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NEEO

Annual Report

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eContentplus

This project is funded under the *eContentplus* programme¹,
a multiannual Community programme to make digital content in Europe more accessible, usable and exploitable.

¹ OJ L 79, 24.3.2005, p. 1.

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2 Project Objectives

2.1 *The problem addressed by the project and its objectives*

The NEEO project (Network of European Economists Online²) creates a networked service providing open access to both historical and recent economics publications from over twenty top European economics research institutes and the full text publications of 500 top researchers. Content includes journal articles, working papers, books and book chapters, conference papers and research data. The service, called Economists Online, based on Institutional Repositories of the participating universities, will improve the visibility, usability and accessibility of this information for users in Europe and in the world at large.

NEEO takes an international, subject-oriented approach which will set standards, guaranteeing the quality of the information and providing the branding which can act as a model for others to follow.³

2.2 *Contribution to the programme objectives*

The project is in line with the objectives of the goals of the European Commission programme eContentplus.⁴ The project enhances the conditions for accessing, using, reusing and exploiting economics content by involving main players and their collections in this area and by implementing mechanisms to aggregate, describe and index the electronic research output.

NEEO will improve the discovery of the information resources of the partners and their researchers and will enable, as much as possible, open access in various languages and for various types of users.

The global visibility of the output of economic researchers in Europe will be enhanced by creating a critical mass of resources in the institutional repositories of the partner institutions.

² NEEO: <http://www.neeoproject.eu/>

³ An Institutional Repository is a database which stores, preserves and disseminates the intellectual research output of an institution in digital form.

⁴ eContentPlus funding programme, DG Information Society European Commission:
http://ec.europa.eu/information_society/activities/econtentplus/index_en.htm

3 Consortium

Netherlands

1. Tilburg University (TU)

2. Erasmus University Rotterdam, University Library (EUR)

3. Maastricht University (UM)

United Kingdom

4. London School of Economics and Political Science (LSE), UK

5. University College of London (UCL)

6. University of Oxford (OXF)

7. The University of Warwick (Warwick)

Belgium

8. Katholieke Universiteit Leuven (KU Leuven)

9. Université Libre de Bruxelles (ULB)

France

10. Sciences Po

11. Toulouse 1 University of Social Sciences (UT1)

12. Université Paris-Dauphine (Dauphine)

Germany

13. German National Library of Economics and Kiel Institute for the

Project Role

- Co-ordinator
- WP1,3 & 4 leader
- Technical expert
- Content provider

- Technical expert
- Content provider

- Content provider

- WP2 and WP8 leader
- Content provider

- WP7 leader
- IPR expertise
- Content provider

- Translation verification
- Content provider

- Content provider

- WP6 leader
- Translation
- Content provider

- WP 5 leader
- Technical expert
- Content provider

- Content provider

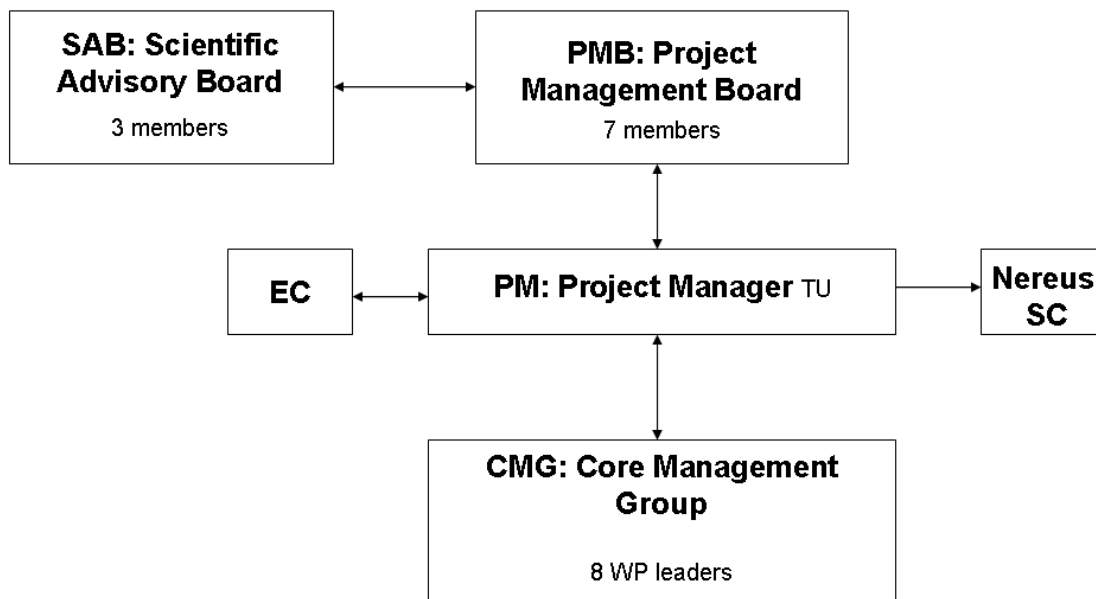
- Content provider
- Translation

- Translation

World Economy (ZBW Kiel)	• Content provider
Spain	
14. Universidad Carlos III de Madrid (UCAR), Spain	• Translation • Content provider
Ireland	
15. National University of Ireland, Dublin, University College Dublin Library (UCD)	• Content provider
Czech Republic	
16. Charles University in Prague, Center for Economic Research and Graduate Education (UK CERGE)	• Content provider
5 New Partners since 1 January 2009:	
USA	
17. Columbia University, New York	• Content provider
Italy	
18. European University Institute, Florence	• Content Provider
Switzerland	
19. Université de Genève	• Content Provider
Belgium	
20. Université Catholique de Louvain	• Content provider
Germany	
21. Universität Konstanz	• Content provider

The NEEO project is governed by a Project Management Board (PMB). It is the decision-making body of the project. It keeps the Nereus Steering Committee (Nereus SC) informed but does not report to it.⁵ Partners 1-16 have signed a NEEO Consortium Agreement. The 5 new partners have signed a Memorandum of Agreement which defines how much content they are committed to bring into the NEEO project. Diagramme 1 shows the NEEO management structure (overleaf).

The day-to-day management is carried out by a Project Manager (PM) with the Core Management Group (CMG) consisting of the 8 Work package leaders. Work is distributed across work packages: WP1: Project management, WP2: User requirements, WP3: Content – traditional publications, WP4: Content – datasets, WP5: Interoperability infrastructure and gateway, WP6: Multilingual issues, WP7: Awareness and dissemination and WP8: Assessment and evaluation.

Diagramme 1 NEEO Management Structure

⁵ Nereus is the membership consortium of leading libraries in the area of economics which is behind NEEO. It is necessary to be a member of Nereus before becoming a NEEO partner. For more information, see <http://www.nereus4economics.info>

4 Project Results/Achievements

4.1 A NEEO user requirement survey

The Mid-Project Questionnaire was developed and disseminated to just over 2000 persons. It was tied into the soft launch of the first version of Economists Online which was presented to just users at NEEO partner institutions. The survey ran from 2 February 2009 until 31 March 2009 and was analyzed in April and May 2009. The questionnaire was presented in four languages (EN, FR, DE, ES). The survey focused on user feedback on content available through Economists Online, the services available, and perceptions of the value of the gateway for dissemination of academic work. Recommendations for content acquisition, improvement of the NEEO portal and its services, recommendations for the multilingual function of the portal and information on the awareness and dissemination of research through NEEO were extracted from this report. The project has taken a number of these recommendations on board, for example, regarding the improvement of the portal's graphic design and its functionality. Others will be considered in the NEEO Business Plan.

4.2 Aggregating decentralised content from 18 partners

Partners have been ardently aggregating content from their researchers in the past 24 months of the project. At present well over 950 authors have committed to working with NEEO. Material is stored in 18 local institutional repositories, 16 of which are currently available via the NEEO portal (for more information on this, see below). The NEEO network of 16 partners from 8 countries has expanded to 21 from 11 countries (3 additional ones to include Italy, Switzerland and the USA) in the last year. They are European University Institute in Florence, the University of Geneva, Université Catholique de Louvain, Columbia University NYC and the University of Konstanz.

Partners have implemented the NEEO Technical Guidelines⁶ to allow for optimal content ingestion by the NEEO harvester. The expansion of the NEEO network to include additional partners has seen a new content policy document for Economists Online to specify the types of publications that the Economists Online seeks. Various publication types are gathered to reflect the breadth of economics research output: working papers, discussion papers, journal articles (post-print or accepted version after peer-review), reports, chapters, books, conference proceedings, theses and other research output. Apart from historical content, the other key focus for the remaining months will be the aggregation of current content, especially full texts from reports, book chapters, books, conference papers, working papers and journal articles.

As at 31 August 2009, 18 Economists Online partners provide their content via the NEEO service.

The totals as of 31 August 2008 were:

- Well over 600 researchers and authors are collaborating in NEEO. This far exceeds the original target of 500.
- Over 55,000 bibliographic references, which is more than the target of 50,000 for the project as a whole
- More than 21,000 full text records available open access.⁷
- The current content full text records added to the portal since that start of the project till August 2009 comes close to the target of 5,000.
- Accessible (full text) via partner repositories are:
 - 7,250 journal articles
 - over 11,000 working and discussion papers
 - over 600 chapters

⁶ NEEO Technical Guidelines can be found at: http://www.neeoproject.eu/NEEO_TechGuide_0808.pdf

⁷ Full text meaning documents containing more than the abstract, i.e. for immediate access to the complete text.

- over 450 theses
- over 250 reports
- nearly 150 books

4.3 NEEO partner institutions well informed of Intellectual Property Rights (IPR) issues related to open access deposit

The IPR issues of datasets have been investigated and are available in D4.1. As with the publications themselves, the production, management and dissemination of the data occurs within a legal framework where there are rights and agreements which must be respected and managed and where restrictions apply to the disclosure of personal and commercial information. NEEO identified what those rights, agreements and restrictions are and proposed means of dealing with them in the area of data in 2009.

The IPR Toolkit⁸ is a document which is largely there to support content mediators in advising on basic legal issues surrounding IPR when retrieving material from authors. It addresses legal aspects to inform partners better about the IPR challenges surrounding repositories. Knowledge of legal aspects is important when managing a repository as well as experiences on how to educate researchers about current changes. Apart from IPR issues of data this document further includes a guide to copyright and repositories for authors and information specialists, an extensive FAQ document, useful links to model licenses and model letters to request the deposit of material in IRs from publishers.

4.4 Eighteen Institutional Repositories interoperable so far for improved access via a subject-specific search service and portal for economics –

The Service Oriented Architecture⁹ of the NEEO Gateway has been developed to enable the access to the distributed content of institutional archives supported by over five different platforms via one subject-based online portal. This service, named Economists Online, profiles strong European research results in the area of economics. Sixteen partners have followed the NEEO Technical Guidelines which specifies the MODS and MPEG21-DIDL metadata standards, to bring partner content into one disciplinary service whole.¹⁰¹¹¹²

Lessons learnt have been shared with early adopters in the project to assist other partners in the integration of more IRs into the portal. By 31 August 2009 18 partners have implemented the NEEO Technical Guidelines to allow them to be harvested by the NEEO harvester and appear with their data in the portal. More new partners will follow shortly.

The architecture of the NEEO Gateway is such that it enables the access to the distributed content of the institutional archives via one subject-based online portal. The institutional archives run on different platforms. The NEEO Gateway has been designed so that it can deal with these different platforms. Crosswalks have been developed for the DSpace, EPrints, Fedora and ARNO platforms. The Gateway has been designed in such a way that partners can register locally author information.

The service offered by the NEEO Gateway is called Economists Online. The version currently available is version 1.4.5. This version is available as a test version. Apart from the basic functionality (search and

⁸ NEEO IPR Toolkit: http://www.neeproject.eu/IPR_toolkit_Public.pdf

⁹ SOA: http://www.neeproject.eu/neo_soa.pdf

¹⁰ MODS: <http://www.loc.gov/standards/mods/>

¹¹ MPEG21-DIDL : http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=41112 and [http://standards.iso.org/ittf/PubliclyAvailableStandards/c041112_ISO_IEC_21000-2_2005\(E\).zip](http://standards.iso.org/ittf/PubliclyAvailableStandards/c041112_ISO_IEC_21000-2_2005(E).zip)

¹² NEEO Technical Guidelines: http://homepages.ulb.ac.be/~bpauwels/NEEO/WP5/WP5_Technical_guidelines.pdf

retrieve), this version also contains contextual help, a solution for multi-lingual interface access (MLIA) as well as a mechanism for the presentation of usage metadata has been implemented. By implementing the MLIA functionality another step towards adding added-value services has been made. For instance, users can now - in a very easy and transparent manner - use the multilingual JEL classification to build their queries. The gateway itself is available in 4 different languages, thus adding another feature of multi-lingual access. RSS feeds, another added-value service, are also available in the latest release. The latest version of Economists Online is available via: <http://www.economistsonline.org>.

Version 1.5 of the technical guidelines for the NEEO gateway is available. This revised version contains step by step procedures and instructions for partners when adding their archives to the gateway. All documentation is available for all partners via Surfgroepen (project's website).

At present 18 NEEO partners have finished the MODS/DIDL implementation. Other partners will follow soon. The good news is that 3 of the new NEEO partners have finished their MODS/DIDL implementation. The EO portal (test version) now shows 18 institutions. More institutions will follow in the coming weeks. The overall target within the project was 500 publication lists. We have already well exceeded this target. In view of the fact that more partners will add content to the gateway in the coming weeks, it is expected that we will have well over 900 publication lists available by the end of the project.

Work on the EO portal in terms of functionality is nearly finished. A number of features need to be added and bugs need to be fixed. It has been decided that at the end of October 2009 a version will be available which contains all required functionality. Enriched metadata will then be available. In order to extract bibliographic references pragmatic solutions need to be found. It is now a serious option to reuse the CitEc service of RePEc.

The release planned for the end of October 2009 will be used for the user evaluation study planned in November 2009.

4.5 Providing more Europeans access to economics content

NEEO has made some efforts to further increase the access to information in 4 of the European languages by translating the Mid-Project online questionnaire from the English into Spanish, French and German. These translated versions have helped NEEO partners communicate more effectively on the project with their authors. A key classification system for economics, JEL (Journal of Economic Literature Classification System) and its some 1,000 terms, exists now in three further languages than English and this has also been integrated in the Economists Online search technology. The search interface of the portal has been translated into English, French, German and Spanish and this will provide broader multilingual access to the economics content of academic output. Version 1.4.5 (test version of the portal) contains the multilingual search interface. In addition, the international Eurovoc multilingual thesaurus and dictionary will be used by the portal if needed to optimise search; all partners have signed up to this license.

In addition, NEEO has taken up contact with various experts in the Multi Lingual Information Access (MLIA) field in view of the planned automated translation of queries and development of the NEEO multilingual search system. A master thesis was carried out for NEEO where NEEO data ran through several multilingual translation tools such as Reverso (Promt), Systran and Google Translate. This thesis formed part of the basis for deciding on which multilingual software to select for the portal's needs. In addition, discussions with the CACAO project were also held in early 2009 to investigate whether their solution would be feasible for the NEEO project. Unfortunately, this was not the case due to technical restrictions and for issues of sustainability. NEEO has now chosen to use Google Translate. As a result. NEEO's multilingual system will be ready is available in test version 1.4.5.

In addition, the Nereus consortium has been in discussion with the Dutch Royal Library (KB) on behalf of NEEO to discuss the long term preservation of the full text content of NEEO in the long term. Nereus and the KB have agreed to the price conditions for the period of 3 years and have set up a work plan meaning that NEEO material will be available in a dark store for the long term. The agreement was signed by the Director of the Nereus Consortium on behalf of NEEO in the summer of 2009.

4.6 Raising awareness of NEEO amongst the publishing, library and information management and economics communities

A NEEO Communication Plan was developed in the first year to identify NEEO's target groups, communication aims and products. Since then, a full set of publicity materials (flyer, leaflet, poster, and website) has been created. More recently, posters and a leaflet with information about the NEEO Project and the NEEO Final Conference on 28-29 January 2010 have been developed and printed. These materials give the project a clear visual identity and online presence and have supported NEEO partners in their project advocacy activities. Presentations about the project or relating to it have already been made at numerous events in Atlanta, Berlin, Bielefeld, Geneva, Paris, Tampere (Finland), Toulouse - all on invitation. The NEEO project was shown to researchers at the 24th Annual Congress to the European Economic Association on 23-27 August 2009 in Barcelona, Spain. For an updated list of events attended, please go to: http://www.NEEOproject.eu/NEEO_events.html In addition, 3 articles are planned in the last 6 months of the project.

Work has started on the NEEO Final Conference¹³ which will take place on 28-29 January 2009 in the British Library Conference Centre. The conference programme¹⁴ has been finalised and invitations have been sent to international economics mailing lists, academics at partner institutes and national bodies. About 160-200 participants will be aimed for. A final conference website has been developed and on air since the first week of September the website. Conference registration is now open to the public.

The NEEO public website with basic information on the project, its partners, events and results, is regularly maintained and can be found at <http://www.NEEOproject.eu/>

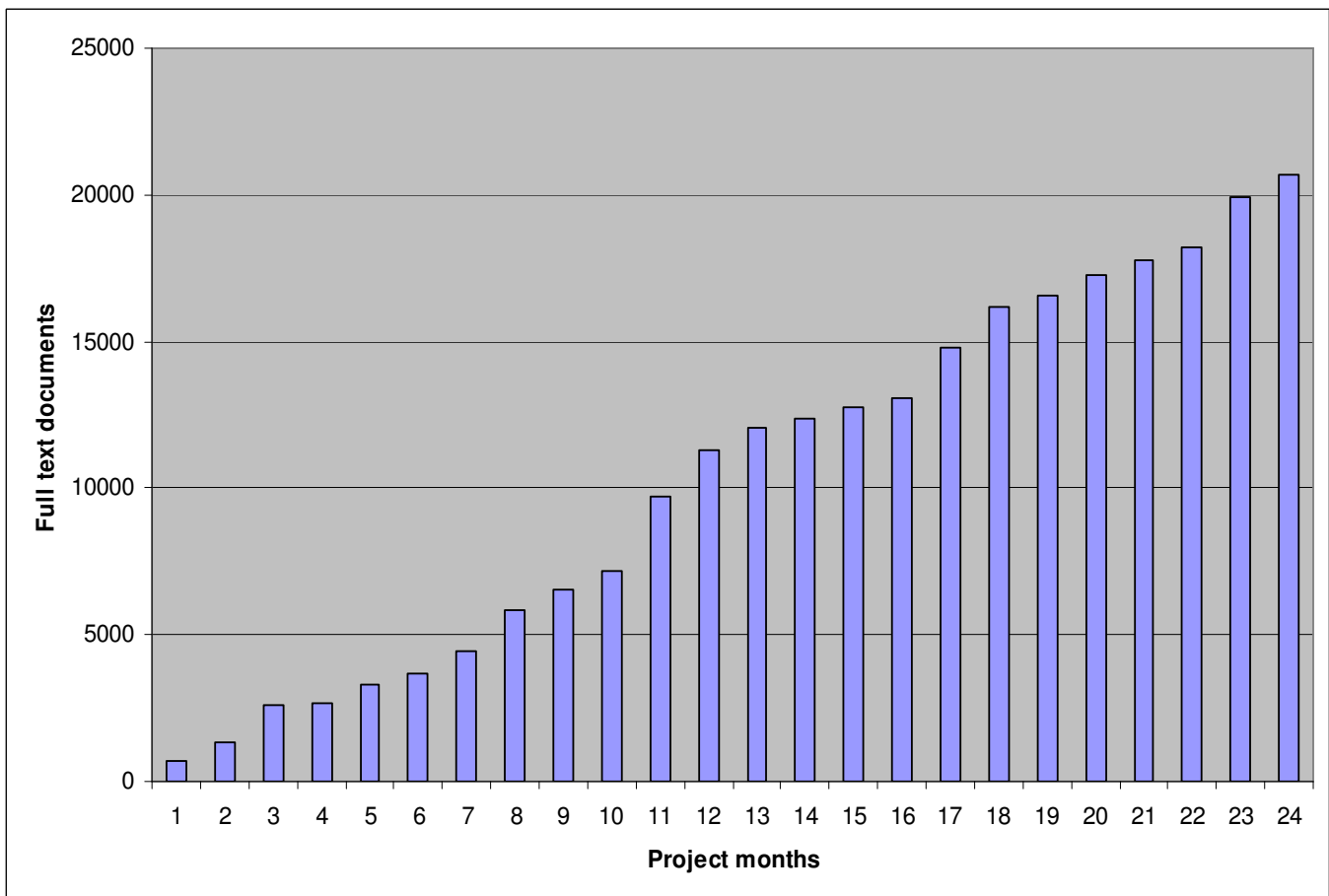
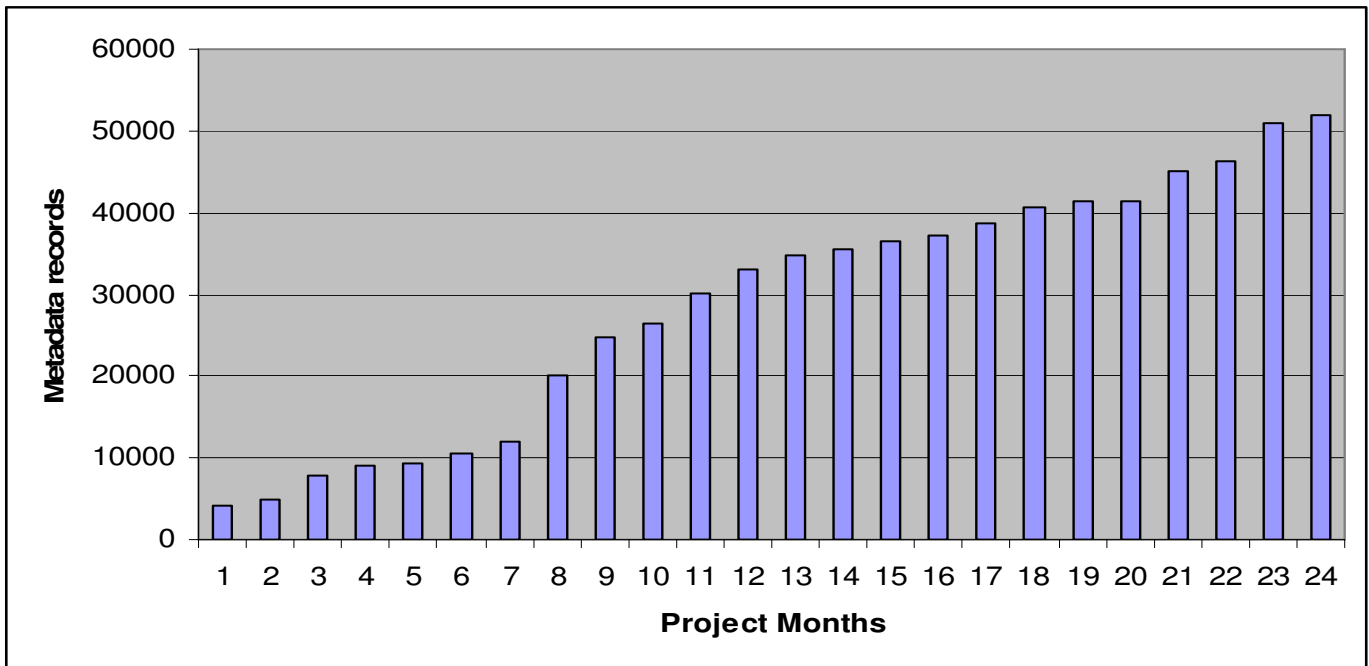
4.7 Assessing the improvement of access to open access content

NEEO repositories have steadily increased their content throughout the life of the project. This can be seen in the following graphics (overleaf) showing statistics of 16 NEEO partners (core and non-core partners) This means that one of NEEO's objectives in providing more access to high-quality research open access is being fulfilled.

¹³ NEEO final conference : <http://www.needconference.eu/>

¹⁴ NEEO final conference programme: <http://www.needconference.eu/programme.html>

Statistics of 16 NEE0 partners (core and non-core partners)



The number of full text downloads has also increased and at a much higher rate. NEEO is currently aggregating download statistics on its material from partners who have the facilities to do so. Progress has been made in how partners will be able to report consistent and comparable statistics by setting up usage statistics guidelines which users have been implementing in 2009. This work is being led by WP5 and will bring great benefits to the project and to usage statistics from IRs more generally as well. This will mean that download statistics will be better comparable in the future.

5 Target Users & their Needs

The Mid-project User Requirements Report (D2.5) followed on from the initial user requirements study, which was completed in February 2008. The aim of this study was to obtain early feedback from users of the Economists Online gateway and identify any refinements needed to future planned work. It sought to gain user feedback on content available through Economists Online, the services available, and perceptions of the value of the gateway for the dissemination of the researchers' work. At the time of the survey, a first prototype version of the portal was in operation and included basic services such as metadata searching and publications lists.

The questionnaire was disseminated to potential end users and contributors to Economists Online including academics, researchers and economics students but only from NEEO partner institutions since the NEEO service will only launch in January 2010.

On the whole, respondents were very positive about the value of the site and indicated both a willingness to contribute work and the belief that the site would help raise the profile of their publications. Among existing contributors, 88 per cent believed it would increase the visibility of their work. Among those respondents who do not yet have research available in Economists Online, 89 per cent indicated a willingness to submit their research to this service. Further, most survey participants would recommend Economists Online to a colleague – 73 per cent of the total – again showing strong support for the service.

The results showed that users considered the quality of publications included in Economists Online high. Access to working papers and journal articles was considered a strength, and respondents reported that by the mid-term stage of the project that the content moderately met their needs. The search functions of the gateway were considered fairly useful by users and facet options such as 'date' and 'series/journal name' were considered most helpful. However, given that the first version of the portal was used in this survey, it is expected that future design and technical improvements will improve users' experiences of the Economists Online service.

Over a third of respondents habitually consult or produce research outputs in languages other than English. While the multilingual functionality of the Economists Online portal is yet to be introduced, survey responses indicate that such a function would be appropriate to these users, and the introduction of a facet option to limit searching by language has been popular.

As a result of the questionnaire, there are a number of areas for development in relation to the structure and content of Economists Online. Results highlighted the importance for the technical functionality of the site to be improved in order to compete with other services popular with users such as RePEc and Google Scholar. However, many initial problems – such as the presentation of search results and functioning of OpenURL – have since been resolved and are expected to lead to further increased user satisfaction.

A third evaluation questionnaire will be conducted by the Evaluation and Assessment Work Package team (Work Package 8) toward the end of the project.

6 Underlying Content

Economics is a science which relies on descriptive as well as empirical research and teaching methods. For this, journal articles, working papers, books, book chapters, theses, conference papers, reports, book reviews, statistical and socio-economic data are essential publications which a library has to provide, in order to support demanding top-ranked research institutions. The Nereus partners are well known for the size and comprehensiveness of their collections. However, not all researchers, teachers, students, authors, and readers around the world have equal access to all resources, which is why NEEO is striving to provide as much of the output of its leading research open access.

6.1 *Direct user/author-base*

In total, all NEEO partners directly serve ca. 30,000 researchers and teachers and over 250,000 students, in all of which 2,500 researchers and teachers and ca. 33,000 students specialise in economics with combined collections of 20 million books, working papers and several thousand journal subscriptions of which three-quarters are e-journals and several hundred databases. By the end of the second project year, well over 600 researchers and authors were collaborating in NEEO by providing CVs or publication lists and publications to project partners. This is over 30 per cent of the total number of researchers and teachers. These leading European scholars are working together with NEEO to make as much of their scientific output digitally accessible in order to share it with the academic community open access where possible. See the list of scholars here: http://www.neeoproject.eu/neo_authors.html .

6.2 Collection development policy

6.2.1 Open access full text

The project is focused on making research results freely available to all via open access thereby increasing access and visibility to leading research results. We discourage the aggregation of embargoed material or material which is only made open access after a specified time although this cannot be completely ruled out as yet due to restrictions set by some publishers.

6.2.2. Versions

NEEO project partners are aggregating several versions of one and the same work in some cases. For example, a working paper may develop into a condensed journal article; both of which are separate publications. Partners are making efforts to mark these appropriately to make it easy for users to identify the version to be read.

6.2.3. Current content and historical content

NEEO is trying to make as much of the complete academic output of its researchers' works digitally freely available. This means making as much of a researcher's output and historical material available online open access where copyright allows. This also means making documents which were formerly only available at specific physical locations such as the researcher's office or library, now available to the world at large online irrespective of location. In one case, the entire contents of the following 2 journals *Cahiers économiques de Bruxelles* (ISSN : 0008-0195) succeeded by the *Brussels economic review* (ISSN : 1379-9932) have been made digitally available for the first time by Université Libre de Bruxelles, providing about 900 new full texts online, also to be found via NEEO.

NEEO aims to make 75% of its current content open access online where possible. Current content is defined as material from the current and previous year, which means that current content figures are moving from year to year. At the end of year two, current content amounted to close to 5,000 full text records, which is close to achieving this aim.

6.2.4. Publication type

The following types of data were selected by economists and information specialists at the beginning of the project as types of data to be made available via partner repositories via NEEO.

- **Journal articles**

Economists are evaluated on their academic output, especially on the publication of articles in journals of high reputation. The project will seek to acquire post-prints, i.e. final author versions after peer-review, or final publisher PDFs - where publishers allow.

- **Working papers** (preferably from WP series)

A working paper is usually the first formalised publication of a research idea or result; it is usually more of an extended version of what will be developed into a journal article at a later stage. It is a preliminary paper, a preprint version, that researchers prepare often to share ideas about a topic or to ask for feedback before submitting the paper to a peer reviewed journal. There is a long tradition of working papers, discussion papers and research papers in the economics community where most NEEO partners have electronic archives which aggregate them.

- **Conference proceedings**

Conference proceedings can share first research results with the economics community or else leading names can provide meta analysis of broader economics topics in keynote speeches, or other papers. The Nereus user survey in 2005 and the NEEO one of 2008 indicated that access to conference proceedings was not straightforward for the researcher and welcomed. NEEO will therefore seek to make more available online and open access via the project's portal.

- **Books**

Economists publish in books to a lesser extent compared to other mediums. We seek to make book references and the books themselves digitally available, or parts thereof where publishers allow and where viable, for easier access via the NEEO portal.

- **Book chapters**

As part of the Nereus user survey in 2005 and the NEEO one in 2008, researchers indicated that they had difficulties in accessing chapters. NEEO therefore seeks to make book references and book chapters digitally available, or parts thereof where publishers allow and where viable, for easier access via the NEEO portal.

- **Reports**

Reports can include research reports of various types. Reports can include government (advisory) reports, forecasts, policy analyses, or simply summaries or final publications of research project results in report form. References to these will be made available via the NEEO portal, as will full text to them where possible.

- **PhD theses**

PhD theses will be aggregated by NEEO partners. Some NEEO partners have institutional mandates for deposit of this material.

7 Summary of Activities

7.1 Investigating the needs of the economist in accessing and disseminating information

The project has studied the information retrieval and dissemination practices of European economists by carrying out a mid-term online questionnaire which ran from 2 February 2009 until 31 March 2009. This survey was developed to gain user feedback on content available through the first version of the Economists Online portal, the services available, and perceptions of the value of the gateway for dissemination of their work. Three small focus groups were also conducted in the same period by academics involved in the NEEEO project where they were asked for feedback on the user friendliness of the portal, its structure and content relative to other search services, and for suggestions on additional features that could be included. All members of the Nereus Scientific Advisory Board were also asked to comment on all three questions. The findings of this survey and recommendations for development of the final version of the gateway were presented in the Mid-Project User Requirement Report. Since the NEEEO portal is in position, the project has followed changes in research, dissemination and reader behaviour and to see whether NEEEO has had an effect on user information retrieval practices. The work for Work Package 2 User Requirement has finished, although the consortium would like to continue to monitor user needs and user feedback after the project ending date on 1 March 2010.

A C T I V I T Y	Executed
Mid-Project Questionnaire	√
Negotiate with organisations over publicising and disseminating the online questionnaire	√
Revise questions for the survey	√
Feedback on questionnaire design by partners	√
Revisions to questionnaire	√
Prepare publicity for questionnaire	√
Transfer questionnaire to the online survey application	√
Test questionnaire on selected economists in Nereus institutions	√
Feedback on testing from partners	√
Revisions to questionnaire and finalisation	√
Launch and run user questionnaire	√
M2.3 Mid-project questionnaire available online	√
D2.4 Mid-project questionnaire	√
Publicise user questionnaire	√
Analysis of results including free text comments	√
Report on mid-project user questionnaire to Project Management Group WP1 with recommendations for any refinements to work packages WP3-WP8	√
D2.5 Mid-project user requirement report	√

7.2 The aggregation of content from decentralised sources

Research results are currently stored on the author websites/servers and on local hard drives of some of our leading economists or in departmental, faculty or cross-institutional archives. This project is trying to organise the storage and dissemination of that content in institutional repositories for open access and increased access and visibility to our research results. Economics information specialists from partner libraries follow the collection development policy of the project. NEEO partners are still aggregating the bibliographic references and full texts of journal articles, working papers, book chapters, books, conference papers, reports, etc. from their institutions' economists directly as well as from other information sources mentioned above. The material is being aggregated from over 600 leading economic researchers.

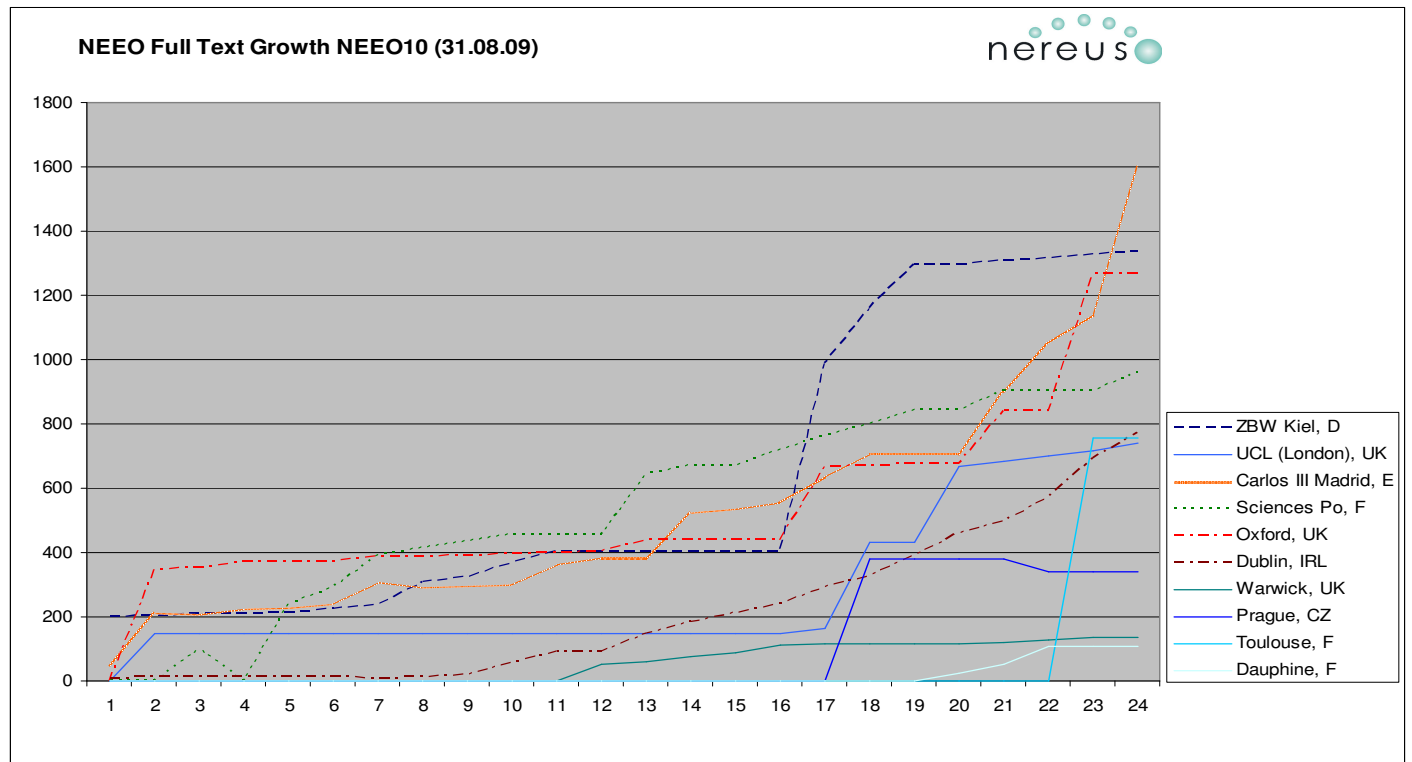
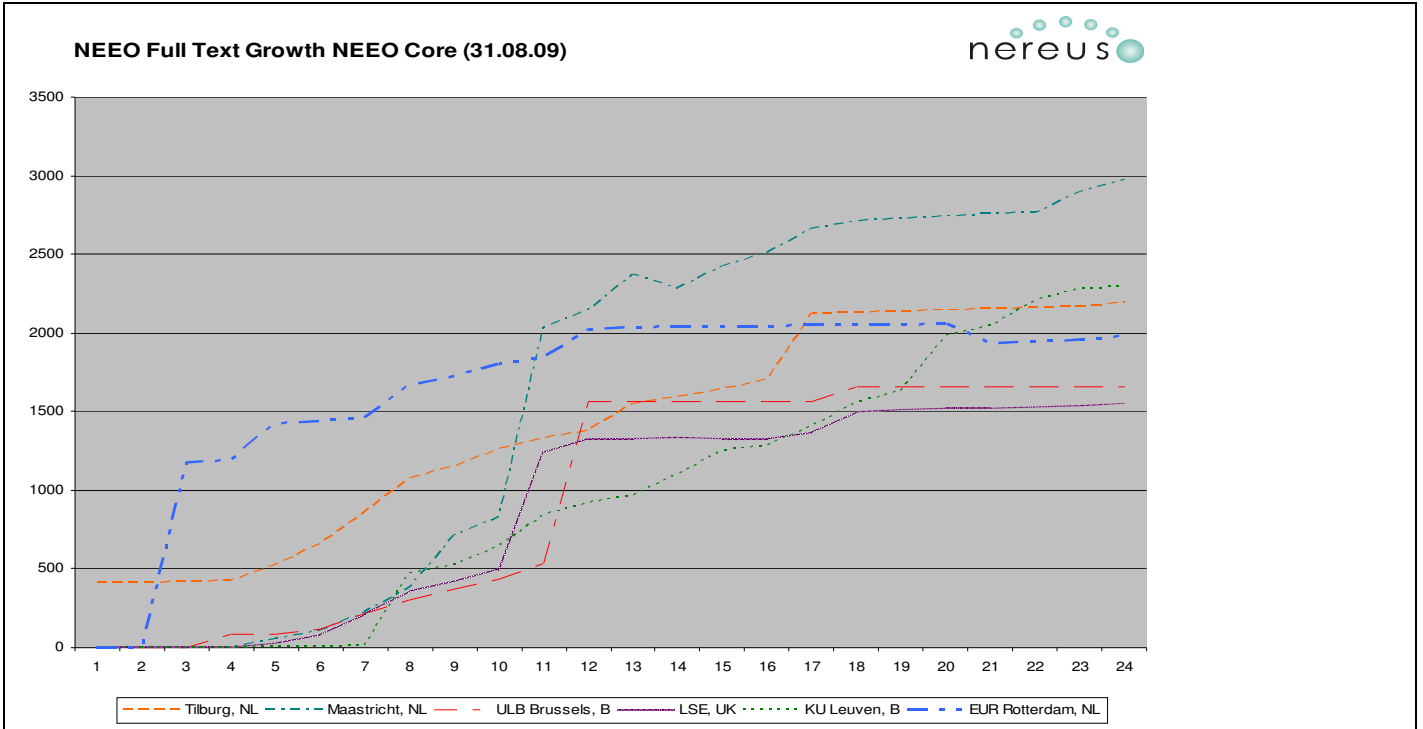
NEEO has learnt from the first user study and from the mid-project questionnaire that all partners still need to focus on bringing in more full text conference proceedings, chapters and reports where researchers have indicated having less easy access to. A new Content Policy for Economists Online was developed and it defines an increased aim to make materials of all types more open access. Material is checked for copyright restrictions before being added to safe institutional archives or so called "Institutional Repositories".

Some partners have made agreements with departments or faculties to supply them with data on a structural basis or they have linked their Institutional Repositories with the local institutional Current Research Information Systems (CRIS) to ensure only one-time deposit or they have taken on a CRIS function themselves. These methods will better guarantee the regular and current delivery of authoritative research output.

Six core partners (The London School of Economics, Tilburg University, Erasmus University Rotterdam, Université Libre de Bruxelles, Maastricht University, and Katholieke Universiteit Leuven) collected most of their resources in the first NEEO year, while the other partners concentrated on filling their repositories in the second year. Content of 18 partners is either already being harvested or ready to be harvested, including well over 600 electronic publication lists are online.

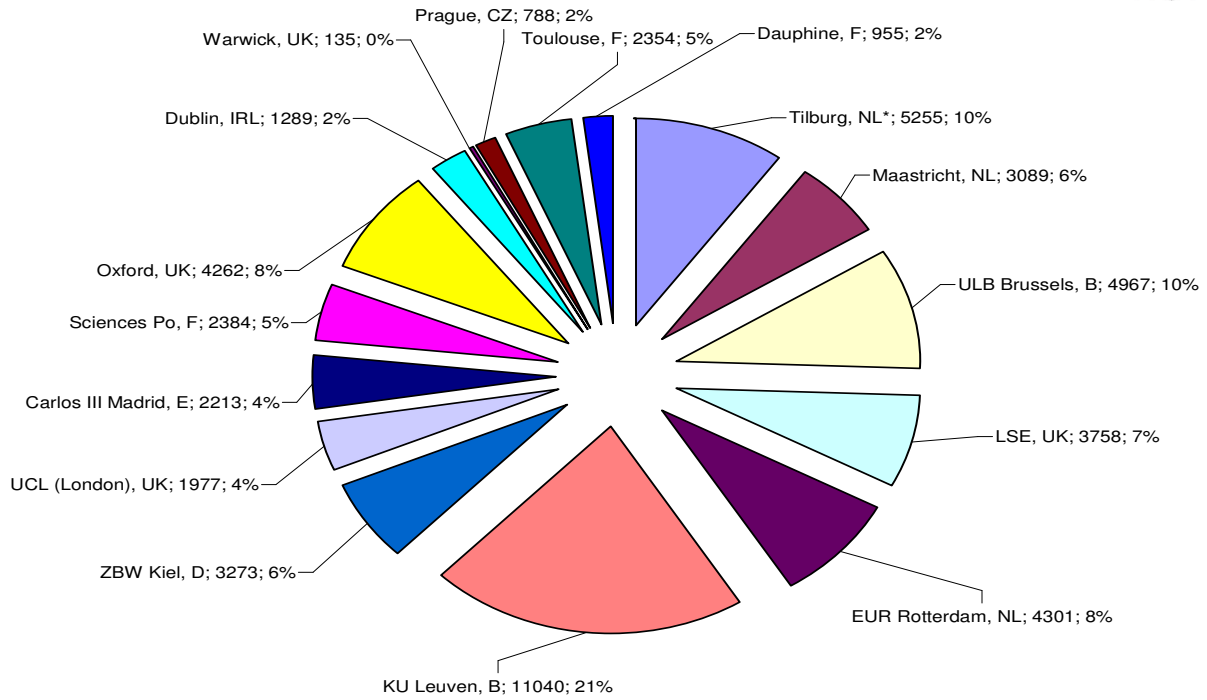
5 new partners (Columbia University, European University Institute, Université Catholique de Louvain, Université de Genève and Universität Konstanz) have joined the NEEO consortium and signed a Memorandum of Agreement showing their commitment to provide content to the service from 2009 onwards. Three of them are already providing content.

NEEO partners are still focussing on retrieving the current content (present and last year's output) of all of the economists of their institutions. This may also include economists working in other faculties or departments such as health economists or historians to make more material available. Selected partners have made structural agreements with departments or faculties for researchers to send new publications to the library when they submit their post-prints to publishers in some cases while others are retrieving this content on a more ad hoc basis until structural solutions can be implemented. Work on retrieving this content will continue for all partners until the end of NEEO year 3 and after the project ending on 1 March 2010. All partners are intending on updating their IRs with material in years to come to continue providing open access content in the future beyond the finish of the project.

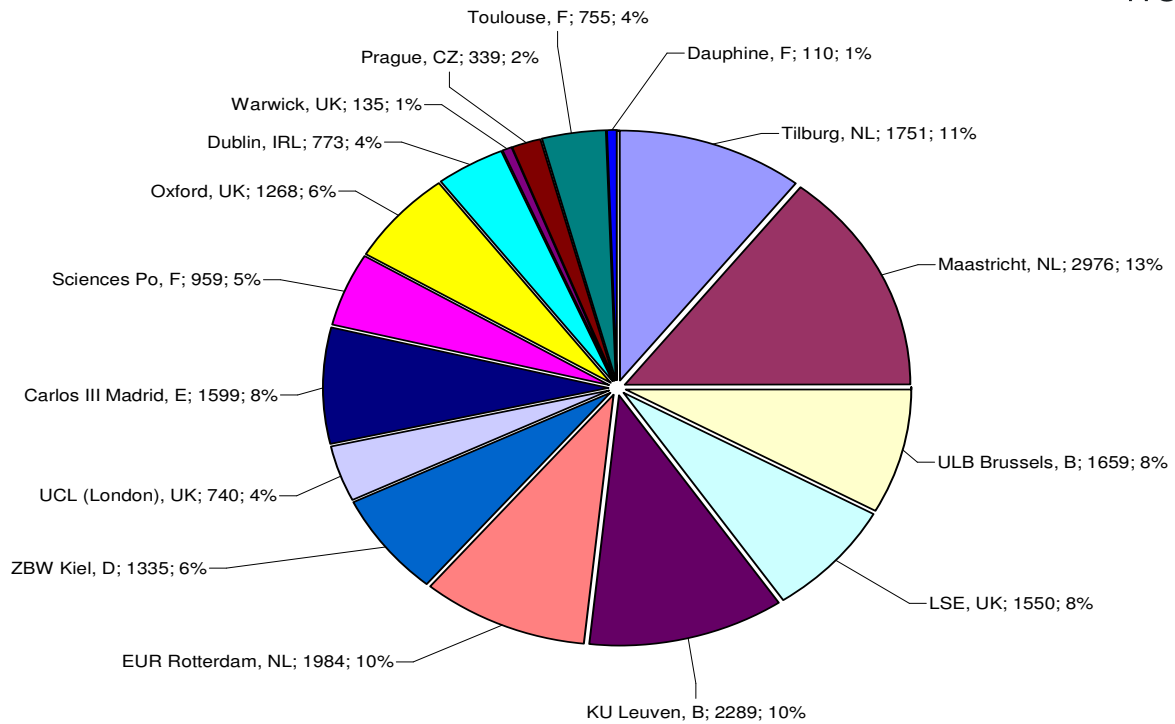




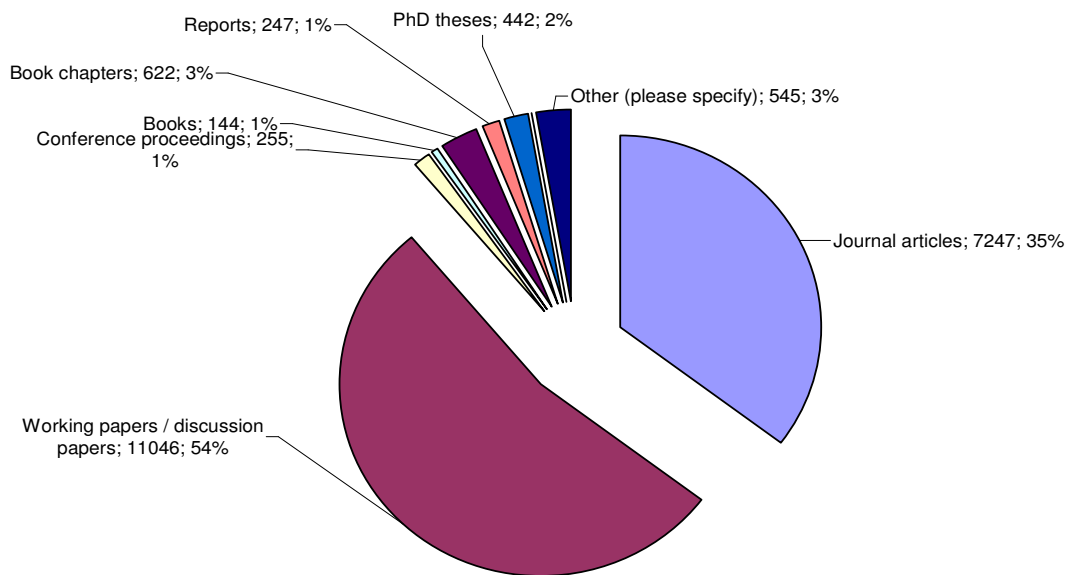
NEEO Metadata partners (31.08.09)



Neoo full text partners (31.08.09)



Full text by type (31.08.09)



ACTIVITY	Executed	Planned
Submit monthly IR Stats to PM	√	
Entry of ca 50,000 bibliographic references into IRs of all partners, incl. current content	√	
M3.5 Metadata on the bibliographic references aggregated by partners in all IRs	√	
500 electronic automated publication lists of leading economists in Europe	√	
Aggregate object files from authors and holdings into IRs based on 500 authors, and current content	√	
Upload object files from authors and holdings into IRs	√	
Released IPR safe material for open access		
M3.6 Object files have been aggregated by all 18 partners in their IRs	√	
D3.3 Content of all partners online; incl. 500 electronic publication lists report	√	

7.3 IPR issues

The work for bringing in datasets into NEEO started in Nov 2008. This began with an inventory on IPR and privacy issues related to the disclosure of research data. An issues report (D 4.1) was published on IPR issues of datasets, including solutions on how to deal with these issues. The report includes information on intellectual property rights (copyright and database rights), contracts, confidentiality, privacy and data protection, deposit licences and end user licences. In addition to the report, a NEEO FAQ list on copyright issues, database rights and derived data for datasets was developed. This document is aimed at IR and data managers and will serve to inform their researchers. The NEEO partners will adapt this info to their local legal situation and will discuss this with their legal advisors and use it in their data advocacy efforts.

At the beginning of the project, project partners were supplied with a Copyright Toolkit, which was developed in consultation with them, to support them when acquiring their content from authors. Partners are adapting this and use it when liaising with their authors on IR deposit, which NEEO hopes will alleviate some fears and encourage rather than discourage deposit. This document is under regular development for improvement based on feedback given by partners, e.g. the self-archiving policies of 20 leading economics journals have been added to the document. Recently IPR issues concerning the archival of datasets has been extensively discussed with partners. A paper on this topic was presented at a recent meeting with all project partners.

7.4 Datasets

Special attention has been given to datasets that are generated as part of the research process in NEEO's second year. Two NEEO partners (Tilburg University and Erasmus University Rotterdam) have already participated in a national dataset enhanced publication pilot project in NEEO's first year, which has resulted in several datasets already being available and lessons learnt here will be invaluable to NEEO. NEEO will be making the research data generated by economists themselves publicly available (not datasets based on commercial statistical datasets) and will concentrate on datasets for which unrestricted access is no concern (i.e. no copyright or privacy problems). It will link the datasets to the related publications and make them available via the NEEO portal. Work on this work package started in late 2009. The Dataverse Network maintained at Harvard University has been chosen for the central data repository for NEEO, guidelines for how to describe datasets have been developed, and a workshop on how to describe datasets in Dataverse was organised in June 2009. IPR and privacy issues of Datasets have also been investigated looking at intellectual property rights (copyright and database rights), contracts, confidentiality, privacy and data protection, deposit licences and end user licences. Partners are currently engaged in locating datasets from authors for inclusion and are describing them to allow the datasets to be linked via the NEEO portal in early 2010. At present nearly 80 datasets have been located and these datasets either are or will become available. Partners are working hard at locating further datasets.

Datasets is a real new area of activities for most libraries while there is hardly any practice to manage and to share datasets at the institutional level. Some partners will be able to deliver the required 10 datasets, and possibly more. For others locating datasets proves to be more difficult. Especially partners who only recently have set up the repositories are struggling in this area. Partners who are successful in locating datasets are actively supporting those that are struggling. The main stumbling block is gaining the confidence of the researchers. The aim is still for all partners to supply datasets. Experiences in this work package will provide valuable input to the lessons learnt to be drawn up.

A C T I V I T Y	Executed	Planned
Inventory of IPR and privacy issue	√	
M4.1 Issue report concerning IPR, incl. datasets issues	√	
Development of a report on the selection and implementation of the data repository, incl. datasets issue report	√	
D4.1 Report on the selection and implementation of the data repository incl. datasets issue report	√	X
M4.2 Data repositories ready for DDI md input	√	X
D4.2 Data repositories with content report	√	X
Storing and implementing data repository		X
Setting up procedures, guidelines etc.	√	X
Organisation of a NEEO Datasets hands-on workshop	√	
Content acquisition plus data storage and description	√	X
Metadata enrichment: citing sets by metadata	√	X
Integrated access via gateway		X
M4.3 Integrated access to datasets given via gateway		X
Development of a report on the selection and implementation of the data repository, incl. datasets issue report		X

7.5 Infrastructure and NEEO Gateway

The NEEO project has opted for an infrastructure and gateway based on a Service Oriented Architecture (SOA) model¹⁵. The various building blocks are interlinked using current open standards technology such as OAI-PMH and SRU.¹⁶¹⁷

The metadata of the publications and their full text files are harvested (the metadata is imported) from the Institutional Repositories using OAI-PMH, in a format according to the NEEO application profile which is based on the MPEG21-DIDL and MODS standards.¹⁸¹⁹ Every participating Institutional Repository needs to develop the necessary software in order to comply with this NEEO application profile. A second technical workshop was held in January 2009 in order to exchange experiences with following the technical guidelines and choices and the various implications of the standards and technologies on all NEEO partners. So far, crosswalks have been written for the DSpace, EPrints, Fedora, ARNO, and other home-made IR software platforms, and metadata are currently already being regularly harvested from 18 project partners.

The NEEO gateway has been designed in the first year of the project. A first version of the gateway was already available at the end of the first year. The basic functionality has now been fully implemented. The interface has been designed by a professional web designer on the basis of user input and comments received from partner institutions.

Much work has gone into setting up the guidelines and step by step procedures for the adding of (local) content by the partner institutions to the gateway. Most partners have followed the guidelines and are either contributing or are ready to contribute to the gateway. A few partners still need to do some work here.

¹⁵ SOA model : http://www.neeoproject.eu/NEEO_finalsoa.pdf

¹⁶ OAI-PMH : <http://www.openarchives.org/OAI/openarchivesprotocol.html>

¹⁷ SRU : <http://www.loc.gov/standards/sru/>

¹⁸ MPEG21-DIDL, idem

¹⁹ MODS, idem

Technical support is available when necessary. The fact that not yet all partners are contributing is a negative point; on the positive side we can report that partners who have only joined the project recently are actively contributing. The overall project targets will thus be met. The problems that some partners are experiencing will form valuable input to the lessons learnt which will be finalised in the last few months of the project.

Most of the functionality has been implemented; in the coming weeks bugs will be fixed and the last features will be implemented. Important targets have been met. The required multilingual features have been implemented. The interface of the EO service is available in 4 languages. In addition an easy and transparent search mechanism for the multilingual JEL classifications has been implemented. Searches can also be translated into any of the 4 core languages by the user. This feature has been implemented by using Google translate. The decision to use Google translate was taken after thorough research and much deliberation.

Other advanced functionality includes contextual help, RSS feeds, advanced searching, full text searching. Implementation of all features has begun. Bugs now need to be removed and the implementation of some features needs to be finalised.

Within WP5 a tool has been produced which allows local partners using DSpace to integrate the Copyright Knowledge Bank. Other partners will have their own solution here. At the end of the project an overview of these local solutions will be produced. Local solutions also exist for version signposting. Again, an overview of these solutions will be produced at the end of the project.

An added-value feature important for authors contributing to the portal will be a graphical presentation of usage statistics. The design of the system and the implementation has been finalised. Partners now need to implement the required system (OAI/SWUP) allowing the gateway to actually obtain the usage data. So, although implementation in the gateway has been completed, no usage data can be shown yet as partners first need to set up the system locally. TU, ULB, LSE and EUR have already finished the local implementation of SWUP.

Enriching metadata has begun. It now has become clear that extracting references may prove to be a problem. Research has shown that extracting references from full text in PDF-format is extremely difficult. We will now search for pragmatic solutions. Reuse of the CitEc implementation of RePEc is a serious option and will be investigated further.

Setting up an EO RePEc archive has taken longer than originally planned. This was mainly due to the need for approval from RePEc key players on the proposed amendment of the ReDIF metadata exchange format. However, in a recent meeting with work package leaders a decision has been reached to give a high priority to this issue which will allow for the swift set-up of such an archive.

Work on the NEEO gateway was originally planned to end at the end of August 2009. Some implementation still needs to be done after this date. Most work, however, is bug fixing and further testing. The reason for the slight delays are twofold. Firstly, some features proved more difficult to implement than planned. Secondly, a thorough redesign of the portal was undertaken which also took some time. It is important to stress that a portal with nearly all the required functionality was made available at the end of August 2009. More importantly, at the end of October 2009 a stable version with all the required functionality will be available in time for the final user evaluation. Well-worth mentioning is also the fact that the user feedback we have had so far on the EO service has been extremely positive.

A C T I V I T Y	Executed	Planned
Interoperability Infrastructure and Gateway		
Adaptation IR solution		
Allow for creation and maintenance of NEEO compatible usage metadata (core partners)		X
Allow for exchange of NEEO compatible usage metadata (core partners)		X
Allow for creation and maintenance of NEEO compatible usage metadata (non-core partners)		X
Allow for exchange of NEEO compatible usage metadata (non-core partners)		X
Allow for harvesting and integration of NEEO enriched metadata into local IR		X
Integration with Copyright Knowledge Bank	√	
Version signposting tool	√	
Transfer developments to IRs of all project partners		X
NEEO Gateway		X
Harvest/index of RePEc into NEEO	√	
Finalize first version of gateway: analyzers for fields to be indexed (diacritics, special characters, whitespace, case, ...), indexing of DIDL, sorting, facets, ...	√	
Conceptual design of final NEEO Gateway infrastructure (including full-text indexing, usage metadata, enriched metadata, MLIA)	√	
Testing SOA architecture (and harvest) for NEEO content	√	
Testing SOA architecture (and harvest) for non-NEEO content	√	
Finalisation of SOA architecture	√	
Fully functional SOA architecture exists	√	
Automatic metadata enrichment		
Automatically generate proposals for JEL codes (based on metadata and full text)	√	
Administrative interface permitting information specialists to check automatically proposed JEL codes		
Automatic enrichment of metadata with JEL codes	√	
Analysis and choice of tools that permit an automated extraction of references from full-text of publication	√	
Implementation of tools for automated extraction of references		X
Implementation of tools for transformation of references into semantically well-defined metadata		X
Automatic enrichment of metadata with well structured information of the references		X
Integration of metadata enrichment tools in central gateway		X
Testing and finalizing integration process of metadata enrichment tools in central gateway		X
END USER SERVICES		
Gateway with basic services, e.g. metadata search service, automated publication lists		
Project technical workshops	√	

A C T I V I T Y	Executed	Planned
Metadata search service		
Finalize first version of portal: manipulation of facets, more powerful search query, search-homepage==empty query, complete APA+ format and navigation, expansion box, openURL links, contextual help (english)	√	
Testing first version of the portal	√	
Public launch of first version of the portal	√	
Design of second version of portal	√	
Implement final version of portal	√	
Testing final version of portal		X
Public launch of final version of portal		X
NEEO search service exists		X
Full text search service		
Analysis and choice of tools for full text searching	√	
M5.3 - Choice of software for full-text search and automated metadata enrichment has been made	√	
Implementing tools for full text searching		X
Rendering full-text search service available through portlet		X
Final configuration of full-text searching tools		X
NEEO publications available through full-text searching		X
Automatic generation of publication lists		
Design of PDF version of publication lists	√	
Development of PDF version of publication lists	√	
Testing of publication lists	√	
Publication lists available for core partners	√	
Public launch of first version of publication lists	√	
Design of final publication lists	√	
Finalisation of publication lists (for all NEE0 partners)	√	
Testing of publication lists		X
Publication lists available for all partners		X
Full text search service and gateway with extended services, e.g. RSS feeds, RePEc archive, metadata enhancement of JEL codes, incl. testing		
RSS alerting service		
Setup 'RSS feeds' service	√	
NEEO 'RSS feeds' service exists	√	
Architect. 4 exchange & presentation of usage metadata & usage statistical overview		
Usage metadata		
Development of technical guidelines and XML Schema for the exchange of NEE0 compatible usage metadata	√	
Technical guidelines for the exchange of NEE0 compatible usage metadata	√	
XML Schema for exchange of usage metadata exists	√	

A C T I V I T Y	Executed	Planned
Setup of database with usage statistics and integration of usage data in metadata	√	
First version of architecture installed	√	
Testing architecture		X
Finalisation of architecture		X
Fully functional architecture exists		X
D5.5 Multilingual NEEO gateway with added value services and content of all partners and of a selection of non-NEEO info sources		
Set up of a NEEO RePEc archive		
Obtain agreement from RePEc on amended ReDIF exchange format	√	
Setup of a NEEO REPEC archive		X
NEEO REPEC archive available		X
Automatic generation of usage reports		
Design of usage reports	√	
First implementation of usage reports (for NEEO core partners)		X
Usage reports available for core partners		X
Testing usage reports		X
Finalisation of usage reports		X

7.6 Multilingual Issues

Part of NEEO's source material is in languages other than English and the project aims to respect the linguistic diversity of the user community. Although English is the lingua-franca for the economist, it is known that NEEO participants do not only publish in English-speaking journals for example, and NEEO researchers have also informed the project via its user activities that they are still sometimes interested in having access to information in their own languages or would like to be able to search in them. For this reason, The Journal of Economic Literature Classification System (JEL) was translated in the first year and has been integrated into the search system.²⁰ In addition, the mid-project questionnaire was also translated in these languages.

The gateway is also now searchable in English, French, German and Spanish. Apart from providing the search interface in four European languages, the metadata coming in from the local repositories will also be searchable in these four languages by using translation tools by autumn 2009. Research into current available tools and challenges with multilingual search software, already took place in year one, liaising with the European Digital Library and several other experts. A masters thesis was also written looking at various platforms and NEEO data to help the project make an informed decision on the multilingual software to be used. It has now been decided to use Google Translate; which will be implemented in the autumn of 2009. The Eurovoc²¹ multilingual thesaurus will be integrated into the portal to optimise searching as will JEL (see above).

²⁰ JEL: http://www.aeaweb.org/journal/jel_class_system.html

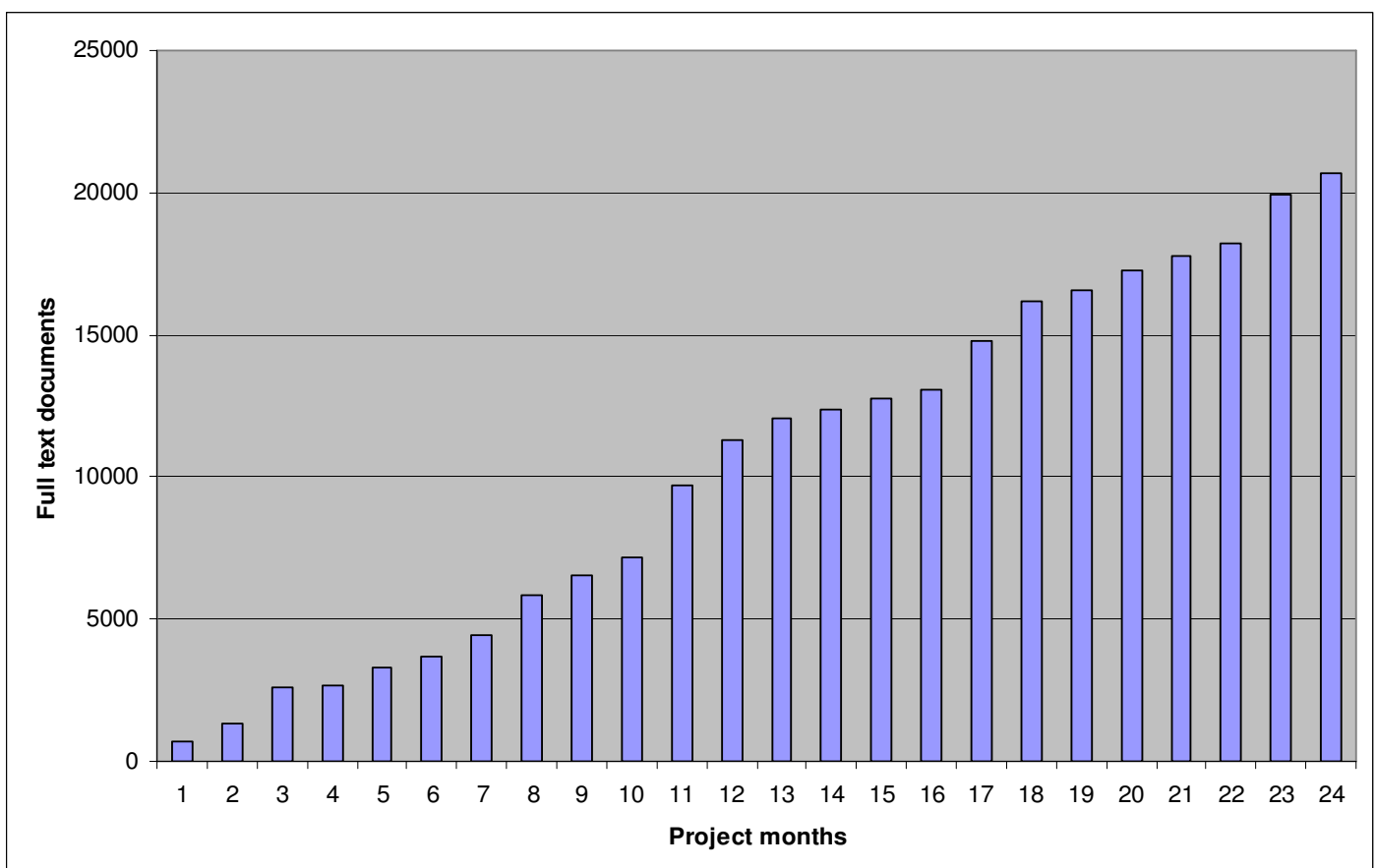
²¹ Eurovoc: <http://europa.eu/eurovoc/>

ACTIVITY	Executed	Planned
Translation of the mid-project questionnaire	√	X
Translation of the online evaluative questionnaire		X
Translation of portal interfaces into 3 languages	√	
Development of multilingual interface in gateway	√	
Selection of translation tool	√	
M6.1 Translation tool selected	√	
Development of the report on the selection of the translation tool	√	
D6.2 Report on the selection of the translation tool	√	
Implementation and testing of automatic metadata and query translation tool		
Integration of the multilingual JEL into the NEEO gateway	√	X

7.7 Assessment and evaluation

As part of the assessment and evaluation of the results of the project, partners have been delivering numbers on the object and metadata files of their repositories to the work package leader responsible for publication content aggregation. Table 1 is a product of this activity.

Table 1 Full text growth during the NEEO project life-time m1-24



There is a steady increase of content in partner repositories throughout the project's life as can be seen in the above diagramme. Usage statistics such as downloads of documents are also being collected by the institutions. Plans are in place to feed back some of this data to authors in the future once the common standard has been implemented by all partners. Progress has already been made with a Business &

Sustainability Plan (D8.1) for NEEO, and lessons learnt have been aggregated from all partners for all work packages. Lessons learnt are being logged by partners.

A C T I V I T Y	Executed	Planned
Sustainability and business plan		
Development of First version of the business and sustainability plan	√	
D8.1 First version of the business and sustainability plan	√	
Development of Final version of the business and sustainability plan	√	X
D8.3 Final sustainability and business plan		X
Full-text availability baseline		
Partner aggregation of object file holding statistics of each economics repository holding at 6 monthly intervals	√	X
6-monthly overviews of EO object file holdings	√	
Repository content reports from all 16 partners	√	
M8.1 – IR object file statistics exist	√	
Full-text use base-line		
Partner monthly aggregation of FT download logs	√	X
6-monthly aggregation of user statistics on FT downloads from all partners	√	X
Semi-annual user statistic reports on FT downloads from IRs	√	X
M8.2 - User log files of the gateway exist		X
Maintenance of a lessons learnt log by all partners (through project wiki)		

7.8 Dissemination and Awareness

Project partners will disseminate NEEO results and create awareness in the broader field of economics as well as in the library and open access community, and other scientific disciplines to ensure that the project has maximum impact. NEEO visibility has further increased in the second year through its presence at several prestigious professional conferences to share experiences. NEEO has been invited to speak at both international publisher, library, as well as national events. NEEO has attended and/or exhibited with its own stand at over 15 conferences in total including Open Repositories 2009 and the European Economics Association . Work on a second NEEO leaflet has started to introduce the service to researchers, describing functionalities and highlighting the value of contributing content. Two further posters were produced for OAI6 and the 38th LIBER General Annual Conference. These various PR materials and the NEEO website have served to inform NEEO's researchers of the project and have helped as part of local project advocacy programmes. Two articles will be published in CILIP's Information + Library Update and UKSG Serials. WP 7 also developed an advocacy programme to support the soft launch of the first version of the EO portal to academics of all partner institutes. Work on the NEEO Final Conference to be held on 28-29 January 2010 started in January 2009. The event is called 'Subject Repositories – European collaboration in the International context'. The conference programme²² has been finalised. A conference website²³ with information on the conference and on the NEEO project is now on air and registration has been open since the first week of September 2009.

Work has increased to distribute NEEO content to other economics information services identified from the NEEO user survey. All partners have been provided with guidelines to ensure the optimal indexing of their repositories by search engines such as Yahoo and Google, which partners have passed on to their technical IR

²² NEEO Conference programme: <http://www.needconference.eu/programme.html>

²³ NEEO Conference website: <http://www.needconference.eu/>

staff. In June 2009 NEEO agreed to collaborate with SSRN with further discussions on how to implement plans ongoing.

A C T I V I T Y	Executed	Planned
PR materials	√	X
Development of a second project leaflet with results	√	X
M7.1.4 Second 6-page project leaflet		X
M7.1 EO PR materials exist	√	
Content distribution		
5 information providers identified for the harvesting of NEEO content	√	
Definition of access mechanisms for further dissemination of content to key information service providers	√	
A list of key information providers where EO content can be found beyond its gateway	√	
7e Dissemination activities (general)		
Dissemination at 9 international and national events, writing articles	√	X
A list of conferences and publications at which EO has been disseminated	√	
Organisation of Final Conference	√	X
Development of a conference website	√	
D7.4 Final Conference		X

8 Impact & Sustainability

The *eContentPlus* Work Programme is creating better conditions for accessing, (re)using and exploiting digital material across Europe in benefit of students, researchers, individuals as well as organisations.²⁴ The NEEO project will aggregate the economics research material produced by NEEO partners to make as much of it as possible freely accessible online. This will thereby increase the visibility and consequent impact of leading research results and hopes to further the development of economics research. Furthermore, the content, services and added features of the Economists Online (EO) portal will follow the information retrieval and dissemination demands of European researchers as identified in a recent cross-country consultation amongst economists by the project.²⁵

8.1 NEEO's contribution to European Economics Research

Findings from previous studies commissioned by the European Economics Association (EEA) have revealed that there is a European market for subject-oriented information services in terms of both, potential end users and under-exploited sources of academic content.²⁶ It is estimated that up until the year 2000, there were over 20,000 active economics researchers in Europe who contributed approximately one quarter of the world's academic publications in this field. However, only one sixth of the world's citations refer to European publications which suggest that there are weaknesses in dissemination practices, access and visibility. This appears not to depend exclusively on the quality of the actual publications as the top-10 European economics departments show similar results.²⁷ Conversely, U.S. institutions, both overall and the top-10 organisations, show an increase in the number of international citations compared to the total number of international publications.

NEEO partners are in a position to make a change to this tendency as they can provide high quality content, facilitate the continued aggregation of quality content and rapidly disseminate those results through open access world-wide via its repositories and services. NEEO partners currently include leading academic institutions from ten different countries in Western Europe (The UK, the Netherlands, Belgium, France, Germany, Ireland, Italy, Spain, Switzerland and the Czech Republic), totalling over 3,000 research and teaching staff in addition to over 55,000 students of Business and Economics. The first US partner from Columbia University has also recently joined the partnership with plans for more to join in the future. Furthermore, the majority of NEEO partners appear in the top-25 European Economics departments according to a ranking based on the quality of publications, including four of the top-5 ranked institutions.²⁸

²⁴ eContentplus (2008) *A Multi-annual Community programme to make digital content in Europe more accessible, usable and exploitable (2005-2008)*. Work Programme 2008. European Commission - Information Society and Media Directorate. [Online] Available at: http://ec.europa.eu/information_society/activities/econtentplus/docs/call_2008/7_en_annex1_2008_wp.pdf

²⁵ Torres-Vitolas CA, Blake B and Shipsey F. (2008) *User Requirement Report*. Report D2.2. [Unpublished]. NEEO.

²⁶ Combes, P.P. and Linnemer, L. (2003) Where are the Economists who Publish? Publication Concentration and Rankings in Europe based on Cumulative Publications. *Journal of the European Economic Association* Vol. 1, No. 6: 1250–1308.

Coupé, T. (2003) Revealed Performances: Worldwide Rankings of Economists and Economics Departments, 1990-2000. *Journal of the European Economic Association* 1 (6): 1309-1345. Pantelis K, Mamuneas TP and Stengos T. (2003) Rankings of Academic journals and Institutions in Economics. *Journal of the European Economic Association* 1 (6): 1346-1366

²⁷ Dreza, J.H. and Estevan, F. (2007) Research and Higher Education in Economics: Can we deliver the Lisbon objectives? *Journal of the European Economics Association* 5 (2-3): 271-304.

²⁸ Lubrano, M., Bauwens, L., Kirman, A. and Protopopescu, C. (2003) Ranking Economics Departments in Europe: A Statistical Approach. *Journal of the European Economic Association* Vol. 1, No. 6: 1367–1401

8.2 Online information services for economists

NEEO aims to facilitate and improve on the open access to European economics research and thereby increase the visibility of high quality academic results internationally. Other search services are also improving access to information world-wide.

Google and *Google Scholar* are very widely used search engines by economists. However, different studies have reported that *Google* is not yet configured to search the deep web (e.g. library data catalogues) and so open-access material tends to be under-represented.²⁹ A prospective study of *Google Scholar* reported a similar limited coverage of open access journals.³⁰ The quality of both *Google* and *Google Scholar* content is diverse as both index non-refereed and non-published documents as well as refereed material.³¹ In addition, the extensive coverage of material by *Google Scholar* can make searching for academic papers unreliable and cumbersome as *Google* search options do not allow a precise exploration of academic material: subject searches are broadly defined (e.g. Social Sciences, Arts, and Humanities are considered one single subject) and it is not possible to search by subject specialities, neither is searching in the abstract nor the sorting of search results possible at this time. In addition, though *Google* and *Google Scholar* provide access to the content-stocks of large publishers, the full text is not necessarily open to all but only accessible on payment or via a license.

Google's popularity makes *Google Scholar* an important window of academic research; however, its use is recommended for exploratory purposes only. Although it provides interesting services for the user such as citation counts and related links, the identification of authors can be inadequate producing problems of homonymy and duplication which can also render unrelated results. It is also uncertain as to how frequently *Google Scholar* updates its index.³²

Partners are trying to get their repository content better indexed by *Google* and *Google Scholar* to boost the visibility of its content there. However, *NEEO* is different in that it offers more extended search facilities and quality content while enhancing the visibility of research and making as much of its material freely accessible to all. *Google* is a resource discovery tool while *NEEO* offers more search options to the researcher as well as better access to full-text scholarship.

RePEc and *SSRN* are two of the most important Economics names in online information services aimed at enhancing the world-wide dissemination of Economics research.³³ However, their different business models and operative frameworks have their drawbacks:

²⁹ McCown F., Liu X., Nelson ML. and Zubair, M. (2006) Search engine coverage of the OAI-PMH corpus. *IEEE Internet Computing* 10(2): 66-73. Accessible at: <http://doi.ieeeecomputersociety.org/10.1109/MIC.2006.41>. Hagedorn K., Santelly J. (2008) *Google Still Not Indexing Hidden Web URLs*. *D-Lib Magazine* 14 (7-8). Accessible at: <http://www.dlib.org/dlib/july08/hagedorn/07hagedorn.html>.

Mayr P. and Walter, AK. (2007) An Exploratory study of *Google Scholar*. *Online Informative Review* 31 (6): 814-830

³⁰ Mayr P. and Walter, AK. (2007) An Exploratory study of *Google Scholar*. *Online Informative Review* 31 (6): 814-830

³¹ Kayvan, K. and [Thelwall](#), M. (2008) Sources of *Google Scholar* citations outside the Science Citation Index: A comparison between four science disciplines. *Scientometrics*, 74 (2): 273-294

³² Jacsó, P (2005) *Google Scholar: The pros and cons*. *Online Information Review* 29 (2): 208-214. Mayr and Walter (2007) op. cit. Meho LI and Yang K (2007) Impact of data sources on citation counts and rankings of LIS faculty: Web of science versus scopus and google scholar. *Journal of the American Society for Information Science and Technology* 58 (13): 2105-2125

³³ Cybermetrics Lab (2008) Ranking Web of World Repositories. [Online]. Available at: http://repositories.webometrics.info/top300_rep.asp

RePEc is a large international collaborative effort that relies on the work of a group of volunteers. Decentralised archives feed its services such as IDEAS and EconPapers which are based on publisher series. RePEc started with institutional based series with working and discussion papers. There are also series with other content such as software. All this material is generally freely downloadable. Large publishers also provide RePEc archives, however, most of these do not give access to the full text unless the user has a personal or institutional subscription or provides payment. In addition, RePEc provides authors' rankings, citations analysis of RePEc documents as well as author and institutional directories. The presence of books (chapters), conference papers and theses is also much smaller than its other collections. Open and free access to such material, including journal articles, is slim compared to its working and discussion paper and software collections, as are datasets which NEEO will focus on in Year 2. RePEc's content is also reliant on publishers and institutions providing RePEc archives which can mean that author overviews are incomplete. RePEc relies on voluntary work, which can lead to a lack of currency and quality metadata. The increase in content from leading researchers could also increase the quality of RePEc content.

SSRN is a scholarly repository for Economics, Accounting, Law and related disciplines. The service is diversified into different networks according to specialisation (e.g. Health Economics Network, Marketing Research Network, etc). Academic papers can be uploaded directly by authors and become available worldwide for free downloading although some institutions will have to pay to upload and disseminate research results to them in a more efficient way. SSRN offers abstracting e-mail journals and periodically distribute emails containing abstracts of papers recently submitted. Its data library is smaller than RePEc's but it provides a more friendly-user design as well as more regularly up-dated links. In addition, it also offers journal content from major publishers and, like RePEc, they are mainly toll-gated, i.e. a license will allow you access to the full text in most cases. Other services provided are like rankings of institutions, authors and papers are freely available to registered users. SSRN finances itself mainly through fees from institutions that outsource the distribution of their research papers through SSRN, fees received for professional and job announcements, conference fees for SSRN's Conference Management System and fees shared with publishers who distribute their papers through SSRN on a pay per download basis.³⁴ Those costs limit the access to SSRN services to less well-funded institutions, increasing - by association - the existing dissemination gap between European and American institutions. Additionally, the SSRN abstracting service, compulsory for all uploaded papers, filter-out direct links to document versions held in non-SSRN (or partners) download sites, restricting the promotion of other open-access initiatives.³⁵ SSRN neither provides a full-text search service, which is a substantial barrier to locating scholarship. Finally, there is a clear American bias in relation to its content and so the sharing of both European and non-English material in its data collection is limited.

³⁴ Jensen, M.C. (2007) *SSRN's Objectives and Commitments to Users* [Online] Chairman - Social Science Research Network. Available at: <http://ssrn.com/update/general/mjensen.html>. [Last accessed: August 20, 2008]

³⁵ Grimmelmann, JTL (2007) *SSRN Considered Harmful*. [Online] Available at SSRN: <http://ssrn.com/abstract=965633>

The NEEO Project will offer end-users a series of advantages in comparison to RePEc and SSRN. It will promote and stimulate the production of freely-accessible open access full-texts providing access for all to leading research. It will provide high-quality research with quality metadata. Economists Online will provide state-of-the-art services making searches render active and useful results. The complete publication lists of leading European names in economics - with as many links to the full text - are available. NEEO also provides a full text search service, which neither SSRN nor RePEc services currently do. In addition, NEEO provides an answer to American-dominated sites becoming a showcase for European academic research whilst its multilingual search system will enhance the visibility of non-English material. However, NEEO will also further disseminate its content to RePEc and SSRN due to their importance as huge information resources. It will supply currently scarce material not covered by them online such as book (chapters), conference proceedings and datasets.

The *ISI-Web of Knowledge* academic database is one of the most heavily used sites for citation information utilised by economists.³⁶ However, there are certain drawbacks in this service: it covers mainly North-American, Western European and English-language titles. ISI considers only a limited number of journals, and does not count citations from books and most conference proceedings not to mention other citation problems.³⁷ NEEO, as a European service, will complement ISI by providing a different assessment (e.g. number of full text downloads) of the impact of the whole of European economics research output.

8.3 Introducing NEEO to the market

The introduction of EO to the market of subject-oriented online resources for academics will be carried out in two phases. The first version of the portal was launched in early 2009 and this was exclusively publicised to the economists of NEEO partners giving them the opportunity to influence the design of the final service. The initial service included basic services such as metadata searching and publications lists of six NEEO partner institutional repositories. This version has since been re-assessed and modified following user feed-back including the hiring of a professional web designer to redesign the Economists Online service. The second phase will mean that the further developed service has been discussed with economists at The European Economics Association annual conference in August 2009. Once the service has been finalised, it will be disseminated to economists for final feedback before the official launch to allow for the project evaluation to effectively take place before the end of the project. A leaflet will also be developed for this purpose. The public launch will take place at NEEO's Final Conference at the British Library in January 2010. Librarians, institutional repository managers, library and faculty policy makers, researchers, publishers will be invited. The event will put NEEO in the context of developments in the area of subject repositories world-wide and workshops will serve to discuss key issues such as content recruitment, IPR, and data with others based on the project's experiences.

³⁶ ISI Web of Knowledge:

http://apps.isiknowledge.com/UA_GeneralSearch_input.do?product=UA&search_mode=GeneralSearch&SID=R2FioPH1CLPfojCPaGp&preferencesSaved=

³⁷ Mcho, L and Yang K. (2006) Citation Analysis: A Comparison of Google Scholar, Scopus, and Web of Science. *Proceedings of the American Society for Information Science and Technology* 43 (1): Pages: 185

8.4 Towards sustainability

NEEO partners are currently in the process of developing a business and sustainability plan which will include the scenarios involved in the continuation and further development of the project's results. The total costs of the continuation for the Economists Online service have been calculated for 2010 and 2011 and will be reviewed regularly.

The sustainability of the end-product of the project is guaranteed by the commitment of NEEO partner institutions to develop and sustain their respective institutional repositories whilst Tilburg University will run the gateway after termination of the project as part of its strategic plan for international collaboration and support.

In the past twelve months NEEO has managed to increase its number of partners from 16 to 21. Moreover, the Nereus consortium currently consists of 23 members while various new applications are being considered. This indicates that there is an increasing interest in the project and its aims. According to the budget that has been calculated for the years after the termination of the project, the Nereus network needs to be extended with four or five more partners to guarantee a sustainable financial situation. An alternative would be to increase the membership fee of the Nereus members.

The project will also explore the feasibility of alternative sources of income to guarantee the long-term financial sustainability and expansion of the service.

The Project Management Board will discuss the future strategy of Nereus and the Economists Online gateway in October and will address in particular the relationship with RePEc and SSRN. A key issue will be how the NEEO service should be positioned in the current information environment, what the views and preferences of the economists as producers and users of information are and how competition with other services can be avoided and collaboration be emphasized.

Annexes

- Annex 1 D4.1 Report on the selection and implementation of the data repository (including datasets issues report)
- Annex 2 List of participating scholars (as of 31 August 2009)
Please go to: http://www.neeoproject.eu/neo_authors.html
- Annex 3 NEEO conference programme final version
See: <http://www.neeoconference.eu/programme.html>
- Annex 4 NEEO conference Website:
See: <http://www.neeoconference.eu/>
- Annex 5 NEEO Liber conference and NEEO OAI6 posters