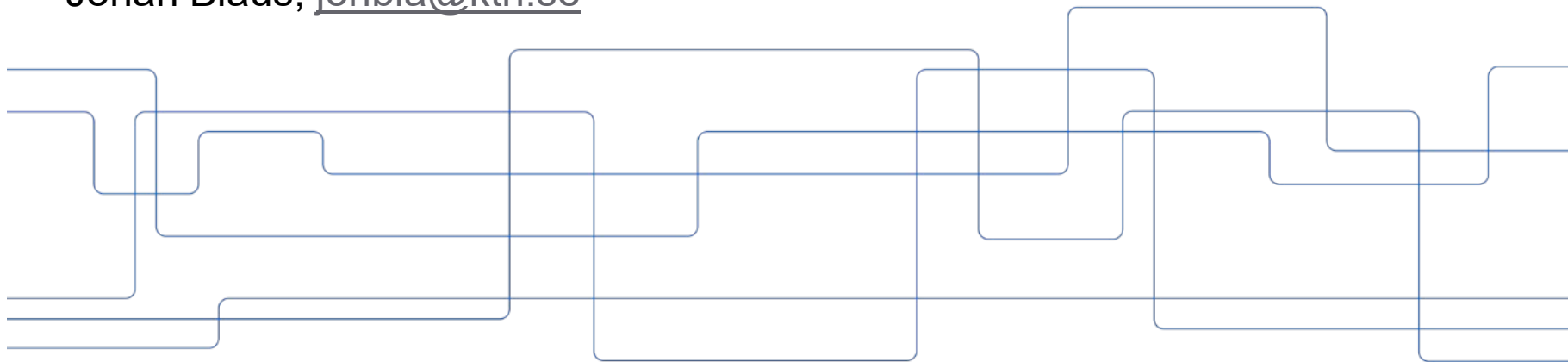




KTH Strategic Collaboration

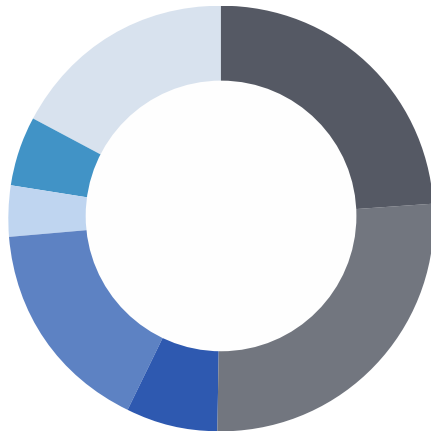
2023-08-23

Johan Blaus, johbla@kth.se



Sources of income 2021 (2020)

Total msek 5,408 (5,074)



Percentage distribution	2021	2020
Government grants for education first and second level studies	25,8	(24,0)
Government grants for research and doctoral studies	26,0	(26,4)
Research councils	6,6	(7,0)
Other government agencies	17,0	(16,4)
Strategic foundations	3,6	(3,8)
EU	5,0	(5,2)
Private/other	16,0	(17,2)



Five locations in and around Stockholm



KTH Kista



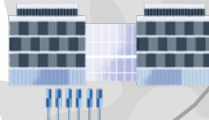
KTH Solna



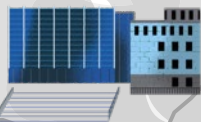
KTH Campus



KTH Flemingsberg



KTH Södertälje



2 km





KTH's schools and departments

Architecture and the Built Environment

- Architecture
- Civil and Architectural Engineering
- Real Estate and Construction Management
- Philosophy and History
- Sustainable development, environmental science and engineering
- Urban Planning and Environment

Electrical Engineering and Computer Science

- Computer Science
- Electrical Engineering
- Intelligent Systems
- Human Centered Technology

Industrial Engineering and Management

- Energy Technology
- Industrial Economics and Management
- Production Engineering
- Learning
- Machine Design
- Materials Science and Engineering
- Sustainable Production Development

Engineering Sciences in Chemistry, Biotechnology and Health

- Biomedical Engineering and Health Systems
- Protein Science
- Theoretical Chemistry and Biology
- Industrial Biotechnology
- Chemistry
- Chemical Engineering
- Fibre and Polymer Technology
- Engineering Pedagogics
- Gene Technology

Engineering Sciences

- Physics
- Mathematics
- Engineering Mechanics
- Applied physics



Films

https://play.kth.se/playlist/dedicated/0_m1yulr54/0_c7m7d4zs

- **Panel 1:**
 - [Department of Architecture - KTH Play](#)
 - [Department of Civil & Architectural Engineering - KTH Play](#)
 - [Department of Real Estate and Construction Management - KTH Play](#)
 - [Department of Philosophy and History - KTH Play](#)
 - [Department of Sustainable Development Environmental Science and Engineering - KTH Play](#)
 - [Department of Urban Planning and Environment - KTH Play](#)
- **Panel 2:**
 - [Department of Gene Technology - KTH Play](#)
 - [Department of Industrial Biotechnology - KTH Play](#)
 - [Department of Protein Science - KTH Play](#)
- **Panel 3:**
 - [Department of Chemistry - KTH Play](#)
 - [Department of Chemical Engineering - KTH Play](#)
 - [Department of Fibre and Polymer Technology - KTH Play](#)
 - [Department of Theoretical Chemistry and Biology - KTH Play](#)
 - [Department of Materials Science and Engineering - KTH Play](#)
- **Panel 4:**
 - [Department of Computer Science - KTH Play](#)
 - [Department of Human Centered Technology - KTH Play](#)
- **Panel 5:**
 - [Department of Intelligent Systems - KTH Play](#)
 - [Department of Biomedical Engineering and Health Systems - KTH Play](#)
- **Panel 6:**
 - [Department of Electrical Engineering - KTH Play](#)
 - [Department of Energy Technology - KTH Play](#)
- **Panel 7:**
 - [Department of Industrial Economics and Management - KTH Play](#)
 - [Department of Learning - KTH Play](#)
 - [Department of Machine Design - KTH Play](#)
 - [Department of Production Engineering - KTH Play](#)
 - [Department of Sustainable Production Development - KTH Play](#)
- **Panel 8:**
 - [Department of Mathematics - KTH Play](#)
 - [Department of Engineering Mechanics - KTH Play](#)
- **Panel 9:**
 - [Department of Physics - KTH Play](#)
 - [Department of Applied Physics - KTH Play](#)



International ranking



1

in the Nordic region

10

in EU

73

in the world

2024



23

in Automation & Control

32

in Mathematics

32

in Telecommunication Engineering

2022



42

THE Impact rankings

53

Engineering and technology

155

in the world

2022



Strategic partnerships

Global companies



Public sector

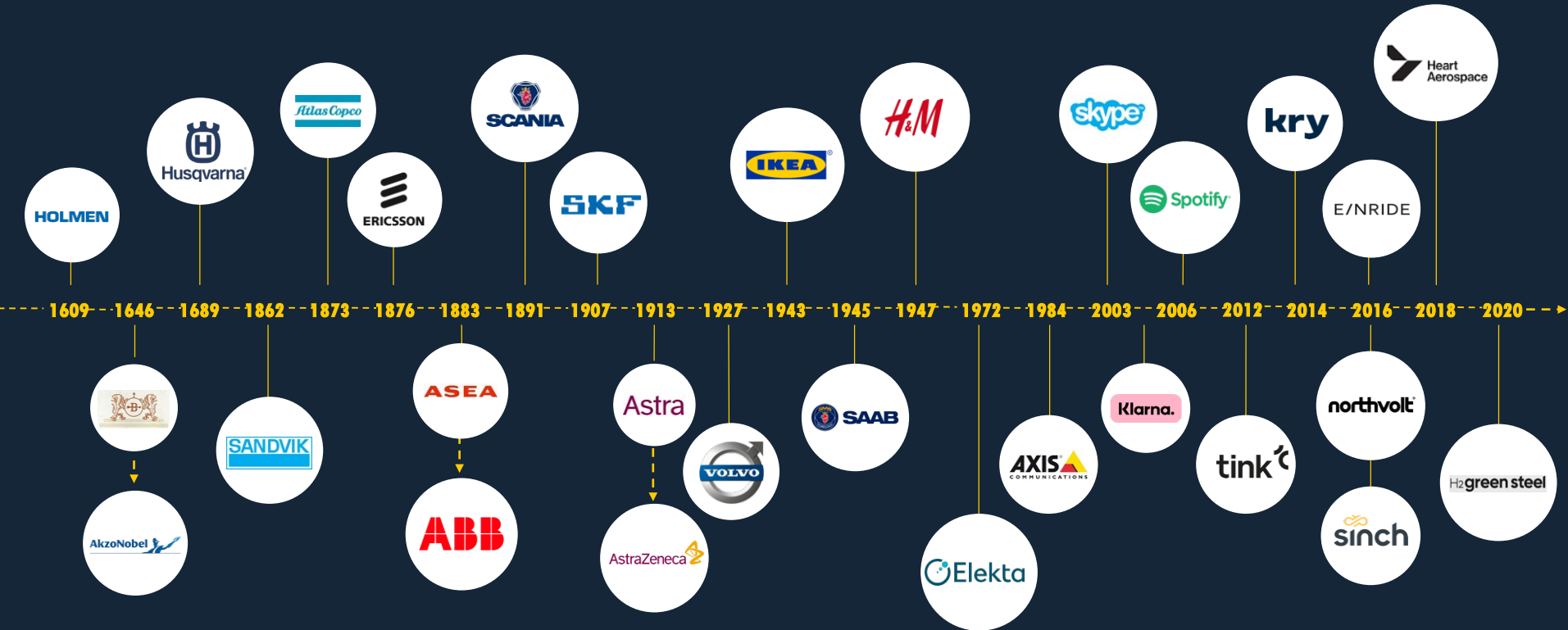


Leading research institutes





A breeding ground for long-term competitiveness, largest number of global companies (per capita)





Strategic partnerships



- Life Long Learning – reskilling
 - ✓ 20% of all education activities 2023
- Engagement in education programmes
- Widening participation
- Research infrastructures
- Attractive career paths for PhD's
- European funding schemes

Management dialogue

Steering committee

Working groups



2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
------	------	------	------	------	------	------	------	------	------	------

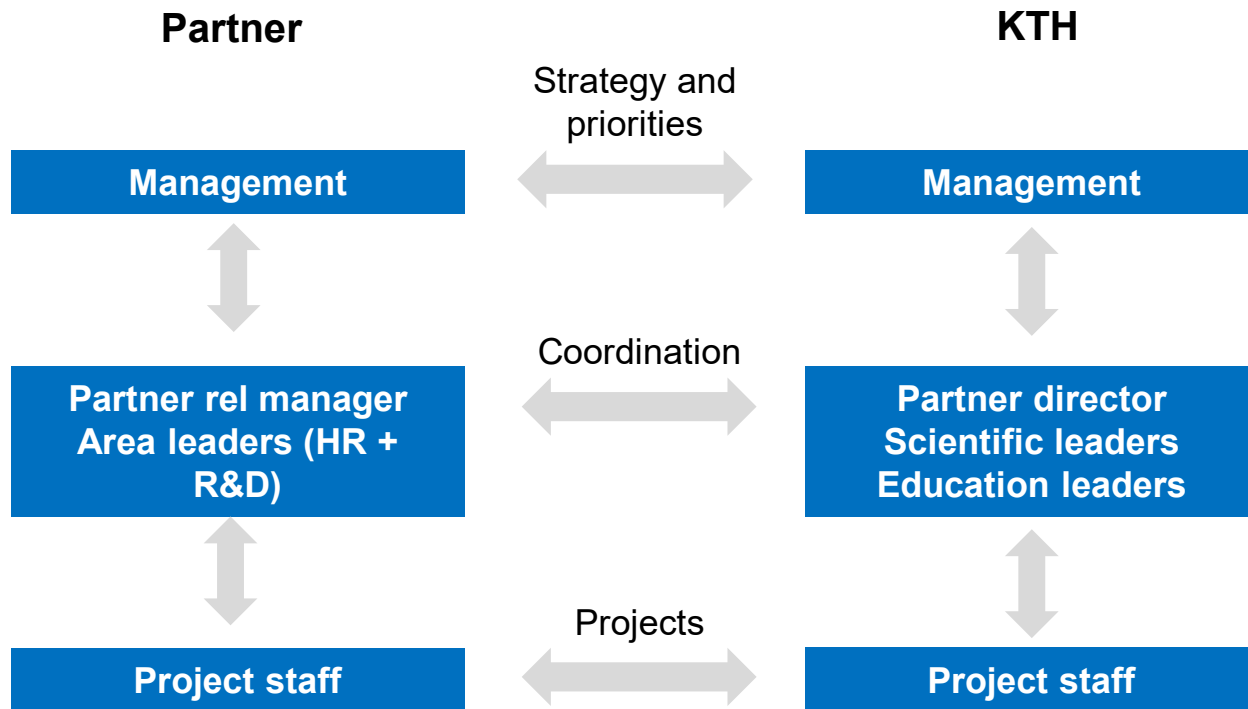
Process assessment

National assessment

Assessment of the program



Structure and roles



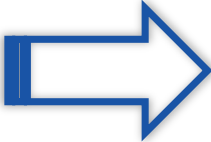




KPI's (example)

KPI	2014	2015	2016	2017	2018	2019
Active Master Thesis Projects	5	8	8	5	10	19
Lic and PHD students	5	5	6	8	11	7
KTH Lic and PHD students	11	11	14	19	23	19
KTH courses with contribution	10	17	16	19	8	7
Joint research applications	7	16	13	13	10	12
Joint projects during the year	12	17	24	23	31	30
Joint published papers / dissertations	3	11	25	17	23	24
Adjunct professors at KTH	2	2	3	3	3	5
Affiliated people at KTH	1	0	2	1	2	2
Affiliated KTH people at company	0	2	3	0	2	1

Connections to professional practice and engagement with external actors in education

		
<p>Systematic interaction with external actors when establishing educational programs or revising existing programs</p>	<p>Collaboration activities integrated into the education (in learning objectives, learning activities and examination)</p>	<p>Collaborative elements that facilitate the transition between study and working life.</p>
<p>For example: Program Advisory Boards, focus groups, study visits for teachers, external stays</p>	<p>For example: Guest lectures, cases, project work, study visits, thesis works</p>	<p>For example: Guest lectures, study visits, mentoring companies</p>



Interaction on several levels



KTH

Comprehensive analysis career survey
Forecasts and statistics
Portfolio programs
Social sectors



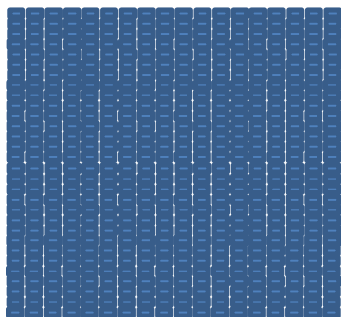
Schools

Analysis career survey
Forecasts and statistics
Sectorial grouping of programs



Programs

Analysis career survey per program
Forecasts and statistics
Progression
Program Advisory Boards



Courses

Connections to professional practise
(Guest lectures, cases, project work, study visits, thesis works)

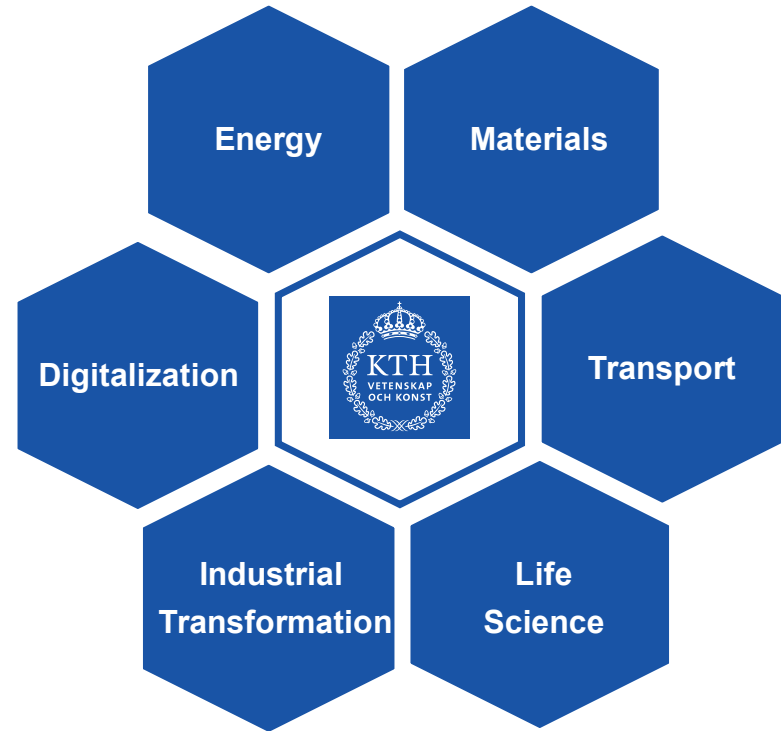


Future Education External
Advisory Forum



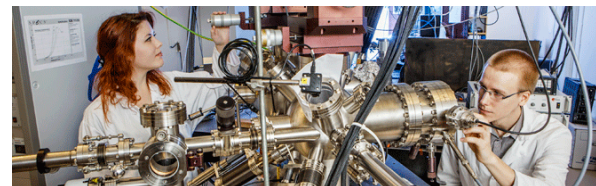
KTH Research platforms

- KTH is a globally recognized leader of multidisciplinary research and a preferred partner by industry, government agencies and relevant academia
- The Research Platforms is a catalyst for multidisciplinary research initiatives to be jointly carried out by research groups at KTH together with relevant external partners
- 2009 -





KTH Research infrastructures



Synergies and collaborations

- Meeting place for academia, industry and other societal organisations
- Open to external parties
- Laboratories and testbeds

Criteria for KTH research infrastructures:

- are strategic
- have long-term planning
- have continuous quality development

ICT

Center for High Performance Computing
Sustainable Power Lab
Visualization studio VIC
The Language Bank for Speech

Life Science Technology

Advance Light Microscope Laboratory
National Genomics Infrastructure
Jonasson Centre of Medical Imaging

Nanofabrication

Electrum Laboratory
NanoLab Albanova

Materials

Hultgren Laboratory
Odqvist Laboratory
2MiLab

<https://www.kth.se/en/forskning/forskningsinfrastrukturer/etablerade-infrastrukturer-1.858996>

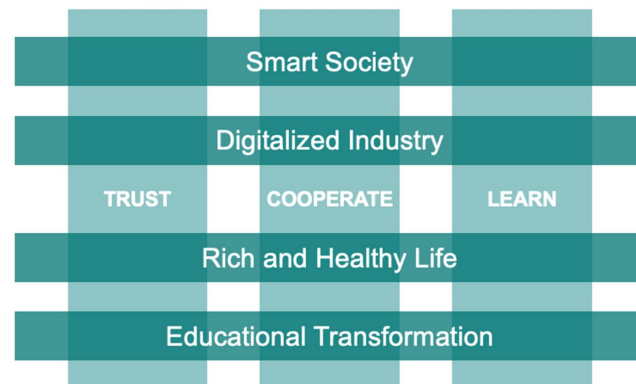
Competence center, examples



KTH Live-In Lab

- Interdisciplinary collaborations
- Collaborates with leading companies, other universities, the public sector and institutes
- Around fifty different competence centres
- Can include both basic and applied research

digital futures



Innovative Centre for Embedded Systems

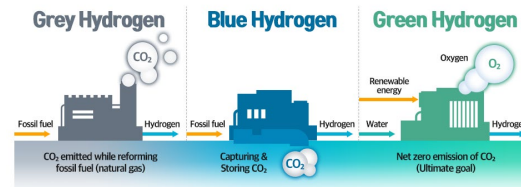
Foster a prospering eco-system for industry and academia, catalyzing world class education, research and innovation in the areas of **software-intensive embedded and cyber-physical systems**.

<https://www.ices.kth.se/>



30+ industry members

- 1 Annual Conference
- 8 Industrial Competence Groups
- 25+ Annual Workshops and Seminars



Production, use and storage of hydrogen (PUSH)

Partnerships program and Industrial & Societal Board

digital futures

Current partners:



SKANSKA



Converting:



Ongoing dialogues:

SIEMENS



ALSTOM



ABB





Means for enhanced value creation through collaboration





Strategic Innovation Programs

impact innovation 2024 -

- Production, consumption and value chains within the boundaries of the planet
- Good and equal health
- Attractive and well-functioning communities

From 17 to 5?



RE:
SOURCE





An innovation champion on a global scale.

2nd

Stockholm is second only to Silicon Valley in producing the most unicorns per capita.

#1

Swedish startups' value per capita is the highest in Europe (USD 20.9K).

31+

Incubators

30+

Science parks

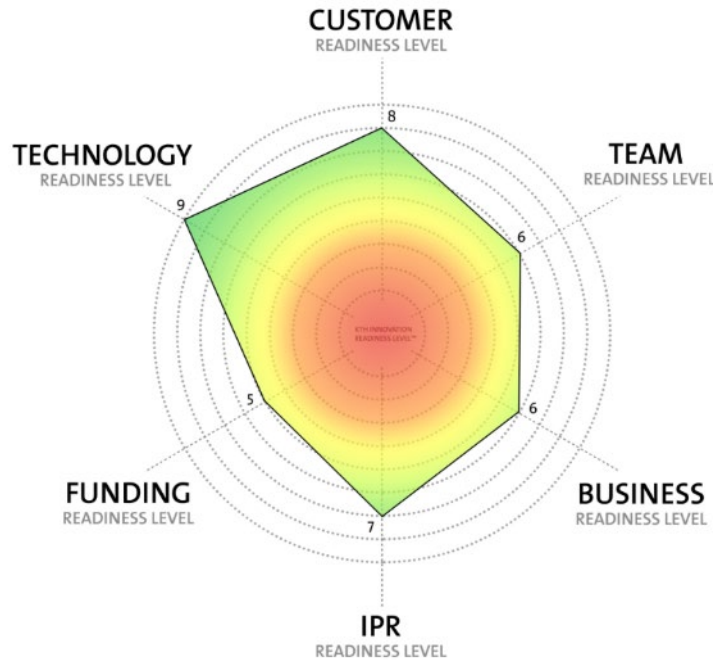
#2

Sweden ranks second globally for patents per capita and 11th in absolute numbers.





Innovation at KTH



- KTH:s innovation support is internationally renowned
- Students, researchers and employees are given support to create impact from their ideas and research
- KTH Innovation Readiness Level-model is used by over hundred organisations around the world
- Many ideas starts the journey from idea to innovation being supported by KTH Innovation

Innovation support at KTH

- [About KTH Innovation](#)
- [Contact KTH Innovation](#)
- [Visit us](#)
- [Innovations from KTH](#)
- [News](#)
- [Calendar](#)
- [Subscribe to our newsletter](#)

KTH Innovation's offer

- [About our support](#)
- [Start developing your idea](#)
- [Coaching](#)
- [Funding](#)
- [Patents & Immaterial Rights](#)
- [Building a team](#)

Programs

- [KTH Innovation's programs](#)
- [The pre-incubator program](#)
- [The Discovery Program](#)
- [The Mentor Program](#)
- [The Brighter Program](#)
- [The Bicky Chakraborty Entrepreneur Program](#)

Contribute

- [Contribute to innovation projects from KTH](#)
- [Join a startup](#)
- [Become a mentor](#)
- [KTH Innovation EarlyBird Network](#)
- [The KTH Innovation Panel](#)
- [Consultancy assignments on KTH projects](#)

<https://www.kth.se/en/om/innovation/kth-innovation-1.956839>

Stockholm innovation eco system





KTH:s global Key Partner Universities

1. Hong Kong University of Science and Technology (HKUST) since 2015
2. Indian Institute of Technology Madras (IIT Madras) since 2019
3. Nanyang Technological University (NTU) since 2013
4. Shanghai Jiao Tong University (SJTU) since 2013
5. University of Tokyo (UTokyo) since 2017
6. University of Illinois at Urbana-Champaign (UIUC) since 2011



