English version
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The KTH Vision
KTH is one of Europe's leading technical universities. Supreme quality in education, research and outreach, as well as a distinct identity, are formed by the best teachers, researchers and students. KTH is a custodian of the role of technology in society and takes responsibility for its impact: creating innovative solutions to global challenges.

KTH is a world leader in technical education. Education is characterised by individual-centred learning in innovative teaching environments. Emphasis is placed on the advanced and research education levels.

KTH is a world leader in technical research. Research is visionary and identifies new technical solutions for the enhancement of living conditions through sustained cooperation between technology and humans, in mutual exchange.

KTH is a visible international university which actively influences the development of society. Its campus areas are integral parts of the Stockholm urban fabric. These campus areas, both physical and virtual, are vibrant nodes of learning, research and innovation.

KTH is a dynamic, transformative and creative university driven forward by curiosity and purposeful determination with the aim of shaping a brighter tomorrow.

The external setting of KTH
Society changes through technical development and through new conditions such as growing environmental change and dwindling natural resources. Changes in mentality, however, may occur more rapidly than technical change. Young peoples' drive towards taking social responsibility appears in new forms. Enhanced quality of life implies increased competition for global resources, but also for talent and investments. Longevity creates new medical and technical challenges for health and medical care. Spending on education is increasing in all countries.

External demands and expectations of higher education and research are increasing decade by decade. Research is expected to be useful to society, both economically and socially. A university seeking wisdom cannot, however, only dwell on day-to-day issues especially in a situation when it is difficult to be sure what tomorrow's issues – and solutions – are going to be. A university must have freedom of action to meet the unexpected by swiftly shifting priorities to areas of increasing importance and above all by retaining the scope of its science subjects.

Education and research are among the most rapidly expanding sectors in society. The globalisation of higher education generates challenges for all universities. Competition does not come from other universities in Sweden, but from other universities all over the world. In rapidly-growing economies across the globe, university capacity is expanding at a breathtaking pace.

Information technology as an integral part of everyday life has altered conditions for university studies fundamentally by 2027. Competition is becoming global when courses, to an ever larger extent, are offered via cloud computing networks and when teaching materials are becoming omnipresent. e-education is a self-evident part of competitive bids for university studies. There is a special challenge in acquiring and maintaining a leading position in both ICT research and e-education.

The emerging and increasingly globalised service society places new claims on competence requirements for engineers, for example as concerns language skills, culture and social relations. Many future innovations will be service innovations, based on systems thinking. Instead of

demanding technical products, future consumers – individuals and firms – will look for holistic solutions. In the development of these solutions, humanities and social sciences will play an increasingly important role which will also be reflected in education and research at KTH.

Education at universities and other higher education institutions is an object of scrutiny for the media society. For youth, it is self-evident to assess universities according to the career potential they might offer. The academic landscape in 2027 will be characterised by cooperation, profiling and concentration for the optimised use of available resources. Alliances of different types will have been forged between Swedish universities in order to create maximum output from national grants for education and research. KTH will recruit a larger share of students at advanced level from other higher education institutions.

In 2027, individuals will study longer when young and it will be common to change occupations during the course of a career. Lifelong learning will be a reality. Reform of the school system in combination with societal needs will have led to increased interest in mathematics, technology and natural sciences among children and young people.

The fact that all the teachers in the early stages of the school system will have studied mathematics has, in 2027, begun to yield results in prior knowledge levels among students applying to KTH. It will be a major challenge for KTH to meet the demands of these new students with qualitatively competitive education.

Quality assurance of engineering education has become global. International quality branding schemes will have been introduced in which both scientific quality and professional relevance are assessed. KTH has supported other technical universities in the world in the establishment of such quality-oriented processes. This has substantially strengthened the international brand name of KTH and extended its networks.

The KTH identity

KTH works for a brighter tomorrow. KTH wishes to enhance society and identify smart solutions to the grand challenges of today, and of tomorrow. KTH works in the service of humankind for the society of tomorrow. One common denominator for all KTH efforts is a better society for individuals, enterprises and society at large. KTH attracts and develops talent at all educational levels.

The most important KTH resource is its faculty. It is of crucial importance to quality of education, research and external cooperation that the faculty possesses high levels of scientific competence and performs its work with great commitment. KTH promotes an active collegiate community culture as a means of creating a brighter tomorrow for KTH too.

People at KTH are driven by a passion to perform their work better in a dynamic environment of creative people. KTH is a place for those who seek inspiration to become creative and to innovate. The three corners of the knowledge triangle – education, research and innovation – are represented and implemented at KTH in a self-enforcing and integrated fashion.

KTH applies an open and inquisitive attitude with respect to what other institutions do and can contribute. KTH embraces an optimistic perspective and constitutes an arena for asserting the constructive role of science and education in the development of society. KTH undertakes a continuous, insightful analysis of long-term trends and developments in society.

The working environment of KTH is characterised by respect for, and confidence in, the individual. A positive attitude and an open and honest exchange of thought and ideas build the foundation of daily

operations. Intellectual variety, environmental responsibility, equal opportunity, collegiality, openness, versatility, quality, groundbreaking thinking and humanity are characteristics of KTH. They are values that the external world associates with KTH.

In the previously male-dominated areas of KTH more women are active thanks to, among other measures, strategic recruitment of professors and associate professors. These women have also become role models for younger female staff. Issues of gender and equal opportunity have an obvious role in development activities. It is a strength that among KTH faculty there are individuals with experience and earlier careers from many parts of the world. This variety of backgrounds will be used in the selection of those who hold management positions at different academic levels. In 2027 KTH is a bilingual university.

Careers at KTH
Students, teachers, researchers and administrative staff are fundamentally important to future success. The environment for education and research is geared towards attracting the most suited and motivated individuals, from Sweden as well as from the outside world, to come to and remain at KTH.

An academic career at KTH in 2027 will be attractive to both the most promising of young researchers and to the more established researchers, and to teachers at associate and full professor level. The proportion of international faculty will be substantial. The merit value of research and development work outside the academic system will have been strengthened. As the future faculty also includes individuals who have worked, and still work, in industry and government, KTH competence stock will be broadened and important contact areas opened up. Exchanges between KTH and relevant industrial sectors will occur regularly through adjunct professorships and other forms of limited-period positions.

The future faculty of KTH consists of coordinated and vibrant networks where the contact route between people working in different academic subject areas is short. Research groups will thus consist of staff with complementary experience and skills. KTH is managed by well-developed collegial leadership at all academic levels.

All younger staff members have access to a mentoring system and are provided with the contacts, and the information, they need to realise their career visions. The will also possess knowledge about the entire profile of the university which prepares them for new multi-disciplinary, and cross-disciplinary, initiatives. The solid reputation of Stockholm as a living environment helps to push KTH in the right direction. Flexible solutions to maximise the potential of combining work with family life, social networking and leisure activities are a trait associated with KTH in the future.

Education at KTH
In 2027 KTH is known to be innovative in learning in the fields of engineering and natural science. in order to stimulate pedagogical development and boost the status of education KTH will inspire, motivate and reward successful pedagogical work in all forms. The academic merit value of pedagogical skill will have increased. The opportunities opened up by e-learning technologies have been incorporated, and the virtual campus is as important as its physical equivalent. Innovation in education shows a distinct link to technological and social innovation.

In 2027 student-centred learning is at the heart of KTH education. The teacher/student ratio has increased and there are more opportunities for individualised learning. A mentor system is in place. Each student feels at home in, and part of, the KTH education system. All programmes at advanced level, and even some programmes at basic level, house an international learning environment. For

KTH, training a large number of international students it is a self-evident element. It is just as natural as the fact that all education programmes at KTH contain exchange study periods abroad.

In order to recruit the best-suited students, KTH will work with different forms of selection instruments. Among students, gaining entry to KTH educational programmes is regarded as a ticket to an exclusive education, which will inspire them to succeed in their studies. Basic level education is carried out in close contact with research perspectives, and is distinctly geared towards the advanced level. Educational programmes have broad entry points at basic level, and a wide variety of opportunities to specialise at advanced level. KTH also bears regional responsibility for the education of professional engineers. There are clear routes towards further study at the advanced level for those who have finished a three-year engineering degree programme at KTH.

At advanced level, broad programmes provide the opportunity to specialise towards all research areas at KTH. In order to offer this freedom of choice to the students, and to offer researchers the opportunity to disseminate their research, there is a large variety of individual course units at advanced level. The inflow of external students, both national and international, to the advanced level is largely thanks to the close connection between research and education, and because of the excellent networks that KTH has established with the labour market. There are also a large number of courses at advanced level for individuals already in their work careers. All education at advanced level is taught in English.

The number of research degrees at KTH has almost doubled thanks to a larger body of external research funding and a greater understanding in industry and government concerning the value of doctoral degrees. There is a large number of doctoral students who finance their studies through grants from industry and government due to these tighter patterns of cooperation.

In 2027, KTH possesses strong competence in the field of educational science. As a corollary to the right to offer teaching degrees there is the requirement to take responsibility for research and development within this field. There will be a lively research environment which will benefit both the education of teachers and other educational programs. The education of teachers at KTH is undertaken in close contact with the school system and KTH also plays an active role in the continuing education of teachers of technology subjects. Furthermore, KTH possesses a comparative advantage as compared of other education providers through its close contacts with relevant industrial sectors. Thus KTH has a key national role to play in the future education of teachers in the science and technology fields.

KTH graduates are driving forces in the development of technology and society. KTH education stimulates independent thinking, creativity and curiosity and applies critical examination of existing technological practices. Engineers and architects identify solutions which embody both innovation and enhancement with a clear social dimension, a distinct focus on sustainability and, for some, also an artistic dimension. Security and self-esteem in professional roles can only be guaranteed via a stable foundation of substantive engineering knowledge, accompanied by relevant contemporary professional skills.

Independence, the ability to be proactive and problem-solving skills are essential competencies which will be stressed in KTH education. Engineers and architects are also needed as managers in industry and government. In the future these professions will possess the necessary technical skills and abilities as well as the responsibility to transmit this knowledge as the concrete, material representations of visions of societal development.

Engineers and architects from KTH will continue to be of world class. Sweden will not primarily compete with narrow competencies in individual areas of specialisation. The Swedish engineering tradition prizes experience in tackling open problems, becoming involved in team work applications and identifying solutions to complex problems. KTH nurtures a culture characterised by solid knowledge in basic engineering areas, creativity, communication and ingenuity - valuable properties in modern international settings.

The future success of KTH is built by staff and students together. The work around education performed by the student union is an important factor for KTH in creating quality and attraction as a study environment. Student representatives are active custodians of the quality of education through responsive, continuous and strategic work at all levels. The activities of the student union form an important element of the social cohesion of the student body, the attractiveness of educational programmes and the vitality and creativity of campus environments.

Research at KTH

KTH is a world leader in technical research. This research is visionary and identifies new technical solutions for the enhancement of living conditions. This is achieved through sustained cooperation between technology and humans in mutual exchange. KTH is renowned for having taken the lead in addressing global challenges, enabled due to the scope of its engineering subject fields and through the university's superior contact networks. KTH is one of Europe’s leading research universities in environmental science and sustainable development.

KTH takes initiatives to groundbreaking research with full confidence. In the competition for research grants, the most successful university will be the one that maintains in-house research with a well-balanced subject range, a strong external network and well-developed strategies for research support. Fundraising will contribute to long-term financing, and international financing will have continued to expand. Together with an increase in the amount of basic governmental research funding, this creates capacity for internally-initiated free research.

One fundamental resource for KTH is its experimental infrastructure. In 2027, some of the largest research infrastructure projects in Sweden will have been completed, which demonstrates the necessity, in many branches of technical research, of joining forces around research infrastructure in an international arena. Thanks to these efforts, and other internal infrastructure projects, KTH researchers will have access to research facilities of leading edge, world-quality level.

KTH is a technical university housing internationally excellent research. Global challenges call for cooperation among researchers from different subject areas. All of these need not be represented at KTH, but multi-disciplinary cooperation will be promoted whenever relevant. Large-scale, cross-disciplinary research efforts will be necessary across the scope of KTH technical research areas.

Research at KTH is well-known for knowledge development which may lead to product and service innovation. A well-developed external contact network and a distinct support system at the service of the staff members who wish to commercialise their innovations, makes KTH the ideal match-making venue for academia and investors. This has contributed to the fact that a substantially larger share of KTH research financing now comes from industrial sources.

In 2027 KTH has become involved in alliances which may have developed into mergers with public research institutes in the geographical vicinity. Considerable synergies will be achieved through such developments which will create the opportunity to act jointly in relation to external financing bodies, and customers.

KTH will be regarded as an attractive partner in European and international research projects in 2027. The university will have established and consolidated strategic alliances with selected universities. In cooperation with other universities, KTH will conduct educational programmes in parts of the world which have been deemed to be of strategic importance. Through this cooperation in international structures for education and research, the innovation environments of KTH, and of the Stockholm region, will be integrated with other environments in Europe to the benefit of economic growth in the region and the country.

External cooperation of KTH

The standing and status of KTH has been strengthened through a conscientiously-developed agenda of communication and cooperation with small, medium-size and large companies, and with public sector actors at national, regional and municipal level. KTH has taken an active part in the enhancement of the Swedish school system through its strategic focus on teacher education, as well as through cooperation schemes at national and regional level aimed at increasing science and engineering competence among teachers at different school levels. This makes a considerable contribution to increased interest in the science and engineering fields among children and young people.

Incentives have been created for an increased exchange of staff both to KTH in the form of adjunct professors, industrial PhD students and guest professors, and from KTH in the form of researchers and PhD students located on site at KTH external partners; research institutes, government agencies, municipalities and county councils. Innovative ability is regarded as an essential, and measurable, learning outcome from KTH education programmes without compromising students' analytical skills.

Via increased authority over its own resources, KTH will be able to work with longer planning perspectives at the same time as it becomes able to act adaptively in view of short-term changes in its external environment. KTH will create and maintain both deep and broad alliances. These alliances will encompass faculty and infrastructure as well as common research and innovation projects. Target groups include external financing institutions and clients, particularly in Swedish industry and government.

The Stockholm Region is one of the most innovative regions in the world. KTH is not alone in taking responsibility for leading the region towards globally excellent education and research; strategic alliances have been forged. Cooperation has become especially pronounced with Stockholm University and the Karolinska Institutet concerning common efforts in education as well as research. In organisational terms this cooperation may have approached a formal institutional merger by 2027. Alliances and cooperation schemes will also have been created with other universities in the region, including the fine arts university colleges. There is also an option to develop new forms of cooperation with other education providers in the field of professionally-oriented engineering education.

For government agencies, municipalities and county councils, cooperation with KTH will entail greater opportunities to tackle the grand societal challenges constructively. Stockholm will have further strengthened its profile as a prominent university city. The global networks that KTH maintains with research institutions and international businesses serve as attractors for researchers and students who migrate to Stockholm. KTH's strong research environments in architecture and urban management substantially add to the physical development of the region. The vision of KTH in this context is that all students and guest researchers will be given a guarantee of a suitable living and working accommodation during their stay in the region.

It will be natural for companies to develop tomorrow's technology in cooperation with KTH. Students and KTH alumni will benefit from KTH's industrial and governmental networks when looking for work. In this development, KTH will be a strong partner for companies, small and large, seeking contacts with KTH in order to become a part of the educational, scientific and innovative culture in Stockholm and the Mälar Region.

KTH campus environments

All campus environments within KTH are characterised by contact between universities, research institutes and companies, and provide passion and inspiration for innovation. In order to attract the best, KTH will offer conditions that enable staff and students to live, work and study in an efficient and inspiring environment.

There are deliberate design elements of the technical university of the future within KTH campus environments. These environments are embodiments of bold, sustainable urban design. They reflect and support KTH creativity and excellence, shape cohesion and meaning and conveying pride in being a member of the KTH story. In addition, the KTH Vision is to lead in terms of full-scale development of ICT infrastructure for the academic area.

The KTH central campus is the nexus of activities and part and parcel of the connected science city Norra Djurgården – Albano – Hagastaden. The campus area on Valhallavägen is a city of science and education within the city - alive 24 hours a day all year round - with accommodation, shops and restaurants. The meeting of scientific disciplines – creative, technical, artistic – and between people from different cultures enriches campus life and adds to the vibrant environment. A number of new landmark buildings have been constructed for use by cross-cutting research centres.

KTH is active in other campus areas across the Stockholm Region. Some of these exhibit characteristic profiles in education, research and innovation. In Kista, KTH, together with the City of Stockholm and companies in the information and communication technology field, is the nexus of a dynamic centre for education, research and innovation. In Flemingsberg, KTH, together with Stockholm County Council, Karolinska Institutet and Södertörn University College, forms a lively and expansive education and research environment in the field of medical engineering and technology.