National CRIS development in Finland

Aija Kaitera
Research Administration
University of Helsinki
Finnish Science and Technology System

Parliament

Research and innovation Council

Government

Ministry of Education and Culture

Ministry of Employment and the Economy

Other Ministries

Academy of Finland

Agency for Technology and Innovation (Tekes)

The Finnish Innovation Fund (Sitra)

Universities, Polytechnics and Public Research Institutes

Business Enterprises and Private Research Institutes

Research.fi
University reform 1.1.2010

• Universities reconstituted as independent institutions under public law

• Aim greater autonomy for universities, which should
  – Increase reactivity, cooperativeness internationally, target resources to top-level research, give strengthened role within the system of innovation

• University’s core funding still comes from the state budget through the Ministry of Education and Culture.
  – Increased need for the Ministry’s monitoring

• Number of universities down to 14 (prev. 20)
  – Unit size still too small

• Impacts are mainly seen in universities’ strategic governance and management.
  – University boards and rectors gained a stronger position

Ministry of Education and Culture, The state of scientific research in Finland 2012
The state of scientific research in Finland 2012, figure 9: R&D activities by sector of performance (contribution of different sectors as a percentage of national R&D expenditure) in 2010.

NB: Data for Switzerland from 2008. The countries are listed in the order of the higher education sector’s proportion of R&D activities. The higher education sector includes universities, polytechnics and (e.g. in Finnish statistics) university hospitals. The government sector comprises other public organisations that engage in R&D. In Finland, government research institutes account for the bulk of government-sector R&D. In this Figure, the government sector also includes private non-profit organisations (PNPs), which in Switzerland accounted for 1.6% of R&D expenditure and in other countries for 0–0.7%, the Finnish figure in 2010.
R&D funding in the state budget in 2012 (M€). Total 2 010.1 M€

The state of scientific research in Finland 2012
University annual data flow (until 31.12.2009)

Separate systems for data collecting
Data validated by the Universities

Summary statistics

University

Statistics FI

Ministry

OECD

University funding model
one year delay
University annual data flow (1.1.2010 onwards)

Separate systems for data collecting
Common manual by the Ministry
Data validated by the Universities and CSC

University

Metadata

CSC IT Center for Science Ltd

Statistics FI

Ministry

National library

University funding model

Publication portal

OECD
## Yliopistojen julkaisut julkaisutyypeistä A-E

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[http://vipunen.csc.fi](http://vipunen.csc.fi)
Associations of Breast Cancer Risk Factors With Tumor Subtypes - A Pooled Analysis From the Breast Cancer Association Consortium Studies

Author(s): Yang, Xiaohong R.; Chang-Claude, Jenny; Goode, Ellen L.; Couch, Fergus J.; Nevanlinna, Heli; Milne, Roger L.; Gaudet, Mia; Schmidt, Marjanka K.; Broeks, Annegien; Cox, Angela; Fasching, Peter A.; Hein, Rebecca; Spurdle, Amanda B.; Blows, Fiona; Driver, Kristy; Flesch-Jayas, Dieter; Heinz, Judith; Sinn, Peter; Vrielin, Alina; Heikkinen, Tuomas

Journal of the National Cancer Institute. Monographs, 2011
A1 Journal article (refereed), original research

Associations of common variants at 1p11.2 and 14q24.1 (RAD51L1) with breast cancer risk and heterogeneity by tumor subtype - findings from the Breast Cancer Association Consortium


Human Molecular Genetics, 2011
A1 Journal article (refereed), original research

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Efforts taken to create flow (1)

- RAKETTI (Rocket) project “towards uniformity in information management of higher education institutions”
- Common Conceptual Model
  - Base for data warehouse model
  - covers the majority of reporting needs of the higher educational institutes and the Ministry of Education
  - [http://tietomalli.csc.fi](http://tietomalli.csc.fi), [teemu.kemppainen@csc.fi](mailto:teemu.kemppainen@csc.fi)
Efforts taken to create flow (2)

• National publication project 2009-2011
  – was terminated, some success though:
• Detailed manual for bibliographical data
  – Incl. classifications for publications and fields of Science
• **Publication Forum** according the Norwegian model (2012, in 2015 funding model)
Efforts taken to create flow (3), perspective change

• Primarily university collaboration
  – Coordination at CSC
  – Ministry and other national funding bodies participating

• Task 1: To compare Finnish common model with CERIF
  – Basic concepts are aligned, some challenges identified
  – CERIF has more connections

• Task 2: To Identify concepts relevant for Finnish HEI but currently missing in the Finnish common model (XDW)
  – Five concepts missing or need clarification (next slide)
Concepts needed for HEIs, missing currently in the FI common model (XDW)

- Person | Project | Award | HEI | External organisation |
- Project (fine tuning)
- Research organisation (networks)
- Research infrastructure
- Merits (activities)
- Other output

- Publication | Art publication | Publication’s organisation | Education | Training event
Challenges:
• Identify relevant connections
• Define model for general concepts (e.g. facility, service)
• Define measurement and Indicator concept
• Create conversion rules
CERIF connections in XDW
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<th>Teaching activities and pedagogical competence</th>
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<th>Public appearances</th>
<th>Memberships in councils, boards, committees and networks</th>
<th>Editorial work and peer-review</th>
<th>Expert and evaluation tasks</th>
<th>Awards, prizes and honours</th>
<th>Service and leadership</th>
<th>Visits</th>
<th>Other activity or merit</th>
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<td>Chair/member/secretary of prg./sci. committee</td>
<td>Presentations and posters</td>
<td>Chair/Secretary/etc. in societies</td>
<td>Membership in editorial board</td>
<td>Expert tasks in the public sector</td>
<td>Award or honour based on academic career</td>
<td>Management of research unit/group/project</td>
<td>Visits abroad (research/artistic/teaching)</td>
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<td>Chair/... of organizing committee</td>
<td>Invited presentations and tutorials</td>
<td>Member in societies</td>
<td>Editor-in-chief/associate editor/guest editor/Editor of journals</td>
<td>Expert tasks in the private sector</td>
<td>Award or honour for scientific/artistic/research/teaching merits</td>
<td>Mentoring and tutoring</td>
<td>Visitors to the organisation (research/artistic/teaching)</td>
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<td>Chair of workshop or session, panel member</td>
<td>Media visibility</td>
<td>Chair/member in expert groups, eval. or steering committees</td>
<td>Reviewer of scientific and scholarly journals/conference articles/other publications</td>
<td>Experts tasks in research organizations</td>
<td>Service at the university</td>
<td>Service at higher education institutions/research organisations</td>
<td>Studies abroad</td>
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<td>Conference organization</td>
<td>Social media</td>
<td>Positions of trust in in companies</td>
<td>Editor-in-chief/associate editor/guest editor/Editor of journals</td>
<td>Eval. of academic/sci/art/teach. competence</td>
<td>Service at the university</td>
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<td>Chair/member of an award committee or jury</td>
<td>Reviewer of scientific and scholarly journals/conference articles/other publications</td>
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*Draft: Classification for Merits*
Future issues in annual reporting

• Currently publications and personnel of universities and polytechnics are collected

• Possible extensions in the future:
  – researcher identifiers for authors of publications
  – data from state research institutes and university hospitals
Final flow

HEI

Conversion of information to common data model and XML-specification

File transfer to central service (daily)

Central service offers real-time ws-interface to external services

CSC

• HEI is responsible
  – for the transfer of information and
  – about the contents as the Registrar
• Ministry of Education and Culture as a service provider (delegated to CSC)

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