goals to show us the way.

Our strategic goals derive from our vision; they are long term and of a fundamental nature. They span the overarching strategic framework and serve to orient our operational objectives and the measures that will help us reach them. We have defined six strategic goals.







The University of Stuttgart opens opportunities for the cooperation of complementary disciplines in a unique manner, enabling them to raise new questions and jointly developing answers with the Stuttgart Way.

The University strengthens the networking of diverse thematic and methodological approaches to knowledge in research and teaching through the integration of engineering, natural sciences, humanities and social sciences.

The University of Stuttgart is a research university with a world-wide reputation at the pinnacle scientific and technological progress.

The University achieves this position through its strength in interdisciplinary research and disciplinary networking as well as its cooperation with strong regional, national and international partners. It is committed to gaining and promoting exceptional individuals at all stages of an academic career.

The University of Stuttgart appeals to talented and diligent students, inspiring them for sciences from day one through research-based teaching and learning.

The University shapes the conditions for degree programs that are methodologically of high value. These are holistic, designed to lead to a successful degree and a comprehensive education of personality. Through its wide range of attractive offers the University creates a life-long affiliation with its alumning The University of Stuttgart is a reliable and innovative partner with a world-wide reputation for the transfer of knowledge and technology in business, science and the community.

The University relies on and strengthens the region as a place of social reflection, paving the way for innovation through excellent researchers and visionary inventors linked with local tradition.



The University of Stuttgart invites creative and motivated individuals at all stages of their careers and is a reliable and attractive employer.

The University strives for equal opportunities, diversity and the balance of work and private life. It promotes enthusiasm and motivation in its employees through a leadership culture full of respect, providing attractive career opportunities for further education and personal development.



The University of Stuttgart promotes divergent thinking through its international orientation, attracting students and academics worldwide and educating graduates that operate responsibly in a variety of contexts both at home and abroad.

The University anchors international and intercultural perspectives in its issues, methods, content, programs and working practices, whilst cooperating with international partners.



Goals

From strategy to implementation

The operational goals derive from the six overarching strategic goals. These are clearly defined, can be described in concrete terms with measurable parameters, and have a motivating effect on the university as a whole. They are divided into nine areas, which correspond to the traditional competence areas of the university:

- Research and junior academic staff
- Teaching and continuing education
- Transfer of knowledge and technology
- Information technology
- Internationalization
- Services and administration
- Human resources and diversity
- Campus development
- Governance, management and communication

Research and junior academic staff

Outstanding results are only produced in a competent, competitive and creative environment. To cultivate and strengthen this environment, the university recruits and promotes excellent people at all stages in their career, and supports junior academic staff in particular in a whole variety of ways. It offers them outstanding working conditions and freedom in which to carry out their research. It adopts new ways of thinking, which emerge thanks to our diversity and international focus.

able **cooperation**.

The interdisciplinary research profile of the University of Stuttgart is a particular asset for all scientists working here. We experience whole new dimensions to guestions and findings as part of our everyday scientific collaboration between specialist disciplines.

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The university has its **strengths in research**, whose quality compares favorably with the best in Germany and around the world. It feels obliged to deliver top performances, both in terms of basic and applied research.

Alongside working on a disciplinary basis, linking methods and themes from engineering and natural sciences through to the humanities and social sciences is essential for excellent research. Using the Stuttgart way of integrated interdisciplinary perspectives, we ask overarching questions together and jointly develop new answers. Cooperation with strong regional, national and international partners is equally important. The university develops the necessary infrastructure for valuable and sustain-

Our research is based on the recommendations of the German Research Foundation for **good scientific practice** as a matter of course, and the results are published in recognized and peer-reviewed specialist media. The university is a place for social discourse, and it uses the results of its research to drive economic and social **innovations** forward. Through this, it contributes towards society's capacity for self-reflection, the competitiveness of the economy, and affluence in general.

Goals

- Increase our research performance and generate international success
- Promote and expand basic research
- Strengthen cooperation in research and an interdisciplinary approach
- Create outstanding working conditions in order to recruit excellent scientists
- Recruit, train and support the outstanding researchers of the future
- Expand research infrastructure and e-science services

Goals

- Recruit and promote outstanding students
- Further increase the quality of teaching
- Strengthen interdisciplinary work as part of degree programs
- Develop a future-oriented and interdisciplinary teacher training program
- Make teaching more international
- Improve and develop opportunities for further training



Teaching and continuing education 1

The University of Stuttgart offers more than 150 bachelor and master programs. It uses new information services to help prospective students find which subject suits for them, and recruits motivated students through targeted **advertising and consulting**. The university supports and encourages students both before and during their studies, and keeps them involved in university life even after they graduate. It meets the students' various circumstances and requirements **flexibly and individually**.

In order to give students the knowledge they need to shape the future of society responsibly, teachers use **modern teaching methods** which are specifically tailored to the target group and provide a strong link to interdisciplinary research and practice. The **Stuttgart evaluation model** helps continuously improve the quality of teaching.

The university is committed to the principles of **diversity** and equal opportunities. It promotes equality between men and women, and works towards the inclusion of disabled and chronically ill students and the integration of refugees. It is open-minded, and is consolidating its international orientation by, among other things, expanding its selection of courses taught in English, making it easier for students to experience life abroad, and attracting talented students from overseas.

In order to further develop our **teacher training** to meet the challenges of the future, the university is expanding the Professional School of Education Stuttgart-Ludwigsburg. It also offers more opportunities for **further development**, for instance in the "Master:Online Academy".

I come across professors during my studies who don't just do a great job teaching their subject, but who also get me enthusiastic through their commitment and passion about science. There's a wide range of electives on offer where you can go into more depth, and the support you get from doctorate students is very good.

Timm Jakob Master's student in Aerospace Engineering

Transfer of knowledge and technology

The University of Stuttgart exceeds the simple transfer of knowledge and technology which is mandated by the legal basis of higher education. It doesn't just promote the use of research findings in practice, it also uses its innovations to contribute towards ensuring **competitiveness**, the **capacity for selfreflection**, and the well-being of science, economy and society. It understands the transfer of knowledge and technology to be a **bi-directional exchange**. This means that suggestions for socially and economically relevant research questions are incorporated into science.

Its success is based on comprehensively taking all steps in the process into consideration, from knowledge creation in disciplinary basic research, interdisciplinary and applied research and development with partners, to applying the research in society and the economy. The knowledge and technology transfer is therefore based on the **Stuttgart way of interconnected disciplines**.

The university sees itself as a nationally and internationally well-connected and reliable partner for the transfer of knowledge and technology, and furthermore as a **founding partner and promoter** of start-ups. It gets students interested in becoming entrepreneurs. It is seen as an innovator, strengthens its brand, and makes access to university services easier through a central contact point. Naturally, the commitment to **good scientific practice** doesn't just apply to research, but also to developing innovations as part of the transfer of knowledge and technology.

Goals

- Maintain good scientific practice in the transfer of knowledge and technology
- Promote transfer projects which are socially and economically relevant
- Actively communicate achievements in research and innovation (university as a brand)
- Increase the internationalization of the knowledge and technology transfer
- Make easier access to transfer of knowledge and technology services
- Increase the use of intellectual property
- Educate students about and promote the benefits of entrepreneurialism

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We see it as our social duty to enable efficient and timely access to the services and results of our research university, and to actively promote their use. This makes the University of Stuttgart an innovative, reliable and internationally renowned partner for the transfer of knowledge and technology in science, as well as society and the economy.

Prof. Peter Middendorf Vice Rector for the Transfer of Knowledge and Technology

We want to support the processes in teaching, research and administration with Information technology as well as possible, and so prepare the university for the challenges of digitization. This calls for a modern information infrastructure, as well as sources of information being made widely available.

Vice Rector for Information Technology

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Information Technology

With its information technology systems, the University of Stuttgart creates the necessary infrastructure to enable top-class and efficient work in research, teaching and administration. This includes managing research data from collecting raw data to archiving, enabling creative digital environments for teaching and learning, and improving working processes in administration. The technology is **based on what is required**, and is reliable and safe – and also economical, transparent and flexible.

The emphasis here is on linking the information technology structures. Basic services, for example for data exchange and collaborative work, are provided centrally and can be used with a central account. A singular login process can be used to access as many offers as possible. By processing its research projects centrally, the university makes them easily visible to outsiders. It makes communication and collaboration between disciplines easier, for example through standardized digital environments. This way, it also involves external partners.

The **opportunities of digitization** are assessed jointly within the university and exploited strategically. Students and employees are fully involved in the different stages towards digitization and are given the appropriate training, they are made aware of safety aspects and given advice regarding technical issues. New trends – for example in the area of visualization, but also in e-learning and e-science - should be recognized at an early stage, and should also be implemented as far as possible.

Goals

- Create an efficient, needs-based and reliable basic Information Technology infrastructure
- Better connect decentral and central information technology systems
- Promote communication and cooperation across institutions using information technology tools
- Support research, teaching and administration with modern application and library systems
- Strengthen the information technology literacy of all students and staff
- Jointly assess and strategically use the opportunities brought about by digitization
- Ensure an appropriate level of information technology security over the long term

Goals

- Integrate internationalization at all management levels
- Expand international partnerships for teaching and research as well as increasingly for knowledge and technology transfer
- Increase international mobility (outgoing and incoming)
- Have an influence on society (social outreach)
- Expand the "welcoming culture" as well as the provision of support and advice

Internationalization

The University of Stuttgart sees itself as an **internationally leading research university** and a partner for wellrenowned universities, research institutions and companies abroad. It is strengthening its international profile and the "University of Stuttgart" brand further in order to develop new strategic partnerships – in teaching, research, and transfer of knowledge and technology. The internationalization strategy is incorporated into the university management and faculties and includes activities which already exist.

The international exchange is shaped by a **welcoming culture**. Academic achievements at other universities are recognized in a process which is transparent and standardized. The university looks after its overseas students and guests well. The university's welcoming culture has a positive influence on the cultural life of the city as well as on society.

English-language teaching provision and international master's programs are being expanded. Doctorate students go through a standardized applications process. Student mobility as well as the mobility of scientists at the University of Stuttgart should be encouraged, for example through the opportunity for double degree programs. Students shouldn't just become experts in their field of study, but should also be made into globally-thinking citizens who can operate in different cultures.

I really appreciate the richly diversified international atmosphere at the University of Stuttgart. Everybody here estimates the intercultural dialog and cooperation amongst students, professors, and university staff. Despite the fact that my home country Sudan is quite far away, I do feel somehow home on campus.

lawhed Bashar Master's student in Water Resources Engineering and Management

Services and administration

The administration at the University of Stuttgart is **serviceoriented** and will incorporate this into its mission statement. Its units **support science** by carrying out the tasks defined by the state higher education act, and furthermore by pursuing the goals set by the university. This means ensuring all procedures are done within the law, efficiently and transparently, and in so doing ensure decisions are taken more rationally, professionally and efficiently.

The university is continuously optimizing its administration processes, and to do this it uses tools such as **external evaluations** and questionnaires, as well as taking part in benchmark processes. The administration is expanding its capacity in key areas, and is avoiding any unnecessary interfaces through **lean management**. It increasingly focuses on **digital data collection and processing methods**.

The service offerings should be **easy for all employees to access**. The administration therefore showcases its services clearly on both the Internet and Intranet. It designates **competent spokespersons** for important questions and promotes dialog across the university.

Goals

- Make comprehensive service orientation a reality to support science
- Optimize and digitalize central processes in order to become more flexible and reactive
- Increase external evaluations
- Create working conditions to meet health and safety standards
- Make administration internationally more focused

It is a great motivator in my everyday work to keep recognizing new ways to potentially optimize services in administration processes and to contribute towards implementing them efficiently. This calls for creativity and an atmosphere of trust when dealing with people at the various interfaces.

Ömer Can Central Finance Management, responsible for the Budget division

There are still some barriers facing disabled people on the campus, though this is definitely outweighed by the level of support and respect that I get from staff and fellow students. I feel very happy at the University of Stuttgart.

international partners.

Human resources and diversity

The University of Stuttgart employs creative and committed people at all stages in their careers, and is an attractive, flexible and reliable employer. It sees its staff as its greatest asset. Therefore, it is committed to equal opportunities, diversity and ensuring its employees have a good worklife-balance, as well as motivating them through an appreciative management culture and offering them a wide range of opportunities for further training and development.

The university recruits excellent professors by giving them the **freedom** to carry out research and opportunities to develop themselves. It promotes the next generation of scientists through a wide range of qualifications and counseling services.

The university's international focus also makes it an attractive place for students and scientists from all over the world. It incorporates intercultural perspectives into the issues it raises as well as in its methods. content, programs and working practices, and it cooperates with its

Diversity at the university is the norm and is part of everyday life. **Tolerance, fairness and respect** form the basis of cooperation in teaching and research. The university lays the foundations for creatively using the potential of all its employees.

Goals

- Create space for creativity and reward commitment more strongly
- Open up attractive opportunities for further training and development
- Optimize personnel marketing and staff selection, as well as supporting and developing careers more closely
- Improve the promotion of younger academic staff in both scientific and non-scientific fields
- Encourage equality of opportunity, diversity and work-life-balance
- Put international and intercultural perspectives at the heart of our working practices
- Improve internal knowledge and skills management

Campus development

An attractive, lively **campus with a good infrastructure** creates the foundations for outstanding performances in study, research, teaching and work, which puts the university on a solid footing and secures its future. It also strengthens the inclination to identify with the university that its members have. Therefore, the university is continuing the ongoing **renovation and modernization** work that is being carried out together with the state, and at the same time it is developing **new plots of land** to be able to build modern teaching and research centers.

The university places great value on **modern and functional workplaces**, and focuses on **sustainable concepts** for mobility and energy supply. Research isn't just carried out on the campus, the campus is also the object of research and innovation. **Lively communications rooms** on the campus create an important foundation for dialog between employees, students and guests. The members of the university play a part in designing their campus.

The Downtown and Vaihingen campuses are **integral parts of the city of Stuttgart**. The university works untiringly to make its campus into something that is visible and tangible for the people of Stuttgart.

Goals

- Create attractive buildings and modern workplaces
- Further develop infrastructure and make it more spatially flexible
- Implement sustainable concepts for mobility and electrical power supply
- Create lively university campuses and communications rooms
- Improve the orientation on the campus and the way it looks
- Make the university visible and tangible for the city and society in general
- Renovate and modernize buildings consistently as well as developing new plots of land

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In the Project Mobility Living Lab, the aim of low-emission mobility is set to be combined with the need of the university to expand the Vaihingen Campus. We want to make a contribution towards a new culture of mobility on campus by implementing sustainable mobility solutions for students, researchers and members of staff. This should develop the campus into an experimental space for new mobility, vehicle and drive solutions.

Prof. Markus Friedrich

Dean of Undergraduate and Graduate Studies Faculty 2 Construction- and Environmental Sciences

- Improve the capacity to act at all levels of governance
- Strengthen the appreciative management culture
- Encourage students and staff to identify more with the university
- Increase internal communication
- Develop external communication with stakeholders



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Efficient and agile management with digital systems and intensive communication at all levels: with these maxims of a participative management and working culture, we are aiming to successfully implementing our future strategy as per the Stuttgart way.

Prof. Wolfram Ressel, Rector at the University of Stuttgart Jan Gerken, Chancellor at the University of Stuttgart

Governance, management and communication

A management culture is firmly in place at the University of Stuttgart which ensures an optimum mixture between academic autonomy and strong management. This means that knowledge from all members of the university can be used effectively in making decisions which are then implemented quickly. The university strives for flexibility and the ability to react in all central processes. It sees itself as an agile organization, and increasingly calls upon teams created ad hoc to deal with specific challenges.

Digitizing processes is an important cornerstone in managing a university, because data-based information and monitoring systems help with efficient steering.

The university encourages its members to **identify with the organization as a whole**, and carries out a number of measures to promote a shared sense of identity. It values **transparency**, and creates a bond and a sense of trust through strong internal communication within the university. It makes its goals and its achievements understandable and clear to all stakeholders involved through its external communication. It also develops **new formats for dialog** between science and society. University of Stuttgart University Communications Keplerstr. 7 70174 Stuttgart hkom@uni-stuttgart.de

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