

International
Research
Assessment
Exercise 2008

Evaluation Package



KTH International RAE 2008

Evaluation Package

There are two parts to this Evaluation Package:

Part A. Strategic Information from the Units of Assessment

Part B. Quantitative Data of the Unit of Assessment

The Parts should be understood as complementary; together should give a full picture of research activities, quality and strategy for the future at the Unit of Assessment. Information given in either Part should support and reinforce information given in the other.

The assessment period for this RAE is January 2003 to December 2007. The census date is the 31st December 2007.

Part A. Strategic Information from the Units of Assessment

Introduction

Part A of the Evaluation Package is designed to help the Units of Assessment to develop and to communicate a common research strategy that meets the objectives of high scientific quality, innovation potential and strategic relevance.

A1. Summary of present research activities

Give a summary of the current research activities in the Unit of Assessment including important infrastructure, academic and industrial networks and interdisciplinary aspects. Comment on the present strategic impact of the Unit of Assessment on society and industry. The strategic impact might contain elements such as for example trained personnel, new knowledge and technology, intellectual property, new companies or services etc.

A2. Self assessment of the strengths, weaknesses, opportunities and challenges of the Unit of Assessment

This analysis should be carried out from the scientific, strategic, organizational and financial points of view.

Describe how the Unit perceives itself in the international context and identify its most relevant role models or competitors (research groups or organizations). Comment on what distinguishes the Unit's research from its competitors. What is the 'niche' of the Unit in the global research arena?

A3. Summary of the most promising future research directions of the Unit of Assessment in an international and strategic perspective

Based on A1-A2, evaluate the Unit's future potential - over the next 8-12 years - in contributing to the development of society. Means towards this end could be e.g. new knowledge and technology, innovations, supporting existing industries, laying the basis for new industries etc.

Comment on the conditions required to develop these future activities.

If relevant, describe the units view on emerging industrial concepts and the research that is required to support such development. How does the Unit position itself in such a development?

Factors for the Expert Panel to Consider

Units of Assessment have an opportunity here to briefly note circumstances they consider may affect their performance in the RAE for the Expert Panels e.g. recent retirement of a senior researcher, inclusion of Lecturer research outputs in the Evaluation Package.

Part B. Quantitative Data of the Unit of Assessment

This Part of the Evaluation Package requests quantifiable information about the Unit of Assessment. It has three sections:

B1: Facts and Figures

B2: Summary of Major Research Activities and Outcomes

B3: Actions for Renewal

B1: Facts and Figures

B1.1 STAFF

Statistics on all Staff employed by the Unit of Assessment (UoA) during the period January 2003 to December 2007.

This table will be completed, as far as possible, by the KTH central administration from central records and given to the UoAs to check.

Research Staff are defined as KTH employees attributable to the categories listed below in table B.1.1. Categories for Other Research Staff and Other Staff are also listed below. **Each member of staff may only be attributed to one staff category.** Full Time Equivalent “FTE” information is requested.

In addition to the total FTE in each category, Unit of Assessment are asked to quantify the number of FTE women in each category and the number of FTE under the age of 40. This information will help the Unit of Assessment and KTH understand the potential for renewal. The “T” column is for Total FTE staff number, the “W” for number FTE of women “U” for the FTE number under 40.

Research Staff		2003			2004			2005			2006			2007		
Category of Staff		T	W	U	T	W	U	T	W	U	T	W	U	T	W	U
	Swedish															
Research Staff																
Professor (recruited)	Professor															
Professor (promoted)	Professor															
Associate Professor	Universitetslektor															
Assistant Professor	Biträdande lektor/ forskarassitent															
Docent*	Docent*															
Researcher	Forskare															
Total																

Other Research Staff																	
Guest Professor	Gästprofessor																
Adjunct Professor,	Adjungerad professor																
Postdoc	Forskare**																
PhD Students	Doktorand**																
Total																	
Other Staff																	
Lecturer	Adjunkt																
Technical Support Staff	Tekniker																
Administrative Staff	Administratör																
STAFF TOTAL																	

* Docent is a title earned based on scientific and teaching merits, and allows a researcher to supervise PhD students as the main supervisor.

** Any form of employment with at least a one year contact to work at KTH

B1.2 RESEARCH FUNDING

Amounts and sources of research funding for the Unit of Assessment during 2003-2007.

This table will be completed by the KTH central administration from central records. Completed tables will be given to the Unit of Assessment to check.

B1.2.1 EXTERNAL

External					
Year	EU	Other International	Research Councils	Vinnova	Ministries
2003					
2004					
2005					
2006					
2007					

Year	Industry	Foundations	Other	TOTAL
2003				
2004				
2005				
2006				
2007				

B1.2.2 TOTAL

This table will be completed by the KTH central administration from central records. Completed tables will be given to the Unit of Assessment to check.

Summarise the amount of External and Internal Funding but **do not** include funding for undergraduate teaching ('GRU').

Total			
Year	External	KTH	TOTAL
2003			
2004			
2005			
2006			
2007			

B1.3 SCIENTIFIC PUBLICATIONS

Units of Assessment are asked to submit the **total number of publications**, by type, published by all members of a Unit of Assessment during 2003 – 2007.

Scientific Publications					
Publication Type	2003	2004	2005	2006	2007
Journal Article					
Review Article*					
Conference Paper					
Authored Book					
Edited Book					
Chapter of Book					
TOTAL					

* a review article reflects on the "state of the field", and most often comments on the work of others; it should appear in a peer reviewed publication.

B1.4.1 Number of PhDs

The total number of PhDs awarded by the Unit of Assessment between 2003-2007. Again, the total number ("T") and number of women ("W") should be recorded.

This table will be completed by the KTH central administration from central records. Completed tables will be given to the Unit of Assessment to check.

PhDs Awarded										
	2003		2004		2005		2006		2007	
	T	W	T	W	T	W	T	W	T	W
No of degrees										

B1.4.2 Career of PhD Students

List here the names and present place and form of employment of all the doctoral students graduated from the Unit of Assessment during 2003-2007. Where possible give the current job title as well as stating whether the role is research or non-research based.

PhD Career				
Name	Year of PhD	Present Employer	Role: Research/Non-Research	Gender: M/F

For those whose present employment is not known, “Not Known” should be entered.

B2: Summary of Major Research Activities and Outcomes

Introduction

In this section each Unit of Assessment is asked to describe those *major* research activities and achievements that indicate the quality of research undertaken in the unit. Submissions in this section should reflect and justify the description of the Unit of Assessment and its strategy submitted in Part A. Submissions are permitted from **all** Research Staff (*including Other Research Staff as defined in B1.1*) within a Unit of Assessment who have been employed at KTH during the assessment period of 2003-2007.

B2.1 Major Research Outputs

Each Unit of Assessment is asked to submit its major Publications and/or other Research Outputs achieved during 2003-2007 that provide the strongest possible profile of the Unit.

To reflect KTH's status as a technical research University, in addition to printed academic work, other research outputs may be submitted that include, but are not limited to: new materials, devices, images, products and buildings; intellectual property, whether in patents or other forms such as software, companies; major reports for governments, agencies or companies, major exhibits or events; work published in non-print media.

Maximum number of Research Output Submissions

The number of research outputs, whether publications or other research outputs, is limited to the total number of full Professors (i.e. both recruited and promoted) within a Unit of Assessment multiplied by 3. For example, a Unit of Assessment with 4 Professors is permitted to submit 12 research outputs. Research Outputs can be the work of any member of Research Staff or Other Research Staff.

B2.1.1 Major Publications

Major Publications			
Principle Authors	Full Title	Journal, Year, Volume, Pages	DOI* if available

*DOI=[The Digital Object Identifier System](#), for scientific publications this is given e.g. in the following format: [DOI: 10.1016/j.tibtech.2007.05.002](#)

B2.1.2 Other Major Research Outputs

Other Major Research Outputs				
Type of Output	Person/s Responsible	Research Group	Description	Date of public availability

B2.2 National or International Centres of Excellence

Here, a Unit of Assessment should note all Centres of Excellence that it is or has been a member of during 2003-2007. All Centres listed here *must* receive external income.

Centres of Excellence						
Name of Centre	Home-page	Person Responsible at the UoA	Role of UoA e.g. coordinator, partner	Other Partners	Total Funding for the UoA	Duration

B2.3 Major International Collaborations

Each Unit of Assessment should record the number of major international activities undertaken with partners outside of Sweden during 2003-2007 by the Research Staff or Other Research Staff (as defined in Table B1.1).

International Collaborations	
	Total Number
Number of collaborating institutions*	
Research visits abroad (of at least 2 months' duration)	
Visiting Researchers (of at least 2 months' duration)	
Other major international activities according to the traditions of the research field (specify; scientific expeditions, field work etc)** 1. 2. etc.	

* Research collaborations given here are limited to those with joint research grants and/or joint publications.

** A maximum of 5 examples may be provided.

B2.4 Major Engagement in Scientific Society

Units of Assessment should enter those activities undertaken during 2003- 2007 that illustrate high quality interactions with their scientific peers. Submissions may be included from any member of Research Staff or Other research Staff (as defined in Table B1.1).

Engagement in Scientific Society		
	Total Number	Number of Individuals Contributing
Plenary or keynote talks at international conferences		
Assignment as editor or member of the editorial board		
Member of international scientific councils		
Member of academic and learned		

societies		
Awards, Prizes of international standing		
Other, specify (e.g. hosting a major international conference, competition, exhibition...)*		

* A maximum of 5 examples may be provided

B2.5 Major Engagements with Industry and Government

Units of Assessment should entre those activities undertaken during 2003- 2007 that illustrate a commitment to working with industry and government both in Sweden and abroad.

Government and Industry Assignments should be understood to be projects of significant budget, billing in excess of 500,000 kr. Submissions may be included from any member of Research Staff or Other research Staff (as defined in Table B1.1).

Major Engagement With Industry and Government	
	Total Number
Adjunct Professorships	
Industrial PhD students	
Major Industry Assignments (contract research)	
Major Government Assignments	
Tailored Educational Courses run for Industry or Government	

B2.6 Innovation Activities

As well as engaging with industry through contract research or education, researchers today sometimes patent their findings, commercialising these through multiple routes. Researchers also form companies either based on patents, other forms of intellectual property e.g. software or experience. These activities are often referred to as “innovation activities” and are highly valid outcomes for research conducted at KTH that will be regarded positively in this RAE.

Units of Assessment should entre those innovation activities undertaken during 2003- 2007, noting their current status as of 31st Dec 2007. Submissions may be included from any member of Research Staff or Other research Staff (as defined in Table B1.1).

B2.6.1

Intellectual Property				
Patent Number*	Short Description	Person(s) holding at the UoA	Date of Registration	Current status e.g. awarded, sold, licensed to established industrial partner, transferred to spin-off, abandoned

*only awarder patents, not applications

B2.6.2

Companies Founded				
Company Name*	Founder(s) from the UoA	Company type: Spin-Off**, Consultancy or Service	Date of Formation	Current status e.g. company trading actively, company closed, company sold

* To be included a company must have, or have had, an income in excess of 250,000 kr per year

** A Spin-Off company should be based on a patent developed through KTH research.

B2.7 Major Engagement in Society in General

Units of Assessment should include those activities undertaken during 2003- 2007 that illustrate a commitment to working with society in general both in Sweden and abroad. Submissions may be included from any member of Research Staff or Other research Staff (as defined in Table B1.1).

Engagement in Society	
	Total Number
Popular science papers or books	
Textbooks	
Popular Science Presentations	
Other societal assignments, specify (e.g. performances, events)*	

* A maximum of 5 examples may be provided

B3: Actions for Renewal

Introduction

As its staff are responsible of all KTH achieves, it is critical that this “resource” at KTH is renewed and opportunities are created for merit-based advancement. In this section, Units of Assessment should quantify those actions it has taken to renew and refresh its Faculty. Again, information should be collected from 2003-2007. The aim of this section is to gauge the potential for quality at the Unit of Assessment in future years.

B3.1 New Recruitments

In this instance, recruitments are valid only when made to the Research Staff, as defined previously in B1.1. Again the total number “T” and number of women “W” should be recorded.

New Recruitments	Number	
	T	W
External Recruitments (with a doctoral exam from another university)		
Internal Recruitments (with doctoral exam from KTH)		
International Recruitments (with a doctoral exam from outside Sweden)		

B3.2 Emerging Talent

A Unit of Assessment should note significant awards won by Research Staff or Other Research Staff (as defined in Table B1.1) under the age of 40. Awards of international standing recognising young talent e.g. Ingvar, VR-Rådsforskarna, Gustafsson, EU Young Scientist, European Research Council Starting Grant, EURYI (European Science Foundation Young Investigator Award), European Commission Marie Curie Excellence Grant, amongst others, should be noted.

Emerging Talent			
Name	Gender M/F	Award	Year