

Abstract

**Motivation, mission and profile  
Research evaluation in the context of societal demand**

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Researchers are motivated by a variety of reasons or incentives when they do their research, that is to make choices what to investigate and how to do it. Arguably, the prime motivation for most researchers is curiosity, which is closely related to the possibility of scientific discovery and theory building. Researchers want to know what is not known yet, find answers to questions that have not been posed or answered yet. Perhaps these questions belong to the most important questions in their field, perhaps not; and perhaps these questions belong to questions that are very relevant for societal problems, and perhaps not. As researchers become part of the community, they most likely will be affected by other motivations. The research group they belong to will have a program they have to fit in to, they have to apply for funding, they start to collaborate, etc. Their initial motivation (curiosity) gets mixed up with other, external motivations.

The motors that motivate research may vary per discipline or field; they might shape its social impact in one case much more than in another. If we think about an astronomer or a chemist, it might be expected that their prime motivation is in the big questions of the discipline, but it could also be of a practical nature (a new drug, or an instrument for the space shuttle). And how does this work for somebody who studies history or health care systems? Their prime motivation for doing the kind of research they do might be in the question what we can learn from the historical development of cities for today's society, respectively why certain health care systems work so much better than others. In other words, in some fields there is a broader orientation than in others, and within fields motivations might range from very theoretical to very practical.

The choice of a person to apply for a certain job in a particular department will partly be made by the research mission that has been developed by that department, which might be curiosity driven – fundamental research, or industry driven – applied research or society driven - policy oriented. Most departments will have a mixture of different missions, they develop a certain research profile over time.

Apart from these content-oriented motivations, there are motivations detached from the research it self, but not detached from the person: financial profit and or social advancement, prestige or power.

These last two motivations are getting more and more entangled in the present day research enterprises. The ambitions of governments (in Europe anyway - Lisbon agreement) are sky high, however, the investments in research are under pressure, and this is not calculating the financial crisis of this moment.

Zaragoza, 13 11 2008

At the same time, industry is leaving a lot of the fundamental research to the universities, because their profit horizon is very short. But it is hard to invest in fundamental research for academic (medical) institutions because their funds are always limited, and researchers have a lot of other things to do (patient care, teaching). What governments try to do, in the Netherlands at least, is to establish institutions that form a bridge between the interests of government, industry and society [f.e. institute for pharmaceutical research]. The question then becomes how to balance all these different interests, and how do you evaluate that.

In my talk I will explain what in the Netherlands has been done by ERiC project, which tries to balance the different interests and demands when research has to be evaluated in a societal context. In a number of fields ERiC is presently conducting pilot studies to develop criteria and indicators for the evaluation of research in the context of societal questions. The pilots all follow the same overarching framework: starting from the mission of a research group we try to distinguish productive interactions between research and a number of relevant social domains and from there indicators that tell us something about the social impact of research. In 2009, we will take the ERiC project to the European level, thanks to a grant from the Science and Society programme of the European commission. One of the case studies there will be the attempt to establish a comprehensive evaluation system (that is evaluating both scientific quality and societal relevance) in the eight Dutch University Medical Centers UMCs, and a few (primary) health care institutes).

# Motivation, mission and profile

## Research Evaluation in the context of societal demand

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Regulación e Innovación en Evaluación de Tecnologías Sanitarias  
Zaragoza, 13 November 2008

# **\*Contextual evaluation\***

**ERIC**

[www.ERIC-project.nl](http://www.ERIC-project.nl)

- ▶ motivation of researchers
- ▶ mission of research group / institute
- ▶ research profile

**productive interactions with  
relevant context**

# \*Motivation of researchers\*

**ERIC**

[www.ERIC-project.nl](http://www.ERIC-project.nl)

- + **curiosity, discovery, theory [sc comm]**
- + **problem solving [sc comm, target gr]**
- + **societal demand : policy, industry, patient groups, NGOs, etc. [wide variation]**
- + **career, esteem, money [self – varied]**

# \*Mission of research group\*

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

 oriented toward scientific community

 industry oriented

 society, policy

 mix

# \*Research profile\*

✚ 4 interaction channels : texts, people, money, artifacts (instruments, prototypes, soft- and hardware)

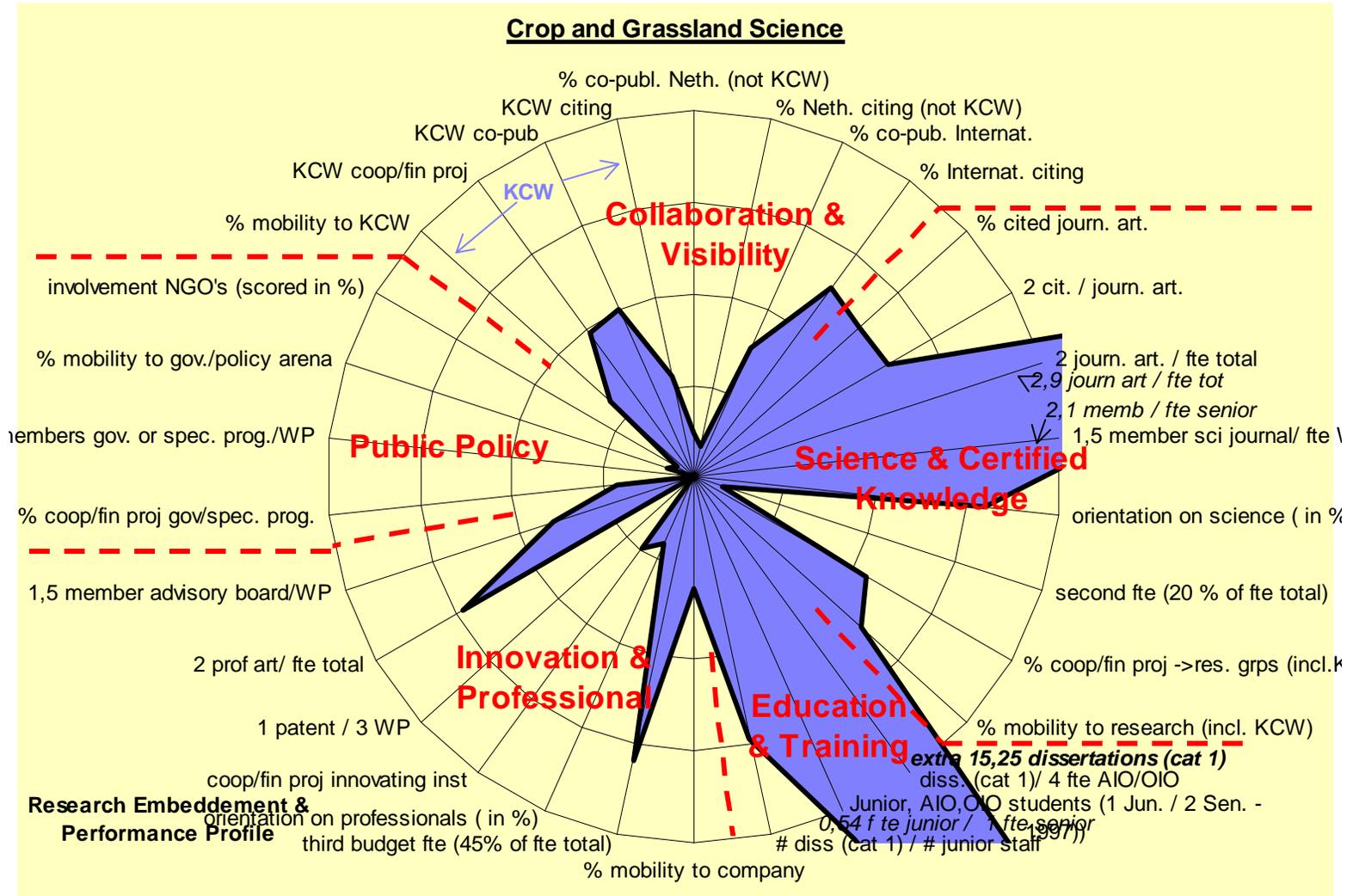
✚ 3-5 social domains (policy/politics; industry, professional sector, society at large)

→ REPP : activities, performance profile

# \*REPP – full profile\*

# ERIC

www.ERIC-project.nl



# **\*Changing context, changing evaluation\***

**ERIC**

[www.ERIC-project.nl](http://www.ERIC-project.nl)

- ✚ mode 1 / mode 2 / policy context / Lisbon 2002**
- ✚ m1 disciplinary competition / int. comparison, focus on int. journals, IF etc.**
- ✚ m2 problem solving, context of application, focus on productive networks, socially robust knowledge**
- ✚ shift from verdicts by jury's and possible reallocation to improvement of research and socio-economic impact →coach model**

## \*Search for new methods\*

- ✚ Societal impact of health research [MRC 2002]
- ✚ National Health Research Council report [2007]
- ✚ Judging research on its merits [2005]
- ✚ Evaluating research in context [2005, 2007]
- ✚ AWT: alfa en gamma stralen (humanities & social sciences shine) [2007]
- ✚ UK : pay back, ESRC, AHRC
- ✚ Denmark : Radar Graph [research policy council]
- ✚ USA, Canada, Australia

# **\*ERiC 2006 – 2009\***

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

- + Broad collaboration of all universities, Academy, Research Councils, professional schools**
- + Further consensus within research areas, and to involve expertise of research community and stakeholders**
- + Conduct pilots in a number of academic fields : architecture, law, electrical engineering**
- + European collaboration → project : SIAMPI**

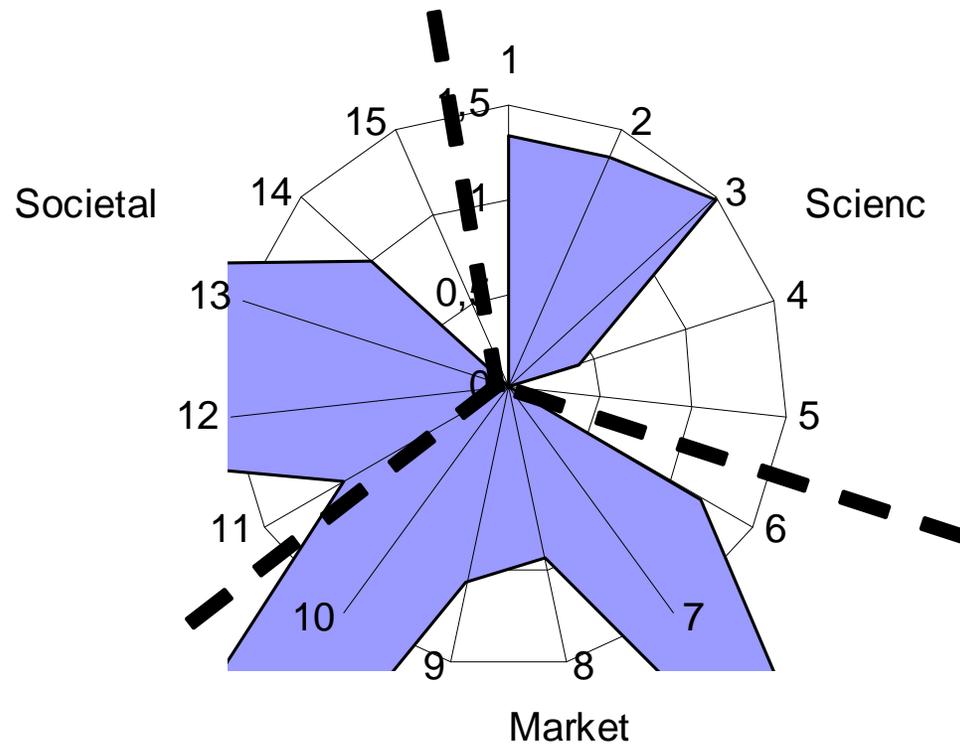
## **\*New evaluation focus\***

- ✚ Focus on wider context**
- ✚ Consider differences between fields of research**
- ✚ Keep it simple and doable**
- ✚ Integration in national systems**

# \*simplified REPP - Pharma\*

ERIC

[www.ERIC-project.nl](http://www.ERIC-project.nl)



REPP

pharma

Science, certified knowledge	
relative citation impact	--
productivity scientific publications	++ <sup>**</sup> (1)
international visibility and collaborations	=
representation in editorial boards	++
invited lectures	++
Industry, market	
non-academic/commercial citing environment	++
productivity professional publications	++ <sup>*</sup> (1)
involvement in industry/market	-
advisory and expert roles in commercial domain	--
editorships professional journal	++ <sup>**</sup>
Policy, societal	
involvement in policy domain	+
memberships and expert roles in governmental bodies	++
memberships of societal organisations: advisory/ education	++ <sup>*</sup>
production of public goods	+
additional grants from policy	+

# **\*ERiC : 4 step method\***

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

- 1. Self evaluation**
- 2. Empirical reconstruction  
performance and interaction  
[REPP]**
- 3. Stakeholder analysis**
- 4. Feed back and forward look**

# **\*SIAMPI : 4 step approach\***

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

- 1. Mission analysis**
- 2. Logic chart (audiences, interactions, output, expected outcome)**
- 3. Stakeholder analysis**
- 4. Feed back and forward look**

# \*SIAMPI : countries, fields\*

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

 **Netherlands**

 **France, NL, EU**

 **NL, UK**

 **Spain, UK**

 **Health**

 **Nanotechnology**

 **ICT**

 **Social sciences  
and humanities**

# **\*SIAMPI : health case study\***

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

- 1. Mission**  **UMC Leiden univ**
- 2. Consulting researchers and stakeholders**  **UMC Free univ Amsterdam**
- 3. Data gathering, indicator development**  **NIVEL (primary health care)**
- 4. Feed back**

# \*Proposed UMC system\*

**ERiC**

[www.ERiC-project.nl](http://www.ERiC-project.nl)

## Societal impact

- Process** 6 measures: advisory committees, collaboration stakeholders, Dutch publications, training professionals, authorized public information, public media
- Product** 6 measures: protocols & guidelines, policy documents, technology & services health care, medical tests, medication, methods to improve quality of care

## Economic impact

- Process** 1 measure: membership of company advisory committees
- Product** 3 measures: commercial products, spin-out companies, patents

# Research Embedment and Performance Profile

Science, certified knowledge	=
relative citation impact	-
productivity scientific publications	-
international visibility and collaborations	-
representation in editorial boards	++
invited lectures	no info
Industry, market	+ / ++
non-academic citing environment	++
productivity professional publications	+
involvement in industry/market	++
advisory and expert roles in commercial domain	++
editorships professional journal	+
Policy, societal	+
involvement in policy domain	=
Memberships and expert roles in governmental bodies	++
Memberships of societal organisations: advisory/education	++
production of public goods	+
additional grants from policy	-

Information combined from:

- Bibliometric analysis
- Input-output figures
- Questionnaire research-unit