The Renewed Centre of Excellence Programme 2018-2025

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Astoria Hall Helsinki

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Vice President for Research
Main goals of CoE strategy 1997 have been achieved

- Quality of research – at international level
- Critical mass of research communities - at satisfactory level
- Strong research environments – CoEs key players in research infrastructure development
- International attractiveness - high share of foreign recruits, intensive cross-border collaboration
RENEWAL OF UP-COMING PROGRAMME
Strategy of the Academy of Finland 2017-2020
Keywords ”Quality, renewal, impact”

Elements of renewed CoE programme

- Renewal of science promoted by favoring break-through research and opening up of the programme also to the younger generation of researchers with potential to achieve excellence

- The funding period extended from 6 to 8 years to foster high gain/high risk research

- The results of the 4 first years subjected to full scientific evaluation during the 5th year to ensure renewal of science

- According to outcome of mid-term evaluation, the last 3-year period will be funded
  - At the same, higher or lower level than the first 5 years
  - Or, Academy funding may be terminated
Sustainability of new CoE programme

- The role of the host organisation strengthened
  - Position of CoE’s research area in host university’s strategy taken into consideration

- Stronger commitment of host to CoE during Academy funding period

- Universities will take the mid-term evaluations into account when deciding about their commitment to the CoE after Academy funding period

- Research infrastructures the CoE needs, has deloped and will develop, also relationship with the Finnish RI Roadmap and European infrastructures (ESRFI) taken into consideration
Interconnectivity between university’s research strategy, the CoEs and research infrastructure – Aca Fi support

Research excellence
Aca Fi: CoE programme

Uni strategy
Aca Fi: Profiling call

Infrastructure
Aca Fi: Infra strategy, Roadmap and FIRI calls
”Societal impact” embedded in legislation and strategy of the Academy

Academy of Finland Act
”The task of the Academy of Finland is to further scientific research and application (hyödyntäminen) of research findings”

Strategy for the Academy of Finland
”The Academy of Finland furthers high quality, responsible and impactful research, and application (hyödyntäminen) of knowledge that emanates from research”
Strategy of the Academy of Finland 2017-2020: Keywords ”Quality, renewal, impact”

Elements of renewed CoE programme

- Beyond scientific impact, several CoEs have delivered impact on society at large, in forms natural to the particular scientific/scholarly disciplines
- Achievements have remained largely invisible

- The impacts of CoEs’ research findings should be made visible, and the mindset of researchers sharpened to pay attention of their works’ impact, by
  - Explanation in application of the forms in which the particular research field has delivered impact
  - And of the potential of the proposed research to create impact
  - Evaluators to comment (no scores) this
  - CoE to report also on impact
  - Mid-term evaluation to comment on the reported achievements
  - Academy to showcase impact of its CoEs on society
PERFORMANCE OF THE CoEs

Quality of research in Finland
Quality of research of the CoE Programme
Development of research infrastructures
The scientific disciplines’ publication proportion by university in 2009-2012

### Discipline’s proportion of publications by university, %
- 0–4.9%
- 5–9.9%
- 10–14.9%
- 15–19.9%
- 20–24.9%
- 25–29.9%
- 30–34.9%
- 35–39.9%
- 40–44.9%
- 45–49.9%
- 50% or more

Top 10 index in selected OECD countries

OECD countries that ranked the same as or lower than Finland in the early 2000s and now rank the same or higher

CoEs Programme’s impact on quality of Finnish research

- Professional bibliometric study including general fora such as Nature Science etc

- Main results
  - Quality of CoE research clearly higher than outside of CoEs
    - Not in all disciplines
  - Scientific impact of CoEs highest when international co-authors
    - Impact: int > national > internal CoE co-authors
  - CoEs’ high impact not sufficient to raise Finnish science above OECD average
  - OECD average can be surpassed only if the large majority of publications (>90% outside of CoEs) are of higher quality
Most ERC grants in CoEs or CoE universities

<table>
<thead>
<tr>
<th>Uni</th>
<th>Uni as CoE coordinator/partner</th>
<th>ERC</th>
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<td>HY</td>
<td>15/5</td>
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CoEs have built infrastructures that have achieved Roadmap status: long-term development

Several CoE leaders have played key roles in promoting Finland’s membership in ESFRIs
PERFORMANCE OF THE CoEs

Diversification of researchers community
Internationalization
Gender
Career age
Internationalization: FiDiPros mostly in CoEs
Current 29 CoEs and Aca Fi FiDiPros (those started in 2010-14)

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<tr>
<th>University</th>
<th>CoEs Coordination/partner</th>
<th>FiDiPros</th>
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Share of FiDiPros in CoEs

- 2010-2015: 33%
- 2012-2017: 67%
- 2014-2019: 22%
Internationalization: CoE Directors ans recruits in CoEs 2012-2017 (15) during 2012-14

- Foreign Directors
  - CoE 2002-2007: 1 out of 16
  - CoE 2008-2013: 1 (same person) out 18
  - CoE 2014-2019: 1 (same person) out of 14 (2012-14 another person)

- 135 dissertations, from them 24% by foreigners
  - From foreign PhDs 67% have remained in Finland

- 275 foreign recruits into CoEs
  - 47% from Europe, 53% from beyond Europe

- Researchers who had left the CoEs are now in
  - Public sector abroad 55%
  - Public sector in Finland 30%
  - Private sector in Finland 15%
## Gender: Female Directors

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<tr>
<th>CoE</th>
<th>Total number</th>
<th>Women</th>
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<tr>
<td>2000-05</td>
<td>26</td>
<td>15%</td>
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<tr>
<td>2002-07</td>
<td>16</td>
<td>12.5%</td>
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<td>2006-11</td>
<td>23</td>
<td>17%</td>
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<td>2008-13</td>
<td>18</td>
<td>22%</td>
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<td>2012-17</td>
<td>15</td>
<td>27%</td>
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<tr>
<td>2014-19</td>
<td>14</td>
<td>14%</td>
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Consensequense of Aca Fi Board decision in 2009: No restriction of number of CoE periods

CoEs 2012-2017 and CoEs 2014-2019: **29** CoEs in total

- Directors of **11** new CoE had been Director of 1 or 2 earlier CoEs
- Director has previous CoE Directors as PIs in **2** new CoEs
- Director was earlier PI in **6** previous CoEs
- New Directors in **10** CoEs
Consequence of Aca Fi Board decision 2009: Director has to be excellent, potential excellence not sufficient

CoEs 2000 – 2008 (83 Directors)
Director excellent or **potentially** excellent

- 27% <50 y; 13% >60 y

CoEs 2012-2014 (29 Directors)
Director excellent

- 13% < 50 y; 38% > 60 y
Dialogues with stakeholders on renewal of CoE Programme

- *Ad hoc group* in 2013-2014
  - Risto Nieminen, Aino Sallinen, Ilona Riipinen

- CoEs 2012-2017 (15) mid-term negotiations together with host organisations in 2014

- Exchange in CoE-seminars in 2013 and 2014

- Discussions with each of the university rectors on elements of renewal in 2015
IN ORDER TO RENEW FINNISH SCIENCE

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Research groups and consortia with potential for excellence
New teams

With
New research themes, approaches, methodologies,

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CENTRES OF EXCELLENCE IN RESEARCH