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Information Research Programme
1997-2001
EVALUATION REPORT

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Foreword

The five-year Information Research Programme was launched by the Academy of Finland in late 1996 with the Ministry of Education acting as co-founder of the programme. The aim of the programme was to generate top-level know-how in the rapidly developing fields of information research by creating novel approaches and networks among interdisciplinary research teams.

A total of 24 projects or consortia were funded at the first stage which came to a close at the end of 1999. Most of the projects represented fields covered by the Research Council for Natural Sciences and Engineering and the Research Council for Culture and Society.

At its launch it was not felt necessary to appoint a coordinator or a programme committee to the programme. It was, however, soon realized that a programme of this size could not be managed without this infrastructure. At the beginning of 1998, the Board of the Academy duly appointed a programme committee and signed a coordination agreement with the Information Society Research Centre of the University of Tampere. Together with the coordinator the initial programme committee prepared the second stage of the programme. Altogether twelve projects or consortia were funded in this second phase during the period 2000 - 2001.

The first stage projects covered a wide range of themes but the second stage had a narrower focus; The intention was to concentrate on human-technology interaction, as well as on the social impacts and changes resulting from the expanding information society.

It is a well-established practice of the Academy of Finland to ask outside experts to evaluate the results of Academy-funded research programmes after their termination. Dr. Sally Wyatt (the University of Amsterdam, Chair), Professor Heli Marjanen (the Turku School of Economics and Business Administration) and Professor Torbjørn Svendsen (the Norwegian University of Science and Technology) were invited to form the evaluation panel of the Information Research Programme. Ms. Outi Kallionen, Ph.D, from the Häme Polytechnic acted as expert secretary for the evaluation.

The main aim of the evaluation was to assess the programme and its administration as a whole and not focus on individual research projects. The outcome and results of the second stage projects will be discussed and evaluated at a seminar later this year when all the different projects and consortia have submitted their final project reports.

On behalf of the Academy of Finland I wish to thank the experts for their most valuable work.

The Information Research Programme was launched over five years ago. It was thus one of the pioneering programmes to be funded within the concept of "research programmes". Even then it was exceptional that a programme had no coordination planned in from the beginning. It is evident that this was a mistake. The evaluation panel directs strong criticism at the administrative infrastructure of the programme.

The Academy became aware of the problems resulting from the lack of proper infrastructure of research programmes early on and has consequently paid a great deal of attention to the adequate planning and management of research programmes in recent years. Most of the recommendations of the present evaluation panel have thus already been implemented in the guidelines of new research programmes.

Helsinki June 24, 2002

Krista Varantola
Chair of the Programme Committee of
the Information Research Programme

INFORMATION RESEARCH PROGRAMME, EVALUATION REPORT

1. Introduction

The main objective of the Information Research Programme was to improve the knowledge base in those research areas associated with advanced information and communication technologies. The Programme aimed to develop interdisciplinary expertise, increase training for younger researchers, and to raise the international profile of Finnish research. Long-term research which would create a basis for future applications was emphasised. Researchers were encouraged to work with end users, although product development itself was not funded.

Phase I of the Programme (1996-99) concentrated on five topics: non-linear phenomena, data visualisation and medialisation, efficient retrieval and transfer of information, man as processor of information and information society. Twenty-four projects were funded within Phase I for approximately 8,4 million euros (FIM 50 million). Following an internal review, Phase II (1999-2001) of the Programme focused on three themes: the growing demands on knowledge, skills and competencies – human processing of information; structural changes in the workplace; and, human-technology interaction in the acquisition, control and production of information. Twelve groups were funded in Phase II, for 2,52 million euros (FIM 15 million); ten of these had also received funding during Phase I.

The Programme was initially overseen by a Working Group (1995-97) of the Academy of Finland which drew up the original objectives and selected the Phase I projects. It disbanded in 1997, and was replaced by a Programme Committee in 1998, which selected the Phase II projects. A second Programme Committee began work in January 2001, which concentrated on obtaining the funds for and setting the parameters of the final evaluation. A co-ordinator was appointed 18 months after Phase I started, and finished at the end of 2001, when the last project finished. The co-ordination budget from the Academy was 336,000 euros (FIM 2 million).

2. Quality of Research

The scope of the Information Research Programme is innovative and ambitious. These very qualities are also part of the explanation about why it is difficult to assess the research outcomes. Another part of the explanation for such difficulty lies in the nature of the information provided to the Evaluation Committee. The Evaluation Committee received lists of publication titles and numbers of research degrees awarded for most of the Phase II projects, together with a report from the co-ordinator based on interviews with a small number of researchers and project leaders. The Evaluation Committee did not receive lists of outputs for all of the Phase II projects. Limited information, in Finnish, was provided about the outputs of Phase I projects which were not also funded during Phase II. Statements from the project leaders, the programme co-ordinator and the Programme Committee about the substantive results of the programme were not available. This lack of information, particularly qualitative information about the outcomes of the projects and the Programme, made the task of the Evaluation Committee very difficult.

The overall volume of publication was acceptable, although it varied between projects. In particular, the proportion of international publications was very uneven. In many cases, it is not known what proportion of publications are really the result of the Programme and what proportion would have been prepared anyway as part of ongoing research activities within project groups.

A significant number of PhDs have been completed or will be shortly. The impact of these will only become apparent within the next three to five years.

The co-ordinator produced seven publications, three of which are published in English and two of which were edited by the co-ordinator. The Finnish publications and two of the English ones were considered to be useful contributions, especially as a publication outlet for more junior researchers. The other English book, *Informational Societies, Understanding the Third Industrial Revolution*, edited by Erkki Karvonen, is of high quality and might be widely read, if distributed properly.

3. National and International Co-operation

On the basis of the lists of publications, it appears that many of the project researchers have extensive international collaborative working relationships. The extent to which these are ongoing collaborations or new contacts made as a result of the Programme is impossible to judge.

Evidence of domestic collaboration across projects is not visible. However, the co-ordinator organised three seminars for Programme participants, one national and two international. Based on interviews conducted by the assistant co-ordinator, it appears that attitudes to the seminars were mixed, though more positively received by the younger researchers. The design of the international seminars, with keynote addresses in English and parallel sessions in Finnish, limited the extent to which international participants were able to engage with project researchers. Despite some problems, the use of such seminars is an effective mechanism for stimulating both national and international collaboration. They are also essential for large, multi- and inter-disciplinary programmes which seek to be more than a collection of projects.

4. Researcher Training

One of the Programme objectives was to enhance researcher training. However, the structure of the Programme with a three year Phase I and two year Phase II inhibited the full realisation of that objective. A Finnish PhD is expected to take four years, thus it was difficult within the funding structure to enable a researcher to start and complete a PhD within the Programme itself. However, ten projects received funding in both Phases I and II, and were in a position to fund PhD work in its entirety. There was a lack of clarity about where responsibility for training lay – within projects, within the departments/universities hosting the projects or within the programme. All of this is likely to have contributed to considerable fragmentation of PhD funding, training and overall experience. Some PhD candidates and younger researchers complained about a total lack of supervision and training.

5. Impact of Programme on Society

Some individual projects had considerable coverage in the mass media. The Programme overall generated very little coverage. The co-ordination report identified lack of interest in the Programme by the mass media as a weakness. It is the view of the Evaluation Committee that mass media coverage requires a clear message about the outcomes of the Programme which has been absent.

The experience of the Evaluation Committee is that it is difficult to obtain meaningful mass media coverage of academic work. A more effective strategy is to work with more targeted audiences, such as policymakers, industry associations or organised social groups. There is no evidence that this was attempted. Given the topicality and importance of the Programme's research to the Finnish economy and society, this is a major omission.

6. Programme Concept and Funding

The Programme's overall concept of bringing together projects from a range of disciplines, all relevant for understanding the emerging information society was a very good one. However,

on the basis of information provided to the Evaluation Committee, it is not possible to assess the value added of the Programme.

Considerable funds were devoted to the Programme. Despite the size and importance of the Programme, the mid-term evaluation was done by the co-ordinator, and not by an independent evaluation group. No funds were set aside for the final evaluation, and such funds as were used had to be found at the last minute. For programmes of this size and significance, interim and final evaluations must be built into the structure and funding from the beginning.

7. Co-ordination of Programme

The Programme was established by a Working Group (1995-97) which drew up the original objectives and selected the Phase I projects. There was then a gap. The first Programme Committee was established in 1998, and selected the Phase II projects. The second Programme Committee, which contained only one member from the first Programme Committee, began its work in January 2001, and concentrated on obtaining the funds and setting the parameters of the evaluation. The lack of continuity from the first to the second Programme Committee was the result of changes in the composition of the Academy's Council.

The co-ordinator began 18 months after Phase I started, and finished at the end of 2001, when the last project finished. For most of this time, and for the first quarter of 2002, a half-time assistant co-ordinator was also employed.

Overall, as mentioned in 2, *Quality of Research*, project and programme reports have been inadequate. Not all projects have provided reports and the information provided by the projects and by the co-ordinator does not include substantive results.

In general, the Programme has suffered from a lack of continuity in the Programme Committee, and from a lack of leadership and accountability at all levels.

8. Extent to which Initial Goals Met

Development of basic research: During Phase I, there was a clear emphasis on developing new connections between basic research and applications, though the extent to which this happened is unknown. Phase II focused more on social science research. Expertise and know-how have been generated, but the Evaluation Committee does not know to what extent such knowledge and skills have been used by enterprises and organisations important for the Finnish national economy.

Development of interdisciplinary expertise: This appears to have happened only to a very limited extent (see 3, *National and International Collaboration*). The co-ordination task in a programme like this needs to include informing projects about related work, funding opportunities and potential research and collaborative partners, as well as organising seminars and publications.

Training a new generation of researchers: Many PhDs and licentiates have been completed which received full or partial funding from this Programme, and several more will be completed within the near future. Precise numbers were not provided. Training and education for these younger researchers was left to individual projects and the universities in which they were based. Some opportunities for learning were provided by the seminars and conferences organised by the co-ordinator.

9. Recommendations for the Future

1. Inter- and multi-disciplinary approaches to the study of the information society remain an important intellectual and policy issue. Understanding the continued rapid pace of change in the development and use of ICTs requires input from a range of academic disciplines. The reasons for Finland's unique and leading position in the European and global information society require further analysis. It is recommended that the Academy continue to fund research in this area, in a focused way, similar to the strategy pursued during Phase II.
2. Following good practice in other national and international research funding agencies, the Academy must introduce as a matter of urgency mechanisms for collecting output information about the research it funds. This should include quantitative information about numbers of publications and completed research degrees; and also clear statements about the intellectual outcomes of the research, and the relationship between those outcomes and the original project objectives. Where research training provision is one of the project objectives, the outcomes of this should also be reported. Again, in line with good practice elsewhere, the Academy should introduce mechanisms for ensuring such reporting obligations are fulfilled (via the withholding of final payment until reports received, for example).
3. Appoint a programme co-ordinator prior to the start of programme funding and continue to fund the co-ordinator beyond the end of the projects. The first allows the co-ordinator to be involved in the formulation of the programme specification and selection of projects. The latter enables the co-ordinator to prepare dissemination materials based on the final results for a range of audiences, including edited collections for academic audiences and briefing materials for policymakers in government and industry. As with individual project leaders, the co-ordinator must also be required to submit reports to the Academy summarising the co-ordination activities and programme results.
4. Introduce programme structures that enable PhD projects to be started and completed within the lifetime of the programme. This would include funding for a minimum of four years, plus provision for adequate PhD supervision.
5. Appoint a Steering Group for the duration of the Programme with clear terms of reference. Keep minutes of all Steering Group meetings.
6. Conduct a meta-evaluation of the role of co-ordinators in Academy programmes, drawing also on the experience of sister academies and research councils elsewhere in Europe. In particular, the balance between the intellectual and managerial functions needs to be addressed.
7. Plan for the evaluation of programmes from their beginning, ensuring that both financial and informational requirements will be in place.
8. Explore mechanisms for disseminating research results to wider audiences, including local, regional and national policymakers, industrial actors and other social groups such as trades unions, information professionals, patient organisations. In addition to the academic reporting recommended in point 2, projects should be required to produce a one page summary of major results written in non-specialist language. Such summaries could provide the basis for communication with the media and other non-academic audiences. Other mechanisms include more effective use of electronic communication such as project and programme websites as well as paper briefing documents and face-to-face meetings with targeted audiences.