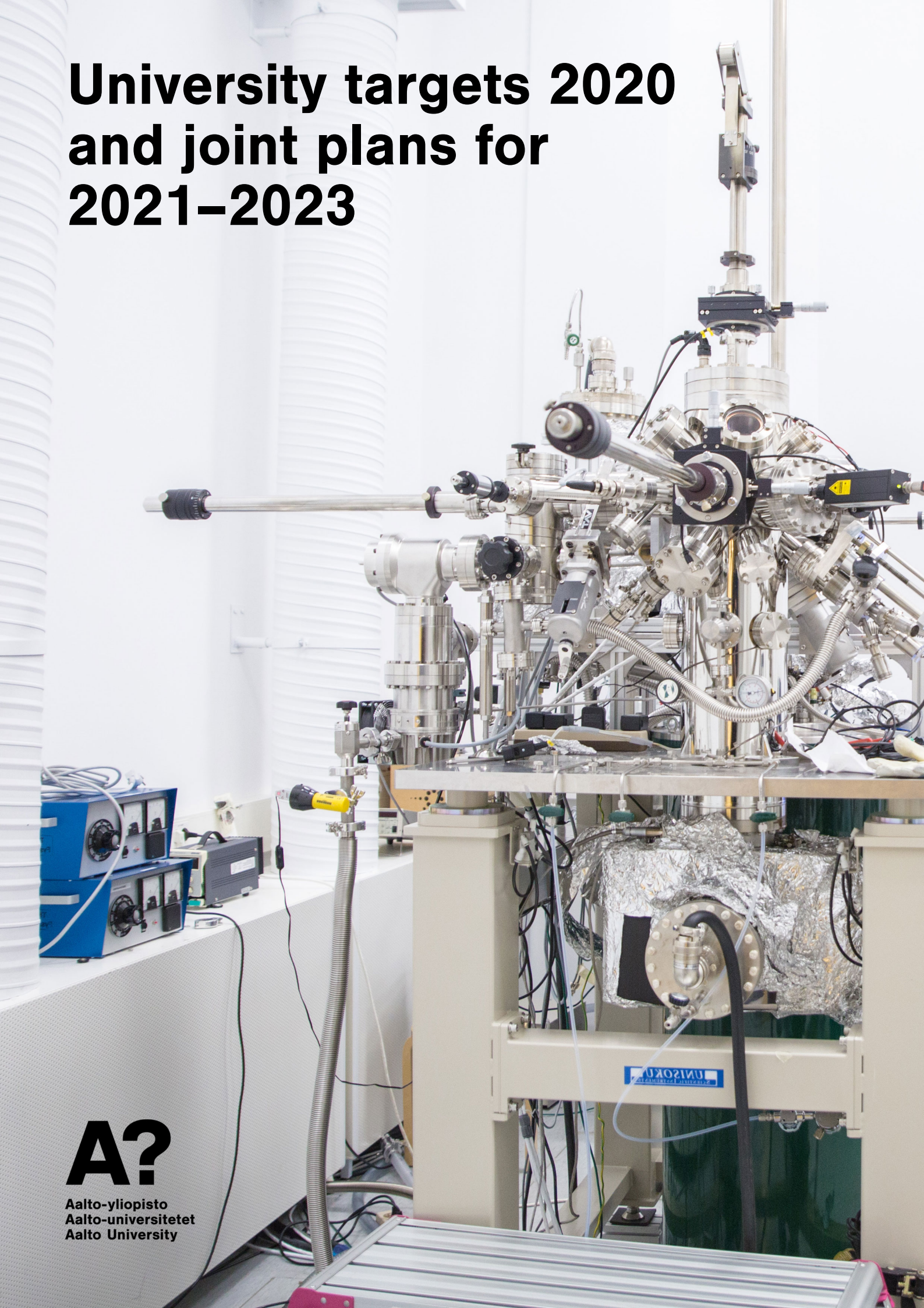
University targets 2020 and joint plans for 2021–2023



Aalto-yliopisto
Aalto-universitetet
Aalto University

University targets 2020 and joint plans for 2021–2023 based on current strategy

Contents

1 Aalto University's strategic plan in a nutshell

Aalto University is working towards a new strategy during the year 2019. In addition, Ministry of Education and Culture (MEC) negotiations for the upcoming agreement term 2021-24 will be held during 2020. This document has no assumptions regarding the changes that will occur and there are no estimates for the changes in MEC funding. This document will be reviewed thoroughly during the 2020 University Dialogue to reflect the new strategy and other changes.

Aalto University has strategy Shaping the future for the years 2016-2020. To implement this strategy, all schools of the University have their own strategy implementation plans. In addition, University has set joint strategic initiatives (JSI) to support the achievement of the joint goals in its strategic areas.

According to the University management's annual clock, the University reviews it strategy implementation yearly in University review. This review sets up joint guidelines for the University planning in University Dialogue held every spring. Aalto University foundation board (AUFB) gives the financial framework and guidelines for this planning.

This document sets the strategic and resource targets for all units and functions of the University for the year 2020 and compiles the joint plans for 2020–2023 in all current strategic areas. The document's content follows University's strategy with the addition of Digital Aalto, which is a significant strategic effort initiated by AUFB during the current strategy period. School specific targets are illustrated in the appendix as well as the funding model for the year 2020.

This document is reviewed yearly in the University Dialogue by President's Management Team (PMT) to jointly agree on the next year's targets and plans for the following three years.

Aalto University's strategic development actions and joint strategic initiatives are listed on the following table.

Research excellence for academic and societal impact	Renewing society by art, creativity and design	Educating game changers	Excellence in advancing and supporting our core goals	Transforming our campus into a unique collaboration hub
• Research excellence and multidisciplinary collaboration • Research environment • Research networks	• Excellence in artistic activities • Visibility, impact and value of creative practices • Broader art-based offering • Mechanisms to integrate creative practices and design thinking	• Attractive programmes • E-learning solutions • Success of students • Working life competences	• Attracting and retaining talent • Forward-looking leadership and professional practices • First-class support services through co-design, digitalization and partnering • Proactive communication and digital presence • Diversifying and securing funding base	• Multidisciplinary clusters and open innovation • New ways of working, shared spaces, co-creation and well-being • Attractive spaces, productive user experiences • Experimental spaces, sustainable development
Joint Strategic Initiatives: Multidisciplinary Activities I Innovation Ecosystem & Entrepreneurship I Digitalization and Campus				

The strategic development actions of Aalto University during the strategy period 2016–2020

2 Core activities

Aalto University has an internationally unique combination of research areas. Aalto strengthens Finland's competence base and fosters actions to support innovation, economic growth, employment and wellbeing, now and in the future. We identify and solve grand challenges of the society, we create breakthrough discoveries and disruptive innovations to facilitate transformations in industry, business and society at large.

2.1 Research excellence for academic and societal impact

2.1.1 Target state 2023

The high quality of the research is demonstrated by our researchers' success, e.g., in impactful publications (measured by citations and social media visibility) and obtaining external research funding from funding institutions and companies (measured). Research results have societal impact, be it economic impact, impact on public policy, health, environment, quality of life, culture, practices, sustainability etc. (measured qualitatively by peer review). The reputation of Aalto's research quality is measured by established international rankings, both the university as a whole, and its key areas. External and systematic peer review procedures such as Research, Art and Impact assessment (RAI) are conducted and their results are taken into account both in internal structure reorganisations and funding allocations.

All research is conducted at departments. Platforms facilitate reaching academic excellence by cross-department collaboration and visibility. Platforms act as a forum for joint sharing of ideas and support forming and maintaining strategic and small-scale partnerships (number and funding volume measured) by providing a single-entry point for internal and external contacts. Development of an attractive innovation ecosystem is supported as well.

Open access to Aalto's research infrastructure contributes to the success of startups and established companies in our ecosystem and thus we measure the infrastructure usage hours of external users. Aalto-wide strategic planning of infrastructures is ongoing to ensure adequate resources.

Strategic partnering with selected high-quality international universities strengthens Aalto's brand and adds value to studies, research, impact and global competence development. Aalto has created a research ecosystem that attracts the best in the world to work at Aalto (measured by the rankings of the universities from which our master students, doctoral students, post-docs and professors come from).

Open research, open publishing (measured by the number of green or gold open access publications) and professional research data management (number of opened data sets measured) attract new collaborators and advance Aalto's impact, visibility and multidisciplinarity aims through increased use of research data and results.

The highest standards of research ethics and research integrity are adhered to, and we follow the number and the reasons of contacts made to research integrity advisers, as well as the number of applications made to the research ethics committee, and the number of requests to the academic appeals board related to potential violations of academic integrity in studies.

Aalto University contributes to Finland's future as a leading knowledge-driven welfare society. Finland has shifted the RDI focus from incremental development work onto innovations and renewal (measured as in "OECD Reviews of Innovation Policy Finland 2017", Synergy Group Europe SGE Ltd 2013, "Innovation capabilities of Finnish companies: Best practices and benchmarks in innovation"). It is of interest for Aalto to follow this national figure.

2.1.2 Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	(14,7)	15,6 (15,2)	17,2	17,8	19,0	19,5	20,0	20,3
Quality of publications (number of top 10% publications)	(1 482)	1 332 (1 751)		1 651	1 797	1 843	1 926	1 948
Scientific publications (JUFO Score) (number of)	6 146	5 722	5 977	6 835	7 080	7 360	7 660	7 760
Doctoral degrees (number of)	260	256	263	253	246	240	247	259
International competitive research funding (1 000 EUR)	16 272	14 736	16 992	18 493	19 467	20 388	21 626	22 186
Other competitive research funding (1 000 EUR)	74 357	70 357	73 752	70 087	72 117	72 503	74 006	74 867
Donations (1 000 EUR)	10 676	11 004	2 600	10 888	10 875	14 200	13 750	12 850

( ) Proceeding papers included

2.1.3 Key development actions

Increasing research quality by strengthening focus on quality rather than quantity of publications (e.g. when considering number of articles required for doctoral thesis), developing quality of research infrastructures (partly in collaboration with partners).

Enhancing societal impact by strengthening the innovation ecosystem (e.g. opening Aalto-level infrastructures and ramping up department-level infrastructures to Aalto-level, significant partnerships, technology and knowledge transfer, campus presence, *A GRID* operations, entrepreneurship as a cross-cutting theme in multidisciplinary education, internationalisation of ecosystem activities). An important area of societal impact of research is to answer to the grand societal challenges brought by e.g. climate change, and several Aalto research groups are actively directing their research activities in line with sustainability issues.

Following the findings of RAI2018 combined with strategy planning done during 2019 to ensure the resources of our selected research focus areas, to foster multidisciplinarity, to ensure research infrastructures have adequate resources and management practices, and to empower the departments to find their own strengths. Internal synergies both in organisational structure and physical locations of research teams are constantly found and put forward.

2.1.4 Joint strategic Initiatives

JSI	Target state	Milestone 2020	End date	Target *
Multidisciplinary activities				
Platforms	Platforms/Hubs have increased multidisciplinarity, cross-school collaboration and visibility of Aalto's research focus areas. They provide a smooth entry for external and internal contacts in key research areas.	Solidify platforms as key contact points for external stakeholders. Fine-tune the platform focus areas in response to RAI2018.	End by 2020 as such and will be re-evaluated as a part of strategy work	R
Academic partnerships (external relation)	Strategic partnering with selected high-quality universities brings added value in studies, research, impact and global competence development.	Solidify existing partnerships and ramp up SUTD partnership in an ambitious way.	End by 2020 as such and will be re-evaluated as a part of strategy work	R, S
Open science	Aalto's impact, visibility and multidisciplinary have increased, and collaborations have been created through full exploitation of research data and results.	Harvesting our data to/from international repositories. Support for open data & research in artistic activities.	End by 2020 as such and will be re-evaluated as a part of strategy work	R, S
New infrastructures	Infrastructures for research (and teaching) increase the quality of our activities across Schools and attract collaborators. Grouped into Aalto-, School- and department-level. Infra investments increased to ~4-6% of School/Aalto budgets.	Continue developing principles for open use. Develop practices for purchases and their Aalto-wide scheduling. Support the ramp-up of selected department-level infrastructures into Aalto level.	End by 2020 as such and will be re-evaluated as a part of strategy work	R, C
Innovation ecosystem and entrepreneurship				
Innovation activation (iScout)	Increased awareness and services for research-based innovation development.	Start grounding the service work as daily activities of Departments.	End by 2020 as such and will be re-evaluated as a part of strategy work	R, S, C
SLUSH associated events	Funding attracted to Aalto-borne startups. Enhanced global visibility of Aalto and ecosystem.	Selected key partner universities and companies to visit Aalto and SLUSH.	End by 2020 as such and will be re-evaluated as a part of strategy work	R, S, C
A Grid & ASUC concept (previously Otakaari5 substance)	ASUC links Aalto and A Grid to a seamless ecosystem. Aalto ecosystem brings added value through growing companies. Among TOP5 Univ based biz accelerators in Europe.	Cooperation with strategic partners e.g. ESA BIC. Emphasis on research-based startups before (Business Finland TUTLI projects) and after startup is founded	End by 2020 as such and will be re-evaluated as a part of strategy work	C
EIT KICs	New research based innovations created and commercialised in Finland with European partnerships	Aalto participates in 6 KICs	End by 2020 as such and will be re-evaluated as a part of strategy work	R, C

* JSI supporting strategic targets:

R = Research excellence for academic and societal impact
A = Renewing society by art, creativity and design
E = Educating game changers
C = Transforming our campus into a unique collaboration hub
S = Excellence in advancing and supporting our core goals

2.2 Renewing society by art, creativity and design

2.2.1 Target state 2023

As a multidisciplinary community Aalto University promotes unique art-based activities across disciplines, knowledge frameworks and communities. By such activities Aalto University is a global leader in renewing the society by art, design and creativity.

Aalto University is recognised for its high-quality artistic activities, education and research, as well as an active participant in international discussions and debates regarding sharing and co-creating transdisciplinary artworks and events, transdisciplinary education and research, as well as integrating design thinking with technology and business at university and beyond.

Art and creative practices have a broad visibility in and outside of Finland, engage communities in and outside of Aalto and produce high impact in society.

2.2.2 Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Actual	Target	Target	Target	Target	Target
Artistic outputs (number of)	329	303	377	300	300	300	300	300

2.2.3 Key development actions

The key development actions (in all schools) are developed mostly through the Joint Strategic Initiatives (see descriptions under JSI). In addition, the following university-wide actions are carried out:

Increase engagement in art and creative practices across the university.

Find enablers and remove disincentives:

- Increase engagement in art and creative practices across the university.
- Support sharing of infrastructure and facilities to enable new ways of working.
- Support joint positions between schools to enable transdisciplinary education and research.
- Develop infrastructure and digital support for university-wide education – developing time-tables and enrolling through the digital platforms.
- Assist programmes in developing transdisciplinarity and in integrating art and design activities within existing courses.

2.2.4 Joint strategic initiatives

JSI	Target state	Milestone 2020	End date	Target *
Multidisciplinary activities				
Sharing and Co-creating Multidisciplinary Artworks	Fully integrated and functioning system for sharing and co-creating transdisciplinary artworks and events with participation from both inside and outside of our University.	Active networks and valued local and international partnerships embedded in all exhibition spaces and art events across campus. Artist-in-residence – School to be defined.	After strategy period 2020, to be continued as Aalto level activity	A
UWAS	Portfolio process for UWAS established. UWAS courses at bachelor level are part of all Aalto curricula. UWAS courses at master´s and doctoral level fully developed.	Full series of BA courses offered and filled with students from all schools. MA and DA level UWAS piloted and running. Erasmus+ project running.	After strategy period 2020, to be continued as Aalto level activity	A, E
Brand Visuality	Guest, Campus and Material Visuality implemented and embedded in the daily business of Aalto.	Guest, Campus and Material Visuality implemented and embedded in Aalto's core brand activities.	Moves to COS after 2019	A
Design & design thinking	Design and design thinking are fully integrated and functioning together with technology and business at Aalto.	Design and design thinking are utilised for strategic approach and planning of activities at Aalto University and in collaboration with partners.	End by 2020 as such and will be re-evaluated as a part of strategy work	A
Global outreach	Aalto University is recognised as a global leader in high-quality artistic activities, education and research, as well as an active participant in international discussions and debates regarding art and creative practices in university and society	Focusing on increasing the participation in international events, forums and stakeholder activities through a variety of presentations and advocacy work on transdisciplinary art, design and creative activities.	End by 2020 as such and will be re-evaluated as a part of strategy work	A

* JSI supporting strategic targets:

R = Research excellence for academic and societal impact
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2.3 Educating game changers

2.3.1 Target state 2023

Aalto is known as a university with high capability to educate creative, innovative, entrepreneurial and multidisciplinary professionals with high employability. Among its peers it is attractive in student admissions. Aalto alumni are recognised to add exceptionally high value in scale-ups and incumbent organisations. Aalto is known as one of the leaders in blended learning solutions with a special emphasis in challenge based experiential learning encompassing both degree education and continuous learning offering. Wellbeing of the students is good despite high ambitions of learning.

Game changer minded portfolio of attractive, multidisciplinary degree programmes as well as courses, modules and customisable learning paths for learners at various stages of their lives, produced as Schools' joint efforts, where appropriate and supported by professional marketing and management processes and tools. KPIs: attractiveness (application pressure), employability, multidisciplinarity.

Fluent study progress facilitated by proper curriculum and workload plans as well as course scheduling. (PI: 55 credits performance)

Comprehensive offering of online learning, supported by enabling technologies and solution service expertise. Widespread ability in faculty to produce digital learning materials and use online educational tools. (PI: Courses making benefit of e-learning solutions)

Study capabilities and wellbeing recognised as the key factors affecting the success of students to grow as game changers. Wellbeing surveys regularly conducted and reacted with appropriate development measures. (PI: Students with high study burnout risk)

Systematic methodology to make benefit of working life relationships and to adopt working life skills as an integral part of the curricula to enhance the employability of graduates and to enrich learning results. (PI: Employability)

2.3.2 Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Actual	Target	Target	Target	Target	Target
Master's degrees (number of)	1 998	1 927	1 628	1 880	1 910	1 940	1 995	2 100
Bachelor's degrees (number of)	1 970	1 178	1 218	1 550	1 550	1 545	1 580	1 700
Students with at least 55 credits per year (number of)	4 448	4 730	4 637	5 560	5 906	6 054	6 346	6 515
Bachelor's feedback: The response rate (%)	70,6	82,5	83,7	87,1	89,2	89,9	91,5	92,5
Bachelor's feedback: The average of the points	3,81	3,87	3,92	4,02	4,04	4,05	4,12	4,13
Master's degrees taken by foreign citizens (number of)	365	369	411	352	400	420	455	495
International student mobility (both in & out) in credits	44 295	45 090	48 573	46 200	49 100	49 400	50 500	50 500

2.3.3 Student intake

Student intake	2015	2016	2017	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Actual	Actual	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	**1 563**	**1 540**	**1 544**	**1646**	**1 785**	**1880**	**1915**	**1925**	**1935**
ARTS	193	185	178	185	199	210	225	225	225
BIZ	418	418	415	425	476	490	490	490	490
CHEM	120	135	150	160	175	185	185	185	185
ELEC	250	250	250	300	310	320	330	340	350
ENG	302	290	290	290	315	345	345	345	345
SCI	280	262	261	286	310	330	340	340	340
Master's programmes *	**1 391**	**1 271**	**1 221**	**1251**	**1 300**	**1482**	**1527**	**1557**	**1557**
ARTS	289	285	267	301	296	285	285	285	285
BIZ **	216	223	201	176	175	185	220	240	240
CHEM	80	95	115	87	83	90	90	90	90
ELEC	350	175	155	145	175	185	195	205	205
ENG	154	216	221	234	250	355	355	355	355
SCI	302	277	262	308	321	382	382	382	382

* Not including Aalto University's own bachelor students

** In years 2015–2017 Mikkeli BScBA graduates included in MSc intake, from 2018 onwards Mikkeli graduates are excluded as they now have automatic study right to the MSs programmes (thus largely explaining the estimated drop intake of MSc students in 2018). BIZ BSc graduates enrolling in the IDBM, CS and GM MSc programmes are shown as new students in the numbers above.

2.3.4 Educational programme roadmap

Degree programme portfolio 2020				
Bachelor's degree programmes	**Master's degree programmes**			
	Arts and design	Business	Technology	
Aalto BSc in Science and Technology	Arkkitehtuurin	Yritysjuridiikka	Advanced Energy Solutions	Life Science Technologies
	Maisema-arkkitehtuurin			Information Networks
Insinööritieteiden kandidaattiohjelma	Contemporary Design	Corporate Communications	Automation and Electrical Engineering	Mathematics and Operations Research
Kemian tekniikan kandidaattiohjelma	Collaborative and Industrial Design	Marketing	Industrial Engineering and Management	Mechanical Engineering
Sähkötekniikan kandidaattiohjelma	Elokuvataide	Management and International Business	Chemical, Biochemical and Materials Engineering	Building Technology
	Lavastustaide			Nordic Master: Cold Climate Engineering

Teknillistieteellinen kandidaattiohjelma	Fashion, Clothing and Textile Design	Entrepreneurship and Innovation Management	Computer, Communication and Information Sciences	Nordic Master: Environmental Engineering
	Interior Achitecture		Engineering Physics	
Taiteiden ja suunnittelun kandidaattiohjelma	Animation	Finance	Space Science and Technology	Nordic Master: Innovative and Sustainable Energy Engineering
	New Media	Accounting	ICT innovation (EIT)	
Bachelor's Programme in Arts, Design and Architecture	Urban Studies and Planning	Information and Service Management	Geoengineering	Nordic Master: Maritime Engineering
	Visual Communication Design		Nordic Master: Polymer Technology	Water and Environmental Engineering
Kauppatieteiden kandidaattiohjelma	Valokuvataide – Photography	Global Management	Environomical Pathways for Sustainable Energy Systems (SELECT)	Spatial Planning and Transportation Engineering
Bachelor's Programme in International Business	Nordic Visual Studies and Art education	Strategy (no new intake)	European Mining, Minerals and Environmental Programme (EMMEP)	Real Estate Economics
	Kuvataidekasvatus			Urban Studies and Planning
Bachelor's Programme in Economics	Visual Cultures, Curating and Contemporary Art	Corporate Communication (no new intake)	Electronics and Nanotechnology	Geoinformatics
	International Design Business Management			
	Creative Sustainability			

New and ending degree programmes 2020–2023

New degree programme	Programme description	Schools involved partners	Launch (mm/yyyy)
European Joint Master in Biological and Chemical Engineering for an Optimal Use of Biomass in a Future Bioeconomy (BIOCEB)	Erasmus Mundus Joint Master Degree application, 2018. (decision due in June/July) Aalto CHEM offers 2. year studies, resp. prof. Eero Kontturi	CHEM, AgroParisTech (koord.), URCA Reims, Université de Liège, TTU Tallinn and Aalto	09/2019 2020 (first students to Aalto)
EIT Joint international Master's Programme in Urban Mobility	New joint international master's programme	ENG (possibly others), Numerous European Universities	Earliest 09.2020 TBD
EIT Master's Programme in Energy Storage (working title)	New joint international master´s programme	ENG	2020
EIT Master's Programme in Manufacturing (working title)	New joint international master´s programme	ENG	2021
MSc: Structural engineering and architecture	New joint international master´s programme	ENG, ARTS	2021
'General Management' MSc for STEM graduates	1-year joint master's programme	BIZ ESADE (Barcelona, Spain)	2021

Ending degree programme		
MSc in Corporate communication	BIZ	07/2020
MSc in Strategy	BIZ	07/2021
Master´s Programme in Product and Spatial Design	ARTS	10/2019

2.3.5 Key development actions

Implementation of study progress and student well-being action plans

- Work load of courses and study entities
- Bottleneck courses
- Course scheduling

Active participation in UWAS/UWBS/UWTS activities for enhancement of multi-field studies. Criteria for UWXS eligibility:

- Potential for transdisciplinary learning (= students from all Aalto fields)
- Educators with solid academic expertise in the field
- Transdisciplinarity in the learning objectives + notable content in the field
- Field specific review process of eligibility

E-learning solutions

- Expand the e-learning solutions on the programme level for ensuring large scale rollout
- E-learning offering for continuous learners

Development of student recruitment, marketing and on boarding

- Collaborative actions in recruitment, marketing and on boarding
- Active recruitment of continuous learners
- Management of programme portfolio (intake numbers, application targets, bachelor education in English)

Enhancement of the quality of education

- Active participation in the Attractive programme, content and quality stream and reviews of the schools' programme portfolio
- Active participation in the coming evaluations:
    - Assessment of the Learning outcomes 2019
    - EGC intermediary assessment 2019
    - Teaching and learning evaluation TEE 2020

JSI funding for actions supporting entrepreneurship will be funded through a special fund from 2019 onwards. Aaltoes and Startuplifers support Aalto to have one of the best university associated entrepreneurship and innovation ecosystems globally, with functions both for students' first step to entrepreneurship and for the cradle of new startups and scaleups. The target is to nurture 10 plus startups valuated over 100 million euros, either originated through Aaltoes activities or with Startuplifers alumni in the founding team.

2.3.6 Joint strategic initiatives

JSI	Target state	Milestone 2020	End date	Target *
Multidisciplinary activities				
ADF	ADF and GDFN serve as network of platforms for enhancing experimental and experience based learning.	GDFN expanded to 30 sites globally ADF related pedagogical methods leveraged in all Aalto schools. External funding increased.	After strategy period 2020, to be continued as Aalto level activity, focus and scope to be discussed. Funding increasingly from external sources.	E, S
AVP	AVP is the leading Ent Edu program in Europe (both in student education and staff training.) Ent Edu is integrated to all Bachelor programs.	Ent Edu integration in all Aalto schools. For-profit summer school(s). For-profit training for foreign faculty.	After strategy period 2020, to be continued as Aalto level activity. Role to be discussed in connection to programme portfolio, Funding increasingly from external sources.	E, S
Education: Educating gamechanger (EGC)	High capability to educate creative, innovative, entrepreneurial and multidisciplinary professionals with high employability. Leader in blended learning solutions. Wellbeing of the students in line with national university averaged.	Large scale rollout of digital learning solutions bearing in mind also continuous learning. Handbook for program directors implemented. Study progress in line with AUFB targets. UWXS launched in all fields.	After strategy period 2020, the development of online learning in the service portfolio of LES-ITS. Additional strategy investment needed due to the requirement on continuous learning (eg. Editor team) Student wellbeing after 2020 to be continued as a strategic focus area. Challenge-based learning to be included in the LES service portfolio after 2020. After 2020, the steering and management of programme portfolio supported by LES, student marketing efforts to be included in the student enrolment entity.	E, S
AALTO UNIVERSITY JUNIOR (LUMA)	Significant societal actor in promoting school-university collaboration, major impact in marketing various fields of Aalto in youth-friendly format, awakening interest to especially natural sciences, technology, business and arts.	Cross-disciplinary *light&colours* program ready. Junior lab in full operation. Hands-on visits to schools outside campus. Girls program established. Enhance Aalto University Junior offering as an attractive hobby alternative.	After strategy period 2020, to be continued as Aalto level activity. Connection to LLL to be considered. Funding increasingly from external sources.	E, S
Student marketing (communication)	Segmented approach to student marketing. Notable earnings through tuition fees. Develop a cross-Aalto holistic recruitment, marketing and on boarding process.	Toolset and support for degree program marketing. Marketing material in line with international student admission targets. Implement a holistic recruitment, marketing and on boarding process.	After strategy period, to be continued in the service portfolios of COS-LES. Objectives, roles and responsibilities to be discussed with schools,	E, S

* JSI supporting strategic targets

3 Professorships in key focus areas and plan for funded tenure slots

Key research area	2018	Plan 2019	Plan 2020	Plan 2021	Plan 2022*	Plan 2023*
Human centered living environments	41	48,6	50,6	50,6	50,9	50,9
Advanced energy solutions	24	23	27	26	26	26
Health and wellbeing	15	19	19	19	18	18
ICT and digitalization	81	96	95,4	94,4	94,4	93,4
Global business dynamics	88	101	102	101	102	103
Arts and design knowledge building	37	34	32	32	31	31
Materials and sustainable use of natural resources	82	94	94	96	94	91
Enabling areas	20	23,4	20	20	19	19
Professorships (total)	388+1	**439**	**440**	**439**	**435,3**	**432,3**

Plan for basic funded slots 2020–2023

	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *		381	381	381	381	381
Planned use of flex (max 10%) **		40,2	41,2	38,6	32	31
Total slots		**421,2**	**422,2**	**419,6**	**413**	**412**

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

Externally funded slots	2018	2019	2020	2021	2022	2023
Plan for 2019–2022	Actual	Plan	Target	Target	Target	Target
Donation based slots (number of)		4	6,2	9,2	11,5	12,7
Co-funded slots (number of)		2	2	2	2	2
TT fund slots (number of)		10	10	10	10	10
Total		**16**	**18,2**	**21,2**	**23,5**	**24,7**

4 Significant infrastructure plan 2020

4.1 Aalto significant infrastructures 2020

Aalto infrastructure			2019	2019	2020	2020
	Key research area*	Coordinating School	Full cost per year (1 000 EUR) **	Aalto share per year (1 000 EUR)	Full cost per year (1 000 EUR) **	Aalto share per year (1 000 EUR)
Aalto Studios	ART, ICT	ARTS	3230	2 500	3260	2500
RAMI RI	MAT	CHEM	1386	378	1457	378
Bioeconomy RI	MAT	CHEM	2925	682	3024	682
Metsähovi Radio Observatory (MRO)	Space, ICT	ELEC	946	264	1 055	264
Aalto Icetank	LIV	ENG	1 096	485	1 411	485
i3 - industry innovation infrastructure	LIV, MAT, ICT, ENE	ENG	5 164	194	4 918	194
Aalto Nanofab	MAT, ICT, ENE, HW	ELEC	2 575	1 324	2 599	1324
Science IT	ICT	SCI	905	407	974	407
Aalto NeuroImaging	HW	SCI	904	445	879	445
OtaNano – Low temperature measurements and quantum engineering	MAT, ICT, ENE, HW	SCI	1520	784	1631	784
OtaNano – Nanomicroscopy centre	MAT, ICT, ENE, HW	SCI	1612	834	1845	834

* Key research areas, ** School's estimate
ART = Arts and design knowledge building
(BUS = Global business dynamics)
ENE = Advanced energy solutions
HW = Health and wellbeing
ICT = ICT and digitalisation
LIV = Human-centered living environments
MAT = Materials and sustainable use of natural resources

4.2 School significant infrastructures 2020

Infrastructure	Key Research Area	Coordinating School
Aalto Acoustics Lab	ICT, HW, ART	ELEC
ComNext 5G/6G Research Platform	ICT	ELEC
Aalto Electronics-ICT	ICT	ELEC
ePowerHub	ENE, LIV, ICT	ELEC
National Standards Laboratory	Metrology	ELEC
Design Factory	-	ENG
Applied physics	MAT, ENE	SCI

5 Enablers

5.1 Transforming our campus into a unique collaboration hub

5.1.1 Target state 2023

The users are at the heart of our campus development. New constructions and renovations, promoting improved user experience, support contemporary ways of working, encounters and sharing and we have more flexible and inspiring working environments and diversified learning spaces.

Communicative and participatory campus planning and design, together with Digital Aalto and research infrastructure development, has produced a distinct high quality and inspiring campus experience, where an experimentality supports social and cultural vibrancy.

We have been able to enhance cross-disciplinary and open areal and spatial development with unique concepts in collaborating, spatial programming and architecture at an international scale.

We have developed experimental and sustainable indoor and outdoor spaces to build an exemplary university campus.

5.1.2 Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Actual	Target	Target	Target	Target	Target
Facilities in University use ('000 m^2)	280	256	228	215	213	206	204	204
Facilities shared with external partners ('000 m^2)	17	29	47	44	39	42	44	46
Energy efficiency as CO2 emissions: energy purchase in buildings (tCO2-ekv/y)		7 723	8 419	6 000	6 500	6 000	5 500	5 000
User and partner satisfaction with strategy implementation ("Leesman" surveys)	2,69	-	3,12	3,48	3,54	3,58	3,60	3,61

5.1.3 Key development actions

Campus development is advancing well when finalising major constructions and removals and with increasing external interest to collaborate and co-locate.

New areas with particularly big potential for growth are:

- Thematic co-working hubs and the campus membership model (incl. shared infrastructures)
- The creative ecosystem

In addition, the development of outdoor areas needs attention.

5.1.4 Joint strategic initiatives

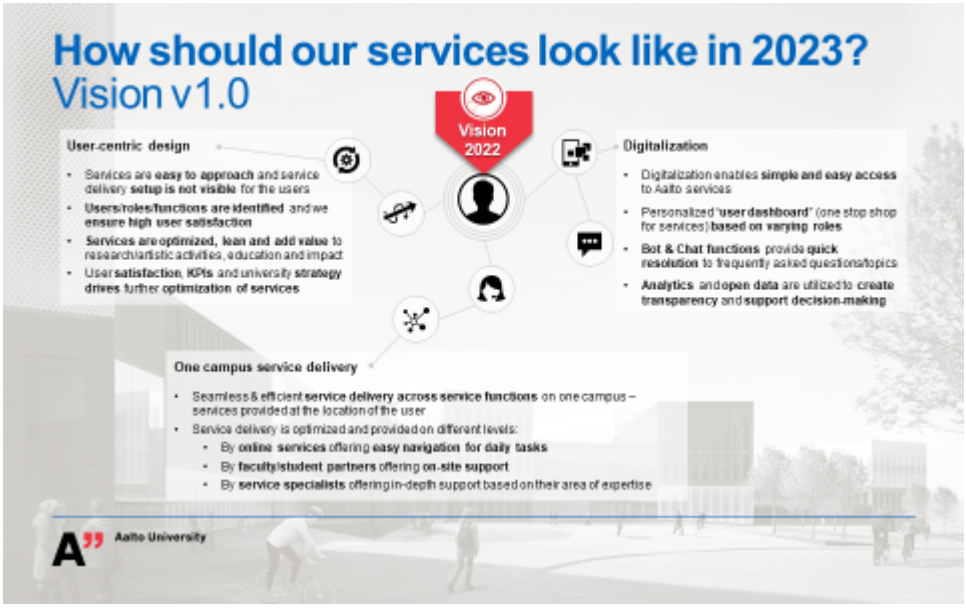
JSI	Target state 2022	Milestone 2020	End date	Target *
New Ways of Working	Shared use of spaces. Campus New Generation.	INDOOR DESIGN DEVELOPMENT: Learning spaces development together with IT. CAMPUS NEW GENERATION: student projects in campus development.	31.12. 2019	R, A, E, C, S
Campus User Experience	CityScope scenario planning. Campus IoT Platform.	CITY SCIENCE@ AALTO: Interactive model in use; data in use; frequent MIT collaboration; academic utilization; collaboration continues with Hafen City Univ. & Andorra. CAMPUS IOT PLATFORM: Tracking tech. for mobility; spatial concepts in IoT; adjusting indoor conditions with Aalto Works as a pilot.	31.12. 2019	R, A, E, C, S
Experimental Sustainability	Campus R&D.	CAMPUS R&D: Thematic clusters and research integration to campus planning.	31.12. 2019	R, A, E, C, S
Multidisciplinary and Open Campus	Campus corporate interaction. Campus as a Service – Operator Membership Model. Aalto Innovation Hub Project.	CAMPUS AS A SERVICE OPERATOR MODEL: Campus service platform project management. AALTO INNOVATION HUB PROJECT: HOOK networking events, benchmarking and networking for the strategy update.	31.12. 2019	A, E, C, S
Campus transformation communication	Internal and external campus communications including community engagement, campaigns etc.	Campus publications, internal communication and media relations. Enhance community activities, work to build campus reputation as an attractive new, living part of the greater Helsinki area.	31.12. 2019	R, A, C, S
Otakaari 5 premises concept	Spaces supporting encounters, startups, acceleration, prototyping etc.	Digital services and tools. Implementing design as part of A Grid activities.	2017	C

* JSI supporting strategic targets:

R = Research excellence for academic and societal impact
A = Renewing society by art, creativity and design
E = Educating game changers
C = Transforming our campus into a unique collaboration hub
S = Excellence in advancing and supporting our core goals

5.2 Services: Excellence in advancing and supporting our core goals

5.2.1 Target state 2023



User-centric services

- Services are easy to approach and service delivery setup is not visible for the users
- Services are optimised, lean and add value to research/artistic activities, education and impact
- Users/roles/functions are identified and we ensure high user satisfaction
- User satisfaction, KPIs and university strategy drive further optimisation of services

Digitalised services

- Digitalisation enables simple and easy access to Aalto services
- Personalised "user dashboard" (one stop shop for services) based on varying roles
- Bot & Chat functions provide quick resolution to frequently asked questions/topics
- Analytics and open data are utilised to create transparency and support decision-making

One campus service delivery

- Seamless & efficient service delivery across service functions on one campus – services provided at the location of the user
- Service delivery is optimised and provided on different levels:
    - By online services offering easy navigation for daily tasks
    - By faculty/student partners offering on-site support
    - By service specialists offering in-depth support based on their area of expertise

5.2.2 Performance indicators

Service indicators will be developed as a part of the service vision work.

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Actual	Target	Target	Target	Target	Target
Personnel survey, service quality *	-	3,46	-	3,8	-	3,9	-	4,0

5.2.3 Key development actions

Continue user-centric development of Aalto service portfolio and service delivery utilising cross-functional synergies and digital working methods.

Ongoing/Planned activities:

1. New HR system (Workday) implementation
2. JOPP project - Aalto Digital Basics (Stream 3):
    - Document mgmt. & collaboration (MS Teams)
    - Effective use of Aalto.fi
    - Team bases service & digitalisation competence development
    - Aalto wide project & project portfolio management
    - Cross-functional analytics
    - Systematic user-satisfaction tracking for services
3. Service desk pilots for department & student services

Service function -specific priorities 2020- (in line with overall roadmap):

ADCO: Corporate partnership model & pricing, fundraising priorities, alumni activities, career services renewal

CAS: Campus membership model, increase of social density, micro-investment program and completion of Aalto Works and Otakaari 2 A&B

COS: Science and research communications, brand and positioning, student marketing, communications digital platform, increased social media impact

FIS: Commercial pricing, travel expense management renewal, endowment & campus, resource model following new strategy

HR: Workday implementation & leaner people processes, recruitment and mobility practices, line manager and leadership development. Diversity and inclusion.

IES: Strategy contributions (innovation ecosystem and research infrastructures), Building a monitoring and follow-up system to evaluate innovations

ITS: Continuously stable IT services, high end-user satisfaction, Aalto-wide cyber security management, Digital Aalto key projects implementation

LEGAL: Smoothly working new organisation, providing excellent support for strategic priorities **LES:** Process harmonisation, organisational culture change due to new digital platforms, services for new areas such as continuous learning

LSS: Strategy work, MEC negotiations, improved support for decision-making process, visitor experience ramp-up

RES: Develop tools for promoting multidisciplinarity, sustainability, open science, and research ethics. Support the researchers in applying for and managing external funding

TSS: Supporting and participating in learning, research and artistic activities as well as improving the usability, availability and visibility of our infrastructures and campus.

5.3 Digital Aalto

5.3.1 Target state 2023

- Excellence in learning experience to educate game changers
- Opening up research data and harnessing digital platforms for collaboration and multidisciplinarity
- A state-of-the-art campus experience enhancing ecosystem collaboration and entrepreneurship
- Seamless digital brand experience and end-user driven and lean services
- Becoming a forerunner as a data driven university

5.3.2 Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Actual	Target	Target	Target	Target	Target
% courses having online components (MyCourses use)	77	79	83	95	95	100	100	100
% of open access publications	26,7	30,8	56	80	90	90	90	95
Aalto IT user satisfaction	75,9	79,8	91,3	90	90	90	90	90

Digital Aalto contribution to Aalto performance indicators

1. Education: study progress
   - Study progress through online materials, electronic examinations and digital process automation
   - Study progress through student CRM engagement & analytics (e.g. workload analytics)
   - Digitalisation of mass courses or other high impact courses and hands-on support for teachers
2. Education: multidisciplinarity
   - Course marketing and availability through online channels and materials
   - Blended and challenge-based learning through digital learning platforms
3. Education: attractive programmes
   - Targeted student marketing
   - Study progress through student CRM engagement & analytics
   - Digitalisation and modularisation of courses and programs enabling, e.g. continuous learning
4. Education: student satisfaction and well-being
   - Student satisfaction through availability of learning spaces and services
   - Student satisfaction through student engagement & analytics
5. Research, Innovation, Artistic activities: Quality of publications/outputs
   - Harvesting Aalto data to/from international repositories, support for open data & publishing tools
   - Fluent research project process
   - Researcher finding
6. Education: Doctoral degrees
   - Study progress through online materials, electronic examinations and digital process automation
7. Research, Innovation, Artistic activities: Competitive research funding

- Advanced research intelligence and funding analytics
- Corporate collaboration through Campus and research infrastructure access & A Grid service platform
- On-demand assets for research, design and innovation ecosystem

8. Enablers
   - Improved brand perception through seamless digital brand experience
   - Improved Campus utilisation rate through online navigation, access and booking systems
   - Improved Campus user experience and energy-efficiency through digitally enabled places and Campus IoT platform
   - Improved external collaboration through partnership management, advanced visitor and event management, multichannel Alumni services, Campus tenant CRM and service platform
   - Improved user satisfaction through simple and easy online access to Aalto Services
   - Improved services cost-efficiency through automated and optimised support processes
   - Improved sustainability through digital solutions
9. Possible new sources of revenue for Aalto
   - E.g. selling data and algorithms; selling connected/virtual infrastructures; pricing varied on pay-per-use or a shared outcome metric; establishing a new life-long-learning education platform; establishing a new research platform

5.3.3 Key development actions

- Planning together basic IT needs and services, special focus on new buildings/moves and renewing IT and AV equipment and software
- Taking new internal collaboration tools (O365, Teams) into wide use
- Implementing digitalization roadmap key projects 2020 as outlined below
- Ensuring strong governance and change management through cross-functional processes and bodies (Schools + Joint Services Process Owner + ITS)

5.3.4 Joint strategic initiatives

JSI	Target state	Milestone 2020	End date	Target *
Teaching & Learning	Student-friendly digital learning environments with active learning spaces, digital and automated assessment, virtual and visual blended learning experience; interactive and digital study materials. Advanced analytics and AI enable personalised and adaptive teaching & learning as well as data-driven decision making. Fluent, fast and fully digitalised support services. Student engagement and analytics for improved study progress, learning outcomes and overall success. Continuous learning enabled.	New student information system (SISU) under implementation. MyCourses in advanced use in all schools. Digital assessments coverage expanded significantly. Student service platform deployed and first stage implementations well on way. Active learning spaces in active use. Students and study progress supported with analytics and digitalization of e.g. mass courses. Core study processes harmonised.	2022	E

Research & Innovations	World-class infrastructure for research, art and collaboration. Data analytics capabilities for research intelligence and management. Research and innovation ecosystem provides on-demand resources for research, design and innovations, and unique opportunities for collaboration. Fluent research project process. Open access publishing and open data with professional research data management.	Data governance activities to make Aalto data FAIR, findable, accessible, interoperable and reusable. IoT platforms and 5G Network for research. University objects digitised and search service to university records utilised. Funding funnel and prediction in use. Creative practice catalogue in use. Capability to find researchers with mutual interest in use. Innovation management platform implemented.	2022	R, A
Partnerships	Enhancing and strengthening partnership Master data with new functions and integrations. Implementing CRM in schools via pilot use cases and analysing their results. Establishing a broader CRM culture and CRM engagement by implementing CRM training and service model and strategic enhancement (Aalto CRM Policy). Developing CRM KPI's towards advanced state, establishing KPI's for CRM user functions. Analytics functions in CRM provide reports for management, inc. fundraising prospects and results, the amount of engaged alumni. To resource, plan and enhance above functions at corporate relations level, enabling CRM as support tool at school level. Standard capability metrics in use. Focus on Master Data Account level and account reports, other reports support where needed.	CRM Master Data Management including necessary processes and integrations Service concept "from reactive to proactive" for alumni including segmented and federated data. Implemented school level CRM use cases Analytics capability and resulting decision making from initial to managed Aalto CRM Policy established and service model implemented	2022	S
Campus	Smart campus with real-time space availability and utilisation status, and smart space reservations and parking. High-end IT infrastructure in place. Dynamic booking and access control, smart campus navigation, campus-wide connectivity and up-to-date AV. Enabling thematic co-working.	Access systems and processes harmonised for most of the buildings. User friendly booking systems, master data up-to-date and available for analytics. Crises messaging system and processes up and running. Outdoor WLAN coverage extension. AV upgraded to decided level. Campus IoT data available.	2022	C
Communication and Collaboration	First-class Aalto digital experience. A blended digital and physical campus will offer a unique and seamless Aalto service experience. Individually tailored and targeted content and a single place for Aalto services, with also AI powered search and content suggestions.	Omni-channel experience building continues. Previously stand-alone services such as Into and people.aalto.fi are embedded into aalto.fi. User profiles are improved and users have control over what they see on the site. The platform supports the rapid deployment of new sites that have their own visual style but all live on one code-base and exist in one ecosystem. Aalto digital workplace concept crystallised, modern collaboration	2022	S, A

		technologies enabled and key tools deployed.		
Joint services & Enablers	Infrastructure supports state of the art academic and artistic activities. We provide digital workflows and have good digital support services for academic personnel recruitment and career management, as well as manager HR & finance real-time planning, reporting and analytics. We have automated financial transaction processing. IT services are independent of user location, and support BYOD. We ensure master data availability and support enter data only once principle. Electrical identity & automated access management are provided.	New HR platform in full use. Travel management processes and system renewed. Event management system implemented. Key service processes digitalised and measured based on service vision. Shared data innovation centre, data lake and analytics platform operational and first cross functional use cases implemented. Master data catalogue done. New IdM system provides automation and self-service for access rights requests to easier and faster access management.	2022	S
People development	A shared understanding on future competences. Aalto people are able to evaluate their competence based on their role; identify their strengths and development needs. Competence development support is offered for ensuring competent and wellbeing people with efficient and meaningful ways of working. Aalto policies, processes and practices enable. leveraging digital opportunities instead of restricting.	Digital competence framework is in place and shared strategic principles for Competence Management defined. Development needs and guidelines are identified for selected functions/roles. New competence development solutions (70-20-10) for understanding changing landscape & foundations for working at future University have been implemented and competence development is included as a requirement on project plans & portfolio management.	2022	R, E, C, S

* JSI supporting strategic targets:

R = Research excellence for academic and societal impact
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6 Funding and Resources

6.1 Financial plan

6.1.1 Target state 2023

Aalto University aims to gradually diversify its funding base, in addition to strong public funding.

Public funding will increase moderately from current level. The MEC new funding model 2021– will reward Aalto's performance and compensate for field specific additional costs, while Aalto additional funding will decline to zero. There continues to be good progress in competitiveness, improving the competitive research funding outlook from AoF, EU and Business Finland.

Aalto University aims at a significant increase in donations, especially through endowed professorships and other targeted donations to specific initiatives and projects. This is achieved through an ambitious long-term fundraising plan, involving all Schools and with adequate support by Advancement and Corporate Engagement. Donations are systematically used to fund university operations.

Income from corporate collaboration other than donations will be increased, with aim on long-term partnerships and an integrated, Aalto-wide pricing system.

Tuition fees will be picking up and having small positive financial contribution.

Endowment real return spending will not exceed the maximum 2,5 % p.a. to ensure preservation of the real value of the endowment for the future years.

In the cost plans, tenure slot outlook is increased with donation based and co-funded slots. Balancing between academic, service activities and joint strategic activities continues.

The cost plan also includes Digital Aalto investments of 15M€ per annum during 2019–2022, realising mainly in increased license & similar use fees, competence development (visible as part of service purchases), service personnel (as targeted strategic recruitments) and other costs.

The benefits of Digital Aalto are estimated at 3–8M€ per annum, to be realised as improved academic results and impact (more time for core activities for faculty, better competitiveness in faculty and student recruitment), improved competitiveness in acquiring competitive funding (improved reputation and better analytics to support corporate collaboration and fundraising prospects) as well as savings in services and energy. The benefits are planned at this stage as a lump sum of net benefits (gross benefits less additional running costs of investments).

6.1.2 Proforma 2019–2023

PRO FORMA (MEUR)	2018	2018	2019	2020	2021	2022	2023
	Forecast	Actual	Forecast	LTP	LTP	LTP	LTP
Turnover	**348**	**347**	**347**	**344**	**346**	**347**	**348**
MEC funding (computational model)	197	190	199	204	204	204	204
MEC funding (Aalto national mission)	23	23	12	0	0	0	0
Academy of Finland	52	51	52	52	54	54	53
Business Finland	14	15	14	14	14	15	15
EU	21	21	24	25	26	27	27
Corporate	12	12	14	16	17	17	18
Other income	23	24	26	27	25	25	25
Use of special purpose funds	6	4	5	5	6	7	7
Expenses	**371**	**365**	**376**	**380**	**374**	**375**	**377**
Academic Personnel	163	160	167	170	171	173	174
Service Personnel	69	67	70	69	69	68	68
Facilities	50	52	47	45	45	45	45
Service purchase	38	39	41	42	39	38	38
Depreciations	11	10	11	13	15	15	16
Other	40	36	40	40	35	35	35
OPERATIVE PROFIT/LOSS	**-23**	**-18**	**-30**	**-37**	**-28**	**-28**	**-28**
Of which Digital Aalto	-11	-11	-15	-15	-15	-15	-15
OPERATIVE PROFIT/LOSS	**-12**	**-7**	**-15**	**-22**	**-13**	**-13**	**-13**

6.2 Functional cost plan

Functional costs (MEUR)	2018	2019	2020	2021	2022	2023
Long term financial plan	Actual	Forecast	Budget	LTP	LTP	LTP
Academic activities	**207**	**219**	**220**	**229**	**232**	**243**
Service activities	**80**	**83**	**86**	**79**	**77**	**71**
Research and innovation services	7	7				
Innovation services	2	2				
Learning services	14	15				
Technical support services	8	9				
Leadership and leadership support services	7	7				
Advancement and Corporate Engagement services	1	1				
Legal services	1	1				
Financial services	9	9				
HR services	8	8				
Secretarial and other services	1	1				
School specific services	2	2				
Communication services	4	4				
IT services	15	15				
Campus services	1	1				
Unallocated service adjustment	0	-1				
Aalto wide JSI	**16**	**18**	**21**	**15**	**16**	**13**
Facilities	**52**	**47**	**45**	**45**	**45**	**45**
TOTAL NET COSTS	**356**	**367**	**372**	**368**	**370**	**373**

Note: Does not include Digital Aalto benefits.

6.3 Personnel Plan

6.3.1 Target state 2023

We will continue to develop our academic personnel with tenure track and lecturer track being key focus areas. Sufficient ongoing renewal of our professorships and the pipeline is a priority. We will monitor and further develop the ratios of senior and junior academic faculty with considering field specific requirements.

We will develop our service personnel in line with Aalto Services Vision 2022, with a focus on competence development and user centricity. The volume, location and organisation of service personnel will evolve in concert with the campus development and digitalisation programmes. Both initiatives promote new ways of working and the development of processes and tasks.

6.3.2 Personnel plan 2019–2023

FTE	2018	2019	2020	2021	2022	2023
Professors, tenure track	348	364	397	414	422	425
Professors, fixed term	48	55	56	53	52	54
Teaching personnel	249	258	257	256	253	249
Other research and teaching personnel	55	45	31	33	33	32
Hourly teaching (incl. computational)	232	244	206	208	211	210
Postdocs	512	572	588	595	606	620
Doctoral students	845	897	937	973	981	1 005
Project researchers	80	80	66	58	62	61
Academic personnel	**2 220**	**2 360**	**2 414**	**2 451**	**2 473**	**2 505**
Teaching and research assistants, basic	**416**	**411**	**386**	**406**	**419**	**419**
Research and innovation services	50	63	70	71	69	61
Learning services	256	259	256	240	228	225
Technical support services	155	165	169	169	168	166
Leadership support services	65	73	75	72	71	65
Financial services	154	152	152	151	151	136
HR services	107	107	101	100	100	100
Secretarial services	16	16	16	16	16	16
School specific services	40	42	43	43	43	46
Communications services	37	43	45	44	44	44
IT services	135	141	142	157	156	149
Campus services	47	46	40	37	37	37
Service personnel	**1 134**	**1 184**	**1 196**	**1 189**	**1 175**	**1 132**
FTE TOTAL	**4 041**	**4 209**	**4 217**	**4 232**	**4 249**	**4 210**

6.4 Financial plans of Joint strategic initiatives

6.4.1 Joint Strategic Initiative Portfolio

JSI Portfolio (1 000 EUR)	2018	2019-2020
Research	2 284	5 625
Artistic activities	646	1 730
Education	6 193	13 523
Innovation ecosystem and entrepreneurship	1 608	2 953
Digitalization	11 779	22 000
Campus transformation	704	695
Total basic JSI	**23 214**	**46 526**
Competitive JSI	283	18 866
GRAND TOTAL	**23 497**	**65 392**

6.4.2 Multidisciplinary activities

JSI – Research (1 000 EUR)	2018	2019-2020
Research	2 284	5 625
Total	**2 284**	**5 525**

JSI – Artistic activities (1 000 EUR)	2018	2019-2020
Sharing and Co-creating Multidisciplinary Artworks *	195	406
UWAS *	270	620
Artistic activities other	180	704
Total	**646**	**1 730**

* To be transferred to regular funding from 2021 onwards.

JSI – Education (1 000 EUR)	2018	2019-2020
ADF	1 895	2 900
AVP	585	800
Aalto University Junior (LUMA)	550	1 100
Education other	3 163	8 723
Total	**6 193**	**13 523**

6.4.3 Innovation eco-system and entrepreneurship

JSI – Innovation ecosystem and entrepreneurship (1 000 EUR)	2018	2019-2020
Aalto ES *	310	800
Innovation ecosystem other	1 298	2 153
Total	**1 608**	**2 953**

6.4.4 Digitalization and campus transformation

JSI – Digitalization (1 000 EUR)	2018	2019-2020*
Aalto digitalization program	5	
Teaching & Learning	1 825	8 741
Research & Innovations	207	2 283
Communication and Collaboration	3 335	2 603
Partnerships	237	1 075
Campus	1 101	3 693
Joint services & Enablers	4 321	1 053
Digi competence development	751	2 551
Total	**11 779**	**22 000**

* Distribution between areas may differ.

JSI – Campus transformation (1 000 EUR)	2018	2019
New Ways of Working	110	87
Campus User Experience	277	328
Experimental Sustainability	48	39
Multidisciplinary and Open Campus	157	114
Campus transformation communication	111	128
Total	**704**	**695**

* To be transferred to running cost & ACRE from 2020 onwards.

6.4.5 University level competitive funding

University level competitive funding (1000 EUR)	2018	2019-2020
Profi extra resources	283	6 039
Flagships (FinnCERES, FCAI, PREIN)	0	4 138
Biofactory (MEC strategy based funding)	0	1 490
HGSE (MEC strategy based funding)	0	2 000
Tuition fees	0	1 300
Own funding FITEC MEC key projects	0	749
Design for Society, AI Ecosystem, UaaS	0	150
MEC strategy funding for Life Long Learning	0	3 000
Total	**283**	**18 866**

6.4.6 Facility cost and sqm plan 2019–2023

Aalto University facilities (sqm)	2019	2020	2021	2022	2023
A8 School of ARTS	27 157	26 882	26 882	28 492	28 492
E7 School of BIZ	8 759	8 759	8 759	8 759	8 759
T1 School of CHEM	20 377	20 447	20 467	20 467	20 467
T2 School of ENG	27 622	27 424	25 670	24 667 (22 737)	24 667 (22 737)
T4 School of ELEC	17 264	18 612	18 010	18 010	18 010
T3 School of SCI	26 531	27 345	27 619	27 423	27 423
U9, U1. U2 University Joint Units	23 364	23 290	23 290	23 290	23 290
Shared	55 463	56 100	53 000	53 000	53 000
Vacant	10 240	4 519	1 901	1 659	1 590
Total	**216 777**	**213 377**	**205 598**	**203 837**	**203 768**

Aalto University facilities (MEUR)	2019	2020	2021	2022	2023
A8 School of ARTS	7,0	7,1	6,8	7,4	7,8
E7 School of BIZ	3,4	3,3	3,3	3,3	3,3
T1 School of CHEM	4,8	5,0	5,0	5,0	5,0
T2 School of ENG	4,7	5,0	5,2	5,3	5,3
T4 School of ELEC	6,7	6,8	6,9	6,9	6,9
T3 School of SCI	4,0	4,4	4,3	4,3	4,3
U9, U1, U2 University Joint Units	5,6	5,8	5,8	5,8	5,8
Shared	6,0	6,0	5,6	5,9	5,5
Vacant	4,9	1,7	0,6	0,6	0,6
Total	**47,2**	**45,2**	**43,6**	**44,5**	**44,5**

Schools facility costs incl. internal rents, user services and lecture halls.

This *Aalto University targets 2020 and joint plan for 2021–2023* document is subject to the long-term strategic and financial framework of the Aalto University.

Espoo in June 18, 2019

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Appendix 1 School specific targets and planning

School of Arts, Design and Architecture

Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
Research	Actual	Actual	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	(19,7)	19,2 (16,8)	19,4	18	19	19	20	20
Quality of publications (number of top 10% publications)	(23)	24 (27)	31	29	30	30	32	32
Scientific publications (JUFO Score) (number of)	327,1	357,6	444,1	390	420	420	440	440
Doctoral degrees (number of)	17	24	14	18	18	18	18	18
International competitive research funding (1 000 EUR)	476	367	765	550	600	600	650	650
Other competitive research funding (1 000 EUR)	1913	1675	1192	1800	1900	1900	2000	2000
Art and creative practices	Actual	Actual	Actual	Target	Target	Target	Target	Target
Artistic outputs (number of)	323	303	377	300	300	300	300	300
Education	Actual	Actual	Actual	Target	Target	Target	Target	Target
Master's degrees (number of)	249	254	330	250	250	255	280	280
Art	187	191	261	190	190	195	200	200
Architecture	62	63	69	60	60	60	80	80
Bachelor's degrees (number of)	296	151	161	180	180	180	180	180
Students with at least 55 credits per year (number of)	646	671	645	753	770	820	900	900
Bachelor's feedback: The response rate (%)	70,6	70,2	73,9	75	80	85	90	95
Bachelor's feedback: The average of the points	3,7	3,7	3,8	4,0	4,1	4,1	4,1	4,1
Master's degrees taken by foreign citizens (number of)	72	62	106	75	80	80	80	80
International student mobility (both in & out) in credits	5737	5878	6116	6100	6200	6200	6500	6500

( ) Proceeding papers included

Education

Student intake	2015	2016	2017	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Actual	Actual	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	193	185	178	185	199	210	225	225	225
Master's programmes *	289	285	267	301	296	285	285	285	285

* Not including Aalto University's own bachelor students

Programme portfolio 2020-2023

Current degree programmes	Ending year (if programme is ending)
Taiteiden ja suunnittelun kandidaattiohjelma	
Tekniikan kandidaatti	
Taiteen kandidaatti	
Bacheor's Programme in Design	
Arkkitehtuurin maisteriohjelma	
Maisema-arkkitehtuurin maisteriohjelma	
Master's Programme in Interior Architecture	
Elokuvataiteen maisteriohjelma	
Lavastustaiteen maisteriohjelma	
Master's Programme in Animation	
Master's Programme in New Media	
Valokuvataiteen maisteriohjelma	
Master's Programme in Visual Communications Design	
Master's Programme in Collaborative and Industrial Design	
Master's Programme in Contemporary Design	
Master's Programme in Fashion, Clothing and Textile Design	
Kuvataidekasvatuksen maisteriohjelma	
Master's Programme in Nordic Visual Studies and Art Education	
Master's Programme in Visual Cultures, Curating and Contemporary Art	

Master's Programme in Creative Sustainability – M.Sc in Architecture	
Master's Programme in Creative Sustainability – Master of Arts	
Master's Programme in International Design Business Management	
Master's Programme in Urban Studies and Planning – M.Sc in Architecture	
Master's Programme in Urban Studies and Planning – M.Sc in Landscape Architecture	

School's infrastructures 2020

Infrastructure *
Aalto Studios

* Significants infrastructures are listed in the joint document.

Key development actions

Research excellence for academic and societal impact

"ARTS is a global leader and internationally recognized in research within Art, Design and Architecture which integrates hands-on experimentation in materials and media with critical academic discourse."

- Create new research strategy with the research community taking into account RAI report and University strategy
- Goal oriented international collaboration: Research, teaching, faculty and student exchange
- Research and doctoral studies collaboration between the departments of Art, Film and Media
- Active participation in EU, AoF, international organizations and decision making bodies
- Strengthen research activity by
  - Building competence to write proposals. Further actions and support needed.
  - Encouraging professors to build and develop research groups and collaborate for larger consortia. Focus on strengthening research group resources and competencies and building collaboration between groups.
  - Targeted seed funding for publications/ projects. Key challenge is finding enough time for professors to apply.

Renewing society by art, creativity and design

ARTS is renewing society through art, creativity and design. ARTS encourages personal expression, intellectual curiosity and critical thinking from all its faculty, staff and students throughout Aalto University"

- Aalto Studios
  - Enables Aalto to leap forward in two core strategic areas: ICT & digitalisation and arts & design
  - Completes Väre, which has been designed from the beginning to work in conjunction with the media centre
  - First Aalto significant infra with transdisciplinary potential for Aalto ecosystem
- Ensure continuation and quality of Film and TV education
- Strengthen existing potential in Film and TV education to support growth of creative and AV industries.
- Ecosystems
  - Competitiveness and employment in all areas of the Finnish economy can be significantly improved by drawing on the creative sectors' digital and customer-centered business models, design, service design, branding and communication competence, ARTS's core activities increase the creative competence and diversification of the economic structures
  - Include and develop ARTS activities in ecosystem activities, like A-Grid
  - Concentrating in Otaniemi may mean discontinuing with Pori agreement
- Art and creative practices at Aalto
  - ARTS works towards increasing the visibility of the social and cultural impact of our activities, and offers educational opportunities beyond the boundaries of schools and disciplines.
  - Transdisciplinary collaboration is further developed, by defining current areas in which tools are needed, and studying possible models both for short term and longer term transdisciplinarity at Aalto.
  - Significant potential in creative industries: Game Design, AI & Design, Film, TV and Media
- Practice based excellence in ARTS
  - Outlining and articulating relevant ways of presenting substance related outputs. The aim is to render the learnings and knowledge cumulating into a sharable format, and increase the intellectual capital of ARTS.
  - Department of Design will pilot appointing a Head of Art and Creative Practices (similar to Head of Education and Head of Research) to lead and co-ordinate departmental level artistic activities and develop practice based excellence.
  - Engage full potential of Väre workshops and other Otaniemi premises

Educating change-makers

"ARTS offers education and a program portfolio that is relevant for facing the grand challenges of the present and future. Our goal is to help our students become confident and able, so that they can make a difference and be global game changers when and wherever needed."

- The second wave of education consolidation:
  - Emphasize fluent learning to enable faster graduation
  - Rebalance student intakes to better meet degree targets and industry needs e.g. Architecture
  - Student, faculty and staff wellbeing: Review workloads
  - Foundation studies reworked to better suit programme needs.
  - Fully implement the two-year curriculum development cycle and execute agreed programme revisions
- Finalise Make Väre Ours project to sustain hands-on educational goals and community spirit.
- Maintain the high quality and significant international interest in our education.
- Support and encourage transdisciplinary activities.
- Develop student employment capabilities, entrepreneurship skills, and strengthen the alumni networking activities.
- Execute pedagogy and excellence driven collaboration with selected partners.
- Start preparing ARTS' lifelong learning model

Future plan for tenure track positions 2020

Priority	Key research area	School focus area	Department	Description	New or redirected slot	Est. call opening	Est start time
	Materials and sustainable use of natural resources	Design in all scales	Design	Design for Bio-based Materials	New / redirection /donation	Jan 2020	Jan 2021
	ICT and Digitalization	Digital society	Media / Film	Animation	New /redirection / donation	Jan 2020	Jan 2021
	ICT and Digitalization	Digital society	Design	Experience Design	New /redirection / donation	Jan 2020	Jan 2021
	ICT and Digitalization	Artistic research practice	Art	Digital Pedagogy	New /redirection / donation	End 2020	Jan 2022
	Materials and sustainable use of natural resources	Design in all scales	Architecture	Humanitarian Architecture	New	End 2020	Jan 2022

Key research area	Plan 2019	Plan 2020	Plan 2021	Plan 2022	Plan 2023
Human centered living environments	12,4	14,4	14,4	14,4	14,4
Advanced energy solutions					
Health and wellbeing					
ICT and digitalization	6,1	6,1	6,1	6,1	6,1
Global business dynamics	3	3	3	3	3
Arts and design knowledge building	32	30	30	29	29
Materials and sustainable use of natural resources	2	2	2	2	2
Enabling areas					
Professorships (total)	**55,5**	**55,5**	**55,5**	**54,5**	**54,5**

Plan for basic funded slots 2020–2023

	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *	55,5	53,6	53,6	53,6	53,6	53,6
Planned use of flex (max 10%) **		1,9	1,9	1,9	0,9	0,9
Total slots	**55,5**	**55,5**	**55,5**	**55,5**	**54,5**	**54,5**

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

Externally funded slots	2019	2020	2021	2022	2023
Donation based PoPs (number of)	0,8	0,8	1	0,8	0,8
Donation based co-funded slots (number of)					
Donation based TT slots (number of)		0,2	0,2	0,2	0,4
Total	**0,8**	**1**	**1,2**	**1**	**1,2**

Proforma

PRO FORMA (1 000 EUR)	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	LTP	LTP	LTP	LTP	LTP
Turnover	**46 612**	**47 879**	**46 763**	**45 745**	**48 137**	**48 112**	**48 151**
Basic funding	41 728	42 614	41 347	40 000	41 500	41 500	41 500
Business Finland	810	587	396	248	227	211	251
Academy of Finland	831	580	697	926	1 200	1 200	1 200
EU	847	1 149	937	1 312	1 500	1 500	1 500
Corporate	433	370	399	549	600	600	600
Other	1 664	2 165	2 434	2 090	2 300	2 300	2 300
Transfer from special purpose funds			370	370	551	551	551
Internal income	299	415	183	250	260	250	250
Expenses	**47 037**	**49 352**	**50 314**	**49 168**	**48 136**	**48 067**	**48 073**
Academic personnel	17 472	17 848	18 383	17 996	17 719	17 734	17 751
Service personnel	6 392	6 719	6 834	7 050	7 068	7 011	7 011
Facilities	6 694	7 425	7 361	7 330	7 085	7 035	7 035
Services	2 480	2 746	3 079	2 240	2 134	2 099	2 100
Depreciations	504	482	745	851	812	850	850
Other	4 173	4 143	3 848	3 510	3 142	3 162	3 172
Joint Services expenses	9 208	9 819	9 977	10 117	10 117	10 117	10 117
Other internal expenses	114	170	87	75	60	60	38
OPERATIVE PROFIT/LOSS	**-425**	**-1 473**	**-3 551**	**-3 424**	**1**	**45**	**78**
Income/expenses from fundraising			500	1 000	1 500	1 800	2 000
Transfer to special purpose funds			-500	-1 000	-1 500	-1 800	-2 000
CUMULATIVE PROFIT/LOSS	**8 453**	**6 981**	**3 430**	**6**	**7**	**52**	**131**

Personnel plan

FTE	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	LTP	LTP	LTP	LTP	LTP
Professors, tenure track	47	47	47	53	52	52	53
Professors, fixed term	11	14	15	14	13	12	12
Teaching personnel	67	69	69	69	69	69	69
Other research and teaching personnel	7	6	8	5	5	5	5
Hourly teaching (incl. computational)	85	94	83	73	70	72	66
Postdocs	21	20	23	21	21	21	21
Doctoral students	42	48	42	43	43	43	43
Project researchers	3	3	5	2	2	0	0
Teaching and research assistants	25	16	15	14	14	14	14
Academic personnel	**308**	**317**	**305**	**293**	**289**	**288**	**283**
Research and innovation services	2	2	2	2	1	1	1
Learning services	30	31	32	31	30	30	30
Technical support services	48	51	53	57	57	56	56
Leadership support services	7	6	4	4	4	4	4
Financial services	16	14	14	13	13	13	13
HR services	12	13	13	13	13	13	13
Secretarial services	2	2	2	2	1	1	1
School specific services	13	14	18	17	17	17	17
Communications services	1	1	1	1	1	1	1
IT services							
Campus services	2	2	1	1	1	1	1
Service personnel	**131**	**135**	**140**	**140**	**137**	**135**	**135**
FTE TOTAL	**439**	**452**	**444**	**433**	**425**	**423**	**418**

Data sources: Actual 2017-2018 Sampo. Plan 2019-2023 Ada.

School of Business

Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
Research	Actual	Actual	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	(18,8)	20,8 (19,2)	22,8	21	21	21	21	21
Quality of publications (number of top 10% publications)	(117)	116 (125)	138	120	142	144	146	148
Scientific publications (JUFO Score) (number of)	567,4	489,7	530,4	540	560	580	600	600
Doctoral degrees (number of)	27	25	27	22	22	20	20	22
International competitive research funding (1 000 EUR)	1 070	803	378	1 043	667	888	1176	1336
Other competitive research funding (1 000 EUR)	4279	4284	3710	4 216	3 563	3 881	4 230	4 405
Education	Actual	Actual	Target	Target	Target	Target	Target	Target
Master's degrees (number of)	443	384	417	445	455	470	485	500
Business	417	358	397	415	425	440	450	460
Social science	26	26	20	30	30	30	35	40
Bachelor's degrees (number of)	376	376	345	400	400	400	410	420
Students with at least 55 credits per year (number of)	1229	1333	1292	1500	1536	1584	1646	1715
Bachelor's feedback: The response rate (%)	73,4	86,4	79,1	90	90	90	90	90
Bachelor's feedback: The average of the points	3,98	3,94	4,00	4,0	4,0	4,0	4,1	4,1
Master's degrees taken by foreign citizens (number of)	58	62	63	75	65	60	75	85
International student mobility (both in & out) in credits	18110	18448	20611	18000	18000	18000	18000	18000

( ) Proceeding papers included

Education

Student intake	2015	2016	2017	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Actual	Actual	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	418	418	415	425	476	490	490	490	490
Master's programmes *	216	223	201	176	175	185	220	240	240

* Not including Aalto University's own bachelor students

In years 2015–2017 Mikkeli BScBA graduates included in MSc intake, from 2018 onwards Mikkeli graduates are excluded as they now have automatic study right to the MSs programmes (thus largely explaining the estimated drop intake of MSc students in 2018). BIZ BSc graduates enrolling in the IDBM, CS and GM MSc programmes are shown as new students in the numbers above.

Programme portfolio 2020-2023

Current degree programmes	**Ending year (if programme is ending)**
Kauppatieteiden kandidaattiohjelma	
BSc in Economics	
BSc in International Business	
Yritysjuridiikan maisteriohjelma	
MSc in Accounting	
MSc in Corporate Communications	7/2020
MSc in Entrepreneurship and innovation management	
MSc in Finance	
MSc in Global Management	
MSc in Information and Service Management	
MSc in International Design Business Management	
MSc in Creative Sustainability	
MSc in Management and International Business	
MSc in Marketing	
MSc in Strategy	7/2021
New programme [Tentative discussions ongoing]	**Starting year**
A possible new English-language BSc program in Otaniemi	Earliest 2021
Joint 'General Management' MSc for STEM graduates together with ESADE	2021
Possible changes to current MSc program portfolio	2021 or 2022

School's infrastructures 2020

Infrastructure *	Expenses 2019	2020	University funding sought 2020
Business research data hub	460	538	0

* Significants infrastructures are listed in the joint document.

Key development actions

Research excellence for academic and societal impact

- Improved data resources for all
  - Continuous improvement of data management & databases
  - Better access to new Finnish research data
- Empirical wonderland
  - More impact and citations by opening researchers' unique data resources to colleagues and outsiders
- Faculty exchange
  - Continuous stream of top visiting professors at Aalto BIZ
  - Faculty and PhD student visits to top schools encouraged
- Research environment
  - Regular seminar series promoted across the school
  - Summer assistant programs made more common
  - Rise in quality of PhD applicants as program promoted more widely, continuous improvement in research reputation
- Societal Impact of research
  - Communicate the importance of studying key societal issues
  - Increased investments in communicating research-based insights for societal impact and to serve as role model
  - Aalto EE (turnover >20M) continuing to be key vehicle in influencing society, with faculty members from the School playing central roles (54 teaching in Aalto EE in 2018)
- Continuous contribution to the Aalto entrepreneurship ecosystem
- Active encouragement of societally relevant multidisciplinary high-quality research.

Renewing society by art, creativity and design

The School ...

- strives to further art, creativity and design in its activities as important aspects of innovation and entrepreneurship
- strives to increase elements of multidisciplinarity in teaching and learning
- aims to increase the number and impact of highly ambitious multidisciplinary research projects with ARTS scholars among others
- continues to cooperate with ARTS in teaching programmes (e.g. IDBM, CS), research projects and platforms (e.g. Experience Platform, new initiatives around service design) as well as hubs (Sustainability Hub).
- intends to integrate creative practices and design thinking with business practises in events to corporate activities, alumni and other societal actors

Educating game changers

- Process to evaluate and fine tune/redesign our bachelor's programmes
  - BSc programme in Economics to run smoothly
  - BSc programmes in Business further developed and in International business fine-tuned and running well in 2020
  - Factors: new competence needs (mega trends,...), the AllWell-results, multidisciplinary, graduation on target time
- Process to evaluate the master's programme portfolio
  - Possibly ending MIB and introducing new programme(s) in 2021
  - Joint 'General Management' MSc for STEM graduates together with ESADE
  - Other possible openings in portfolio
- Fully exploit the new teaching facilities in Otaniemi
- Student marketing and recruiting
  - Focus on further developing student marketing and the recruitment & selection processes
- Graduation time reduction
  - Removal of process hindrances and negative incentives, encouragement to speedy graduation
- Development of blended learning and on-line learning material and courses, also relevant for continuous learning
- Continued emphasis on improving teaching/learning: tt-criteria & processes, teaching material production, etc.
- Increased focus on continuous learning
  - Development of new modular digital material content that can be used in fully online courses, blended learning courses, and beyond. These may be used in both in the BSc and MSc degrees and via the Open University, as well as many other ways, including paid continuous learning. Several projects are already planned, subject to funding.
  - BIZ is considering appointing an assistant dean for continuous learning or similar role for a fixed term.
  - In addition to own initiatives, BIZ will actively participate in developing University-wide continuous learning solutions and their business model.

Societal impact

- Continuing to encourage close collaboration with corporations and policy-makers in Finland and internationally (e.g. EU organisations)
- Stimulating and supporting entrepreneurship
- Continuing to encourage faculty to contribute to executive education, also by writing books
- Enhancing how the School portrays its societal engagement in line with "Better Business - Better Society" through own & public media (e.g. utilizing the relocation) and events (incl. Dean's Circle)
- Further developing a sense of community and engaging alumni through events in new building (e.g. large-scale Jaakko Honko -event and new event concepts) and abroad
- Fundraising: continuing the Leave your Mark -campaign for building close alumni ties; engaging donors for endowed professorships in societally relevant areas.
- Providing opportunities for setting up new institutes/centres to increase societal engagement

Future plan for tenure track positions 2020

Priority*	Key research area	School focus area	Department	Description/ Funding	New or redirected slot	Est. call opening	Est starting time
1	Global Business Dynamics	Global Business Dynamics	Marketing	Retailing / Donation	New	12/2019	9/2020
2	Global Business Dynamics	Global Business Dynamics	Economics	Economics (undefined)/ Donation	New	12/2019	9/2020
3	Global Business Dynamics	Global Business Dynamics	Economics	International trade (may change, depending on donors' wishes) / Donation	New	12/2020	9/2021
4	TBD	TBD	TBD	TBD (world class VIP talent)/ School flex	New	n/a	n/a

*As the first three are donation funded slots, timing and realization are uncertain. There are further opportunities for donated professorships that will likely realize later than in 2020.

The School retains the last available flex slot for a possibility for a direct recruitment of a world class VIP talent, should such person willing to join Aalto be found. Currently no discussions are ongoing.

Key research area	2018	Plan 2019	Plan 2020	Plan 2021	Plan 2022	Plan 2023
Human centered living environments	0,7	0,7	0,7	0,7	1,7	1,7
Advanced energy solutions						
Health and wellbeing						
ICT and digitalization	5	5	5	5	5	5
Global business dynamics	76	79	80	81	82	83
Arts and design knowledge building						
Materials and sustainable use of natural resources						
Enabling areas	1	1	1	1	1	1
Professorships (total)	**82,7**	**85,7**	**86,7**	**87,7**	**89,7**	**90,7**

Plan for basic funded slots 2020–2023

	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *	72,3	72,3	72,3	72,3	72,3	72,3
Planned use of flex (max 10%) **	5,7	5,7	5,7	5,7	6,7	6,7
Total slots	78	78	78	78	79	79

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

Externally funded slots	2018	2019	2020	2021	2022	2023
Plan for 2019–2022	Actual	Plan	Target	Target	Target	Target
Donation based slots (number of)	0,7	3,7	4,7	5,7	6,7	7,7
Co-funded slots (number of)						
TT fund slots (number of)	4	4	4	4	4	4
Total	**4,7**	**7,7**	**8,7**	**9,7**	**10,7**	**11,7**

Proforma

PRO FORMA (1 000 EUR)	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Budget	LTP	LTP	LTP	LTP
Turnover	**41 971**	**43 278**	**45 676**	**44 667**	**44 486**	**44 998**	**45 594**
Basic funding	33 768	35 069	35 695	34 448	33 455	33 447	33 451
Business Finland	1 351	792	362	417	477	556	601
Academy of Finland	2 617	2 758	2 760	3 003	3 207	3 430	3 509
EU	907	752	1 015	1 272	1 313	1 471	1 629
Corporate	1 333	914	1 182	1 202	1 254	1 302	1 351
Other	1 506	1 833	2 500	2 451	2 546	2 376	2 442
Transfer from special purpose funds	0	0	877	1 097	1 502	1 672	1 854
Internal income	488	1 161	1 285	777	733	745	757
Expenses	**42 467**	**43 330**	**44 689**	**44 526**	**44 866**	**45 254**	**45 660**
Academic personnel	19 473	19 604	19 878	20 520	20 818	21 174	21 484
Service personnel	4 021	4 165	4 329	4 182	4 097	3 996	3 941
Facilities	3 701	3 621	3 502	3 454	3 487	3 522	3 557
Services	2 246	2 195	2 697	2 120	2 144	2 184	2 238
Depreciations	27	19	82	72	72	72	72
Other	3 140	3 106	3 476	3 307	3 375	3 430	3 493
Joint Services expenses	9 705	10 528	10 611	10 759	10 759	10 759	10 759
Other internal expenses	155	93	116	113	115	117	117
OPERATIVE PROFIT/LOSS	**-497**	**-52**	**987**	**141**	**-380**	**-256**	**-66**
Income/expenses from fundraising	**2**	**0**	**5 395**	**3 725**	**3 050**	**3 050**	**2 700**
Transfer to special purpose funds	**0**	**0**	**-5 395**	**-3 725**	**-3 050**	**-3 050**	**-2 700**
CUMULATIVE PROFIT/LOSS	**7 105**	**4 574**	**5 561**	**4 702**	**3 322**	**3 066**	**3 000**

Note that internal income in 2019 assumes 438k€ income due to early move savings. Also note that cumulative profit shows 1M€ reduction from 2019 to 2020 and from 2020 to 2021, as MEC funding for Helsinki GSE professorship is moved to a balance sheet fund. Note that possible continuous learning extra income and costs are not included in this scenario due to the overall uncertainty.

Please note the very significant stretch targets in external funding and fundraising.

Personnel plan

FTE	2017	2018	2019	2020	2021	2022	2023
Professors, tenure track	70	69	68	77	80	81	82
Professors, fixed term	8	11	10	9	9	9	9
Teaching personnel	17	18	19	19	19	19	19
Other research and teaching personnel	10	12	8	5	5	5	5
Hourly teaching (incl. computational)	23	23	23	23	23	23	23
Postdocs	40	35	44	50	50	51	51
Doctoral students	50	50	52	56	54	53	52
Project researchers	17	19	13	10	9	9	10
Teaching and research assistants, basic	18	16	20	18	18	18	18
Academic personnel	**254**	**252**	**256**	**265**	**267**	**268**	**268**
Research and innovation services	9	12	13	12			
Learning services	29	32	34	33			
Technical support services	0	0	0	0			
Leadership support services	3	3	3	4			
Financial services	9	9	8	8			
HR services	6	6	6	5			
Secretarial services	7	9	8	7			
School specific services	11	9	8	7			
Communications services	1	1	1	1			
IT services	0	0	0	0			
Campus services	0	0	0	0			
Service personnel *	**74**	**80**	**81**	**78**			
FTE TOTAL	**327**	**332**	**336**	**343**			

* Service personnel for 2020–2022 to be planned jointly in 2019.

School of Chemical Engineering

Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
Research	Actual	Actual	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	(12,2)	10,5 (10,9)	11,2	14	16	17	18	18
Quality of publications (number of top 10% publications)	(189)	168 (184)	190	224	256	265	288	288
Scientific publications (JUFO Score) (number of)	748,3	685,6	888,2	846	1000	1100	1150	1200
Doctoral degrees (number of)	35	36	36	36	36	34	34	39
International competitive research funding (1 000 EUR)	2559	2815	3385	3400	3600	3700	3900	3900
Other competitive research funding (1 000 EUR)	11944	10540	10994	11771	12554	13422	13976	14062
Education	Actual	Actual	Actual	Target	Target	Target	Target	Target
Master's degrees (number of)	179	166	118	180	180	180	185	200
Bachelor's degrees (number of)	181	67	78	145	145	140	150	160
Students with at least 55 credits per year (number of)	318	346	351	450	500	500	550	550
Bachelor's feedback: The response rate (%)	72,9	76,1	80,8	88	88	88	88	90
Bachelor's feedback: The average of the points	3,73	3,84	3,85	4,0	4,0	4,0	4,0	4,1
Master's degrees taken by foreign citizens (number of)	32	23	18	22	25	25	25	25
International student mobility (both in & out) in credits	2829	3043	2647	3800	4200	4200	4500	4500

( ) Proceeding papers included

Education

Student intake	2015	2016	2017	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Actual	Actual	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	120	135	150	160	175	185	185	185	185
Master's programmes *	80	95	115	87	83	90	90	90	90

* Not including Aalto University's own bachelor students

Programme portfolio 2020-2023	
Current degree programmes	**Ending year (if programme is ending)**
Kemian tekniikan kandidaattiohjelma Aalto BSc Programme in Science and Technology	
Master's Programme in Chemical, Biochemical and Materials Engineering Master's Programme in Advanced Energy Solutions Master's Programme in Life Science Technologies Master's Programme in International Design Business Management - M.Sc. In Technology (CHEM) Master's Programme in Environomical Pathways for Sustainable Energy Systems (SELECT) Master's Programme in European Mining, Minerals and Environmental Programme (EMMEP) Nordic Master's Programme in Polymer Technology	
New programme	**Starting year**
European Master in Biological and Chemical Engineering for Sustainable Bioeconomy - BIOCEB	2020 (2021 first students to Aalto
MSc Energy Storage, EIT InnoEnergy Master School program (under preparation, ENG in main responsibility)	First admission 2020
Master´s programme in Creative Sustainability	First admission 2020

School's infrastructures 2020

Infrastructure *
Bioeconomy RI
RAMI RI

* Significants infrastructures are listed in the joint document.

Key development actions

Research excellence for academic and societal impact

Research excellence

- Further strengthening school's focus areas by targeted TT-and staff scientist recruitments, graduate and post doc programmes and infrastructure investments.
- Emphasizing high quality publications and open access publishing by active work in the publication forum and by systematic support of young professors.
- Ensuring highly competed funds from the Academy of Finland and especially the EU by active tutoring, efficient support services and increased networking.
- Focusing on research aiming at solving the Grand Challenges especially climate change and energy and resource scarcity, this provides a real growth potential to Aalto and CHEM school.

Research environment

- Continuous development of our national roadmap infras (Bioeconomy, RAMI) together with the strategic partners VTT and GTK.
- Upgrading the most significant infras, towards new national FIRI and European ESFRIs roadmaps
- Infrastructures in a full use by the Aalto University faculty, other national and international scientific communities and industrial partners due to a developed open reservation system.
- Efficient school level technical support together with academic support (new scientists) for infrastructures.

Research networks

- Active role in the key national (e.g. VTT, GTK, LUKE, and CLIC Innovations, Helsinki University) and international networks (e.g. EIT RawMaterials KIC and EIT Climate KIC, North Caroline State University, KTH) both in research and in education.

Innovation ecosystem

- Focus and profile on the ecosystems highly important to our school: Bio- and Circular economy in the fields of materials, process technology, metallurgy, chemical energy technologies and process digitalisation.
- Continue to build new strategic openings with 3-5 industrial partners, including all aspects of the Aalto partnership model.
- Introduce young professors to the industry and promote collaboration via targeted visits and workshops, FinnCERES activities and school's Industrial Advisory Board.
- Establish an internationally attractive ecosystem BIOFACTORY with start-ups, SMEs and large companies utilising infrastructures, research themes, and education in the field of Bioeconomy.
- With the joint affiliations (PoP, Designer in Residence) enlarge interdisciplinary collaboration between ARTS, BIZ and the industry.
- Develop the Industrial Advisory Board activities to get the maximum benefit for our school.

Renewing society by art, creativity and design

1. Excellence

- To ensure that CHEM has a solid mechanism to collaborate with ARTS this includes continuously hosting Artist in Residence and Designer in Residences, and joint affiliations such as PoP, Designer in Residence with ARTS

2. Visibility & impact

- To have excellent visibility of school´s research and education for all stakeholders through exhibitions and different co-creating artworks, and projects
- Ensuring "the open campus" at CHEM by sharing galleries, co-creating artworks, and initiating creative activities.

3. Broader art-based offering

- Further spreading knowledge of UWAS (University Wide Art Studies) for CHEM students, and staff who is working with study plans and giving student advice.
- Strengthening CHEMARTS activities by maintaining a CHEMARTS lecturer and other joint positions

4. Mechanisms to enable creative practices

- Course contents and curricula are updated with creative practices in mind
- Introducing design thinking elements in CHEM education

Scaling up the interdisciplinary network to increase the entrepreneurial mind-set and design thinking of personnel

By embedding design research to the projects and teaching at the early state, e.g. in funding applications

Educating game changers

1. Attractive programme

- Programme attractiveness will be increased by streamlining the programmes and efficient marketing. The negative image of chemistry will be turned to possibilities to solve the Grand Challenges by active communication and marketing. Furthermore, the concept and possibilities of chemical engineering will be made more concrete to high school and first year students.
- Number of application targets and the content of programme portfolio will be reconsidered.
- Strengthen CHEM programmes with Aalto University multidisciplinary areas (design, entrepreneurship, ICT, etc.).

2. E-learning solutions

- To expand electronic learning methods to several courses and implementing electronic examination of large courses.
- Offering e-learning courses will provide flexible studies for students and improve efficiency in course provision (economic and timesavings.)
- Participation in development of national bioeconomy e-learning material and platform. Platform brings also possibilities to arrange continuous learning offering.

3. Success of students

- To continue "the CHEM 55 credit development plan" (bottleneck courses analysis, scheduling of studies, school's trainee positions + summer courses, etc.).
- To continue active academic advising (tutoring) to support learning and study progress.
- Teaching pilot for doctoral students: students will participate more in mass course teaching and thus obtain better pedagogic skills; additional resources will help the departments and improve the quality of teaching.

4. Working life competences

• To strengthen collaboration with employer organisations in promoting students' working life capabilities.

• Highlighting educational collaboration with industrial partners.

• Enabling internships by, e.g., digital solutions and scheduling.

5. Continuous learning

• Continuous learning offering to be developed and integrated into schools' educational activities.

• Target groups are decision makers in society, alumni and persons in need of re-education.

• Bioeconomy and circular economy as first identified fields.

Future plan for tenure track positions 2020

Priority	Key research area	School focus area	Department	Description	New or redirected slot	Est. call opening	Est starting time
1	Materials and Sustainable use of Natural Resources	Chemistry, Biorefinery	CMAT/BIO2 / CMET	Advanced modern synthesis. Organic synthesis using emerging technologies. Strong synergy with industrial chemistry, catalysis, polymer engineering, non-fossil raw materials and Bioeconomy. Industrial collaborations emphasized.	Redirected.	2020	2021
2	Materials and Sustainable use of Natural Resources	Plant design and Process Systems Engineering	CMET	High student interest and industrial relevance in rapidly evolving field	Redirected	2020	2021

Key research area	2018	Plan 2019	Plan 2020	Plan 2021	Plan 2022	Plan 2023
Human centered living environments						
Advanced energy solutions						
Health and wellbeing						
ICT and digitalization						
Global business dynamics						
Arts and design knowledge building						
Materials and sustainable use of natural resources		47	46	48	47	45
Enabling areas						
Professorships (total)		47	46	48	47	45

Plan for basic funded slots 2020–2023

	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *		42,4	42,4	42,4	42,4	42,4
Planned use of flex (max 10%) **		4,2	4,2	4,2	4,2	2,6
Total slots		46,6	46,6	46,6	46,6	45

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

Externally funded slots	2018	2019	2020	2021	2022	2023
Plan for 2019–2022	Actual	Plan	Target	Target	Target	Target
Donation based slots (number of)				1 (Forest industry)	1(Forest industry)	1 (Forest industry)
Co-funded slots (number of)						
TT fund slots (number of)						
Total		**0**	**0**	**1**	**1**	**1**

Proforma

PRO FORMA (1 000 EUR)	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Budget	LTP	LTP	LTP	LTP
Turnover	**41 109**	**42 083**	**43 973**	**45 215**	**46 390**	**47 225**	**47 440**
Basic funding	26 150	25 665	26 371	25 987	25 613	25 600	25 600
Business Finland	2 921	1 941	2 372	2 690	3 090	3 236	3 208
Academy of Finland	5 301	6 137	6 280	6 277	6 521	6 697	6 682
European Union	2 936	3 848	3 713	4 094	4 307	4 481	4 500
Corporate	2 658	3 044	3 292	3 769	4 045	4 336	4 566
Other income	732	940	1 654	1 769	1 730	1 769	1 827
Transfer from special purpose funds	0	0	83	502	1 079	1 101	1 051
Internal income	412	509	208	128	6	6	6
Total Expenses	**40 905**	**43 276**	**45 863**	**46 243**	**46 381**	**46 991**	**47 203**
Academic Personnel	17 926	20 374	21 488	21 503	21 915	22 442	22 719
Service Personnel	2 885	2 592	2 713	2 765	2 728	2 705	2 717
Facilities	28	99	71	49	43	53	54
Internal expenses (facilities)	5 223	5 072	4 779	5 007	5 006	5 006	4 979
Services	1 729	1 616	1 675	1 694	1 670	1 653	1 654
Depreciations	1 378	1 402	1 913	2 232	2 215	2 213	2 102
Other	3 372	3 547	4 262	4 093	3 899	3 995	4 047
Joint Services expenses	8 151	8 344	8 538	8 659	8 659	8 659	8 659
Internal expenses (university)	213	231	424	241	245	265	271
OPERATIVE PROFIT/LOSS	**204**	**-1 192**	**-1 890**	**-1 028**	**10**	**234**	**237**
Income/expenses from fundraising				800	1 300	1 300	1 300
Transfer to special purpose funds				-800	-1 300	-1 300	-1 300
CUMULATIVE PROFIT/LOSS	**6 458**	**5 243**	**3 353**	**2 325**	**2 335**	**2 569**	**2 805**

Personnel plan

FTE	2017	2018	2019	2020	2021	2022	2022
Professors, tenure track	42	42	43	43	44	43	43
Professors, fixed term	1	3	2	4	2	2	3
Teaching personnel	20	21	24	24	24	24	23
Other research and teaching personnel	3	5	5	3	2	3	3
Hourly teaching (incl. computational)	5	7					
Postdocs	71	94	93	82	87	89	94
Doctoral students	122	119	139	146	160	162	165
Project researchers	4	6	8	6	3	4	4
Teaching and research assistants, basic	65	77	50	53	54	58	55
Academic personnel	**333**	**373**	**365**	**361**	**376**	**384**	**390**
Research and innovation services	1						
Learning services	15	15	16	16	15	15	15
Technical support services	33	34	36	35	33	33	33
Leadership support services	3	3	3	3	4	4	4
Financial services	12	11	11	12	12	12	12
HR services	6	6	6	6	6	6	6
Secretarial services	2	3	3	3	3	3	3
School specific services	2	2	6	6	6	6	6
Communications services							
IT services							
Campus services							
Service personnel *	**73**	**75**	**81**	**81**	**78**	**78**	**78**
FTE TOTAL	**406**	**447**	**442**	**443**	**453**	**461**	**467**

* Service personnel for 2020–2022 to be planned jointly in 2019.

School of Electrical Engineering

Performance indicators

Performance Indicator	2018	2019	2020	2021	2022	2023
Research	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	16,0	17	18	18,5	19	19,5
Quality of publications (number of top 10% publications)	324	310	330	340	350	360
Scientific publications (JUFO Score) (number of)	1 458	1 700	1 750	1800	1 900	1900
Doctoral degrees (number of)	56	60	50	50	55	60
International competitive research funding (1 000 EUR)	3 232	4 200	4 300	4 400	4 600	4 600
Other competitive research funding (1 000 EUR)	15 818	14000	17 000	17 000	17 000	17 000
Education	Actual	Target	Target	Target	Target	Target
Master's degrees (number of)	216	275	275	275	275	280
Bachelor's degrees (number of)	186	250	250	250	250	250
Students with at least 55 credits per year (number of)	624	850	900	900	950	950
Bachelor's feedback: The response rate (%)	87,1	85	90	90	95	95
Bachelor's feedback: The average of the points	3,90	4,0	4,0	4,0	4,1	4,1
Master's degrees taken by foreign citizens (number of)	71	50	80	85	85	85
International student mobility (both in & out) in credits	4256	4 800	4 900	5000	5 500	5500

( ) Proceeding papers included

Education

Student intake	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	300	310	320	330	340	350
Master's programmes *	145	175	185	195	205	205

* Not including Aalto University's own bachelor students

Programme portfolio 2020-2023	
Current degree programmes	**Ending year (if programme is ending)**
Sähkötekniikan kandidaattiohjelma	
Aalto Bachelor's Programme in Science and Technology (1 own major)	
Master's Programme in Electronics and Nanotechnology	
Masters's Programme in Automation and Electrical Engineering	
Master's Programme in Computer, Communication and Information Sciences (2 own majors)	
Master's Programme in Advanced Energy Solutions (1 own major)	
Master's Programme in ICT Innovation (EIT Digital Master School) (2 own majors)	
Master's Programme in Life Science Technology (1 own major)	
New programme	**Starting year**
Master's Programme in Space Science and Technology	Existing programme but the current Erasmus contract is about to end. Continuation applied.

School's infrastructures 2020

Infrastructure *
Aalto Acoustics Lab (ICT, HW, ART)**
ComNext 5G/6G Research Platform (ICT)
Aalto Electronics (ICT)
ePowerHub (ENE, LIV, ICT)
National Standards Laboratory (Metrology)

* Significants infrastructures are listed in the joint document.
** Key research area(s) in parentheses

Key development actions

Research excellence for academic and societal impact

- **Recruitment of world class academic staff:** Strategic effort in recruiting postdocs and other senior researchers has given concrete results. The focus during the rest of the strategy period will be on maintaining the balanced personnel structure, on recruiting doctoral candidates.
    - ELEC will strongly promote diversity in recruitment. Necessary means for increasing staff diversity will be developed.

- **Research funding:** The amount of external funding has developed positively but there is room for improvement in diversity of the funding base and especially in EU and direct company funding. Incentives for applying larger projects and coordinating larger applications also need developing.
    - Special emphasis will be put into foundations as a new funding segment.

- **State-of-art research infrastructures are a competitive factor for ELEC.** Infrastructures are developed systematically and continuously and depreciations have reached 6 % of the total turnover. Renewal and/or relocation of large infrastructures and maintaining/finding/reaching a sufficient level of competent technical staff are on focus during the rest of the strategy period.

- **Innovation and Impact:** Establish ELEC innovation organisation to support innovation activities and efficiently co-operate with IES and the Vice President for Innovation. Consider different ways to recognize ELEC innovators and entrepreneurs.

- **Multidisciplinary research:** Develop/utilise opportunities to promote networking between ELEC, ARTS and BIZ researchers since shortage of funding opportunities slow down the birth of Multidisciplinary (MD) projects. Continue to support well advancing MD activities in education (increasing number of MD student projects in courses, design in engineering education, internally funded MD doctoral school positions).

- **Researchers' wellbeing:** We see management and supervision as a key factor in wellbeing of researchers, and that is why we will continue to support the line management and leadership in onboarding of new employees, setting clear targets, mentoring, and career guidance. For providing a good working environment for the researchers, ELEC focuses on solving problems with our buildings that are reaching or have already reached their maximum capacity. We also continue to further develop events like ELEC Family Day that bring together our community members with diverse backgrounds and their families and contribute to integrating our international staff to the community. Sustainability as a cross-cutting theme will be promoted.

Renewing society by art, creativity and design

- **Collaboration with ARTS**
    - **Joint Professor of Practice (Sound in VR)** The goal is to successfully fill the Professor of Practice position which is an important step towards closer collaboration with ARTS.
    - **Multidiciplinary doctoral school positions** Two of the six multidisciplinary doctoral school positions started in 2019 were filled with candidates with a second supervisor from ARTS. Now the focus is on monitoring and evaluating the programme.
    - **Research collaboration** Encourage applying seed funding for multidisciplinary research with ARTS.

- **Engineering design** Engineering design is now part of the ELEC teaching portfolio both on BSc and MSc levels. The success factors and targets for development of the courses have been carefully analysed after the first year and the courses are going to be adjusted accordingly.

- **Events:** Support Art and Design activities and events promoted by ARTS school.

Educating game changers

- **Improve ELEC students' study progress:** The most important action is the update of ELEC education syllabi, which affects both the contents and teaching of the courses and students' perceived workload. In addition, the invocation of best practices will be continued e.g. BSc scholarship for exemplary study progress, recognition of practical training and balancing students' workload by continuous assessment. A new course supporting MSc thesis writing process has been established based on last year pilot.

- **Increase the number of MSc students.** In 2018 the number of enrolled new MSc students almost doubled from 57 to 107 because of Automation and electrical engineering which met the student recruitment targets. The other programmes/majors in ELEC, however, should increase their marketing efforts.

- **Raise the efficiency of BSc education**. Long-term data of BSc studies indicate that about 70-75% of the enrolled BSc students will eventually graduate. If the statistics is acknowledged, 250 BSc degrees as the target would imply at least 335 quota for new students. Actually, even higher because of decreasing talent. ELEC will conservatively increase the BSc student intake, but preferably renew the BSc education after Teaching Evaluation Exercise in 2020. In BSc student recruitment special effort is spent to increase the number of female applications.

- **Enhance study well-being support specifically among foreign MSc students**. Preliminary analysis shows that risk of burn-out have increased 19% (2018) to 26% (2019) among MSc students and from 12% to 15% among BSc students. The higher stress level of MSc students correlates directly with the increased intake of foreign students. Hence, specific attention to the support of this student group will be paid in 2019.

- **Mobility of ELEC BSc students to other programmes in Aalto is high**. Statistics indicate that a considerable part of ELEC's BSc students transfer to another Aalto school which, on one hand, results in multidisciplinary MSc graduates, but is very problematic from ELEC's point of view due to the loss of good MSc students.

- **Continue the development of the new English-instructed BSc major.** The small number of BSc students in the new BSc programme was a disappointment. The application pressure exceeded all expectations (342), but yet the number of accepted students was small (14). Yet BSc education is seen as an investment for future and thus, the development courses taught in English will continue.

Future plan for tenure track positions 2020

Priority	Key research area	School focus area	Depart-ment	Descrip-tion	New or redirected slot	Est.call opening	Est.starting time
1	Advanced energy solutions / ICT digitalization	Advanced energy solutions / Information and communication technologies	EEA	Autonomous systems and robotics	New slot	2H19	2H20
2	Advanced energy solutions	Advanced energy solutions	EEA	Power systems	New slot	2H19	2H20
3	Materials and sustainable use of natural resources	Materials and sustainable use of natural resources	ELE	Complex material electromagnetics	New slot	1H20	1H21
4	ICT and digitalisation	Information and communication technologies	COMNET	Communications and Networking Technology	New slot	1H20	1H21

Professors in key research areas	2018	2019	Plan 2020	Plan 2021	Plan 2022	Plan 2023
Human centered living environments						
Advanced energy solutions	14	14	15	14	14	14
Health and wellbeing	7	6	6	6	6	6
ICT and digitalization	33,4	32,4	33,4	33,4	33,4	32,4
Global business dynamics						
Arts and design knowledge building						
Materials and sustainable use of natural resources	8	8	9	9	9	9
Enabling areas	3	3	3	3	3	3
Professorships (total)	**65,4**	**63,4**	**66,4**	**65,4**	**65,4**	**64,4**

Plan for basic funded slots 2020–2023	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *	57	57	58	58	58	58
Planned use of flex (max 10%) **	0,4	2,4	4,4	5,4	2,4	2,4
Total slots* **	57,4	59,4	62,4	63,4	60,4	60,4

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

*** Excluding fund slots, please see below

Externally funded slots	2018	2019	2020	2021	2022	2023
Plan for 2019–2022	Actual	Plan	Target	Target	Target	Target
Donation based slots (number of)	0	0	1	1	2	2
Co-funded slots (number of)						
TT fund slots (number of)	2	3	3	3	3	3
Total	**2**	**3**	**4**	**4**	**5**	**5**

Proforma

PRO FORMA (1 000 EUR)	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Forecast T1	LTP	LTP	LTP	LTP
Turnover	**57 081**	**59 765**	**61 569**	**61 374**	**61 593**	**61 807**	**61 887**
Basic funding	35 312	36 329	35 713	35 050	35 050	35 050	35 050
Business Finland	3 227	3 742	4 047	4 163	4 210	4 260	4 300
Academy of Finland	7 718	8 386	8 602	8 750	8 850	8 950	9 050
EU	3 993	3 816	4 329	4 567	4 557	4 600	4 600
Corporate	3 259	3 559	4 207	4 380	4 450	4 550	4 650
Other income	2 887	2890	3176	3 100	3 100	3 150	3 200
Transfer from special purpose funds			341	385	392	359	156
Internal income	684	1 043	1 154	979	984	888	881
Total Expenses	**55 070**	**57 866**	**60 629**	**61 744**	**62 059**	**62 003**	**61 771**
Academic personnel	24 876	26 672	28 613	29 072	29 530	29 581	29 664
Service personnel	4 955	5 104	5 313	5 394	5 282	5 282	5 240
Facilities	5 120	4 596	4 200	4 574	4 483	4 491	4 494
Services	2 182	2 365	2 802	2 276	2 300	2 300	2 300
Depreciations	2 481	2 810	2 967	3 525	3 680	3 543	3 308
Other	4 321	4 218	4 972	4 952	4 850	4 870	4 890
Joint Services expenses	11 076	11 498	11 665	11 829	11 829	11 829	11 829
Other internal expenses	57	603	97	122	106	106	47
OPERATIVE PROFIT/LOSS	**2 011**	**1 900**	**941**	**-370**	**-465**	**-196**	**116**
Income and expenses from fundraising			300	500	500	500	500
Transfer to special purpose funds			-300	-500	-500	-500	-500
CUMULATIVE PROFIT/LOSS	**19 046**	**18 449**	**19 390**	**19 020**	**18 555**	**18 359**	**18 475**

Personnel plan

FTE	2017	2018	2019	2020	2021	2022	2023
Professors, tenure track	53	53	57	60	63	62	63
Professors, fixed term	2	4	4	5	5	4	4
Teaching personnel	24	24	25	25	26	26	25
Other research and teaching personnel	11	14	12	10	11	10	10
Hourly teaching (incl. computational)	16						
Postdocs	73	97	107	110	107	110	113
Doctoral students	190	197	202	206	210	215	215
Project researchers	9	10	13	10	13	13	13
Teaching and research assistants, basic	88	80	89	90	90	90	90
Academic personnel	**466**	**479**	**509**	**516**	**525**	**530**	**533**
Research and innovation services	0	0	0				
Learning services	22	23	23				
Technical support services	32	31	37				
Leadership support services	3	3	3				
Financial services	17	19	19				
HR services	14	14	13				
Secretarial services	6	3	3				
School specific services	0	0	1				
Communications services	0	0	0				
IT services	0	0	0				
Campus services	0	0	0				
Service personnel *	**94**	**94**	**99**				
FTE TOTAL	**560**	**573**	**608**				

* Service personnel for 2020–2022 to be planned jointly in 2019.

School of Engineering

Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
Research	Actual	Actual	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	(15,0)	16,3 (15,3)	15,8	18,5	20	20	20	20
Quality of publications (number of top 10% publications)	(186)	194 (232)	214	238	259	264	270	270
Scientific publications (JUFO Score) (number of)	851	813	804	830	850	860	870	870
Doctoral degrees (number of)	43	35	42	45	45	45	45	45
International competitive research funding (1 000 EUR)	1195	885	1541	1 800	2 300	2 600	2 800	3 000
Other competitive research funding (1 000 EUR)	10873	11026	9739	10 800	11 100	9 800	9 800	9 900
Education	Actual	Actual	Actual	Target	Target	Target	Target	Target
Master's degrees (number of)	420	630	256	400	400	400	400	400
Bachelor's degrees (number of)	490	223	244	300	300	300	300	300
Students with at least 55 credits per year (number of)	1007	995	902	1300	1 200	1 200	1 200	1 200
Bachelor's feedback: The response rate (%)	74,5	87,0	86,9	85	90	90	90	90
Bachelor's feedback: The average of the points	3,7	3,71	3,78	4,0	4,0	4,0	4,1	4,1
Master's degrees taken by foreign citizens (number of)	49	87	70	50	70	80	90	100
International student mobility (both in & out) in credits	6107	6326	6334	7 300	8 000	8 000	8 000	8 000

( ) Proceeding papers included

Education

Student intake	2015	2016	2017	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Actual	Actual	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	302	290	290	290	315	345	345	345	345
Master's programmes *	154	216	221	234	250	355	355	355	355

* Not including Aalto University's own bachelor students

Programme portfolio 2020-2023

Current degree programmes	Ending year (if programme is ending)
Bachelor's Programme in Engineering: major in Built Environment	
Bachelor's Programme in Engineering: major in Energy and Environmental Engineering	
Bachelor's Programme in Engineering: major in Mechanical and Structural Engineering	
Bachelor's Programme in Science and Technology: major in Computational Engineering	
MSc: Advanced Energy Solutions, ENG majors: Sustainable Energy in Buildings and Built Environment Sustainable Energy Conversion Processes /MSc in Energy Technology (no intake since 2016)	
MSc: Mechanical Engineering	
MSc Nordic: Innovative and Sustainable Energy Engineering	
MSc Nordic: Maritime Engineering	
MSc Nordic: Cold Climate Engineering	
MSc Nordic in Environmental Engineering	
MSc: International Design Business Management (MSc in Technology)	
MSc: Water and Environmental Engineering	
MSc: Geoinformatics	
MSc: Real Estate Economics	
MSc: Spatial Planning and Transportation Engineering	
MSc: Creative Sustainability	ENG 2020
MSc in Urban Studies and Planning: major in Urban Studies and Planning in Real Estate Economics	
MSc: Building Technology	
MSc: Geoengineering	
MSc: European Mining, Minerals and Environment Program	
New programmes	**Starting year**
EIT Master's Programme in Urban Mobility (working title)	2020
EIT Master's Programme in Energy Storage (working title)	2020
EIT Master's Programme in Manufacturing (working title)	2021
MSc: Structural engineering and architecture	2021

School's infrastructures 2020

Infrastructure *
Aalto Ice Tank
Aalto Works i3

* Significant infrastructures are listed in the joint document.

Key development actions

Research excellence for academic and societal impact

- The School will continue to focus on recruitment and development of TT –professors in key fields. Special attention is given to diversity and equality.
- Continue to leverage investments in doctoral education via doctoral education co-funding with industries.
- Discussion with stakeholders are ongoing to fund new TT- and PoP professors or provide long-term research resources
- The School is implementing a multi-year research infrastructure investment plan for the IceTank and i3. Pilot a Nordic 5 Tech initiative on infrastructure sharing and doctoral candidate exchanges.
- ENG is active in the start-up phase of two new EIT initiatives: Urban Mobility KIC and Manufacturing KIC.
- Give attention to top-10% publications
- Promote Urban Finland Initiative
- Technical services will be under development in ENG due to retirements and the creation of the i3-infra and future Aalto Works. ENG will need additional competences to support experimental research to fully utilise infrastructures for education, research and co-operation with external users.

Renewing society by art, creativity and design

- Continuous improvement of 1st year ENG-ARTS course
- Further development of the Industrial Design Doctoral School together with ARTS and BIZ
- Establish an adjunct professorship in design together with Design Factory Melbourne
- Innovation through design discussions with SUTD
- Add two to four partners to the DFGN
- Expand existing 3D Studio
- Initiate the Aalto Cruise Experience Centre (ACEC)

Eucating game changers

- ENG wishes to participate in developing a comprehensive education plan for the university. This should include a road map in which BSc and MSc intake numbers as well as graduation targets would be in balance with teaching and advising resources of the school.
- Several actions that aim to balancing the work load in education will be carried out; among others following the amount of supervised MSc theses per professors, and monitoring the number of courses by teaching personnel.
- Continuation of the selection of suitable UWS courses and participating in the UWS education development in the school and the university
- Continuation of the developed concept DIGISTUDIO in digitalization of courses

- More course implementations per year for some key BSc level courses. The English language BSc major in Computational Engineering will provide more options and flexibility for students
- ENG's Bachelor's Programme Steering Group has made to courses in the compulsory basic studies module to give more options for students. Also, some timetable changes will be made to ensure more fluent study paths for students.
- ENG will introduce a period based newsletter about study affairs for students first time in May 2019.
- Create a more visible connection between ENG DF and the Aalto Jr and LUMA centres

Future plan for tenure track positions 2020

Priority	Key research area	School focus area	Department	Description	New or redirected slot	Est. call opening	Est starting time
1	ICT and digitalisation	Systems design and production	Built Environment	Geoinformation Technology	New	Jan 2020	Jan 2021
2	Human-centered living environment	Sustainable built environment	Civil Engineering	Structural Engineering	New	Jan 2020	Jan 2021
3	ICT and digitalization	Systems design and production	Mechanical Engineering	Mechatronic machines in digitalized industry	Redirected slot (10302)	August 2019	August 2020

Key research area	2018	Plan 2019	Plan 2020	Plan 2021	Plan 2022	Plan 2023
Human centered living environments	31,2	35,5	35,5	35,5	34,8	34,8
Advanced energy solutions	8	9	9	9	9	9
Health and wellbeing						
ICT and digitalization	8,4	7,4	7,4	7,4	7,4	7,4
Global business dynamics						
Arts and design knowledge building	2	2	2	2	2	2
Materials and sustainable use of natural resources	14	15	15	15	15	15
Enabling areas	1					
Professorships (total)	**64,6**	**68,9**	**68,9**	**68,9**	**68,2**	**68,2**

with flex slots and donation slots

Plan for basic funded slots 2020–2023

	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *	60,6	60,2	60,2	60,2	60,2	60,2
Planned use of flex (max 10%) **		6	6	5,4	4,4	4,4
Total slots		66,2	66,2	65,6	64,6	64,6

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

Externally funded slots	2018	2019	2020	2021	2022	2023
Plan for 2019–2022	Actual	Plan	Target	Target	Target	Target
Donation based slots (number of)		0,3	0,3	1,3	1,6	1,6
Co-funded slots (number of)		2*0,5	1	1	1	1
TT fund slots (number of)	1	1	1	1	1	1
Total	**1,0**	**2,3**	**2,3**	**3,3**	**3,6**	**3,6**

Proforma

PRO FORMA (1 000 EUR)	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Budget	LTP	LTP	LTP	LTP
Turnover	**56 227**	**55 826**	**55 229**	**53 411**	**55 435**	**55 753**	**56 492**
Basic funding	38 686	38 965	38 753	35 960	37 717	37 724	37 968
Business Finland	4 564	3 738	2 292	2 625	2 605	2 635	2 636
Academy of Finland	4 724	4 429	3 783	4 234	4 607	4 560	4 707
EU	1 270	2 017	2 810	3 306	3 368	3 483	3 667
Corporate	2 143	2 067	2 075	2 156	2 396	2 546	2 676
Other	3 959	3 735	4 103	3 625	3 472	3 482	3 662
Transfer from special purpose funds			998	1 342	1 107	1 160	1 012
Internal income	880	875	416	163	163	163	163
Expenses	**53 209**	**53 326**	**55 172**	**56 133**	**56 478**	**56 571**	**56 264**
Academic personnel	23 413	23 945	25 370	25 377	25 831	25 760	25 665
Service personnel	5 944	5 869	5 910	6 016	5 952	5 955	5 970
Facilities	6 209	5 086	4 805	5 115	5 316	5 332	5 373
Services	1 669	2 217	1 858	1 799	1 718	1 760	1 677
Depreciations	702	915	1 154	1 666	1 660	1 800	1 926
Other	3 344	3 251	3 921	3 836	3 675	3 638	3 329
Joint Services expenses	11 489	11 934	12 141	12 312	12 312	12 312	12 312
Other internal expenses	440	110	14	13	13	13	13
OPERATIVE PROFIT/LOSS	**3 018**	**2 500**	**57**	**-2 722**	**-1 042**	**-818**	**228**
Income/expenses from fundraising		**0**	**533**	**1 572**	**722**	**1 022**	**900**
Transfer to special purpose funds		**0**	**-533**	**-1 572**	**-722**	**-1 022**	**-900**
CUMULATIVE PROFIT/LOSS	**8 267**	**10 769**	**10 826**	**8 104**	**7 061**	**6 244**	**6 472**

Personnel plan

FTE	2017	2018	2019	2020	2021	2022	2023
Professors, tenure track	56	56	57	62	64	64	64
Professors, fixed term	8	9	11	11	11	11	12
Teaching personnel	31	32	31	30	30	30	30
Other research and teaching personnel	6	7	4	3	2	2	2
Hourly teaching (incl. computational)	29	26	28	28	28	28	28
Postdocs	61	64	75	75	73	71	71
Doctoral students	142	149	159	164	175	180	181
Project researchers	29	28	20	17	15	15	14
Teaching and research assistants, basic	71	72	77	70	74	73	75
Academic personnel	**433**	**443**	**462**	**460**	**472**	**474**	**476**
Research and innovation services	0	0	0				
Learning services	27	28	27				
Technical support services	51	52	49				
Leadership support services	3	2	2				
Financial services	21	19	18				
HR services	11	11	11				
Secretarial services	4	4	4				
School specific services	11	11	11				
Communications services	0	0	0				
IT services	0	0	0				
Campus services	1	1	1				
Service personnel *	**129**	**128**	**124**				
FTE TOTAL	**562**	**571**	**586**				

* Service personnel for 2020–2022 to be planned jointly in 2019.

School of Science

Performance indicators

Performance Indicator	2016	2017	2018	2019	2020	2021	2022	2023
Research	Actual	Actual	Actual	Target	Target	Target	Target	Target
Quality of publications in % (Proportion of top 10% publications)	(16,7)	17,0 (17,1)	18,2	19	20	20,5	21	21,5
Quality of publications (number of top 10% publications)	(714)	645 (813)	723	730	780	800	840	850
Scientific publications (JUFO Score) (number of)	2554	2369,8	2306,3	2450	2500	2600	2700	2750
Doctoral degrees (number of)	83	76	88	72	75	73	75	75
International competitive research funding (1 000 EUR)	7422	6180	7691	7500	8000	8200	8500	8700
Other competitive research funding (1 000 EUR)	28133	24849	23728	25500	26000	26500	27000	27500
Education	Actual	Actual	Actual	Target	Target	Target	Target	Target
Master's degrees (number of)	323	326	291	330	350	360	370	380
Bachelor's degrees (number of)	356	191	204	275	275	275	290	310
Students with at least 55 credits per year (number of)	668	758	823	900	1 000	1050	1100	1200
Bachelor's feedback: The response rate (%)	64,0	90,6	93,1	90	93	94	95	96
Bachelor's feedback: The average of the points	3,94	4,03	4,08	4,1	4,15	4,2	4,25	4,3
Master's degrees taken by foreign citizens (number of)	83	95	88	70	80	90	100	120
International student mobility (both in & out) in credits	5839	6831	7709	6 200	7800	8000	8000	8000

( ) Proceeding papers included

Education

Student intake	2015	2016	2017	2018	2019	2020	2021	2022	2023
Student places offered in	Actual	Actual	Actual	Actual	Target	Target	Target	Target	Target
Bachelor's programmes	280	262	261	286	310	330	340	340	340
Master's programmes *	302	277	262	308	321	382	382	382	382

* Not including Aalto University's own bachelor students

Programme portfolio 2020-2023

Current degree programmes	Ending year (if programme is ending)
Aalto University Bachelor's Programmes in Science and Technology: Data Science Quantum Technology	
Bachelor Programme in Science and Technology (teknistietellinen kandidaattiohjelma) /study options: Computer Science (Tietotekniikka) Engineering Physics and Mathematics (Teknillinen fysiikka ja matematiikka) Information Networks (Informaatioverkostot) Industrial Engineering and Management (Tuotantotalous)	
Master's Programmes: Engineering Physics Industrial Engineering and Management Information Networks Mathematics and Operations Research *Jointly with other Aalto University Schools:* Computer, Communication and Information Sciences, study options: • Computer Science • Game Design and Production • Human-Computer Interaction • Machine Learning, Data Science and Artificial Intelligence • Security and Cloud Computing • Software and Service Engineering Life Science Technologies International Design Business Management	
International double-degree programmes ICT Innovation (EIT Digital Master School), study options: • Autonomous Systems • Cloud and Network Infrastructures • Data Science • Human Computer Interaction and Design • Visual Computing and Design Advanced Materials for Innovation and Sustainability AMIS (EIT Raw Materials) Security and Cloud Computing, SECCLO (Erasmus Mundus)	
Brain and Mind Master's Programme in Applied Mathematics and Engineering Mathematics - N5TeAM euSYSBIO - Master's Programme in Systems BiologyNordSecMob Master's Programme in Security and Mobile Computing	Should be discontinued, no intake for past 4-5 years

Doctoral Programme in Science	
New programme	**Starting year**
Continuation of SECCLO	2021-2023 (funding)

School's infrastructures 2020

Infrastructure *
Applied physics; key research area: MAT, ENE; School: SCI

* Significants infrastructures are listed in the joint document.

Key development actions

Research excellence for academic and societal impact

Research excellence

- Support for SCI focus areas via strategic centres.
  - ABC, ACOR (launched in 2017), AScI, AVP, Biodesign Finland, CQE, HAIC, HIIT.
- Coordinate or participate in Centres of Excellence in all SCI focus areas. ERC grantees in all SCI departments.
  - Two new CoEs started in 2018: Quantum Technology coordinated at PHYS, MS partner in Inverse Modelling and Imaging. Preparing for the next CoE call, including joint effort with CHEM on continuation of HYBER.
  - ERC grantees in 4/5 SCI departments already.
  - School support for successful ERC applicants launched in 2017.
  - Further support and mentoring to utilize all our potential in ERC calls.
- Improve gender balance on all levels of SCI faculty.
  - Develop Shaking up Tech as brand for wider activities.
- Engage in open data sharing.

Research environment

- Secure facilities, equipment and personnel needed for world class research at SCI.
  - Infrastructure strategy at Aalto level needed.
  - Using 2.5 M€ from fundraising to infrastructure: especially support staff and medium size equipment.

Research networks

- Co-operate with top international partners.
  - Boosting professors' research visits abroad via a joint policy of all SCI departments: funding for 1 month / professor annually.
- Build strategic partnerships: major companies, University of Helsinki, VTT Technical Research Centre of Finland, Hospital District of Helsinki and Uusimaa, and Finnish National Defence University.
  - FCAI flagship
  - Participate in Helsinki Network Brain and Mind and National Neurocenter
  - Double-affiliation professors
  - Strategic partnership with Alan Turing Institute
- Co-operate with all Aalto schools. Take/continue in leading/active role in Digi, Energy, Health, and Materials platforms. Participate in Living+ and Experience platforms.
- Ensure relevant research areas are represented in new national and EU programmes.

Innovation ecosystem

- Strengthen strategic alliances and initiatives with key partners, e.g. Aalto Industrial Internet Campus, Biodesign Finland, Health Capital Helsinki
  - Boosting Biodesign Finland by doubling the resources to two teams annually
- Develop accessible research infrastructure to support co-operation.
  - Infrastructure strategy at Aalto level needed.
- Develop new ways of co-operation: industrial PhDs, process and practices for companies to participate without Business Finland funding.
- Support co-location of companies and spin-offs.
- Form European level I&E partnerships via the EIT KICs.
- Develop Aalto Ventures Programme as a part of the university wide ecosystem.
  - Organisation of entrepreneurial education at Aalto with AVP steering group.

Renewing society by art, creativity and design

Visibility & impact

- Develop Aalto Junior activities in collaboration with Aalto ARTS.
- Make better use of visually impressive results.

Broader art-based offering

- Integrate art and design in curricula.

Review of art and design courses in curricula, consider UWAS content.

Renewing Media track in Information networks programme, co-operation with ARTS.

- Broaden Math&Arts offering beyond Crystal Flowers. Collaboration with EMMA.

Mechanisms to enable creative practices

- Strengthen the link between ARTS and SCI, and make the most of multidisciplinary Aalto.
  - Starting from 2018 meeting of AASG representative and Dean two-three times per semester.
  - Explore possibilities for PHYS and ARTS co-operation. How to overcome the bottleneck in producing enough material for ARTS to use?
- Foster multidisciplinarity of strategic initiatives.
  - Consider weather AScI could be extended even further to Aalto wide activity, SCI willing to host.
  - Support strategic planning of overlapping areas via strategic initiatives: e.g. quantum technology via CQE (SCI, ELEC).

Educating game changers

Attractive programmes

- Maintain our position in having the best programmes in Finland and approach the top in Europe.
    - Revising curricula of our programmes by 2020.

Attract the best students.

- School level investment and actions needed in student marketing.
    - Own SCI/ELEC person hired for programme level marketing.
    - Shaking up Tech event launched in 2018.
    - Industry donations for HAIC scholarships for CCIS/major information security
- Ramp up Quantum Technology study option in English BSc programme?

Co-operate with University of Helsinki in building an attractive education hub in the Helsinki area.

- Support internationalisation of students. Form new attractive partners in student exchange. Encourage students to international studies via academic advising.
- Encourage students to take UWAS and UWBS courses, create UWTS courses for ARTS and BIZ students.
- Take responsibility of the basic programming education at Aalto.

E-learning solutions

- Strive for being a forerunner in e-learning in Finland.
    - Draft SCI education digi strategy with programmes in focus.
    - Continue as responsible of the Aalto wide A!OLE initiative.

Success of students

- Ensure faculty commitment for supporting students already on BSc level and throughout their studies.
    - Develop academic advising further based on feedback from first academic year.
    - Systematise academic advising also for MSc level.
    - NBE takes responsibility of BioIT students' academic advising.
- Our graduated students are recognised for their contributions to Finnish society and economy, and are networked globally.
- Utilise best practices for enhancing student well-being developed by IEM and Prodeko in other SCI programmes.

Working life competences

- Acknowledge and give credit to the learning goals students achieve while working during studies.
- Lead the entrepreneurial education at Aalto.
- Teach time management skills consistently through course assignment schedules and thesis work.
- Integrate international students to Finnish working life already during their studies.
- Maintain contact with our graduated students via alumni network.
    - Co-create courses with alumna.
    - Annual get-together events on department/programme level.

Future plan for tenure track positions 2020

Priority	Key research area	School focus area	Department	Description	New or redirected slot	Est. call opening	Est starting time
1	Health and wellbeing	Health technology	NBE	Translational neuroimaging, joint with HUS and UH	new	Q3/19	Q2/20
2	Global business dynamics	Creation and transformation of technology based business	DIEM	Leadership and organizational development	redir	Q3/19	Q2/20
3	Enabling areas	Enabling areas	MS	Analysis/Statistics	redir	Q1/20	Q4/20
4	Health and wellbeing	Health Technology	NBE	Biomedical Engineering: biophotonics	redir	Q1/20	Q3/20
5	Materials and sustainable use of natural resources / Advanced energy solutions	Advanced energy solutions / Condensed matter and materials physics	PHYS	Emerging field; experimental physics Examples: Novel photonics, Novel energy materials	redir	Q3/19	Q2/20
6	Global business dynamics	Creation and transformation of technology based business	DIEM	Technology and innovation management	redir	Q2/20	Q1/21
7	Materials and sustainable use of natural resources / Advanced energy solutions	Advanced energy solutions / Condensed matter and materials physics	PHYS	Applied physics with strong industrial connection	redir	Q3/20	Q2/21

Key research area	2018	Plan 2019	Plan 2020	Plan 2021	Plan 2022	Plan 2023
Human centered living environments						
Advanced energy solutions		3	3	3	3	3
Health and wellbeing		13	13	13	12	12
ICT and digitalization		45,5	43,5	42,5	42,5	42,5
Global business dynamics		19	19	17	17	17
Arts and design knowledge building						
Materials and sustainable use of natural resources		22	22	22	21	20
Enabling areas		16	16	16	15	15
Professorships (total)		118,5	116,5	113,5	110,5	109,5

Plan for basic funded slots 2020–2023

	2018	2019	2020	2021	2022	2023
Target for directly funded slots (number of) *		95,5	94,5	94,5***	94,5***	94,5***
Planned use of flex (max 10%) **		20(8)	19(7)	16(2)	14(2)	14(1)
Total slots****		115,5	113,5	110,5	108,5	108,5

* Baseline for tenure slot funding. Tenure track professorships allocated by the President including professorships for artistic/design/architectural practices. Other professorships that are not allocated by the President (e.g. professors of practice and adjunct professors) are not included.

** Flex pre-empts retirements & other exits from long-term slots and takes into account that filling positions takes time.

*** Pending on new strategy. ****flex total(over65)

Externally funded slots	2018	2019	2020	2021	2022	2023
Plan for 2019–2022	Actual	Plan	Target	Target	Target	Target
Donation based slots (number of)						
Co-funded slots (number of)		1	1	1	1	1
TT fund slots (number of)	1	2	2	2	2	2
Total	**1**	**3**	**3**	**3**	**3**	**3**

Proforma

PRO FORMA (1 000 EUR)	2017	2018	2019	2020	2021	2022	2023
	Actual	Actual	Budget	LTP	LTP	LTP	LTP
Turnover	**100 257**	**99 257**	**101 844**	**101 822**	**102 851**	**104 420**	**106 087**
Basic funding	63 592	61 679	62 604	62 544	62 599	62 520	62 541
Business Finland	5 070	4 385	3 924	3 575	3 515	3 668	3 847
Academy of Finland	18 600	18 462	18 556	18 553	19 366	19 914	20 513
EU	8 662	9 271	10 651	10 837	10 797	11 080	11 261
Corporate	1 478	1 111	1 315	1 451	1 802	2 369	2 843
Other	2 428	3 190	3 692	3 678	3 549	3 559	3 563
Transfer from special purpose funds			479	684	753	811	1016
Internal income	426	1 158	624	501	496	502	503
Expenses	**94 548**	**95 412**	**100 576**	**102 222**	**103 044**	**103 771**	**105 273**
Academic personnel	47 436	49 048	51 950	53 100	53 531	54 248	54 910
Service personnel	6 094	6 071	6 570	6 705	6 665	6 668	6 689
Facilities	7 866	7 226	7 023	7 140	7 167	7 192	7 126
Services	3 047	3 442	3 589	3 488	3 514	3 484	3668
Depreciations	2 628	2 510	2 537	2 832	3 395	3 531	3 718
Other	7 652	7 704	9255	9 073	8 911	8 778	9 320
Joint Services expenses	18 871	18 379	18 565	18 825	18 825	18 825	18 825
Other internal expenses	953	1 032	1 087	1 060	1 062	1 045	1 017
OPERATIVE PROFIT/LOSS	**5 709**	**3 845**	**1 268**	**-400**	**-193**	**649**	**813**
Income/expenses from fundraising		**-5**	**560**	**700**	**850**	**850**	**850**
Transfer to special purpose funds			**-560**	**-700**	**-850**	**-850**	**-850**
CUMULATIVE PROFIT/LOSS	**14 364**	**15755**	**17 023**	**16 624**	**16 431**	**17 080**	**17 893**

Personnel plan

FTE	2017	2018	2019	2020	2021	2022	2023
Professors, tenure track	90	88	93	94	95	96	96
Professors, fixed term	9	11	14	15	13	13	14
Teaching personnel	42	46	46	46	45	44	45
Other research and teaching personnel	11	11	8	5	7	7	6
Hourly teaching (incl. computational)	100	79	78	73	71	70	69
Postdocs	206	214	230	246	251	257	262
Doctoral students	292	287	306	328	331	333	353
Project researchers	13	17	22	21	18	21	22
Teaching and research assistants, basic	132	163	162	142	156	165	166
Academic personnel	**896**	**917**	**959**	**970**	**987**	**1006**	**1033**
Research and innovation services	1	1	2				
Learning services	26	27	26				
Technical support services	23	20	26				
Leadership support services	3	3	3				
Financial services	31	30	31				
HR services	18	18	17				
Secretarial services	2	3	4				
School specific services	24	20	16				
Communications services	1	2	3				
IT services	0	2	0				
Campus services	0	0	0				
Service personnel *	**130**	**125**	**129**				
FTE TOTAL	**1 026**	**1 041**	**1088**				

* Service personnel for 2020–2022 to be planned jointly in 2019.

University joint operations – U9 and U2

Proforma (U9)

PRO FORMA – U9 (kEUR)	2018	2019	2019	2020	2021	2022	2023
	Actual	Budget	Framed forecast	Framed budget	LTP	LTP	LTP
Turnover	**8 331**	**5 798**	**7 145**	**6 498**	**4 524**	**4 188**	**2 896**
Basic funding	0	0	0	0	0	0	0
Academy of Finland	142	145	121	0	0	0	0
Business Finland	1	0	0	0	0	0	0
EU	413	0	341	18	0	0	0
Corporate	1 322	825	1241	972	616	643	295
Other income	5 979	4 715	5 170	5 208	3 898	3 535	2 591
Transfer from special purpose funds	0	0	0	0	0	0	0
Internal income	475	113	272	300	10	10	10
Expenses	**6 633**	**6 661**	**6 168**	**-1 227**	**-6 522**	**-8 649**	**-16 164**
Personnel	36 132	36 557	36 315	36 067	38 018	37 564	34 171
Academic Personnel	2 622	2 899	2 708	2 999	2 688	2 564	2 376
Service Personnel	33 509	33 658	33 607	33 068	35 330	35 000	31 795
Facilities	16 293	14 925	16 082	13 238	11 466	11 819	11 919
Services	14 139	14 236	14 241	12 097	11 619	10 236	7 555
Depreciations	1 524	2 124	1 983	2 220	2 155	1 908	1 373
Other expenses	8 407	9 007	8 683	7 294	2 720	2 325	1 319
Travel	610	722	690	896	223	223	128
Materials and supplies	2 764	1 878	2 439	1 865	2 007	1 621	872
Other expenses	5 033	6 407	5 554	4 534	490	480	319
Internal expenses	-69 862	-70 188	-71 136	-72 143	-72 501	-72 501	-72 501
Joint Services expenses	-70 502	-70 500	-71 499	-72 501	-72 501	-72 501	-72 501
Other internal expenses	640	313	363	358	0	0	0
OPERATING PROFIT/LOSS	**1 699**	**-862**	**977**	**7 725**	**11 046**	**12 836**	**19 060**
Income/expenses from fundraising	691	1 092	1 181	1 259	961	958	949
Transfer to special purpose funds	0	0	0	0	0	0	0
PROFIT/LOSS FOR THE PERIOD	**1 008**	**-1 954**	**-204**	**6 466**	**10 085**	**11 878**	

Personnel plan (U9)

FTE – U9	2018	2019	2020	2021	2022	2023
Professors, tenure track	0	0	0	0	0	0
Professors, fixed term	0	0	0	0	0	0
Teaching personnel	40	43	44	45	43	40
Other research and teaching personnel	0	0	0	0	0	0
Hourly teaching (incl. computational)	38	35	33	19	19	0
0Postdocs	0	0	0	0	0	0
Doctoral students	0	0	0	0	0	0
Project researchers	0	0	0	0	0	0
Teaching and research assistants, basic	0	0	0	0	0	0
Academic personnel	**78**	**78**	**77**	**64**	**62**	**40**
Research services	30	41	48	48	48	48
Innovation Ecosystem services	43	30	22	22	22	18
Learning services	86	89	87	83	80	79
Technical support services	0	0	0	0	0	0
Leadership support services	43	47	47	48	47	43
Advancement and Corporate Engagement serv.	28	34	35	34	34	33
Legal Services	0	14	23	23	22	20
Financial services	57	50	50	49	49	35
HR services	40	36	35	38	38	38
Secretarial services	0	0	0	0	0	0
School specific services	1	3	4	4	4	4
Communications services	32	32	35	35	35	35
IT services	119	120	121	121	121	119
Campus services	44	41	39	36	36	36
Service personnel	**523**	**536**	**546**	**540**	**535**	**506**
FTE TOTAL	**600**	**615**	**623**	**604**	**597**	**546**

Proforma (U2)

PRO FORMA – U2 (MEUR)	2018	2019	2020	2021	2022	2023
	Actual	Forecast	Budget	LTP	LTP	LTP
Turnover	**830**	**1 356**	**678**	**205**	**2**	**2**
Basic funding	0	0	0	0	0	0
Academy of Finland	0	0	0	0	0	0
Business Finland	0	0	0	0	0	0
EU	0	0	0	0	0	0
Corporate	0	0	0	0	0	0
Other income	825	1 356	678	205	2	2
Transfer from special purpose funds						
Internal income	5	0	0	0	0	
Expenses	**16 360**	**19 319**	**21 290**	**17 932**	**17 464**	**11 886**
Personnel	3 267	6 027	2 948	4 505	3 970	3 098
Academic Personnel	237	272	30	0	0	0
Service Personnel	3 030	5 755	2 918	4 505	3 970	3 098
Facilities	92	20	44	40	40	40
Services	10 322	9 907	14 421	8 960	9 232	6 096
Depreciations	522	606	980	1 529	1 351	1 042
Other expenses	2 006	2 619	2 746	2 898	2 871	1 610
Travel	335	595	488	91	76	10
Materials and supplies	1 243	1 205	1 671	2 664	2 663	1 588
Other expenses	428	820	587	143	131	11
Internal expenses	152	140	150	0	0	0
Joint Services expenses	0	0	0	0	0	0
Other internal expenses	152	140	150	0	0	0
OPERATIVE PROFIT/LOSS	**-15 531**	**-17 962**	**-20 612**	**-17 726**	**-17 461**	**-11 883**
Income/expenses from investment oper.		0	0	0	0	0
Income/expenses from fundraising		0	0	0	0	0
Tax						
Transfer to special purpose funds						
Surplus/deficit from investment operations	**-15 531**	**-17 962**	**-20 612**	**-17 726**	**-17 461**	**-11 883**

Personnel plan

FTE – U2	2018	2019	2020	2021	2022	2023
Professors, tenure track	0	0	0	0	0	0
Professors, fixed term	0	0	0	0	0	0
Teaching personnel	1	0	0	0	0	0
Other research and teaching personnel	3	1	0	0	0	0
Hourly teaching (incl. computational)						
0Postdocs	0	0	0	0	0	0
Doctoral students	0	0	0	0	0	0
Project researchers	0	0	0	0	0	0
Teaching and research assistants, basic	0	0	0	0	0	0
Academic personnel	**4**	**1**	**0**	**0**	**0**	**0**
Research services	7	9	10	10	10	2
Innovation services	0	0	0	0	0	0
Learning services	20	20	18	8	0	0
Technical support services	0	0	0	0	0	0
Leadership support services	1	4	6	1	1	0
Advancement and Corporate Engagement serv.	0	0	0	0	0	0
Legal Services	0	0	0	0	0	0
Financial services	0	1	0	0	0	0
HR services	1	5	2	0	0	0
Secretarial services	0	0	0	0	0	0
School specific services	0	0	0	0	0	0
Communications services	3	9	9	8	8	8
IT services	16	22	21	36	35	30
Campus services	2	4	0	0	0	0
Service personnel	**51**	**73**	**66**	**64**	**54**	**40**
FTE TOTAL	**55**	**74**	**66**	**64**	**54**	**40**

Note: JSI volume planning is not finalised and further funding decisions may affect so far planned FTE volumes.

Appendix 2 Aalto University Funding Model 2020

Aalto University funding model 2020

k€	Scaling	ARTS	BIZ	CHEM	ELEC	ENG	SCI	Decision open	Aalto Wide JSI	AALTO TOTAL	Aalto 2019
INPUT BASED BLOCK FUNDING		**20 711**	**12 718**	**11 544**	**15 914**	**15 556**	**25 812**	**0**	**0**	**102 255**	**102 255**
Tenure slot funding		**18 211**	**12 718**	**10 484**	**14 326**	**14 877**	**23 342**			**93 958**	**93 958**
Funded slots 2019		53,6	72,3	42,4	57,0	60,2	95,5			381	383
Funded slots 2020		53,6	72,3	42,4	58,0	60,2	94,5			381	381
Tenure slot price	100 %	340	176	247	247	247	247				
Significant infra funding		**2 500**		**1 060**	**1 588**	**679**	**2 470**			**8 297**	**8 297**
OUTPUT BASED BLOCK FUNDING		**14 379**	**18 716**	**10 623**	**17 314**	**18 056**	**28 186**	**0**	**0**	**107 274**	**110 462**
Education											
Bachelors	90 %	1 176	1 919	457	796	1 112	2 740			8 200	9 456
Masters	95 %	3 684	5 121	1 712	2 849	5 088	4 520			22 974	25 191
Students with 55 credits	105 %	1 925	3 904	1 009	1 816	2 914	2 235			13 802	13 883
Student feedback	105 %	608	1 298	349	665	1 071	885			4 876	5 249
International student exchange	90 %	578	1 848	276	404	608	655			4 369	4 244
Masters by foreign students	90 %	658	513	204	504	577	737			3 193	2 962
Employed graduates	90 %	440	542	536	508	586	538			3 151	3 151
Research & artistic activities											
Doctoral degrees	90 %	1 225	1 760	2 384	3 810	2 674	5 503			17 357	18 077
International research funding	40 %	126	176	685	819	283	1 666			3 755	3 765
Other competitive funding	40 %	138	355	967	1 280	914	2 216			5 870	5 976
Artistic outputs		2 853		25	2	23	13			2 916	2 538
JUFO publications	65 %	966	1 281	2 018	3 862	2 205	6 478			16 812	15 970
BLOCK FUNDING TOTAL		**35 090**	**31 434**	**22 167**	**33 228**	**33 612**	**53 998**	**0**	**0**	**209 529**	**212 717**
Block Funding Total-%		16,7 %	15,0 %	10,6 %	15,9 %	16,0 %	25,8 %	0,0 %	0,0 %	100,0 %	100,0 %
EXCELLENCE FUNDING		**3 458**	**932**	**683**	**1 253**	**848**	**3 709**	**0**	**0**	**10 883**	**12 794**
Top publications (number)		49	237	365	799	409	1 494			3 353	2 994
Top publications (proportion)		542	595	101	203	339	455			2 236	1 996
Top artistic forums		2 817		17			60			2 894	2 584
Academy Centres of Excellence					100		600			700	1 500
ERC grants		50		150	100	100	900			1 300	1 150
Academy professors, Aalto distinguished professors			100	50	50		200			400	350
Exceptional Educational Achievements		0	0	0	0	0	0			0	420
Other achievements (incl. partnerships)		0	0	0	0	0	0			0	1 800
COMPETITIVE FUNDING		**345**	**1 457**	**1 987**	**366**	**550**	**2 819**	**640**	**3 294**	**11 458**	**5 918**
CERES flagship co-funding				1 749						1 749	750
PREIN flagship co-funding (NEW)					255					255	175
FCAI flagship co-funding (NEW)							1 209			1 209	0
Profi3 extra resources		246	246	238		328	883		264	2 205	1 044
Profi4 extra resources		99	211		111	222	727		30	1 400	500
Profi5 extra resources								640		640	250
Own funding (FITEch, MEC key projects)										0	749
Tuition fees										0	1 300
Helsinki GSE			1 000							1 000	1 000
Design for Society, AI Ecosystem, UaaS										0	150
MEC strategy funding for LLL									3 000	3 000	0

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k€	Scaling	ARTS	BIZ	CHEM	ELEC	ENG	SCI	Decision open	Aalto Wide JSI	AALTO TOTAL	Aalto 2019
JOINT STRATEGIC INITIATIVES FUNDING		**448**	**0**	**1 150**	**0**	**950**	**161**	**8 620**	**7 800**	**19 129**	**28 887**
Multidisciplinary activities											
Research		**0**	**0**	**0**	**0**	**0**	**0**	**2 199**	**0**	**2 199**	**3 426**
Platforms										0	2 926
Academic partnerships										0	210
Open science										0	120
New infrastructures and opening										0	170
Decision open								2 199		2 199	0
Artistic activities		**448**	**0**	**0**	**0**	**0**	**0**	**246**	**0**	**694**	**1 036**
Sharing and Co-creating Multidiciplinary Artworks		160								160	246
UWAS		288								288	332
Brand Visuality										0	50
Design & design thinking										0	308
Global outreach (NEW)										0	100
Decision open								246		246	0
Education		**0**	**0**	**550**	**0**	**950**	**161**	**5 111**	**0**	**6 772**	**6 751**
ADF						950				950	1 950
AVP							161			161	639
Education										0	3 012
Aalto Junior				550						550	550
Student marketing										0	600
Decision open								5 111		5 111	0
Innovation ecosystem and entrepreneurship		**0**	**0**	**600**	**0**	**0**	**0**	**1 064**	**800**	**2 464**	**1 979**
iSCOUT project										0	115
SLUSH associated events										0	50
A Grid and ASUC concept										0	150
Aalto ES									800	800	0
EIT KICs										0	774
Biofactory				600						600	890
Decision open								1 064		1 064	0
Campus transformation										**0**	**695**
Digitalization									**7 000**	**7 000**	**15 000**
Decision open										**0**	
TOTAL FUNDING MODEL 2020		**39 341**	**33 823**	**25 987**	**34 847**	**35 960**	**60 687**	**9 260**	**11 094**	**250 999**	**260 316**

Aalto University funding model 2019 calculations 1/2

Students with 55 credits			number of students	ARTS	BIZ	CHEM	ELEC	ENG	SCI	TOTAL
			2015/16	611	1 262	314	563	1 014	656	
			2016/17	671	1 354	345	631	1 001	759	
			2017/18	645	1 292	351	624	902	823	
MEC unit price 2020 estimate		2,9	average	642	1 303	337	606	972	746	4 606
	Scaling	1,05		14 %	28 %	7 %	13 %	21 %	16 %	
				1 925	**3 904**	**1 009**	**1 816**	**2 914**	**2 235**	**13 802**
Doctoral degrees			number of degrees	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	17	27	35	55	43	83	
			2017	24	25	36	60	35	76	
			2018	14	27	36	56	42	88	
MEC unit price 2020 estimate		74,3	average	18	26	36	57	40	82	260
	Scaling	0,90		7 %	10 %	14 %	22 %	15 %	32 %	
				1 225	**1 760**	**2 384**	**3 810**	**2 674**	**5 503**	**17 357**
International research funding			k€	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	476	1 070	2 559	3 550	1 195	7 422	
			2017	367	803	2 815	3 685	885	6 175	
			2018	765	378	3 385	3 232	1 541	7 691	
MEC unit price 2020 estimate		0,59	average	536	750	2 920	3 489	1 207	7 096	15 997
	Scaling	0,40		3 %	5 %	18 %	22 %	8 %	44 %	
				126	**176**	**685**	**819**	**283**	**1 666**	**3 755**
Other competetive funding			k€	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	1 913	4 279	11 944	14 582	10 873	28 133	
			2017	1 675	4 284	10 540	13 893	11 026	24 849	
			2018	1 192	3 710	10 994	15 818	9 739	23 728	
MEC unit price 2020 estimate		0,22	average	1 593	4 091	11 159	14 764	10 546	25 570	67 724
	Scaling	0,40		2 %	6 %	16 %	22 %	16 %	38 %	
				138	**355**	**967**	**1 280**	**914**	**2 216**	**5 870**
Student feedback			number of points	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	10 099	14 188	6 389	8 662	17 467	11 560	68 365
			2017	5 077	16 590	2 537	6 164	9 287	9 036	48 691
			2018	5 882	14 136	3 146	8 178	10 329	10 021	51692
MEC unit price 2020 estimate		0,083	average	7 019	14 971	4 024	7 668	12 361	10 206	56 249
	Scaling	1,05		12 %	27 %	7 %	14 %	22 %	18 %	
				608	**1 298**	**349**	**665**	**1 071**	**885**	**4 876**
Employed graduates			number of employed	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			Employed 2015	166	323	115	156	295	213	
			graduates total	257	406	146	210	343	269	1 631
	MEC '18	3 501		65 %	80 %	79 %	75 %	86 %	79 %	
	Scaling	0,90	weight	0,65	0,80	0,79	0,75	0,86	0,79	4,62
				440	**542**	**536**	**508**	**586**	**538**	
Bachelor			number of virtual bachelors	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	276,9	313,8	118,6	161,4	266,4	645,0	1 782
			2017	137,7	307,3	46,3	104,7	126,0	317,7	1 040
			2018	144,9	291,9	52,6	112,6	136,7	341,1	1 080
MEC unit price 2020 estimate		7,006	average	186,5	304,3	72,5	126,2	176,4	434,6	1 301
	Scaling	0,90								
				1 176	**1 919**	**457**	**796**	**1 112**	**2 740**	**8 200**

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Aalto University funding model 2019 calculations 2/2

Master			number of virtual masters	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	259,6	423,0	144,3	304,4	368,7	376,5	1 877
			2017	256,1	351,3	138,0	150,2	542,6	357,9	1 796
			2018	314,8	380,2	103,7	187,7	235,8	284,6	1 507
	MEC unit price 2020 estimate	14,007	average	276,8	384,8	128,7	214,1	382,4	339,7	1 726
	Scaling	0,95								
				3 684	**5 121**	**1 712**	**2 849**	**5 088**	**4 520**	**22 974**
JUFO publications			number of JUFO-points	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	269	476	694	1 458	850	2 595	
			2017	365	435	686	1 430	816	2 347	
			2018	447	522	877	1 431	800	2 303	
	MEC unit price 2020 estimate	4,127	average	360	478	752	1 440	822	2 415	6 267
	Scaling	0,65		6 %	8 %	12 %	23 %	13 %	39 %	
				966	**1 281**	**2 018**	**3 862**	**2 205**	**6 478**	**16 812**
International student exchange			number of study credits	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	5 845	18 086	2 840	4 572	6 137	5 807	
			2017	5 917	18 448	3 043	3 663	6 326	6 748	
			2018	6 114	20 611	2 642	4 251	6 324	7 709	
	MEC unit price 2020 estimate	0,108	average	5 958	19 048	2 841	4 162	6 262	6 755	45 027
	Scaling	0,90		13 %	42 %	6 %	9 %	14 %	15 %	
				578	**1 848**	**276**	**404**	**608**	**655**	**4 369**
Masters by foreign students			number of masters	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	72,0	58,0	32,0	71,0	49,0	81,0	
			2017	62,0	62,0	23,0	38,0	87,0	94,0	
			2018	101,0	63,0	18,0	71,0	70,0	88,0	
	MEC unit price 2020 estimate	9,335	average	78,3	61,0	24,3	60,0	68,7	87,7	380,0
	Scaling	0,90								
				658	**513**	**204**	**504**	**577**	**737**	**3 193**
Top 10 publications (60%)			number of publications	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	23	117	189	335	186	714	
			2017	27	125	184	482	232	813	
			2018							
			average	25	121	187	409	209	764	1 714
	Scaling	0,00		1 %	7 %	11 %	24 %	12 %	45 %	
	Aalto 2019	3 353		**49**	**237**	**365**	**799**	**409**	**1 494**	**3 353**
Top 10 publications (proportion) (40%)			proportion of publications	**ARTS**	**BIZ**	**CHEM**	**ELEC**	**ENG**	**SCI**	
			2016	19,7 %	18,8 %	12,2 %	12,2 %	15,0 %	16,7 %	
			2017	16,8 %	19,2 %	10,9 %	14,0 %	15,3 %	17,1 %	
			2018							
			average (-10%)	8,2 %	9,0 %	1,5 %	3,1 %	5,1 %	6,9 %	6 599
	Scaling	0,00		24,3 %	26,6 %	4,5 %	9,1 %	15,2 %	20,4 %	
	Aalto 2019	2 236		**542**	**595**	**101**	**203**	**339**	**455**	**2 236**

Aalto University joint unit charge 2019

Joint unit charge budget 2019 (MEUR)			
Service entity	**Forecast 2019**	**Budget 2020**	**Main items**
Research Services	7	To be allocated to the service entities in T2 2019.	Research support, Library material & database purchases, Acris, TAF cooperation
Innovation Ecosystem Services	2		Innovation services, commercialization, ASUC
Learning Services	6		Joint Learning services, library & student information systems, DIA
Leadership support services	5		University leadership, CRM and Alumni net license fees; ADCO; incl U SES
Advancement and Corporate Engagement Services	1		Partner cooperations, CRM
Legal services	1		General & Academic legal services
Financial Services	3		Joint finance & accounting services; finance IT: Rondo, M2, QlickView, Ada, Raindance; Joint Travel Team
HR Services	5		Joint HR services; Unisport services for personnel & students, occupational health care; HR IT, Payroll
Communication Services	4		Aalto brand marketing, common medias, communication in schools, student marketing, events
IT Services	16		Joint IT services & infra; IT helpdesk, campus licenses, phone bills, data storage, IT classroom equipment & student printing. Data comms service, server environment, GDPR, data security
Campus Services	1		Joint campus services, accomodation services
Adjustments agreed to the original service frame.	1		
Services total	**52**	**56**	
Joint unit facility costs	6	6	Facilities used by joint units
Shared facilities	10	8	Facilities used by university but not charged to schools: vacancy of learning facilities and other spaces, restaurants
Language center	3	4	
JOINT UNIT CHARGE TOTAL	**71,5**	**72,5**	

Aalto University joint unit charge by school 2019

Joint unit charge by school

	ARTS	BIZ	CHEM	ENG	SCI	ELEC	TOTAL
2019 Budget							
Share (%)	13,9 %	14,9 %	11,8 %	16,9 %	26,1 %	16,3 %	100
Charge (k€)	9 819	10 528	8 344	11 934	18 379	11 498	70 502
2019 Forecast							
Share (%)	14,0 %	14,9 %	11,9 %	17,0 %	25,9 %	16,3 %	100
Charge (k€)	9 980	10 638	8 535	12 139	18 548	11 662	71 502
2020 Budget planned according to 2019 forecast							
Share (%)	13,9	14,9	11,8	16,9	26,1	16,3	100
Charge (k€)	10 120	10 788	8 655	12 309	18 808	11 825	72 504

Appendix 3 Schools' funding allocations to departments 2020

School of Arts, Design and Architecture

ARTS will utilise its cumulative profits during 2020. It has been agreed with the University Leadership that while carrying on current operations, a forward looking strategy and a sustainable long term financial plan for ARTS will be created. Departmental funding decision for 2020 will thus be delayed for now.

School of Business

Aalto University School of Business Funding Model 2020, k€

k€	Allocated from Aalto to school	Charge for university & school joint expences	Amount available for dept funding	E701 Accounting	E702 Marketing	E703 Economics	E704 Information and Service Economy	E706 Management Studies	E707 Finance	E710 CEMAT	E720 CKIR	Total
INPUT BASED BLOCK FUNDING	**12 718**	**-3 539**	**16 256**	**2 206**	**1 882**	**1 581**	**2 653**	**6 052**	**1 802**	**69**	**11**	**16 256**
Tenure slot funding	12 718	12 718										0
Significant infra funding	0	0										0
Salary base funding		-10 596	10 596	1 661	959	1 206	1 913	3 412	1 445			10 596
Block funding		-1 437	1 437				25	1 362		50		1 437
Internal facilities compensation		-2 266	2 266	261	210	262	439	835	231	18	11	2 266
Reservations		-1 957	1 957	283	713	113	276	444	126	2	0	1 957
Surplus use												
OUTPUT BASED BLOCK FUNDING	**18 716**	**16 816**	**1 900**	**276**	**246**	**190**	**387**	**575**	**205**	**10**	**11**	**1 900**
Education	**15 144**	**14 138**	**1 006**	**228**	**124**	**91**	**185**	**236**	**142**	**0**	**0**	**1 006**
Bachelors	1 919	1 776	143	45	17	19	23	10	29			143
Masters	5 121	4 918	203	45	26	13	32	56	30			203
Students with 55 credits	3 904	3 904										0
Student feedback	1 298	1 298										0
International student exchange	1 848	1 848										0
Masters by foreign students	513	513										0
Employed graduates	542	542										0
Research & artistic activities	**3 572**	**2 678**	**894**	**48**	**122**	**99**	**202**	**339**	**63**	**10**	**11**	**894**
Doctoral degrees	1 760	1 632	128	7	12	18	30	54	8			128
International research funding	176	176										0
Other competetive funding	355	355										0
Artistic outputs	0	0										0
JUFO publications	1 281	1 281										0
Education: Credits		-570	570	121	67	55	120	139	68			570
Education: BSc completed in time		-20	20	6	2	2	3	2	5			20
Education: MSc completed in time		-13	13	4	1	1	2	3	2			13
Education: Aalto EE teaching		-57	57	6	12	2	4	26	7	0	0	57
Research: PhD completed in time		-6	6	1	0	0	3	2	0			6
Research: Publications		-665	665	39	100	71	162	242	41	6	4	665
Research: total external funding		-95	95	2	10	10	7	41	14	4	7	95
SCHOOL DEVELOPMENT FUNDING 2017-18	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
EXCELLENCE FUNDING	**932**	**922**	**10**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**10**
Top publications	832	832	0									0
Top artistic forums		0										0
Academy Centres of Excellence		0										0
ERC grants		0										0
Academy professors, Aalto distinguished professors	100	90	10						10			10
Significant strategic non-academic partnerships		0										0
Other achievements*		0	0									0
COMPETITIVE FUNDING	**1 457**	**1 000**	**457**	**0**	**0**	**0**	**0**	**457**	**0**	**0**	**0**	**457**
Profi funding	457	0	457	0	0	0	0	457	0	0	0	457
Profi3	246	0	246					246				246
Profi4	211	0	211					211				211
Profi5		0	0									0
Helsinki GSE	1 000	1 000	0									
JOINT STRATEGIC INITIATIVES FUNDING	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Multidisciplinary activities	0	0	0	0	0	0	0	0	0	0	0	0
Research		-110	110									110
Artistic activities												0
Education		-65	65									65
Innovation ecosystem and entrepreneurship												0
Digitalization and campus transformation												0
TOTAL FUNDING MODEL 2020	**33 823**	**15 200**	**18 623**	**2 482**	**2 128**	**1 771**	**3 040**	**7 084**	**2 017**	**79**	**22**	**18 623**

School of Chemical Engineering

School funding allocation 2020 k€	% to departments	Allocated to school	School Common	Allocated to dpts	T105/CMAT	T106/CMET	T107/BIO2	à price
Professors		42,4			13,66	12,33	18,5	
Input based block funding	38 %	10 484	6 480	4 004	1 229	1 110	1 665	90
Significant infra funding/BioEconomy		682	1 979	-1 297	0	-307	-990	
Significant infra funding/RAMI		378	1 005	-626	-411	-215		
Output based block funding								
Education								
Virtual Bachelors (real bachelors in CHEM)	23 %	457	352	105	49	32	24	
Virtual Masters (real masters in CHEM)	23 %	1 712	1 318	394	126	169	99	
Other education funding based by credit points			-1 009	1 009	397	283	329	
Students with 55 credits (no data to allocate)		1 009	1 009	0				
Student feedback (no data to allocate)		349	349	0				
International student exchange (no data to allocate)		276	276	0				
Masters by foreign students (no data to allocate)		204	204	0				
Employed graduates (no data to allocate)		536	536	0				
Research & artistic activities								
Doctoral degrees	23 %	2 384	1 836	548	149	133	266	
International research funding	23 %	685	527	158	45	46	67	
Other competitive funding	23 %	967	745	222	50	65	96	
Artistic output		25	25					
JUFO publications	23 %	2 018	1 554	464	118	119	227	
BLOCK FUNDING TOTAL 2020	22 %	22 166	17 185	4 982	1 752	1 435	1 783	
Excellence funding TOTAL (TBC)								
Top 10 publications (number)	50 %	365	183	183	44	29	110	
Top 10 publications (proportion)	50 %	101	51	51	15	10	25	
Top artistic forum		17	17					
ERC/Academy positions/FiDiPro		200	-20	220	60		160	
Profi3		238	0	238	238			
Other achievements (Excellence funding)		0	0	0				
Flagship (according use)		1 749	1 749					
EXCELLENCE FUNDING TOTAL 2020	26 %	2 670	1 979	691	357	39	295	
Strategic Iniatives Funding (TBC)								
Platforms		0	0	0	0		0	
AScI-projects		0	-63	63	38	25		
LUMA (STEAM)		550	550	0				
Biofacltory		600	600					
Dean's graduate school			-370	370	185	0	185	
Tenure packages			0	0				
Strategic Iniatives Funding Total	38 %	1 150	718	432	222	25	185	
ALLOCATED FUNDING 2020	23 %	25 986	19 882	6 105	2 332	1 498	2 263	

School of Electrical Engineering

AALTO ELEC Funding Allocation 2020, k€

k€	Aalto allocation 2020	Charge for uni & school joint exp 2020	Dept funding 2020	T499 reserve 2020	T405 2020	T407 2020	T408 2020	T409 2020	T410 2020	T411 2020	ELEC dpts 2020
INPUT BASED BLOCK FUNDING	**15 914**	**8 628**	**7 286**	**0**	**822**	**988**	**785**	**1 324**	**1 531**	**1 835**	**7 286**
Tenure slot funding	**14 326**	**10 926**	**3 400**	**0**	**630**	**630**	**0**	**0**	**1 030**	**1 110**	**3 400**
Funded slots 2020	58,0				11,0	11,0			18,0	19,4	59,4
Tenure slot price	247				57	57			57	57	229
Significant infra funding (depreciations)	**1 588**	**-2 298**	**3 886**	**0**	**192**	**359**	**785**	**1 324**	**501**	**725**	**3 886**
OUTPUT BASED BLOCK FUNDING	**17 314**	**10 514**	**6 800**	**645**	**885**	**1 211**	**0**	**0**	**2 173**	**1 885**	**6 800**
Education											
Bachelors	796	-904	1 700	0	135	340	0	0	525	700	1 700
Masters	2 849	1 549	1 300	0	122	295	0	0	666	217	1 300
Students with 55 credits	1 816	1 816	0	0	0	0	0	0	0	0	0
Student feedback	665	665	0	0	0	0	0	0	0	0	0
International student exchange	404	404	0	0	0	0	0	0	0	0	0
Masters by foreign students	504	504	0	0	0	0	0	0	0	0	0
Employed graduates	508	508	0	0	0	0	0	0	0	0	0
Research & artistic activities											
Doctoral degrees	3 810	3 810	0	0	0	0	0	0	0	0	0
Fast graduation reward: Doctors		-300	300	300	0	0	0	0	0	0	300
International research funding	819	819	0	0	0	0	0	0	0	0	0
Other competetive funding	1 280	1 280	0	0	0	0	0	0	0	0	0
Artistic outputs	2	2	0	0	0	0	0	0	0	0	0
JUFO publications	3 862	2 162	1 700	0	272	378	0	0	435	614	1 700
ELEC Doctoral School + networks	0	-1 800	1 800	345	356	198	0	0	547	354	1 800
SCHOOL DEVELOPMENT FUNDING 2019-2020	0	-192	**192**	**112**	**35**	**5**	**0**	**0**	**5**	**35**	192
BLOCK FUNDING TOTAL	**33 228**	**18 951**	**14 277**	**757**	**1 742**	**2 204**	**785**	**1 324**	**3 709**	**3 756**	**14 277**
Block Funding Total-%	15,9 %		43,0 %		5,2 %	6,6 %	2,4 %	4,0 %	11,2 %	11,3 %	43,0 %
EXCELLENCE FUNDING	**1 253**	**1 003**	**250**	**0**	**50**	**50**	**0**	**0**	**0**	**150**	**250**
ELEC strategic funding decisions	**0**	**-370**	**370**	**185**	**0**	**15**	**0**	**0**	**0**	**170**	**370**
JOINT STRATEGIC INITIATIVES FUNDING	**366**	**0**	**366**	**366**	**0**	**0**	**0**	**0**	**0**	**0**	**366**
TOTAL FUNDING MODEL 2020	**34 847**	**19 584**	**15 263**	**1 308**	**1 792**	**2 269**	**785**	**1 324**	**3 709**	**4 076**	**15 263**

School of Engineering

Aalto University, ENG Funding Model 2020, k€

k€	Allocated from Aalto to school	Charge for university & school joint expences	Amount available for dept funding	Mechanical Engineering (T212) Dept of ME	Built Environment (T213) Dept of BE	Civil Engineering (T214) Dept of CE	Design Factory (T210) Design factory	I^3 infra (T21101)	School common (T211) To Depts according to realized cost or to be decided later	Total
INPUT BASED BLOCK FUNDING	**15 556**	**7 249**	**8 307**	**2 746**	**2 040**	**1 294**	**0**	**2 077**	**150**	**8 307**
Tenure slot funding	14 877	9 493	5 384	2 346	1 726	1 312			0	5 384
Significant infra funding	679	0	679	485	0	0		194		679
Infra support and investments		-1 238	1 238	235	273	230		500		1 238
Tenure track starting packages		-856	856	354	255	248			0	856
Tenure track recruiment		-50	50	0	0	0			50	50
Parental leaves, etc		-100	100	0	0	0			100	100
I^3 infrastructure rents		0	0	-674	-214	-495		1 383		0
OUTPUT BASED BLOCK FUNDING	**18 056**	**11 599**	**6 457**	**3 137**	**1 670**	**1 178**	**0**	**0**	**473**	**6 457**
Education										
Bachelors	1 112	-328	1 440	828	328	244			40	1 440
Masters (ENG: not virtual degrees)	5 088	2 665	2 423	1 203	628	592				2 423
Students with 55 credits	2 914	2 914	0							0
Student feedback	1 071	1 071	0							0
International student exchange	608	608	0							0
Masters by foreign students	577	577	0							0
Employed graduates	586	586	0							0
Research & artistic activities										
Doctoral degrees	2 674	1 866	808	384	296	128				808
International research funding	283	14	269	204	44	21				269
Other competetive funding	914	645	269	149	66	54				269
Artistic outputs	23	23	0							0
JUFO publications	2 205	157	2 048	763	538	314			433	2 048
Project support compensation (was YK-charge)		800	-800	-394	-231	-174	0			-800
Other school block funding <insert new rows>										
SCHOOL DEVELOPMENT FUNDING 2017-18	**0**	**0**	**0**							
EXCELLENCE FUNDING	**848**	**748**	**100**	**0**	**100**	**0**	**0**	**0**	**0**	**100**
Top publications	748	748	0							0
Top artistic forums		0								0
Academy Centres of Excellence		0	0	0	0	0	0		0	0
ERC grants	100	0	100	0	100	0	0		0	100
Academy professors, Aalto distinguished professors		0		0	0	0	0		0	0
Other achievements		0	0	0	0	0	0		0	0
Other school excellence funding		0	0	0	0	0	0		0	0
Other school excellence funding <insert new rows>										
JOINT STRATEGIC INITIATIVES FUNDING	**1 500**	**0**	**1 500**	**74**	**300**	**102**	**950**	**0**	**74**	**1 500**
Multidisciplinary activities			0							
Research	550	0	550	74	300	102	0		74	550
Artistic activities		0	0	0	0	0	0		0	0
Education	950	0	950	0	0	0	950		0	950
Innovation ecosystem and entrepreneurship										0
Digitalization and campus transformation										0
SCHOOL OF ENGINEERING STRATEGY FUNDING		**-3 167**	**3 167**	**1 093**	**629**	**553**	**0**	**0**	**893**	**3 167**
ENG internal graduate school		-1 865	1 865	503	281	278	0		803	1 865
Other ENG education		-148	148	0	78	30	0		40	148
ENG research		-1 155	1 155	590	270	245	0		50	1 155
Other school JSI funding <insert new rows>										
TOTAL FUNDING MODEL	**35 960**	**16 428**	**19 532**	**7 049**	**4 738**	**3 127**	**950**	**2 077**	**1 590**	**19 532**

School of Science

PRELIMINARY SCHOOL OF SCIENCE FUNDING BREAKDOWN 2020

	Allocated to school	University charge	DEAN	Allocated to departments	MS	AP	DIEM	CS	NBE	Total
Funding allocation		31,10 %	14,84 %	53,38 %						
Allocation % to not earmarked		34,45 %	17,800 %	47,75 %						
Input based block funding	**25 812 155**	**8 042 397**	**4 154 904**	**13 207 855**	**1 789 685**	**4 004 246**	**1 654 103**	**4 121 698**	**1 638 123**	**25 812 155**
Tenure slot funding	23 342 155	8 042 397	4 154 904	11 144 855	1 789 685	2 386 246	1 654 103	4 121 698	1 193 123	23 342 155
Number of positions				102,8	16,5	22,0	15,3	38,0	11,0	
Slot price			108 466	108 466						
Significant infras (ANI, LTL, NMC, Science-IT)	**2 470 000**			2 063 000		1 618 000			445 000	2 470 000
Science IT	407 000		407 000							407 000
ANI	445 000			445 000					445 000	445 000
LTL	784 267			809 000		784 267				784 267
NMC	833 733			809 000		833 733				833 733
Output based block funding	**28 186 218**	**9 711 389**	**5 017 147**	**13 457 682**	**1 752 660**	**3 460 650**	**2 235 505**	**5 043 061**	**965 807**	**28 186 218**
Education										
Virtual Bachelors	2 740 289	944 150	487 771	1 308 368	490 603	179 985	246 075	370 878	20 827	2 740 289
Masters	4 519 973	1 557 329	804 555	2 158 089	247 331	135 744	621 615	1 057 936	95 463	4 519 973
Students with 55 credits	2 235 471	770 218	397 914	1 067 339	245 337	86 801	254 881	446 692	33 628	2 235 471
Student feedback	884 613	304 788	157 461	422 364	124 571	50 614	88 993	153 848	4 339	884 613
International student exchange	655 380	225 807	116 658	312 915	15 173	25 756	95 475	166 855	9 656	655 380
Masters by foreign students	736 546	253 772	131 105	351 668	5 370	8 647	47 901	277 347	12 404	736 546
Employed graduates	537 942	185 345	95 754	256 844	29 436	16 156	73 981	125 910	11 361	537 942
Research & artistic activities										
Doctoral degrees	5 503 365	1 896 151	979 599	2 627 615	234 039	952 112	372 334	781 902	287 229	5 503 365
International research funding	1 665 618	573 879	296 480	795 260	1 994	462 634	52 024	177 903	100 704	1 665 618
Other competitive funding	2 216 137	763 556	394 472	1 058 108	68 174	362 818	110 537	403 548	113 031	2 216 137
Artistic outputs	12 519	4 313	2 228	5 977	2 562	1 708			1 708	12 519
JUFO publications	6 478 366	2 232 081	1 153 149	3 093 135	288 070	1 177 676	271 690	1 080 242	275 457	6 478 366
Transfer to initiatives			-2 472 500							-2 472 500
Transfer to other			-1 682 882							-1 682 882
BLOCK FUNDING TOTAL	**53 998 373**	**17 753 786**	**5 016 668**	**26 665 537**	**3 542 344**	**7 464 896**	**3 889 607**	**9 164 759**	**2 603 930**	**49 842 991**
Excellence funding	3 709 077	1 071 213	553 416	2 084 448	182 272	1 223 902	102 092	379 469	196 712	3 709 077
Top publications (number)	1 494 152	514 801	265 959	713 392	47 302	321 461	66 609	193 070	84 951	1 494 152
Top publications (proportion)	454 989	156 764	80 988	217 237	7 009	64 133	35 483	94 341	16 271	454 989
Top artistic forum	59 937	20 651	10 669	28 617	4 088	4 088		20 441		59 937
Academy Centres of Excellence	600 000			600 000	100 000	500 000				600 000
ERC grants	900 000	310 090	160 200	429 710	23 873	262 601		47 746	95 491	900 000
Academy professors, Aalto distinguished professors	200 000	68 909	35 600	95 491		71 618		23 873		200 000
Exceptional Educational Achievements	0	0	0	0	0	0	0	0	0	0
Other achievements	0	0	0	0	0	0	0	0	0	0
EXCELLENCE FUNDING TOTAL	**3 709 077**	**1 071 213**	**553 416**	**2 084 448**	**182 272**	**1 223 902**	**102 092**	**379 469**	**196 712**	**3 709 077**
Competitive funding	2 818 441		0	1 209 000	0	470 575	219 119	824 007	95 740	1 609 441
FCAI flagship co-funding (NEW)	1 209 000			1 209 000						0
Profi3 extra resources	882 568			882 568			169 725	712 843		882 568
Profi4 extra resources	726 873			726 873		470 575	49 394	111 164	95 740	726 873
Profi5 extra resources	0									0
COMPETITIVE FUNDING TOTAL	**2 818 441**	**0**	**0**	**2 818 441**	**0**	**470 575**	**219 119**	**824 007**	**95 740**	**1 609 441**
Joint Strategic Initiatives funding										0
Transfer from Block funding				**550 000**						550 000
Multidisciplinary activities										
Research										
Digi platform										0
HIIT				550 000				550 000		550 000
Health										0
Education										
AVP										0
AIOLE										0
Aalto Bachelor's programme in Science and Technology										0
Attractive programmes										0
University level competitive funding										
Tuition fees (for MSc programmes)	0									0
Design for Society, AI Ecosystem, UaaS	0									0
JOINT STRATEGIC INITIATIVES FUNDING TOTAL	**0**	**0**	**0**	**550 000**	**0**	**0**	**0**	**550 000**	**0**	**550 000**
School initiatives funding										
Transfer from Block funding			**750 000**	**1 172 500**						
ASci			150 000							150 000
ABC			350 000							350 000
CQE			250 000							250 000
BioDesign				100 000					100 000	100 000
HAIC				80 000				80 000		80 000
ACOR				100 000	100 000					100 000
MSc programmes				155 000	10 000	10 000	80 000	55 000		155 000
Academic advicing				200 000	23 529	39 216	43 137	94 118		200 000
Other (incl. Starting packages)				537 500	75 000	50 000	50 000	312 500	50 000	537 500
SCHOOL INITIATIVES FUNDING TOTAL	**0**	**0**	**750 000**	**1 172 500**	**208 529**	**99 216**	**173 137**	**541 618**	**150 000**	**1 922 500**
Digitalization funding										
										0
DIGITALIZATION FUNDING TOTAL										
Other										
Transfer from Block funding			**439 929**	**1 242 953**	406 697	245 600	203 961	349 152	37 542	1 682 882
Lec.halls, comp.class, Physics teach.Lab			25 676	642 953	194 924	169 659	83 963	175 600	18 809	668 629
Nanofab (Micronova) user support			214 253							214 253
Science-IT			200 000							200 000
Service teaching				600 000	211 773	75 941	119 999	173 553	18 734	600 000
OTHER TOTAL	**0**	**0**	**439 929**	**1 242 953**	**406 697**	**245 600**	**203 961**	**349 152**	**37 542**	**1 682 882**
FUNDING (Block, Results, Strategy, Other)	**60 525 891**	**18 825 000**	**6 760 013**	**34 533 878**	**4 339 843**	**9 504 189**	**4 587 918**	**11 809 005**	**3 083 925**	**59 316 891**
Service personnel salary			2 223 941	-2 223 941	-209 555	**-632 763**	**-341 940**	**-810 636**	**-229 046**	0
SERVICE CHARGE			**2 223 941**	**-2 223 941**	**-209 555**	**-632 763**	**-341 940**	**-810 636**	**-229 046**	**0**
FUNDING TOTAL 2020	**60 525 891**	**18 825 000**	**8 983 953**	**32 309 938**	**4 130 288**	**8 871 425**	**4 245 977**	**10 998 369**	**2 854 879**	**59 316 891**
FUNDING TOTAL 2019	**62 089 435**	**18 379 000**	**10 603 614**	**33 106 822**	**4 281 713**	**9 065 397**	**4 937 517**	**11 955 796**	**2 866 398**	**62 089 435**

- Profi5 to be decided later
- JSI-funding to be decided later
- HIIT funding 550 000 eur to be funded from SCI Dean budget

Aalto-yliopisto