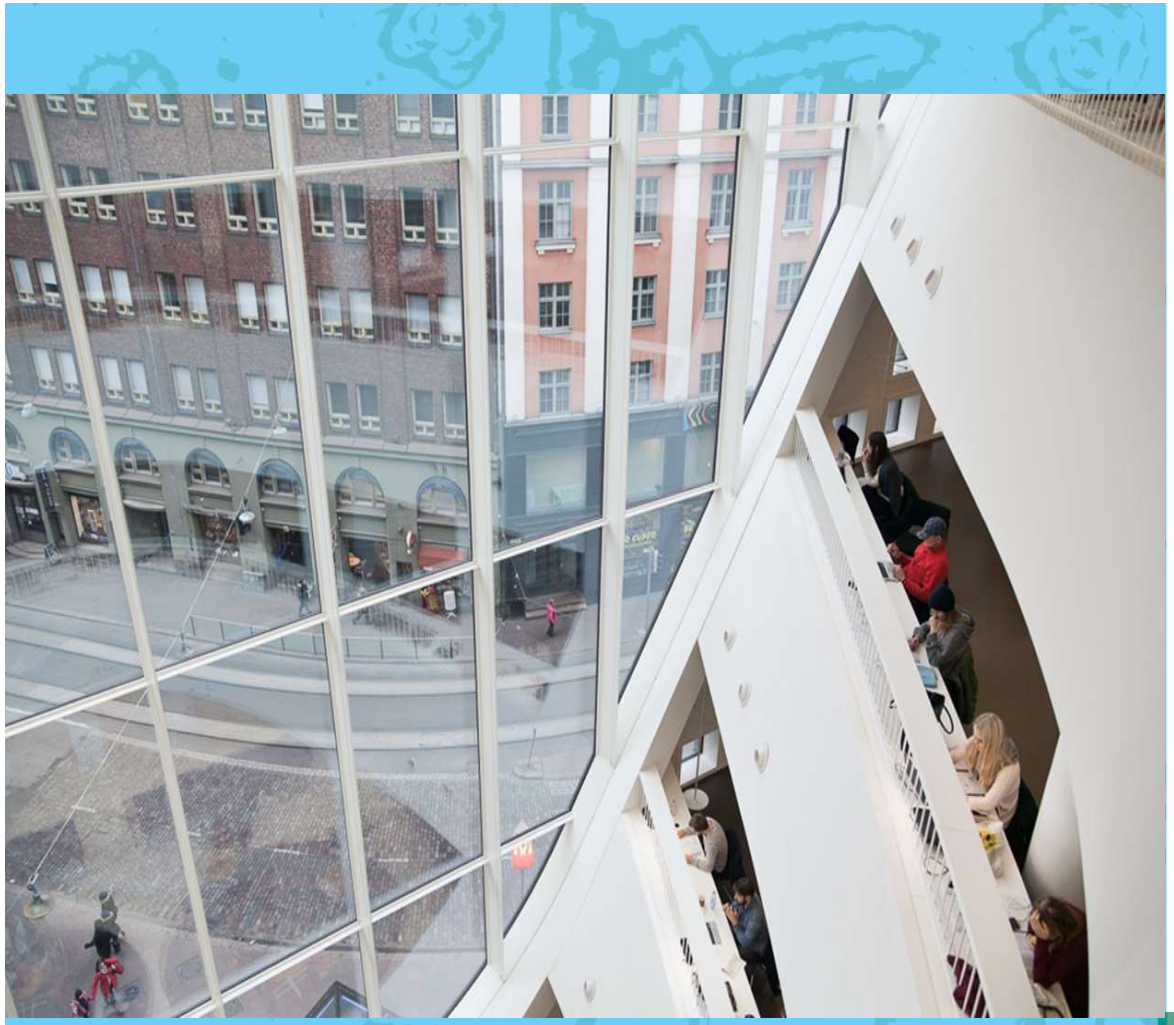

On Higher Education and Science Policy in Finland

Steering aspects and Statistics, including Career Framework

Senior Ministerial Adviser
Paavo-Petri Ahonen
17.12.2020

Contents

- The Ministry of Education and Culture, Department of Higher Education and Science Policy
- Steering of Higher education and Research Institutes in Finland
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- Four step Career Framework -- Idea of integration and labor mobility

Inclusive and competent Finland – a socially, economically and ecologically sustainable society

Programme of Prime Minister Sanna Marin's Government 2019

Carbon neutral Finland that protects biodiversity

Globally influential Finland and policy on Europe

Safe and secure Finland built on the rule of law

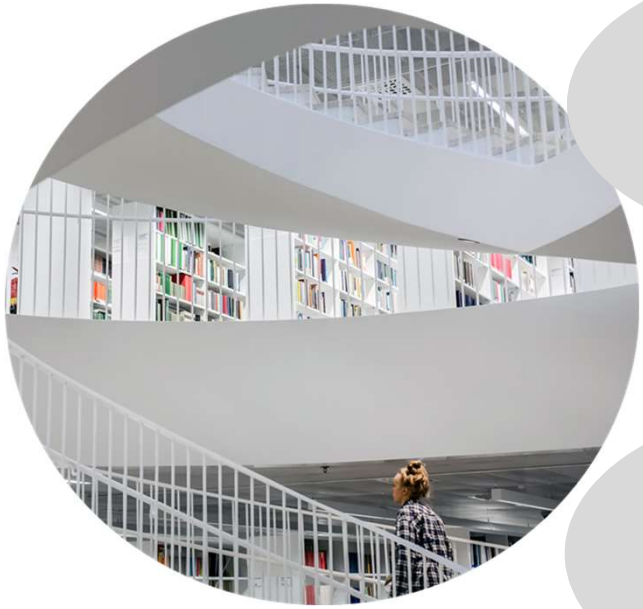
Finland that promotes competence, education, culture and innovation

Dynamic and thriving Finland, transport networks and agriculture

Finland built on trust and labour market equality

Fair, equal and inclusive Finland

Long-term Aims of the Finnish HE and Research policy



Quality of HE and Research

Internationa-lisation

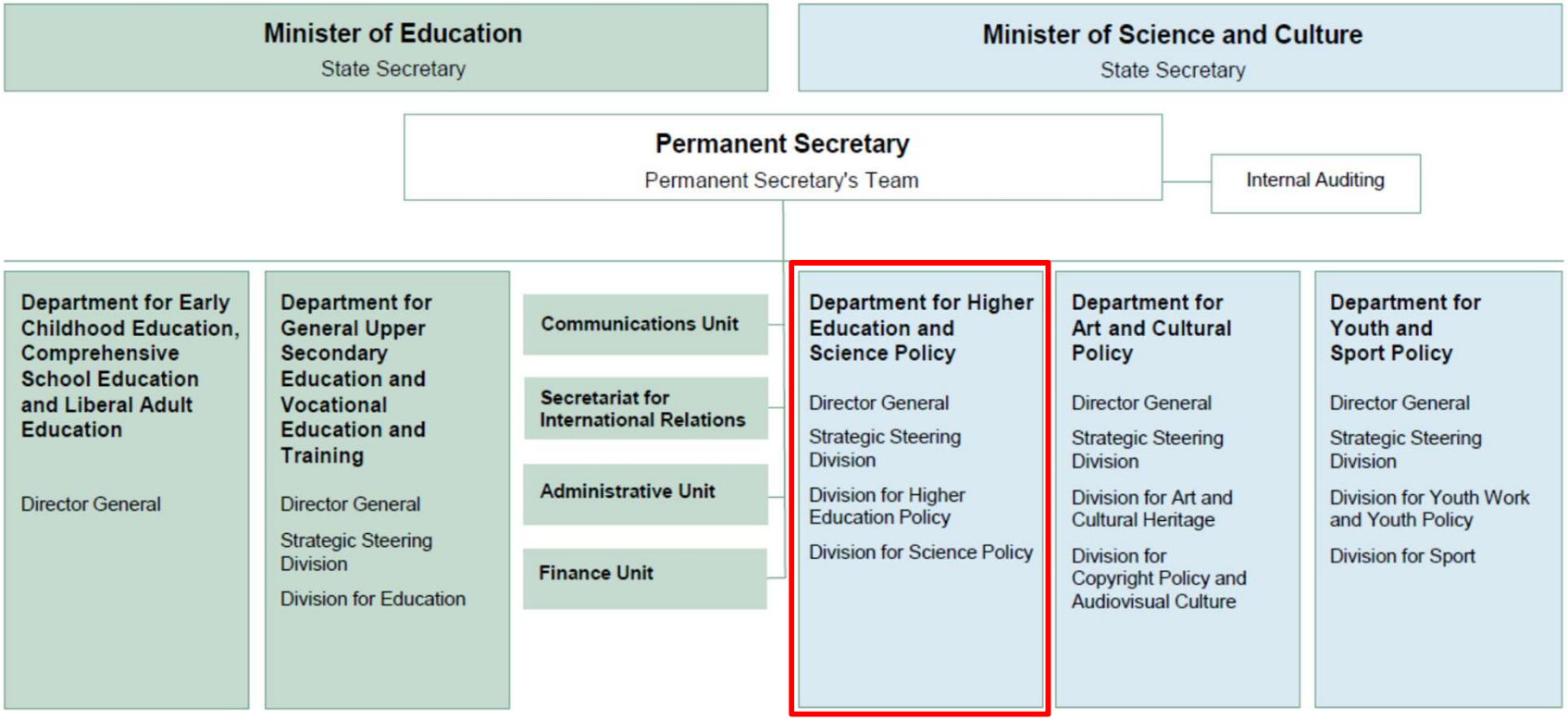
Impact of the HE

Equality and Equity

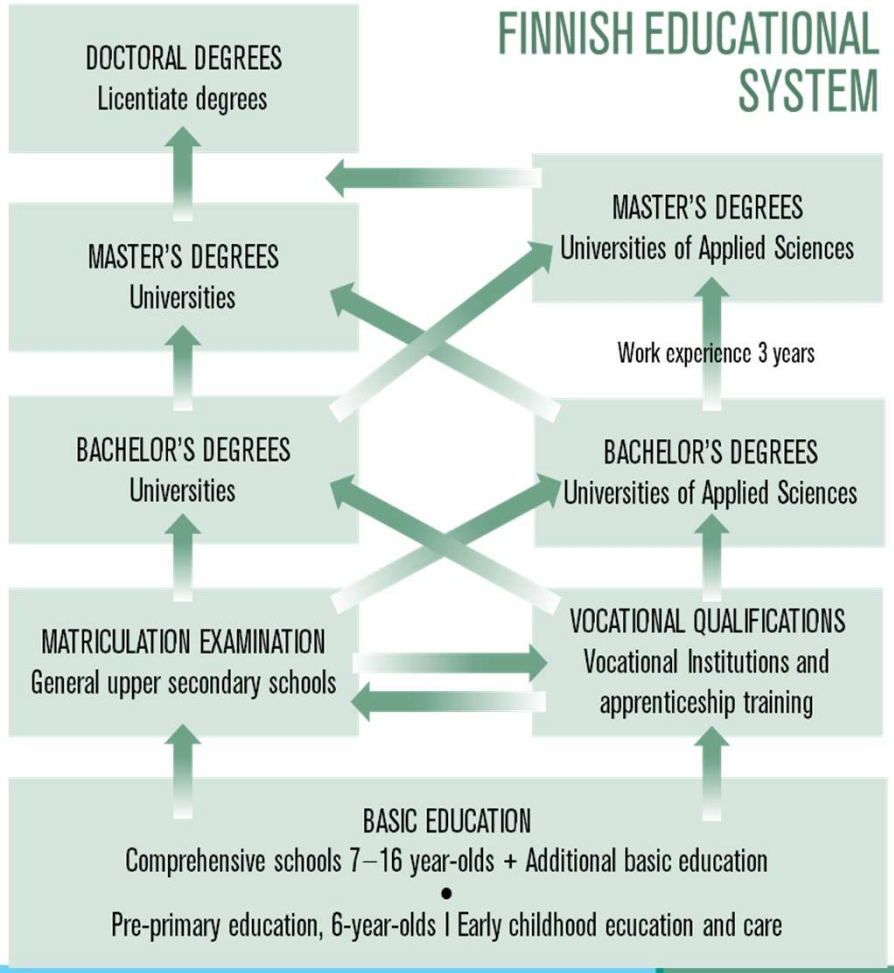
Reforming the Finnish Society with skills and competences

Photo: Mika Huisman / University of Helsinki

Ministry of Education and Culture



- The education system gives each student great flexibility.
- Binding decisions are not expected to be made at an early stage.
- The road all the way to tertiary education is untracked, with none of the paths leading to a dead end.



LIBERAL ADULT EDUCATION
- Open University education
- Open UAS education
- Adult education centres
- Folk high schools
- Summer universities
- Study centres
- Sports institutes

HE, research and science system in Finland

Higher Education Institutions

- **13+1** Universities
- **23+2** Universities of Applied Sciences
- **12** Research Institutes
- **5** University Hospitals

R&D in the Private Sector
(Industries and Private Research Institutes)

2,8 %
of GDP to R&D
(2017)

1,8 %
of GDP to Higher Education

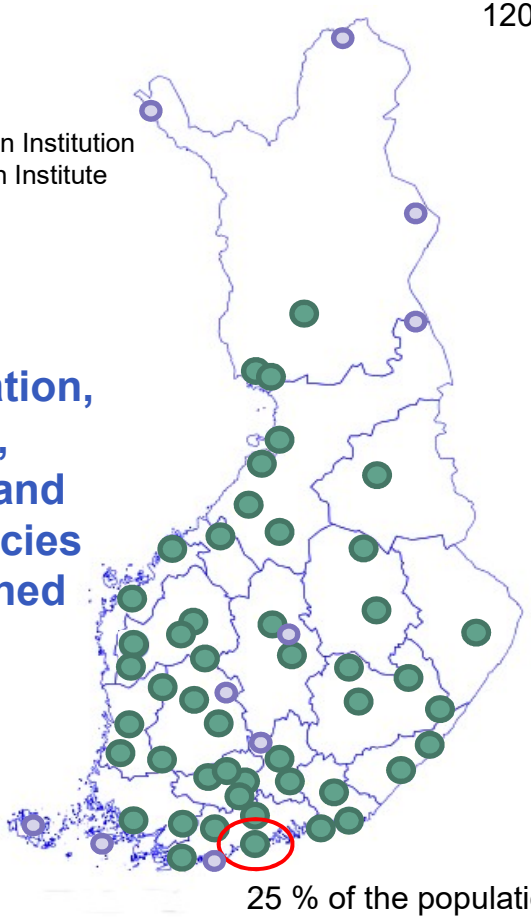
Population of
5,5 million

65 %
of R&D in the Private Sector

1200 km

Higher Education Institution and/or Research Institute

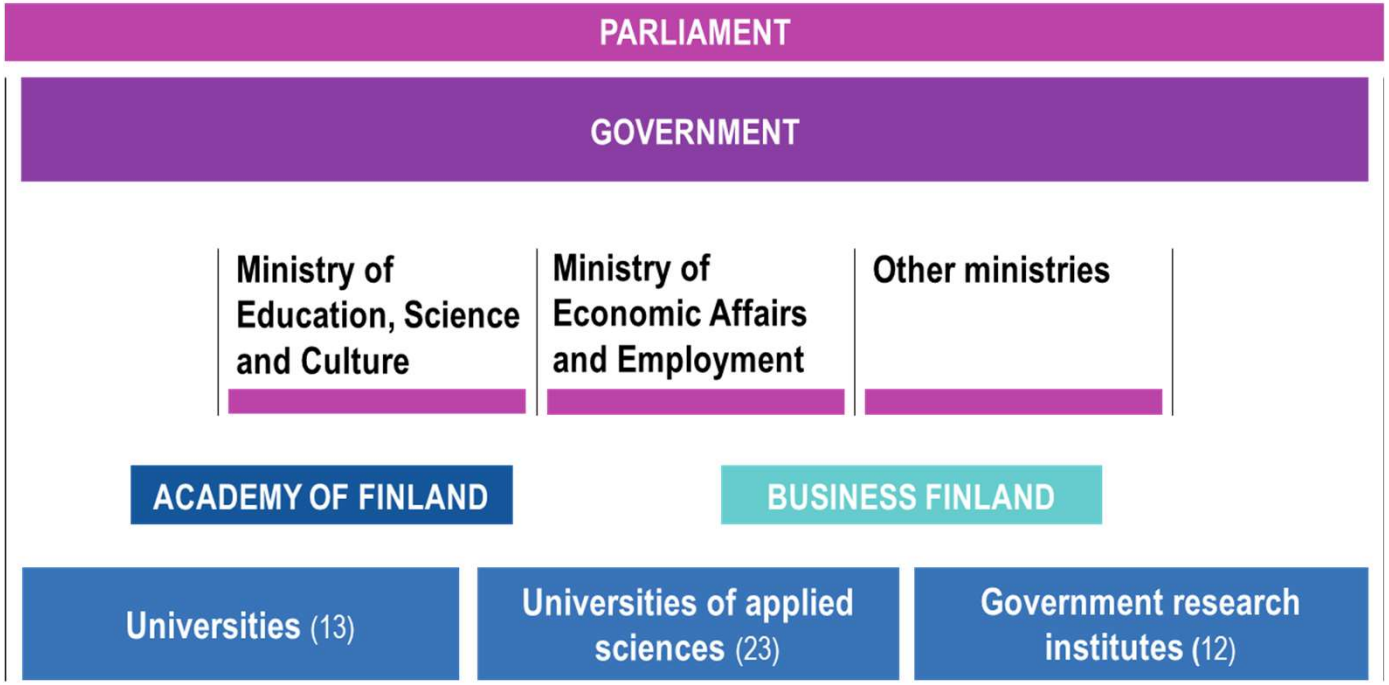
Field Station



25 % of the population

Higher education, research, innovation and regional policies are intertwined

Public funding of HE and research in Finland

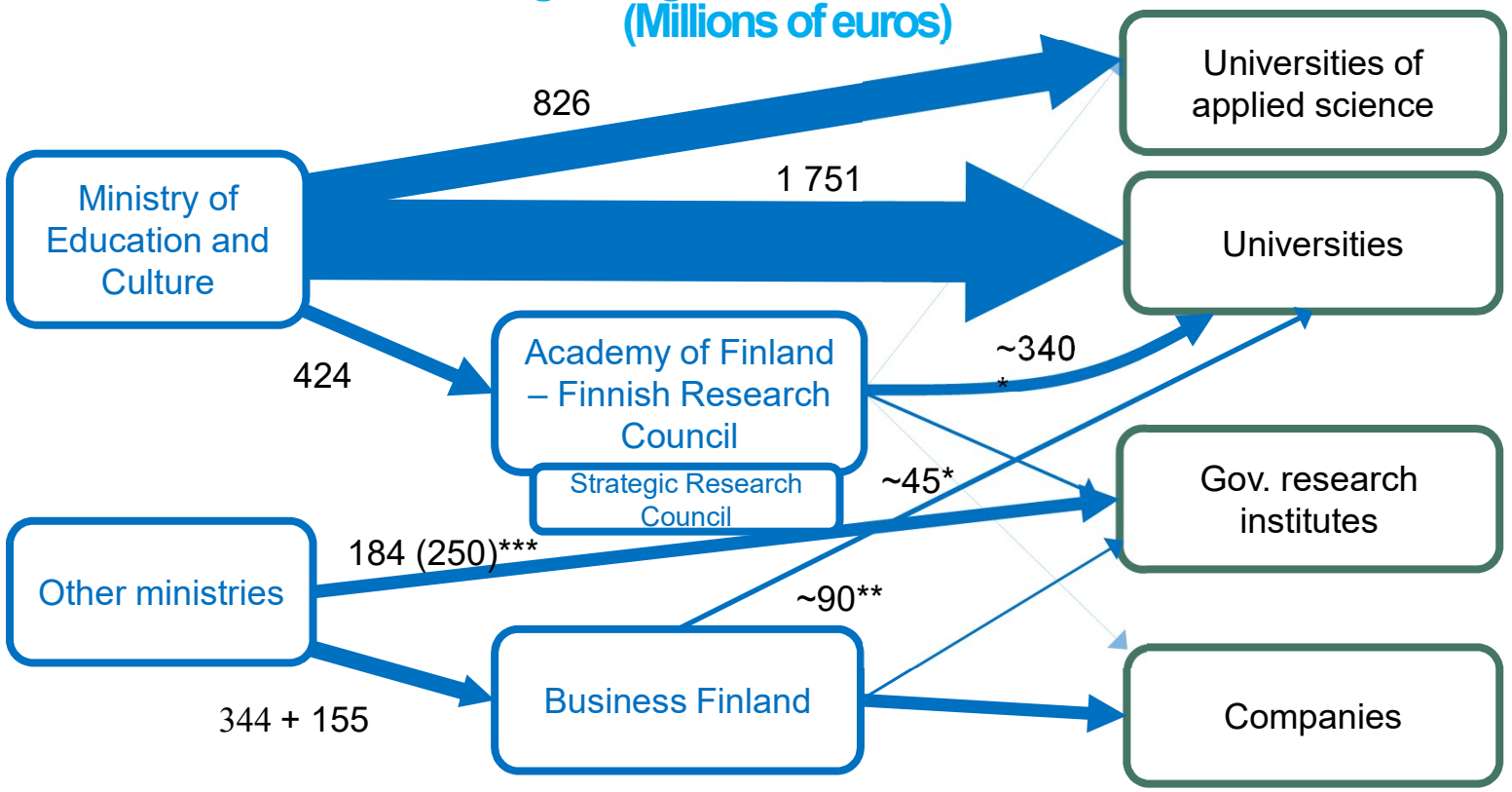


In addition: National Defence University, as part of the Finnish defence administration.

Tools for Steering, Feedback and Monitoring

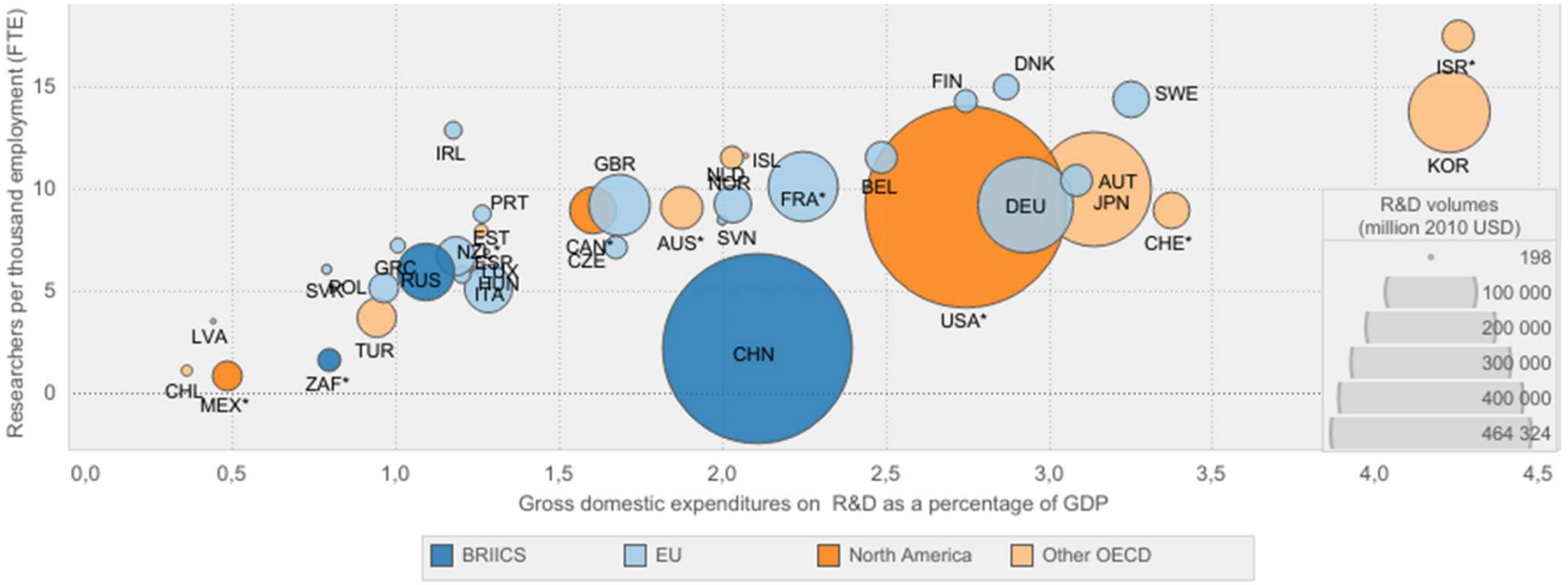
- Legislation (universities, UAS, Academy of Finland)
- Performance agreements between the HEIs and the Ministry
- Agreement negotiations (also AKA and other science organizations)
- Steering by funding (funding models, funding of mergers and strategic cooperation)
- Steering by information
  - Joint events: Small and large, multilateral and bilateral meetings between HEIs and the MoE
  - Informal exchange of information is frequent
- The HEIs are expected to present correct information on their performance and finances in a way that enables their progress be evaluated against the set goals.
  - Development is annually monitored through indicators which gauge effectiveness and quality

Public funding for higher education and research 2019 (Millions of euros)



In addition, private foundations (~ €200m) and EU funding (~ €150m) are important sources.
*: data from 2018; **: data from 2017. ***: direct funding for research in the basic government funding of the institutes.
The Academy of Finland – Finnish Research Council also funds, e.g,, research done at universitys hospital and international research infrastructures.

Human and financial resources directed to R&D, 2016

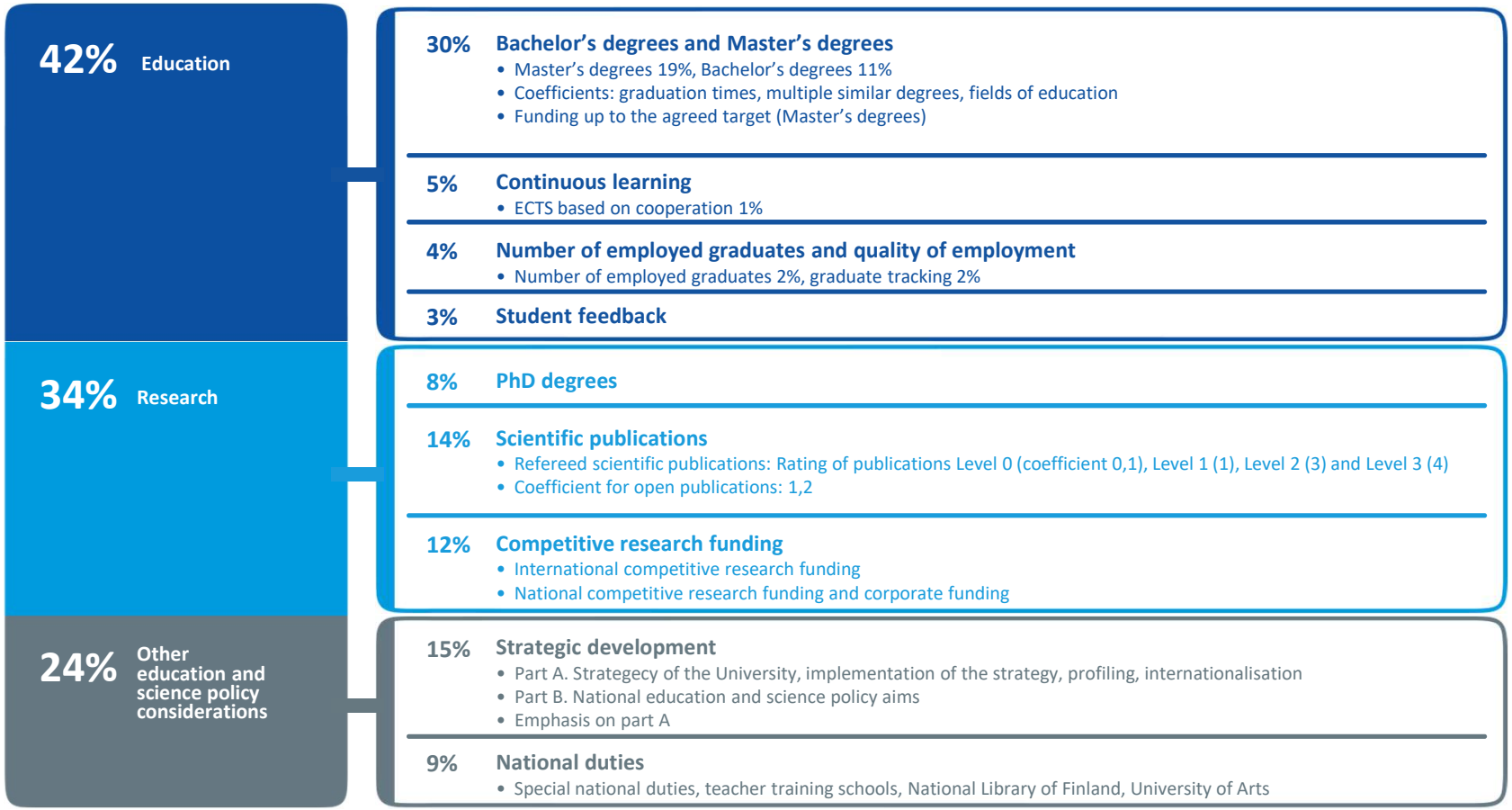


Source: OECD, Main Science and Technology Indicators Database, http://oe.cd/msti , July 2018.
* Latest available data prior to 2016

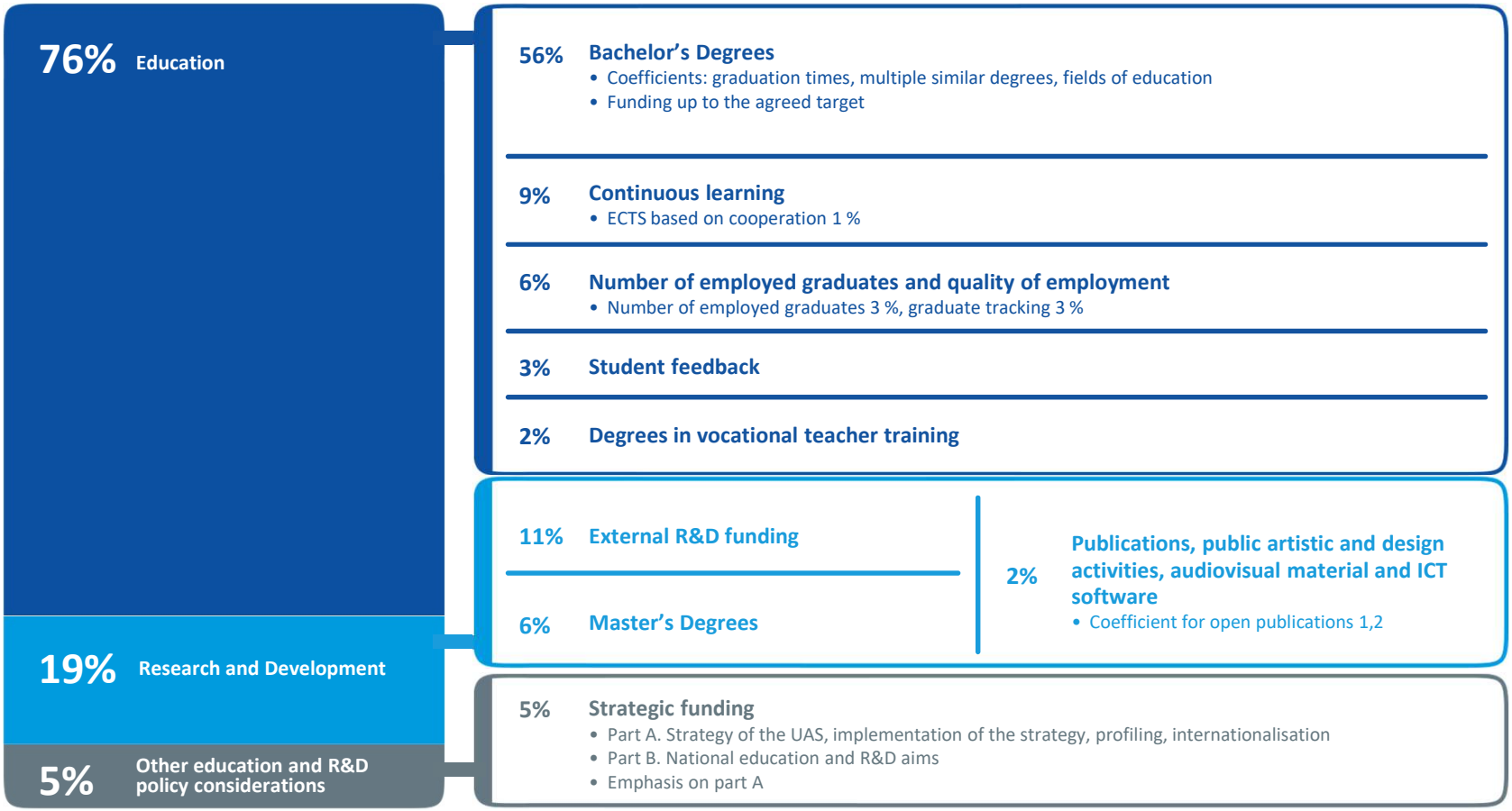
Core funding for the HEIs

- The Finnish Parliament yearly decides the overall amount of the core funding allocated to the Finnish Universities (for the whole sector) and to the Finnish UAS (for the whole sector)
- Approximately 1,6 billion € (2019) allocated between universities using the Ministry of Education and Culture's funding model
  - Core funding from the ministry comprises about two thirds of the total funding of the Finnish universities (on average)
- Approximately 800 million € (2019) allocated to UAS using the Ministry of Education and Culture's funding model
  - Core funding from the ministry comprises more than 80 % of the total funding of the Finnish UAS (on average)
- Other funding sources for example Academy of Finland, Business Finland, foundations, companies, international funding (EU etc.)

Universities Core Funding model from 2021



Universities of Applied Sciences Core Funding Model from 2021



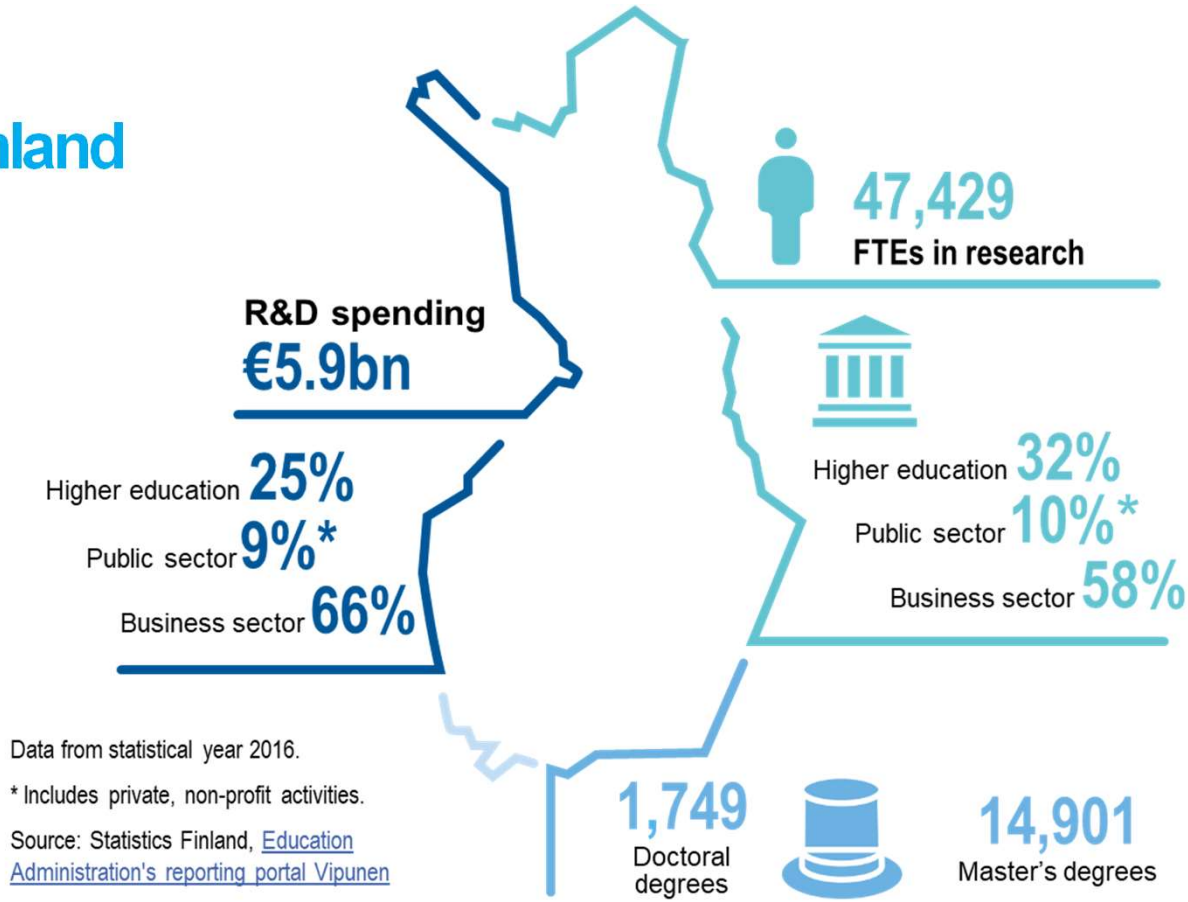
Core funding models of the HEIs'

- HEIs are mainly funded based on their achieved outputs
- Future oriented strategic funding

- All indicators calculated using 3-year averages
  - When allocating funding for the year 2019, most of the indicators are averages from the years 2015-2017
  - Three year averages and slowly changing indicators like degrees results in moderate and predictable changes in funding. This acts in practice as ”core” element of the funding model.

- Funding allocated to HEIs in a lump sum

R&D in Finland



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Vipunen - Education Statistics Finland

- Vipunen is the education administration's reporting portal. The Ministry of Education and Culture and the Finnish National Agency for Education are jointly responsible for its content.
- Vipunen's statistics are based on data and registers collected by the Statistics Finland, the Ministry of Culture and Education, and the Finnish National Agency for Education.
- Anybody can use this service to access statistics and indicators for education in a number of educational sectors, placement of students after completion, research conducted in higher education institutions, the population's educational structure and the socio-economic background of students.
- The portal serves in Finnish, Swedish and English.

Vipunen - Education Statistics Finland

- Vipunen's content is arranged according to the following sectors of education:
  - All levels and sectors
  - Pre-primary and basic education
  - General upper secondary education
  - Vocational education and training
  - University of applied sciences education
  - University education
  - Higher education and r&d activity
  - Population, educational and vocational structures

Attained degrees in universities in 2019

Degrees	University bachelor degree	Higher university degree (Master)	Licentiate's degree	Doctoral or equivalent level	Grand total
Aalto University	1 341	1 962	6	234	3 543
Hanken School of Economics	270	363		9	639
Lappeenranta–Lahti University of Technology	480	780		57	1 314
University of Eastern Finland	1 368	1 650	1-4	147	3 168
University of Helsinki	2 898	2 700	24	504	6 126
University of Jyväskylä	1 236	1 575	15	126	2 952
University of Lapland	429	474		24	930
University of Oulu	1 152	1 503	1-4	159	2 814
University of Tampere	1 569	1 896	12	189	3 663
University of the Arts Helsinki	246	303		9	558
University of Turku	1 512	1 800	15	183	3 507
University of Vaasa	468	564	1-4	24	1 056
Åbo Akademi University	453	564	1-4	57	1 077
Grand total	13 419	16 128	78	1 719	31 344

Source: Vipunen database

Degrees by Field of Education 2018

	University Master's		UAS Bachelor's	
Education	1 556	10,4 %	251	1,1 %
Arts and culture	626	4,2 %	1 508	6,5 %
Humanities	1 699	11,4 %	66	0,3 %
Social sciences	2 064	13,8 %	65	0,3 %
Business, administration and law	2 639	17,7 %	4 843	21,0 %
Natural sciences	1 203	8,1 %	57	0,2 %
ICT	977	6,6 %	1 583	6,9 %
Engineering and technology	2 428	16,3 %	4 557	19,8 %
Agriculture and forestry	314	2,1 %	496	2,2 %
Medical science	739	5,0 %	156	0,7 %
Health and welfare	493	3,3 %	7 813	33,9 %
Services	173	1,2 %	1 649	7,2 %
Grand total	14 911	100,0 %	23 044	100,0 %

Source: Vipunen database

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Four step Career Framework

- Working group by MinEdu in 2008:
  - "The working group's presentations are based on the four-stage research career model in universities that promotes the transparency and predictability of a research career. The **first stage** usually consists of young researchers working on their doctoral dissertation, the **second stage** is the career phase of researchers who have recently completed their doctorate, the **third stage** consists of independent research and education professionals capable of academic leadership, and the **fourth stage** is that of professorship."
  - "It should be possible to develop aspects within the system, such as components that encourage mobility, advancement opportunities as a result of successful research and opportunities to establish permanent positions."

Four step Career Framework

- Working group by MinEdu in 2007:
  - “The four-stage research career system aims at supporting and facilitating transfers back and forth between universities and other actors, (research institutes, companies, the civil service) by, for example, readjusting the method of evaluating qualifications acquired by researchers outside of their academic work using the system’s qualification descriptions. The four-stage system also provides companies and research institutes with methods for examining the structure of their own system of permanent positions.”

Teaching and research staff at universities in 2019

Source: Vipunen database

Person work years in universities	female	male	Grand total
Level 1 (e.g. Doctoral student)	**2 683**	**3 068**	**5 751**
Aalto University	288	648	936
Hanken School of Economics	12	23	35
Lappeenrannan-Lahden teknillinen yliopisto	87	157	244
Tampere University	337	443	780
University of Eastern Finland	237	219	457
University of Helsinki	671	563	1 234
University of Jyväskylä	226	187	413
University of Lapland	77	46	123
University of Oulu	332	436	768
University of the Arts Helsinki	19	11	30
University of Turku	285	230	515
University of Vaasa	36	39	76
Åbo Akademi University	76	65	141
Level 2 (e.g. Postdoctoral researcher)	**2 347**	**2 275**	**4 623**
Level 3 (e.g. University lecturer)	**2 014**	**2 197**	**4 211**
Level 4 (e.g. Professor, Research director, Academy Research Fellow)	**722**	**1 559**	**2 281**
Part-time lecturer	**397**	**470**	**868**
Grand total	**8 165**	**9 569**	**17 734**

Four step Career Framework: examples from various sectors

Source: Tutkijanuran tilannekuva, OKM 2016:2

Taulukko 2. Esimerkkejä neliportaiseen tutkijanuramalliin sijoittamisessa käytetyistä nimikkeistä eri sektoreilla. Yliopistosektorin osalta opetus- ja tutkimushenkilökunnan jakautuminen eri portaille (vuonna 2014) on esitetty Yliopisto-sarakkeessa (Lähde: Vipunen. Tuntiopettajia tai uraportaille sijoittamattomia yliopistojen henkilöstöstä on 6,5 prosenttia).

Porras	Yliopisto	Ammattikorkeakoulu	Tutkimuslaitos	Elinkeinoelämä	Julkinen sektori
IV	professori 15 %	tutkimusjohtaja, osaamisalueen johtaja	tutkimusjohtaja, tutkimusprofessori, osaamisalueen johtaja	R&D manager, unit manager	tiedehallintoyksikön johtaja, tutkimusjohtaja
III	apulaisprofessori, yliopistotutkija, yliopistolehtori 22 %	yliopettaja, tutkimuspäällikkö, projektipäällikkö	johtava tutkija, erikoistutkija	project manager	erikoissuunnittelija, johtava tiedeasian-tuntija, opetusneuvos
II	tutkijatohtori 22 %		tutkijatohtori, vanhempi tutkija	product and process developer	tiedeasiantuntija, ylitarkastaja, opetusneuvos
I	nuorempi tutkija, väitöskirjatutkija, tohtorikoulutettava 41 %	tutkija, lehtori, tuntiopettaja	tutkija, asiantuntija	junior product & process developer	ylitarkastaja, hallitussihteeri

Four step Career Framework

- Evaluation project of the Four step Career Framework by MinEdu in 2016:
  - Not well known among universities' staff.
  - Works well as a statistics tools, and in universities best serves HR staff rather than researchers.
  - Clarifies career structure and affiliations/titles used.

17.12.2020

OPETUS- JA KULTTUURI-MINISTERIÖ

UNDERVISNINGS- OCH KULTUR-MINISTERIET

MINISTRY OF EDUCATION AND CULTURE