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Libraries as Repositories of Knowledge: Present and Future

Papers from the 3rd International Conference on the Greek World in Travel Accounts and Maps,
'Knowledge is Power', Meet the Experts Session, 2-4 November 2016, University of Cyprus, Nicosia

***Libraries as Repositories of Knowledge:
Present and Future***

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2017

**Papers from the 3rd International Conference
on the Greek World in Travel Accounts and Maps,
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Introduction: Libraries as Repositories of Knowledge: Present and Future

Filippos Tsimpoglou

The International Scientific Conference ‘Knowledge is Power’ was held in Nicosia at the University of Cyprus on 2-4 November 2016, organised by the Sylvia Ioannou Foundation and the University of Cyprus. When asked by the organisers for an appropriate theme for the Meet the Experts Session of the Conference, I suggested a kind of dialogue about the future of libraries among experts from representative, different library models. The central issue would be an investigation of the way these libraries evaluate their own attitudes towards other kinds of libraries and how each category foresees its coexistence with the other models in the new and evolving internet and digital environment. In order to cover five main library models, we invited one expert from a university library, one from an art and museum library, one from an international digital ‘library’, one from a public library and one from a national library.

Libraries of all categories in our age have been called hybrid, as they combine both print collections and digital ones. We can safely speculate that this hybrid environment will last for many years into the future. Even with different degrees of penetration for each library category, digital and internet material has been embedded in all libraries, in parallel with the traditional printed matter that endures. However, the future library cannot be understood as an isolated institution outside of the environment of other libraries. Every future library should be understood as an active constituent of a world grid of information sources. Thus, the interconnected, interoperating libraries of the future should continue to offer their services. This grid-like operation is a consequence of the advancement of information and communication technologies and the exploitation of them by libraries. It is a product of an inter-thematic and inter-sectoral approach of collaboration among libraries and people, transcending geographical and other material or mind frontiers. Libraries are moving towards a cooperative globalisation in which each one offers its own ‘locality’ in terms of unique or particular assets and features to the global society, each one acting locally but thinking and influencing globally.

Aside from the issue of selecting representative library models, the challenge was to turn five potential monologues, each presented by the representative of each category, into an organised dialogue, so we prepared each speaker before the Conference by asking them to read, compare and comment in advance on the papers written by the other speakers. We invited the participants to consider how different kinds of libraries can cooperate in a globally networked environment and which new roles and activities should be undertaken to complement the current ones. This arrangement helped in stimulating questions and answers that otherwise would not have been unveiled. Thus, five draft papers were written and then sent to all the experts, first to be aware of the issues that were raised by their co-speakers and second to comment on all of them with their own points. This idea was born from the reading of a very special book, *The Study of Information: Interdisciplinary Messages: ‘Nine lead papers [each one in a different scientific field] and three to five discussion papers for each of*

the nine were commissioned. The subsidiary papers were asked to offer critical comments, elaboration, or supplementary observations on the subject of the lead papers. The author of the lead paper would then come back with a rejoinder.¹

The conference was divided into two main parts, just as these proceedings are arranged. Part I consisted of the presentation of each representative's library, its mission, target groups, figures and trends or shifts noticed in the particular library, as well as the concept, strategies, approaches, methods, tools and practices followed. The second part consisted of the comments on the papers of the other participants. These raised such subjects as the relations or interconnections of each library with libraries of other categories on such issues as local discoveries of world treasures, digitisation versus digital curation, oral history, information literacy, dissemination of formats, linked open data, fields of collaboration, complementary activities and synergies, as well as thoughts on the threats and challenges to the future of the libraries in each category. There followed questions from the audience, answered by the speakers.

An important matter is that this dialogue should carry on and widen, as not all the issues could be addressed within the duration of a conference; it needs to expand so that further contributions can be made by other actors and stakeholders. Here we identified the limits of the printed form of information and, having in mind that this continuation could be offered by exploiting the features of digital information, we all (organisers, speakers, editors) decided to publish the proceedings in an electronic format, openly accessed online and in a forum where further contributions to the dialogue that started at the Conference could be added by further library categories and stakeholders. Please consult p. 78 for details of how to join in.

1. F. Machlup and U. Mansfield (eds), *The Study of Information: Interdisciplinary Messages*, New York: Wiley-Interscience, 1983, p. xiv.



Part I:

Case Studies of

Five Library Models

UCL Library Services: Developing the 21st-century Research Library

Paul Ayris

Video link: https://www.youtube.com/watch?v=tv9sX_iFIAM&t=3m35s

Mission

University College London [UCL] is a research-intensive university, one of the great universities in the world. It was ranked 7th in the QS World University Rankings in 2017.¹ The Mission of UCL Library Services encompassed in the Library Strategy² is to:

- provide an information infrastructure to enable UCL's research and education to be world-class;
- offer an outstanding student experience in partnership with UCL's academic and Professional Services departments;
- enable effective learning and discovery, by designing and managing world-class and sustainable spaces in partnership with the UCL community;
- develop library and information professionals who are innovative and can offer leadership to UCL and to the national / international library community;
- work in partnership with the UK National Health Service [NHS], providing support for research, clinical practice and patient care;
- support UCL's global outreach, contributing leadership in engaging with new audiences and partnerships in London and beyond.

This is supported by a Vision for what the Library wishes to achieve:

- In 2015-2018 UCL Library Services will deliver a transformative user experience that is founded on service excellence, spaces that are innovative and world-leading in range and number, a first-rate digital library and efficient underlying processes that put the user first.
- We will measure and communicate our value to UCL and our key partners and raise UCL's global profile through our outreach activities and our support for Open Scholarship.
- Delivery of the Strategy will be characterised by engagement with UCL staff, students, users and external partners and underpinned by investment in the development of Library Services staff, to continue to equip them with the skills and knowledge necessary to realise our vision. The 2015-2018 Strategy builds on our successful partnerships with the NHS and further strengthens partnerships with UCL Professional Services.

1. QS World University Rankings: <https://www.topuniversities.com/university-rankings/world-university-rankings/2016>; last accessed 18 July 2017.

2. UCL Library Services: <http://www.ucl.ac.uk/library/about/strategy>; last accessed 25 February 2017.

- The 2015-2018 UCL Library Services Strategy will empower UCL in its **mission**³ to engage with and change the world.

The Library Strategy, which will deliver the Library's Mission and Vision, has six key performance areas [KPA], which have been identified as priorities for development:

- user experience
- staff, equality and diversity
- finance, management information and value for money
- systems and processes
- sustainable estate
- communication, Open Access [OA] and outreach

The implementation of the Library Strategy is overseen by the Leadership Team. Each KPA is led by a Working Group, which reports to the Leadership Team a minimum of three times a year. The Pro-Vice-Provost uses this analysis to report on Strategy implementation to the UCL Library Committee three times a year. The Leadership Team has produced an overview of the aims of the Strategy,⁴ which places the Library at the heart of academic endeavour at UCL.

The success of the Leadership Team in delivering the Library's mission was recently recognised by gaining the Highly Commended Award in the Times Higher Education Leadership & Management Awards (2016).

Target Users

The role of UCL Library Services is to meet the information needs of its staff, students and partners, such as the NHS, and external researchers / visitors. Student evaluation of the services and facilities which the Library has to offer is regularly monitored by a number of national / international surveys. The key survey for undergraduates is the National Student Survey [NSS]. This is currently recording a satisfaction rating of 88% against the question 'Are the Library services and facilities good enough for your needs?' Another set of survey statistics are those of the Student Barometer / International Student Barometer [SB / ISB]. The Library received good results in the Autumn 2015 SB / ISB survey. The SB survey ran between May and June 2015 and achieved a 16% response rate, with 6510 students responding.

The Library scores sit in the Learning satisfaction section:

| Autumn 2015 | % UCL satisfaction |
|------------------|--------------------|
| Online library | 94% |
| Physical library | 86% |

Table 1. % satisfaction with UCL services in the Autumn 2015 SB / ISB survey.

3. UCL: <http://www.ucl.ac.uk/2034/>; last accessed 18 July 2017.

4. UCL Library Services: <http://www.ucl.ac.uk/library/about/strategy/library-strategy-download.pdf>; last accessed 25 February 2017.

Usage of the physical library remains steady, supplementing the outstanding nature of UCL's digital library. Provision of cutting-edge library and learning spaces remains a challenge. UCL currently has 10.4 students for each learning space against a Russell Group average of 9.6 students. The Russell Group comprises research-intensive universities in the UK.⁵ The UCL numbers here include all Library-managed learning spaces, department-managed spaces which can be used by others and UCL's use of the adjacent Senate House Library. It excludes UCL-provided Information Services Division [ISD] spaces (which are primarily teaching spaces) and department-only spaces.

This ratio is projected to decline in the next two years as student numbers increase in excess of learning spaces, before improving to approximately 8.9:1 in 2018-2019 as a planned new Student Centre with 1000 learning spaces is completed (see fig. 1). The main issue therefore is how to provide more learning spaces and improved use of them for students prior to the Student Centre opening. Longer term, with student numbers expected to continue increasing, learning space provision should be kept under review to ensure an excellent student experience.

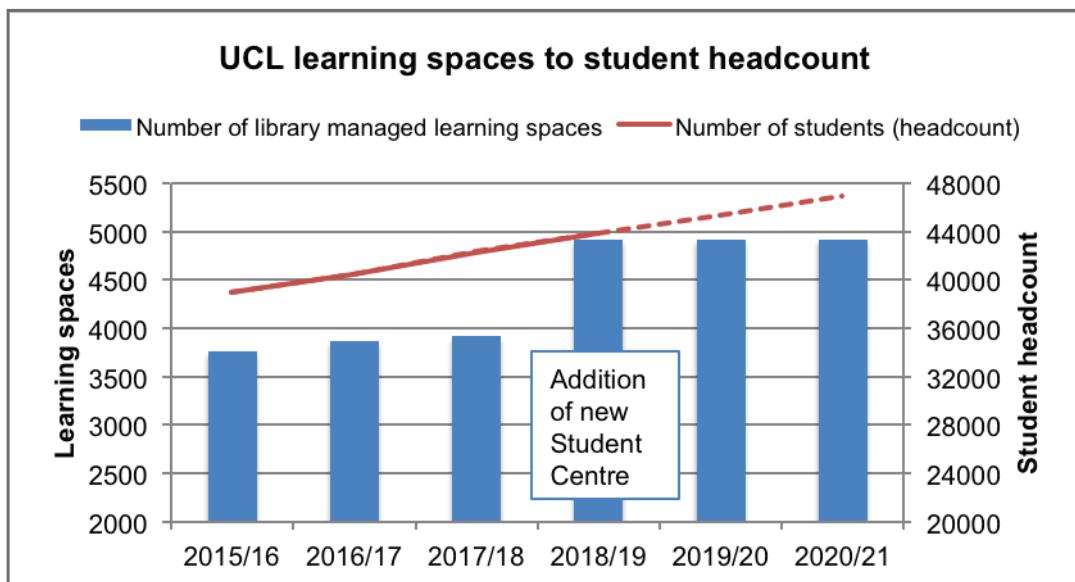


Fig. 1. Projected UCL student numbers to 2020-2021.

| Students per learning space | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | Russell Group average |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------|
| Headcount | 10.4 | 10.5 | 10.8 | 8.9 | 9.2 | 9.5 | 9.6 |
| FTE | 8.6 | 8.7 | 9.0 | 7.4 | 7.7 | 7.9 | 8.0 |

Table 2. Ratio of UCL students by headcount / full-time equivalent per learning space.

Table 2 shows how the UCL ratio (headcount) of students to available learning spaces will improve by 2020-2021. This will be achieved by the construction of the Student Centre, which will provide 1000 new digitally enabled learning spaces (no paper provision) by 2018-2019.

5. The Russell Group: <http://russellgroup.ac.uk/>; last accessed 25 February 2017.

Factual Library Data

UCL Library Services comprise 18 library **sites**⁶ in the UCL family of libraries and one library partnership. UCL is the third oldest university in England after Oxford and Cambridge. The university was founded as the original University of London in 1826, and the library service was begun in 1829. To measure the importance and success of its services, UCL has created a Value for Money dashboard. This is linked to the Key Performance Area in the Library Strategy ‘Finance, Management Information and Value for Money’ (see table 3 [the numbers in the headings below refer to this table]).

Surveys (1-2)

The NSS and SB / ISB results have been analysed above.

There is a clear correlation between the funds spent on e-resources and the online digital library satisfaction rate. This pays testament to the Library’s financial strategy, which has concentrated on a high level of investment in e-resources to fulfil student needs.

Further evidence of the success of this investment can be seen in the positive contribution towards the large information expenditure per student (listed under SCONUL Strategic Data), which shows a high ratio and again has put UCL Library Services in the top five in the Russell Group. At UCL, this directly supports UCL 2034’s ambition to embed research-based education across all faculties, schools and departments.

Two postgraduate surveys mirror the NSS results, with a very respectable 88%, and the new UCL arrivals data provides very healthy scores – 96% and 89% respectively. The arrivals survey (the library element) indicates the fact that several libraries are being used, and also, thanks to our skilled librarians, students are able to access information ‘on arrival’.

SCONUL Strategic Data (3)

Five key statistics have been extracted from the data set to provide an overview of the Library’s value to its users. Points to note are:

- The number of visitors in UCL’s libraries has increased considerably over the past three years and demonstrates the Library’s pulling power. Some of the increase in footfall is attributable to the high increase in student numbers, which includes the recent mergers of the School of Pharmacy and the Institute of Education. The Library is the 2nd most heavily used academic library in UK higher education, only marginally behind the University of Sheffield.
- In terms of finance, the Library receives 1.8% (budget from the centre) of the overall institutional £1 billion+ expenditure to accommodate all libraries, which is a decrease on 2013-2014; and efficiency savings have also had to be made.
- The person hours for information literacy training remain high.

6. UCL Library Services: <http://www.ucl.ac.uk/library/sites/libraries>; last accessed 18 July 2017.

Library Finance (4)

These figures highlight the key areas of expenditure, which are paramount for supporting the Library Strategy.

The sector average for percentage of budget spent on staff is 50%-55%. The smaller levels of UCL staffing spend demonstrate how well the staff has coped with the increase in student numbers and footfall to maintain the 88% student satisfaction rates.

Within this period, there has been an emphasis on increasing e-resources, which accounts for approximately 33% of the total core library budget.

For staffing and e-resources, there is a healthy 81% expenditure (core) on these key components of the Library.

Following a recent Library restructure, staffing costs are expected to rise just above the 50% mark. This follows the Library's mission to embrace the new approaches of the 'modern' library where the student / institute is supported by a greater engagement by librarians. This should help towards increasing the satisfaction ratings for both the Library and UCL, as well as supporting the Library's ambition to attain Customer Services Accreditation.

Project funds, largely research funds, have been greater than £2 million in the past two years and greatly support the Library's core budget to enable additional expenditure, especially in the area of Open Access (see section 7).

| Table 3. KPA FINANCE – DEMONSTRATING VALUE | 2014 UCL Library Stats | 2015 UCL Library Stats | 2016 UCL Library Stats |
|--|---------------------------|---------------------------|---------------------------|
| Andy Pow (UCL LIBRARY SERVICES) | 2013-2014 | 2014-2015 | 2015-2016 |
| 1. SURVEYS | | | |
| National Students Survey [NSS]: 'The Library resources are good enough for my needs' | 88% | 88% | 88% |
| Student Barometer [SB] Autumn wave: Online satisfaction rate | 93% | 94% | |
| 2. UCL STUDENTS ARRIVAL DATA | | | |
| Use one or more of the libraries within UCL | | | 96% |
| Access online library resources e.g. e-journals, e-books | | | 89% |
| Postgraduate Research Experience Survey [PRES] : 'There is adequate provision of Library services' | | | 88% |
| Postgraduate Taught Experience Survey [PRES] : 'There is adequate provision of Library services' | | | 88% |
| 3. SCONUL STRATEGIC DATA | | | |
| Total Annual visits | 1,953,153 | 2,302,680 | 3,004,058 |
| UCL BLOCK Grant as a percentage of Total UCL Expenditure | 1.94 | 1.80% | 1.81% |
| Student numbers [FTE] | 25,589 | 30,395 | 31,793 |
| Expenditure on material resources per student | 379 | 303 | 312 |
| Number of person hrs. of information literacy training received by users | 21,384 | 35,904 | 33,983 |
| 4. LIBRARY FINANCE | | | |
| % Core Expenditure on staff (CORE - The budget from the Centre) | 48% | 47% | 48% |
| % Core Expenditure on material resources | 32% | 35% | 33% |
| Project funds received (including Research) | £1.8m | £2.3m | £2.4m |

| Table 3. KPA FINANCE – DEMONSTRATING VALUE | 2014 UCL Library Stats | 2015 UCL Library Stats | 2016 UCL Library Stats |
|---|---------------------------|---------------------------|---------------------------|
| Andy Pow (UCL LIBRARY SERVICES) | 2013-2014 | 2014-2015 | 2015-2016 |
| 5. USER EXPERIENCE [UX] | | | |
| Library RFID implementation c.£1m | 4 | 9 (cum) | 13 (cum) |
| Self Service Circulation stats. – Staff / Self-service 2015 | 31%/69% | 16%/84% | 11%/89% |
| Opening Hrs | <24/7 | 24/7 term time | 24/7 All yr |
| Reading lists | 20% | 45% | 55% |
| 6. USAGE STATS | | | |
| E-Resources - downloads (cost per download on Big deals) | 0.70 | 0.64 | 0.59 |
| Full text article electronic requests | 6.1m | 7.3m | 8.7m |
| E-book section requests | 1.2m | 2.9m | 3.8m |
| UCL Discovery downloads | 1.8m | 2.1m | 2.2m |
| 7. OPEN ACCESS [OA] | | | |
| Spend on APCs | 4,052,087 | £4,090,097 | £4,055,592 |
| 8. UCL PRESS | | | |
| Books published | | 17 books | 22 books |
| 9. PUBLIC ENGAGEMENT [PE] / WP / Outreach | | | |
| Lectures / exhibitions / workshops 2014-2015 (incl. website ‘hits’ and views) | 3.8m | 7.7m | 7.6m |
| 10. SPACE MANAGEMENT | | | |
| Total number of Study Spaces | 2,351 | 3,432 | 3,864 |
| Student / Space ratio | 10.88 | 8.86 | 8.23 |
| 11. DIVERSITY (ref NSS) | | | |
| Race [BME – Black and minority ethnic students] | 85% | 87% | 89% |
| Disability | 90% | 85% | 89% |

User Experience (5)

Based on the key indicators, this is very much a success story and welcomed by students.

Radio frequency identification [RFID] self-service implementations, following a three-year £1.2 million project, have resulted in the installation of 16 RFID machines in the UCL family of libraries.

The circulation statistics demonstrate the present success of the RFID implementations, reaching a high of 89% self-service for all online digital transactions compared to staffed service of 11% for 2015-2016.

The Library is presently open 24/7 for the three largest hubs in the family – Main, Science and Cruciform.

The Reading Lists service provides full-text digital versions of reading list material for modules in Portico, the UCL Student Information System. Coverage has gone from 20% in 2013-2014 to 55% in 2015-2016.

Usage Statistics (6)

Much effort has been spent on investigating the number of downloads that have occurred for e-resources, essentially targeting the ‘big deals’. Once again, the focussed expenditure on e-resources is proving to be good value for money. As the number of downloads has increased, the costs in turn have fallen considerably to 59p per download. E-requests have correspondingly increased, and the number of downloads in UCL Discovery, UCL’s Open Access repository, is now over 2 million a year.

Open Access (7)

For Open Access in the Research Excellence Framework [REF] 2020, the UK’s national research evaluation framework, the Library is making provision for substantial advocacy, technical platforms and support to engage with academics. This is supported by funding Gold OA and Green OA, publications from UCL Press and work with academic departments to ensure REF compliance.

UCL Press (8)

UCL Press is the first UK university press to be launched with a completely Open Access business model, that is, all books from the Press are made available digitally free at point of use. Launched in June 2015, UCL Press materials have already been downloaded in over 200 countries, with nearly 200,000 downloads. UCL Press won the UCL Brand Ambassador Award at the 2017 UCL Professional Services Conference on 15 February 2017.

Public Engagement [PE], Outreach and Widening Participation (9)

Often an area not highlighted in the role of the Library, the interests of the staff in this activity are growing. The list of events, which includes school visits to UCL, exhibitions and broadcasts, is impressive. This area has been expanded, and a Public Engagement Strategy is being progressed for even greater impact. The output presently provides excellent value, as the staff who participate operate from virtually a zero budget.

Space Management (10)

This is a challenging area for UCL and has affected the Library's satisfaction rating for the physical library in the SB Survey. However, despite the increase in UCL student numbers, the Library has been proactive in adding additional study space, and as a result the student / study space ratio has reduced. The Library is instrumental in the UCL East and Student Centre projects, which should increase the number of study spaces and reduce the ratio further, subject to additional growth in student numbers.

Diversity and Disability (11)

The Library has performed well in both these areas with high satisfaction ratings. Most notable has been the great improvement in black and minority ethnic [BME] satisfaction, which has gone from 80% to 89% in the past four years. In 2012 the BME satisfaction rate was 70%.

Lessons to be Drawn

The conclusions from this data show how UCL Library Services has spent its funding compared to its size; the staff's ability to cope with the much higher number of students and footfall; and the ability to maintain a high information spend per student ratio, a mark of a research-based education. To hit a satisfaction rate of 88% consistently in NSS is commendable. The Library has responded to student requests and opens the 3 larger libraries 24/7. RFID and ReadingLists@UCL have also proved to be popular amongst the student population. Open Access continues to be a shining light, and the Library has excelled further with the growing success of UCL Press. UCL Library Services has been integral to learning space developments in UCL and continues to participate in space-related projects. Public engagement and outreach now have the platform for expansion once the many activities are further aligned, and the Library also has the opportunity to make in-roads with regards to diversity.

UCL Library Services repays the investment given by UCL by delivering aspects of the institutional UCL 2034⁷ Strategy; being cost-effective in terms of its spend on staff and materials; prioritising research-based education and the student experience as primary drivers in its activities; and using technology to offer innovative services, reinventing the role of the Library in the 21st century.

Old Terms versus New / Shifting Concepts

Led by the UCL Library Services Strategy,⁸ there are a number of new concepts which the Library has willingly embraced. Amongst the more important are these:

- Learning Spaces – the Library now manages all centrally provided learning spaces (digitally enabled learning spaces), as well as traditional library spaces and services.
- The Library has embraced a culture of 24-hour **opening**.⁹ This means that the larger libraries and learning spaces are open 24 hours a day in term and vacation alike. The Library is now working to make this pattern of 24-hour opening available 7 days a week. The Library has done this at the direct request of students, who identified this as the development in library provision they most wished to have funded.

7. UCL: <https://www.ucl.ac.uk/2034/>; last accessed 25 February 2017.

8. See note 2 above.

9. UCL Library Services: <http://www.ucl.ac.uk/library/opening>; last accessed 18 July 2017.

- The Library has pioneered a centrally provided [ReadingLists@UCL¹⁰](#) service to support education, whereby core readings set by academic members of staff are available digitally to students 24/7 on-campus and off-campus. As of January 2017 58% of all modules in Portico have a digital reading list attached – 2760 lists out of 4799 modules.
- Open Access is an agenda which is now led by UCL Library Services for the whole of the UCL community – staff and students. The Library runs the UCL repository [UCL Discovery¹¹](#); and it manages large funds for Article Processing Charges [APCs] from UCL and from external research funders.
- Research Data Management and Open Research Data are agendas which are being supported by the Library, and the Library takes the lead in UCL in terms of policy development and advocacy to researchers. The Library is running an EU-funded project on Research Data Management called [LEARN¹²](#).
- There is a new role for Rare Books, Manuscripts and Archives in the projected creation of a new London Centre for the Arts, Humanities and Recorded Word (paper and digital) with cutting-edge research facilities, services, support for education and outreach to new communities.

Two Perspectives which UCL Sees as Positive for the Future

- 1) The creation of new digitally enabled learning spaces in UCL, managed by the Library, open 24/7, which meet the ways students now wish to work. This is represented by two major building projects – the creation of 1000 new learning spaces in the Student Centre (opening 2018-2019; see fig. 2) and 400 learning spaces on UCL's new research campus in UCL East. The new Student Centre¹³ builds on earlier work in the creation of 400 digitally enabled learning spaces in the new UCL Cruciform Hub (see fig. 3).

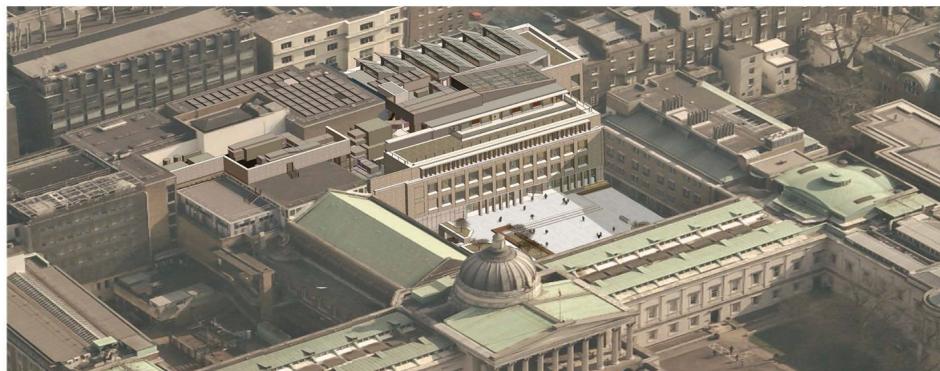


Fig. 2. The new UCL Student Centre, to be managed by UCL Library Services.

10. UCL Library Services: <http://www.ucl.ac.uk/library/teaching-support/reading-lists>; last accessed 18 July 2017.

11. UCL Library Services: <http://discovery.ucl.ac.uk/>; last accessed 18 July 2017.

12. LEARN: <http://learn-rdm.eu>; last accessed 25 February 2017.

13. See UCL: <http://www.ucl.ac.uk/transforming-ucl/current-projects/new-student-centre>; last accessed 25 February 2017.

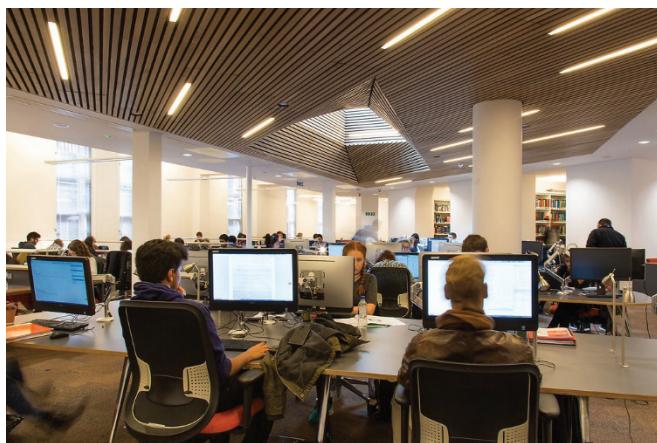


Fig. 3. UCL Cruciform Hub, part of UCL Library Services.

- 2) The Library is not only a collector, curator and cataloguer of knowledge; it is now a creator of knowledge. It houses UCL Press, which is the UK's first fully Open Access university press. This press is 18 months old and has published 26 books and 6 journals. Downloads number over 190,000 in over 200 countries (as of January 2017). The development of the Press, the initiative of UCL Library Services, has created an important new service to support the dissemination and visibility of UCL research.

Two Perspectives which UCL Offers as Challenges

- 1) Funding: Student and research income at the University level may be affected by the UK's decision to leave the European Union. Will EU students still want to come to the UK, with a requirement to pay higher fees? What will the relationship of UK universities be to Horizon 2020 funding? Whilst UCL is not pessimistic, these are challenges which face UK higher education.
- 2) Open Science: Open Access to publications and good practice in research data management (and Open Data) are part of an emerging global agenda called Open Science. Open Science has the potential to revolutionise the way research is conducted, recorded and disseminated, just as the invention of moveable type printing did in the West in the 15th century. How much will this cost? What needs to change? Who in the University will offer leadership? And what is the role of the Library?

Conclusions

What are the conclusions which can be drawn from this analysis of the growth and diversity in UCL Library Services? Three overall themes can be identified. First, the Library itself is nearly 200 years old, but it has recognised the need to change and develop into a service fit for the digital age of the 21st century. It has done this by adopting a clear and transparent strategic planning framework, with clear objectives and deliverables, and a monitoring regime which measures success. Second, in developing its vision, the Library has redefined the mission of an academic library. Traditionally, libraries have collected, curated and catalogued learning and research materials. Now, however, there is a new role – not simply collecting, curating and cataloguing, but one of creating knowledge. Open Access and the related concept of Open Science allow libraries to take on this proactive role in the new information

landscape. The model of UCL Press is worthy of note – the UK's first fully Open Access university press. In creating knowledge, the Press is also able to support the University's Global Engagement Strategy,¹⁴ with downloads of UCL authors in over 200 countries around the globe. Third, whilst some things change, others remain the same. User satisfaction remains key to the success of any library operation, and this is underscored by the immense care with which UCL Library Services monitors and seeks to improve its standing in surveys of student satisfaction.

In a digital age, UCL has shown that the Library is a core component in the learning and research infrastructure of the University. With over 3 million physical visits a year, that role is key in maintaining the reputation of UCL as one of the great universities of the world.

14. UCL: <https://www.ucl.ac.uk/global/strategy>; last accessed 25 February 2017.

Virtual Cycles of Discovery: Promoting Art Research in the 21st Century

Milan Hughston

Video link: https://www.youtube.com/watch?v=tv9sX_iFIAM&t=23m00s

The Museum of Modern Art [MoMA] in New York continues to be a great place to see some of the best modern and contemporary art in the world; whether it is the permanent collection or special exhibitions, we take a lot of pride in what visitors see when they come to the galleries; and we hope they take away a souvenir booklet of our highlights, available in at least nine languages.

Our displays follow a pretty traditional model – objects on the wall or in the galleries, arranged in a compelling way; my talk was originally entitled ‘Reaching Out to Gather In: Promoting Art Research in the 21st Century’, but I recently heard a phrase that I think is very timely, which is what I believe all of us will be addressing [at this conference] in some form: ‘Virtual Cycles of Discovery’. You might ask *why*, since we have a long history of successfully sharing our collections via the traditional means of acquiring, cataloguing and access. Many institutions would be content just to continue doing that to the best of their abilities.

However, I think that at MoMA’s Library and Archives there is a new attitude that is not so much only about *collecting* but rather how we *promote* those collections. We also acknowledge that the catalogue, as good as it is, is certainly not the only way to promote our wonderful collections and is sometimes even insufficient as a promotional tool. If our goal is to embed our collections successfully into teaching and learning, to use the broadest terms, then we need to be prepared to let others make the case for our collections. Therefore, I would like to share examples of how the Library and Archives connect and collaborate with new stakeholders.

Background and History

MoMA was founded in November 1929, and its founding director, Alfred Barr, recognised that publications and research should complement exhibitions. As a result, what started as a small curatorial collection was more formally established as a library in 1932, and in those days a library was a convenient place to put anything that was deemed of enduring value, such as letters, files and documentary photographs. This kind of situation was not unique to MoMA, and indeed the story of most museum libraries follows this track; as the collections became richer in content, the obligation to share them with a larger world than just museum staff became a goal (see fig. 1).

The Museum of Modern Art is a place that fuels creativity, ignites minds, and provides inspiration. With extraordinary exhibitions and the world's finest collection of modern and contemporary art, MoMA is dedicated to the conversation between the past and the present, the established and the experimental. Our mission is helping you understand and enjoy the art of our time.

Mission Statement

Founded in 1929 as an educational institution, The Museum of Modern Art is dedicated to being the foremost museum of modern art in the world.

Through the leadership of its Trustees and staff, The Museum of Modern Art manifests this commitment by establishing, preserving, and documenting a permanent collection of the highest order that reflects the vitality, complexity and unfolding patterns of modern and contemporary art; by presenting exhibitions and educational programs of unparalleled significance; by **sustaining a library, archives, and conservation laboratory that are recognized as international centers of research**; and by supporting scholarship and publications of preeminent intellectual merit.

Central to The Museum of Modern Art's mission is the encouragement of an ever-deeper understanding and enjoyment of modern and contemporary art by the diverse local, national, and international audiences that it serves.

To achieve its goals The Museum of Modern Art recognizes:

- That modern and contemporary art originated in the exploration of the ideals and interests generated in the new artistic traditions that began in

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Vasily Kandinsky. *Panel for Edwin R. Campbell No. 1*. 1914

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Fig. 1. The MoMA mission statement.

Today, our home is in a beautiful facility which opened to the public in November 2006 after several years of planning, and it has provided us with a showcase for promoting Library and Archival collections. The Lewis B. and Dorothy Cullman Education and Research Building is located on the east side of the MoMA sculpture garden as part of our midtown facility, which was vastly augmented in 2004 and 2006 (see fig. 2). The Library and Archives occupy most of the top three floors, with the public reading rooms located on the sixth floor in a beautiful environment for research and study (see figs 3-4).



Fig. 2. The Cullman Education and Research Building from 54th Street.



Fig. 3. The MoMA Library Reading Room.



Fig. 4. The MoMA Archives Reading Room.

Yet we do much more than provide access to the material in the Library and Archives, which numbers about 350,000 books documenting modern and contemporary art and over 5 million papers in the Archives. In fact, our new building has allowed us to promote and do outreach about our programmes in a number of ways. We sponsor regular exhibitions drawn from the collections in addition to special events focussing on research resources, working closely with the Museum's curatorial and education departments in conjunction with MoMA exhibitions and programmes. We also have access to MoMA's social networking sites to promote Library and Archival resources to MoMA's huge Facebook, blog and Tumblr communities. In fact, our Tumblr site has over 253,000 followers.

The Library's collection follows a fairly traditional approach to collection development, focussing on documentation of works in the MoMA collection; but I will describe how we expanded the scope of the Archives beyond a classic institutional archive, which historically concentrates on documents created within the MoMA walls. Because the new building is the first purpose-built space for archives storage and access, we have been able to broaden the scope to include archives created outside MoMA. You have heard the cliché 'build it, and they will come'. That has been an effective strategy for adding wonderful holdings to the Archives, including archives of dealers, such as Richard Bellamy and Paul Rosenberg, avant-garde magazine archives, such as *Avalanche* magazine, archives of such writers as Calvin Tomkins and, finally, our crown jewels, archives from collectors, such as the Gilbert and Lila Silverman Fluxus collection and the Herman and Nicolle Daled collection of conceptual art.

It is not enough to just acquire, process and house the collections: we need to promote their use as well. Online finding aids and our online library catalogue ensure that users know what we have / do not have in advance of their visit. Now that we have the new reading rooms, we are in good shape, certainly from the researcher's standpoint.

Outreach

We have also done some outreach in what we think are creative ways to ensure that our community, both onsite and globally, knows what we have. Here are some notable examples. When the new gallery building opened in 2004, it also coincided with the 75th anniversary of MoMA; to celebrate that we published a picture album portraying the history of MoMA's first 75 years through photographs and documents from the Museum Archives. The Museum's archivist, Michelle Elligott, and long-time MoMA editor, Harriet Bee, combed through thousands of photographs and documents to select several hundred images which tell the story of the Museum and, by extension, the history of modern and contemporary art in America. The publication *Art in Our Time* remains an invaluable resource and is a great example of how a museum's archives can be mined for information.

The bulk of the photographs came from the Museum's extensive photo archives, and I am pleased to report that over 23,000 of them have been digitised by ARTstor for inclusion on their site. Digitisation also plays a role in bringing to life MoMA publications, such as our *MoMA Bulletin*, which played a key role in promoting the collections and programmes from 1933 to 2002.

Another good example is the ongoing series featuring archival material in the twice-yearly publication *Esopus*; the publisher and editor of the magazine expressed interest in archival material, so I suggested that he work with our archivist to feature something from the Museum Archives in each issue. The feature is called 'Modern Artifacts' and has been a great way to promote undiscovered avant-garde material in the Archives. We have reached 17 issues, with the most recent in Spring 2017 describing an unexpected, for MoMA, exhibition of Italian Renaissance paintings held at the Museum in 1940.

The series began in 2006. First was an article featuring all of the various iterations of Alfred Barr's famous charts outlining the development of modern art. The reader is no doubt familiar with the final version, but all of the various drafts are just as fascinating, and those are lovingly reproduced in the magazine. Second was a feature showing the correspondence between long-time MoMA curator and advocate of contemporary artists, Dorothy Miller, and James Lee Byars, the endlessly fascinating conceptual artist. We have reached 23 issues, with the most recent in May 2017 featuring the evolution of MoMA's sculpture garden.

Our space in the Cullman building also allows us to exhibit material from the Library and Archives on an ongoing basis, about four exhibitions a year. In addition, we have been partnering with the Museum's curatorial and education department on a number of panels and presentations throughout the year; again, our new space allows us to not only talk about the research resources in a formal lecture environment but also to adjourn upstairs to the Library and Archives reading rooms for closer looks at the material, usually accompanied by a glass of wine. This again has been an effective way to promote our resources and share our collections.

The Museum of Modern Art benefits from the interest and generosity of many individuals, and in 2000 we established The Library Council, a group founded to support Library and Archives activities at MoMA. Members pay US \$2500 per year and are invited to special events focussing on MoMA's research resources. In addition, we publish a specially commissioned artist book every other year. Membership dues and proceeds from the sale of the books augment Library and Archives acquisitions, preservation and processing.

The Museum has long considered oral history to be an important vehicle to preserve the spoken word and to bridge gaps in written documentation for curators, scholars, artists and the enrichment of the general public. The Artist's Oral History Initiative at MoMA centres on the Museum's unparalleled collection and the artists whose work has a prominent presence in it. The ambition of this project is to further expand the role of oral history not only for research, but also for the benefit and enrichment of the broader public. By filming the interviews and making use of a variety of digital technologies we hope to make the results of the project available in a variety of formats – such as on the Museum's website, as well as a research resource in the MoMA Archives. To date we have interviewed Vija Celmins, Dan Graham, Yvonne Rainer, Vito Acconci, James Rosenquist and Ed Ruscha.¹

Collaborations

I will provide three examples of collaboration, two internal and one external, that have served the Library and Archives well over the past decade. Contemporary and Modern Art Perspectives [C-MAP] for Art in a Global Age is a new research effort at MoMA, which is being coordinated by the International Program. C-MAP is driven by a desire to deepen the Museum's expertise and to expand the criteria by which quality in works of art and artistic movements is defined. I am proud to say that this initiative was prompted by the Library and Archives acquisition of the Fluxus archives, which challenged us to look at MoMA's collections in a 'non-Western' art way.

The initiative currently takes the form of three dedicated research groups at MoMA, composed of curators and educators, and Library, Archives and publications staff, to focus on global research in the visual arts of the Far East, Latin America and Central and Eastern Europe. The current topics for each group grew out of research for future exhibitions (Lygia Clark, Latin American architecture and the origins of abstraction), a recent acquisition (Fluxus) and a topic of cross-departmental interest (Performance).

1. <https://www.moma.org/research-and-learning/research-resources/archives/oralhistory?x-iframe=true#aohi>

Each of these original research initiatives will continue for three years, allowing for sustained and deep exploration of the subject. The main geographic foci for the groups reflect the Museum's long-standing connections to these regions, its commitment to conducting deep, prolonged research on these visual arts communities and the connections between the three themes and the arts of the Far East, Latin America and Central and Eastern Europe. I am pleased to report that librarians and archivists are deeply 'embedded' in each of the C-MAP initiatives and play a major role in travel, acquisitions, seminars and exhibitions. These initiatives also illustrate how barriers that once existed between departments at MoMA have been broken down, so that it is truly a cross-departmental collaboration.

The group works closely with MoMA's International Program, a long-established department devoted to the promotion of modern and contemporary art globally. It has a very serious scholarly and research component, which has resulted in the publication of a number of important publications around the theme of primary documents. Examples include: *Primary Documents: A Sourcebook for Eastern and Central European Art since the 1950s* (2002); *Listen, Here, Now! Argentine Art of the 1960s: Writings of the Avant-Garde* (2004); *Modern Swedish Design: Three Founding Texts* (2008); *Alfredo Boulton and his Contemporaries: Critical Dialogues in Venezuelan Art, 1912–1974* (2008); *Contemporary Chinese Art: Primary Documents* (2010); and *From Postwar to Postmodern: Art in Japan, 1945–1989: Primary Documents* (2012). Forthcoming titles include publications devoted to Latin American architects from 1920 to 1985 and contemporary Arab art.

Recognising that collaboration is key to long-term viability for art documentation centres, MoMA was a founding partner of the New York Art Resources Consortium [NYARC], which consists of the research libraries of three leading art museums in New York City: the Brooklyn Museum, the Frick Collection and the Museum of Modern Art.² With funding from the Andrew W. Mellon Foundation, NYARC was formed in 2006 to facilitate collaboration that results in enhanced resources to research communities. We benefitted from the expertise of Columbia University's chief librarian and library innovator, Jim Neal, to help us work on a framework to advance a series of programmatic services, with a potential for transforming the environments in which these activities take place and broadening the collective audience served by the three libraries.

Our collaborations caught the attention of what many consider the newspaper of record, *The New York Times*, with a full-page article on 14 March 2010, describing the ground-breaking aspects of our cooperation. It is just this kind of coverage and attention that verifies the major role that art documentation still has in the 21st-century information landscape.

Exhibition History Website

I will conclude with the latest example of how we have pulled together digital assets from around the Museum into a new tool that really inspired me to change the title of my talk to 'Virtual Cycles of Discovery', since it does precisely that: releases data on every MoMA exhibition from its founding in 1929 to the present. Like many cultural institutions, MoMA had done a decent job of digitising various components of its collections, including objects, press releases and installation photographs. However, with the hire of a digital strategy manager, she set about to manage the disparate digital assets that existed on different platforms. She had the good sense to seek leadership in that endeavour from the Library and Archives staff, since we had long advocated for a centralised approach to sharing our information. As a result, an exhibition history website was launched in 2016.³ It brings together, in one search, information about every MoMA exhibition since our founding. Not only can you find installation photographs and full text of press releases, but we also digitised every MoMA exhibition catalogue and

2. <http://www.nyarc.org/>

3. <https://www.moma.org/calendar/exhibitions/history>

linked it to the exhibition history website; all freely accessible on the web. This was further enhanced with a full exhibition checklist that allows for keyword and name searches across every MoMA exhibition; as far as I can tell, this is a unique resource – many institutions have provided images of their collections or publications, but this is the first to link all of that together in a great online resource, resulting in an almost endless, virtual cycle of discovery.

Two Optimistic Perspectives

- 1) Collaboration will continue to be imperative for continued success of art / museum libraries.
- 2) Increased value of special collections, rare items and unique archives within the art library environment will ensure ongoing research value.

Two Pessimistic Perspectives

- 1) The need to recognise the perception that specialised libraries, and maybe art collections in general, are seen as elite.
- 2) More institutional resources are needed for the digitisation of the rare and unique materials held in art libraries; however, budgets remain flat for large-scale initiatives.

OpenAIRE: A European e-Infrastructure for Open Science

Yannis Ioannidis

Video link: https://www.youtube.com/watch?v=tv9sX_iFIAM&t=42m58s

Main Mission

Open Science needs pragmatic, participatory infrastructures to work. The diverse and culturally varied research communities of Europe will accept no ‘one-size-fits-all’ solutions. While some see variety and diversity as insurmountable barriers, for OpenAIRE they are the foundation stones upon which we build. Embedded in a global network of regional repository networks, OpenAIRE is an exemplar for other regions in the world, placing Europe at the forefront of Open Science developments.

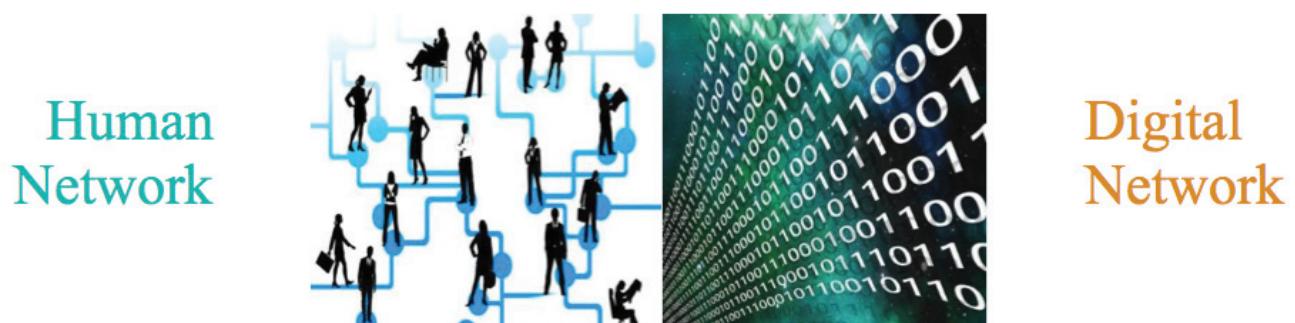


Fig. 1. OpenAIRE fosters the social and technical links that enable Open Science in Europe and beyond.

OpenAIRE is an infrastructure that implements the policies of the European Commission regarding its Open Access [OA] policies. It has been funded through a series of European projects (OpenAIRE, OpenAIREplus, OpenAIRE2020), with approximately fifty partners from all over the European Union and beyond, including data centres, universities, libraries and repositories (fig. 1). OpenAIRE is scheduled to become a legal entity in 2018. It has been operational on a 24/7 basis since December 2010 and is considered as one of the five or six key electronic infrastructures of the EU.

Above all, OpenAIRE is a socio-technical network that supports the *implementation* and *monitoring* of Open Science policies, including Open Access to publications and research data:

- **Implementation** is enabled by a pan-European network of Open Access / Open Science experts – the National Open Access Desks [NOADs], organised and present in every EU country and beyond, and partitioned geographically into four European regions, as in figure 2. The NOADs

work together to align national policies and to define shared solutions and best practices, and coordinate outreach and advocacy activities through a range of targeted training events and support materials.

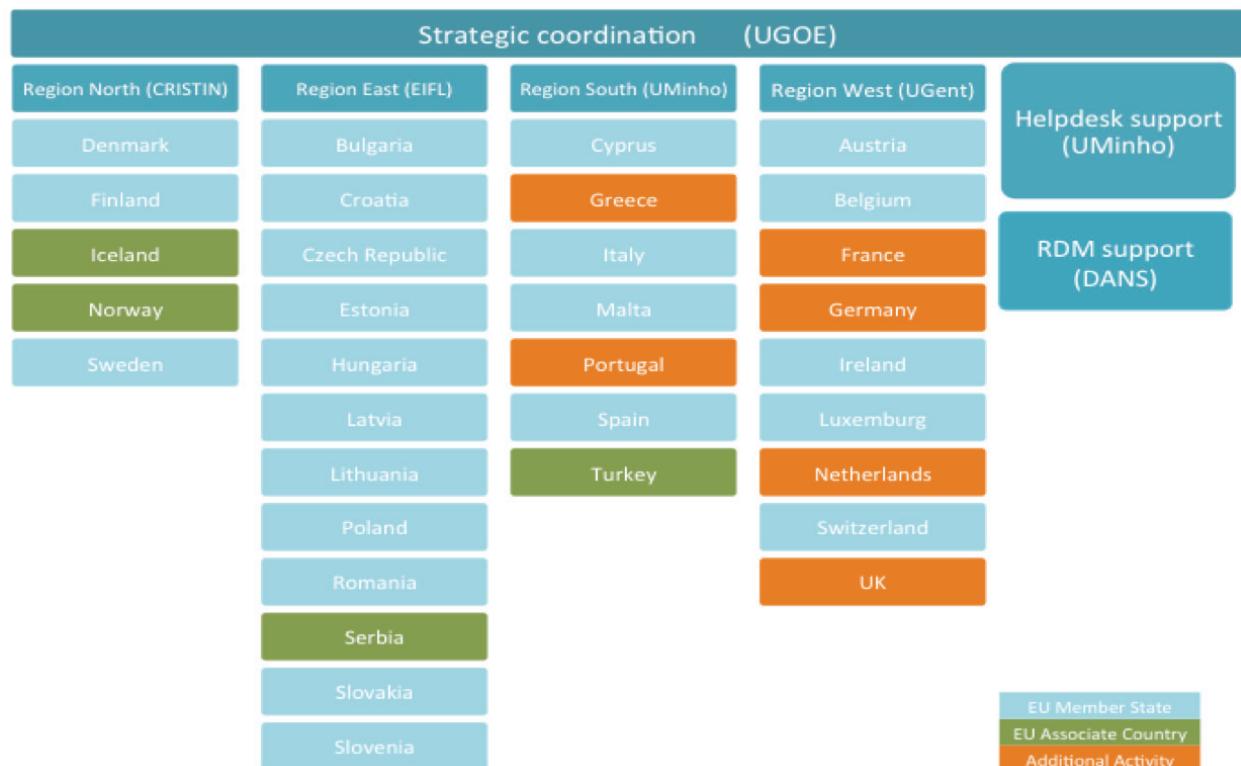


Fig. 2. National Open Access Desks.

- **Monitoring** is achieved by means of an advanced data infrastructure (see fig. 3) consisting of a decentralised network of data sources, namely publication repositories, data repositories and current research information systems, established by research institutions, individual scientific communities and publishers. By harnessing the contents of ‘compatible’ publications, data, software and method repositories (both institutional and disciplinary), linking them to other research entities (researchers, institutions, projects) and building a broad spectrum of services on top of the resulting ‘research information’ graph, OpenAIRE produces a 360° picture of the impact of European research funding.

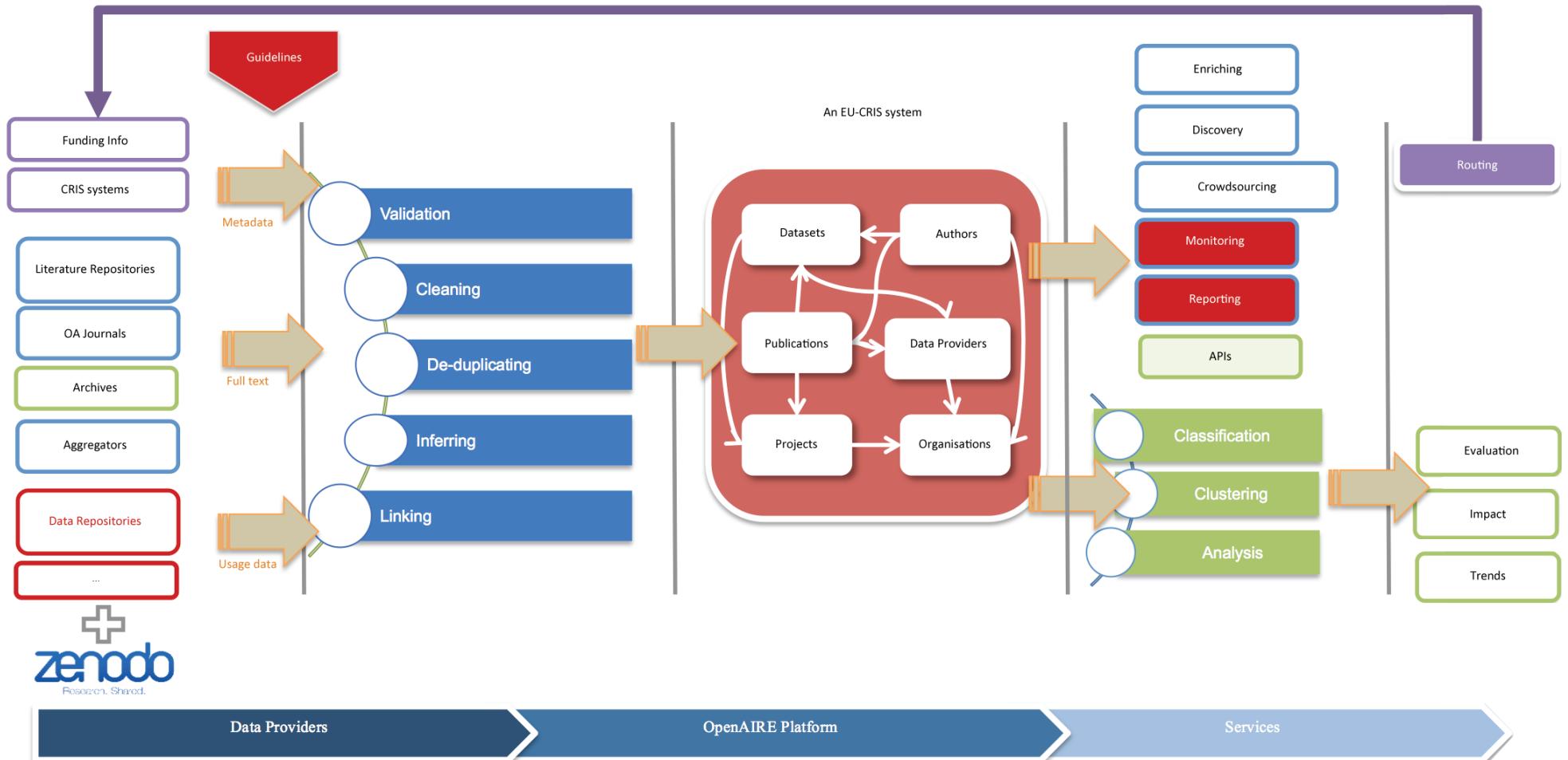


Fig. 3. Advanced data infrastructure.

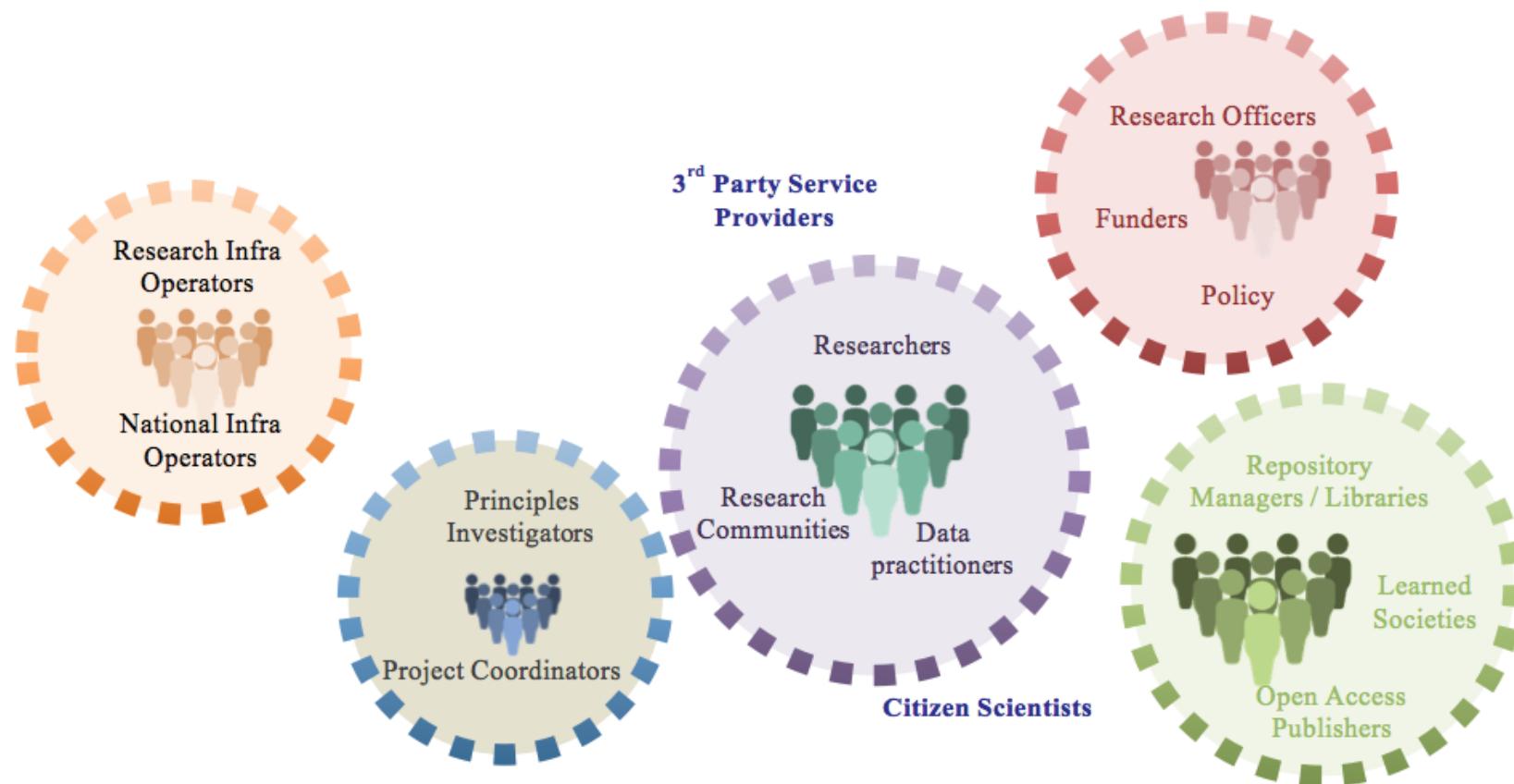


Fig. 4. Target users.

Target Users

OpenAIRE addresses a variety of stakeholders (as indicated in fig. 4), each with different perspectives and specific requirements on several aspects of scholarly communication:

- *Researchers* – who want to discover the work of their peers and the context in which it took place; who are looking for having easy-to-use services embedded into their research workflows to allow them to collaborate with their peers (data sharing and reuse);
- *Research communities (data initiatives / labs / groups)* – who are in need of a one-stop shop for their Open Science needs regarding publications, data and other research artefacts: opening them up, sharing and reusing them, linking and putting them in context, monitoring their outputs;
- *Repository managers and university libraries* – who are keen to implement Open Science policies and are at the forefront of support for Open Science;
- *Principal investigators and project coordinators* – who are responsible for monitoring and reporting all project research outcomes to their funders, their peers and the public, while at the same time complying with the funder policy mandates;
- *Research administrators in research performing organisations* – who look for ways to discover the impact of their organisations and see how this compares to others; who are looking into the practical issues of the implementation of Open Science policies as they are key in influencing decisions taken at the organisational level;
- *Open Access publishers* – who want to keep up with the latest policies and researcher behaviours; who need to follow the latest trends of Open Science, for example linking publications to data and other research artefacts; who want to be more visible to more researchers;
- *Learned societies* – who want to keep up with the latest Open Science trends and implement them for their research constituencies;
- *Open Science practitioners* – who need a knowledge hub and a one-stop shop for all aspects of openness in science: legal, organisational, technical;
- *National infrastructure policy makers and operators* – who need to follow the latest Open Science policies and best practices so that they align with EU and global networks;
- *National funders and other policymakers* – who need the community interaction and feedback to shape Open Science policies; who, once they issue the policies, need to monitor them and adapt them; who must employ advanced research analytics to support future decisions.

Factual Library Data

OpenAIRE is an initiative that has been funded through a series of three EU projects (OpenAIRE, OpenAIREplus, OpenAIRE2020) from FP7 and H2020. It started in 2009, and the current project will end in June 2018. It has 50 partners from 33 European countries, bringing together broad expertise on Open Science policies and practices and their implementation. The human capital of OpenAIRE includes librarians, repository managers, OA experts, legal experts, e-Infrastructure developers including data centre operators, computer and data scientists, and domain discipline experts.

Through its advanced and rigorous operations, which include harvesting, homogenising, cleaning, transforming, text mining, enriching and de-duplicating, OpenAIRE has created an enriched graph of research and scholarly communication entities which is continuously populated by data from new data sources and updated and enriched with new types of relationships. Presently, OpenAIRE provides access to the following:

- 760+ validated data sources
- 17.3 million unique publications (with 360,000 publications linked to 6 funders)
- 28,000 data objects linked to publications or funding
- 370,000 publications linked to projects from 6 funders
- 3500 links to software repositories
- 33,000 organisations

Furthermore, OpenAIRE provides an extensive suite of services, which is continuously updated as Open Science requirements and new functionalities emerge (see table 1).

Old Terms versus New / Shifting Concepts

Based on emerging trends in scholarly communication and recent relevant innovative proposals, it is evident that the research community has moved beyond Open Access in order to embrace a more holistic view of Open Science. Furthermore, as the research paradigm moves to data driven and shared economy practices, Open Science becomes a vehicle for collaboration and innovation.

Open Science touches upon all aspects of the research life cycle, such as access to research facilities (e.g. physical spaces, equipment, lab instruments), storage, stewardship and processing of data (e.g. proper identification, metadata documentation, repository certification, distributed and shared cloud system use) and novel forms of publication of research results, including submitting to new types of journals as these emerge from various communities or universities, employing open (peer) review methods, incorporating innovative ways to disseminate science to the broad public (societal benefits) and adopting new ways to measure impact.

| Service | Description |
|--|--|
| OA Depositing | Promotion of the use of institutional repositories as a means to comply to funder OA mandates |
| OA Publishing [APCs] | Support for the FP7 post-grant pilot, monitoring the use of APCs. <i>The system developed can be used as a cloud service by funders / institutions.</i> |
| Interoperability: Guidelines and Validator | Common standards (guidelines) for literature, data repositories, aggregators, OA journals, CRIS systems. Validator of guideline compliance as a web service or a standalone tool. |
| (Intelligent) Discovery / Access | Search and browsing capabilities over a catalogue of Europe's interlinked research results (and beyond) |
| Monitoring / Reporting | Off the shelf monitoring of OA for funders. Reporting to the EC back end |
| Linking | Author, publication, data, project and other research entity (e.g. bioentities) linking that produces a comprehensive graph capturing all elements related to scholarly communication |
| Brokers | (Meta)data exchange among different data providers |
| Resolvers | Data-data and data-publication resolver (DLI service) |
| Enriching | Similarity of documents and references / citations (publication, software and data citation) |
| Knowledge Extraction | Author affiliation, project funding, classification |
| Usage Analytics | Impact monitoring based on repository use |
| Research Analytics | Clustering (hidden relationships), correlations, trends (advanced APIs and visualisations) |
| Helpdesk Consulting and Training | Open Access implementation support, including research data management [RDM], data management planning [DMP] tools and best practices |
| Storing | OpenAIRE's Zenodo (hosted by CERN) has become a well-recognised catch-all repository used for research artefacts from all over the world |
| Data Provision to 3rd-Party Services | Standard protocol offerings: OAI-PMH, REST APIs , LOD |

Table 1. OpenAIRE services.

These new practices require advanced knowledge and skills. In particular, data skills are important in all phases of the research process, and in the case of publishing, where OpenAIRE comes into play, the libraries play a key role in supporting and improving these practices. The new generation of 'data librarians' needs to be educated to guide and train researchers on a variety of topics, including the following:

- availability and use of tools and services from commercial or public e-Infrastructures (whether these are national / EU / global thematic or more generic e-Infrastructures) to be embedded into the library processes;
- promotion and use of open tools (e.g. Jupyter Notebook) and their effective integration into research processes;
- different modes of publishing for articles and data (electronic publishing) and the accompanying costs and benefits;
- support of data curation and stewardship and relevant best practices.

Two Positive Perspectives on the e-Infrastructure Model

- 1) E-Infrastructures achieve economies of scale as far as service provision is concerned (e.g. monitoring and assessment) and affect the behaviour and practices of researchers regarding Open Science. OpenAIRE's proven capabilities to deliver advanced, production-quality technical services used by a wide range of stakeholders has exactly shown this (e.g. increasingly more funders and research performing organisations rely on OpenAIRE's data and off the shelf services for research analytics regarding their constituencies). Significantly, OpenAIRE's active network of National Open Access Desks has a multiplication effect, while using shared resources for support and training.
- 2) If well-designed and operated, e-Infrastructures are community driven and reveal real researchers' needs more intimately than commercially driven e-Infrastructures or services (e.g. publishers). Engaging the wider community via its representatives (in OpenAIRE's case, the libraries), e-Infrastructures can easily adapt to new trends, adopt new services as they come along and, more importantly, help invent new scholarly communication mechanisms.

Two Negative Perspectives on the e-Infrastructure Model

- 1) E-Infrastructures are hard to grasp, as they provide several soft and low-level services that are not well understood by the different stakeholders; things change only when value added services appear and are embedded in researchers' daily activities. In this sense, e-Infrastructures require an effective coordinated effort that overcomes these barriers and brings to the same level of understanding people from different regional backgrounds and technical expertise. Such coordination may be best left to appropriate national organisations (e.g. national data services).
- 2) As with all other infrastructures, it takes time for researchers to change behaviours and practices and allow for the value of e-Infrastructures to be noticeable, particularly via advanced services that are in the critical path of research. Therefore, they require continuous investment in people and money and long-term commitment from funders around the world (research is a global endeavour, and e-Infrastructures only succeed if they address the challenges that arise at this level). Naturally, in doing the above, another layer of complexity arises, as these global efforts require alignment.

Citizens as Repositories of Knowledge: The Case of Copenhagen Public Libraries

Jakob Heide Petersen

Video link: https://www.youtube.com/watch?v=tv9sX_iFIAM&t=1h05m10s

The Main Mission of Copenhagen Public Libraries

According to the Danish Act Regarding Library Services, the purpose of the public libraries is to ‘promote information, education and cultural activity by making available books, periodicals, talking books and other suitable materials’.¹ When the legislation was passed in 2000, it was already becoming apparent at the time that there is an imbalance between the ends (promoting information, education and cultural activity) and the means (making available a collection of materials). The means are not sufficient to achieve the ends.

- Library collection of 1 million materials
- 330 library staff
- 580,000 inhabitants, 200,000 cardholders
- 4.6 million visits, 3.1 million loans
- 5.4 million web visits
- 20 locations
- Libraries merged with ‘cultural houses’, school libraries or citizen service centres
- 15 Libraries open from 8-22



Fig. 1. Copenhagen Public Libraries.

Danish public libraries therefore have a long tradition of relying on a broad variety of activities in addition to the collection in order to achieve the ends stated in the legislation. Since the introduction of the internet in Danish public libraries in 1995 and the subsequent media development, the availability of a library collection has become increasingly peripheral to many library users.

1. Danish Act Regarding Library Services:

http://slks.dk/fileadmin/publikationer/publikationer_engelske/andre/Act REGARDING_library_services.pdf

The shift is reflected in the library strategy of Copenhagen Public Libraries (see fig. 1), where the traditional slogan of ‘Everything imaginable’ has been supplemented by the new one, ‘We get smarter together’.² The internet has challenged the older slogan, and the new slogan is meant to signal an invitation to citizens to collaborate with library staff as equals and to suggest that learning is increasingly a social activity. In that way the slogan echoes David Lankes’ concept of libraries as places of knowledge creation and John Seeley Brown’s ideas of learning as a social activity.³ The new slogan also suggests that the mission of Copenhagen Public Libraries is still to ‘promote information, education and cultural activities’, but that this is achieved primarily by engaging citizens rather than making a collection available.

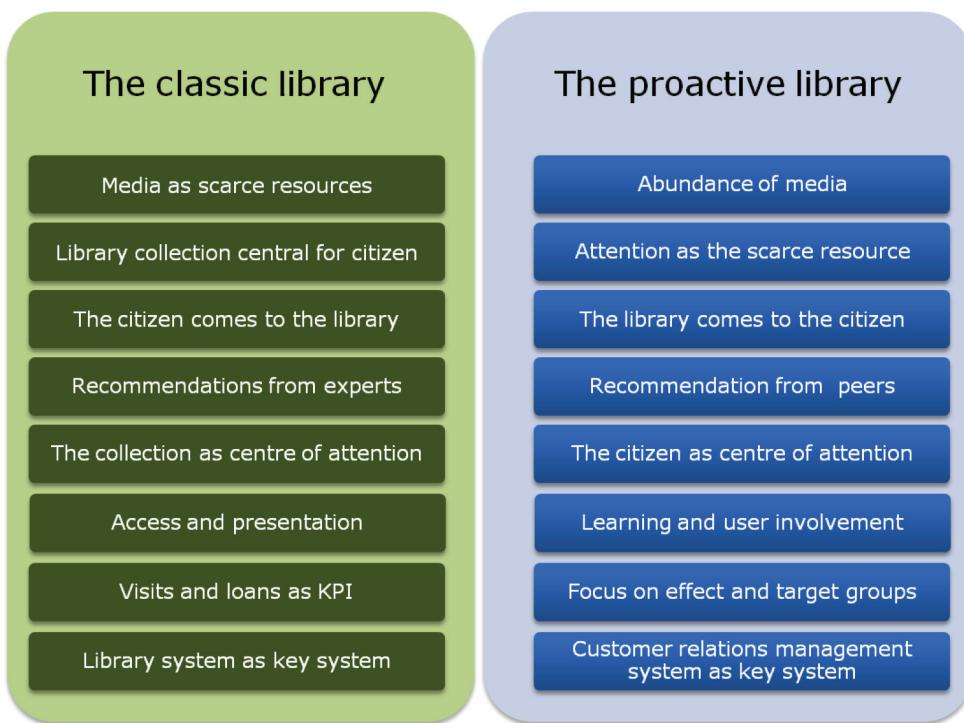


Fig. 2. The classical library versus the proactive library.

The thinking behind the strategy for Copenhagen Public Libraries is presented in figure 2 as a move from the more classical public library to a more proactive library.

The Target Users of Copenhagen Public Libraries

The target users of the Danish public libraries are the citizens of the municipality. The legislation put a special emphasis on children and on the library’s obligation to be open to all citizens free of charge. The number of visitors to the Danish public libraries is relatively stable, but there are an increasing number of non-users. The citizens of Copenhagen can be divided into three groups: one third frequent library users (several times a month), one third occasional library users (several times a year) and one third non-users.

2. Copenhagen Libraries Strategy: <https://bibliotek.kk.dk/About>

3. An example of the thinking of David Lankes can be found at: <http://quartz.syr.edu/blog/?p=1721> and of John Seeley Brown at: <http://www.newcultureoflearning.com/internetlibrarian.pdf>

The stable or for some libraries increasing number of library visits coupled with an increasing number of non-users suggest a polarisation in library use with a group of increasingly frequent library users and a growing group of non-users. The Copenhagen library strategy identifies this development as problematic because the non-users may actually need library services. It therefore suggests a more proactive role for the libraries in order to reduce the number of non-users. The public libraries are not viewed just as a capacity or infrastructure that is made available to the citizens but as an active institution that must work to fulfil the overall purpose for all citizens.

The strategy put a strong emphasis on children as a target group. This is done because such early efforts are more effective in terms of the balance between resources and results, for example in regard to literacy and reading habits. Another reason is that good library habits are created early, so the focus on children ensures future library users.

The History and Current Activity of Copenhagen Public Libraries

The public libraries in Copenhagen were established in 1885 to replace the small privately managed book collections for citizens. There were six small branches where citizens could check out one book at a time for a two-week period. In 1914 the main library opened in Copenhagen, and in 1920 the first national library legislation was passed, introducing a rapid development of the Danish public libraries. In the 1930s a focus on children's libraries was initiated, and until the 1960s the emphasis was on information and enlightenment for both children and adults. In the 1960s there was an increased stress on the role of public libraries as cultural institutions with a stronger prominence on music in library collections. The public libraries also began showing movies and later also lending them. This development culminated in the library legislation of 2000 that emphasised the equality of media, making it obligatory for public libraries to lend out music CDs and also making movie DVDs available.

Today both music and movies are disappearing from public library collections. The increasing predominance of services such as Spotify and Netflix has resulted in a dramatic decline in loans of CDs and DVDs over the past six years (decline in loans of 55%-70%; see fig. 3). The public libraries have come full circle and are again focussing on literature and enlightenment.

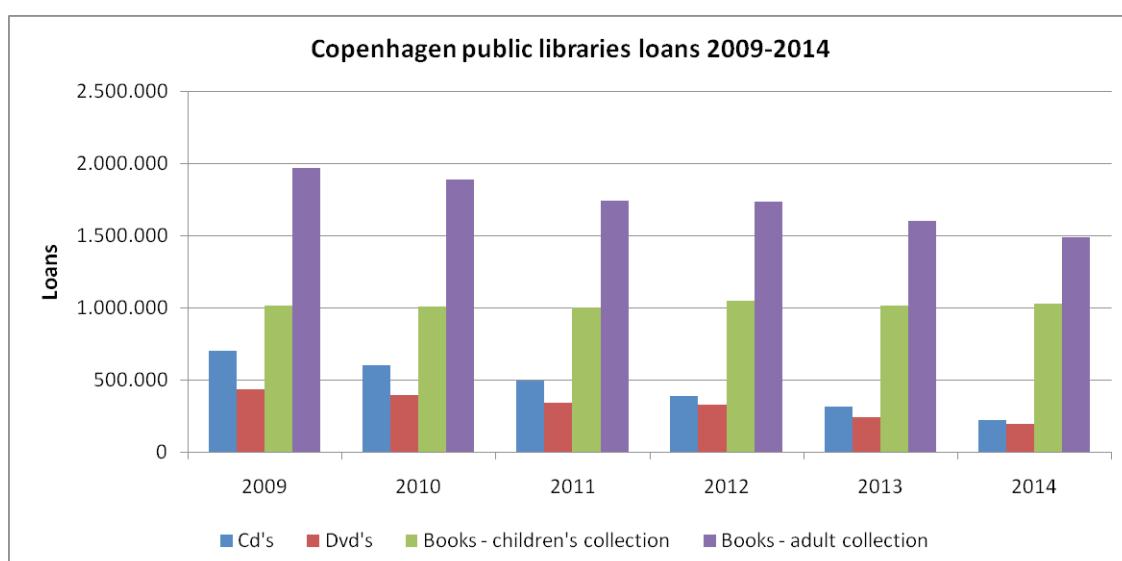


Fig. 3. Loans of different materials, 2009-2014.

The Copenhagen Public Libraries are first and foremost cultural institutions, but the library strategy puts a strong emphasis on learning. The city of Copenhagen already offers citizens many cultural activities and the abundance of commercial media and cultural offerings means that there is no shortage of cultural activity. There is, however, a shortage of informal learning and literacy among children, so those are action areas in the library strategy. The cultural activities offered by the Copenhagen libraries must ideally be something that is not delivered by others or they must reach groups of citizens that would not otherwise experience them. The activities should ideally also involve the citizens and either challenge or inspire them – they should not be mere entertainment.

Changes and Shifting Concepts at Copenhagen Public Libraries

As mentioned above, the media development has resulted in a changed role for the library collection. The collection is not an end in itself but a tool to achieve other objectives. It is viewed from the perspective of different citizen needs. Some types of literature (non-fiction books and individual journal articles) are primarily discovered through the online catalogue and reserved for check-out by students. There is less need to have large collections of this kind of literature in all branches. Other kinds of literature are relevant for exhibitions at local branches in order to inspire citizens or introduce them to literature relevant to activities at the library.

It does seem appropriate to have large collections of children's books at places where parents and children can encounter them in their daily lives. Children need to experience the physical books and become familiar with them, and parents need the opportunity to browse and skim the literature before checking them out. This way of thinking means that Copenhagen libraries are reconsidering the composition of local collections, the physical layout of libraries and the overall branch structure in the city.

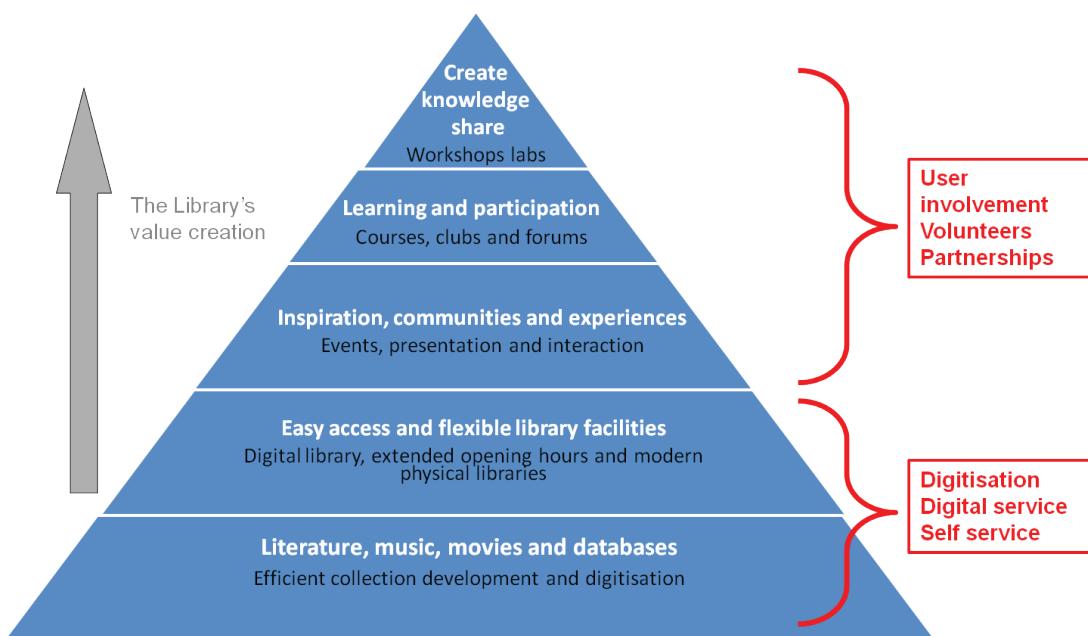


Fig. 4. Copenhagen Public Libraries strategy.

An important priority is collaboration with schools. In most Danish municipalities the public schools are under a different administration than public libraries. There have been legally mandated school libraries, but they are changing into pedagogical learning centres with less focus on the library

task. The recent comprehensive public school reform in Denmark means a shift in focus from teaching to learning and an aspiration of creating learning in new ways, for example through cultural activities. The Copenhagen Public Libraries are therefore hoping to take over some school library functions and to offer new cultural activities that can promote learning. This could entail taking over responsibility for the public schools' book collections and assisting with access to digital information resources.

Another area that is undergoing profound changes is library services. Figure 4 illustrates the library strategy of Copenhagen Public Libraries. The value creation of the library increases at each level of the pyramid.

The foundation for the library services is the collection. The collection becomes more valuable if the library has long opening hours, good physical facilities or if it is digitised. A library collection that citizens can access from 7 am to 10 pm is more valuable than one that is only accessible, for example, from 10 am to 5 pm. If the library can facilitate inspiration and new experiences based on the collection, the library value creation is even larger. If the library can engage citizens and initiate learning, it is even more valuable, and the value creation culminates if the library can get citizens to create and share knowledge.

The model has been the subject of much discussion among staff and management in Copenhagen: Isn't reading a book (at the bottom of the pyramid) as valuable as participating in a workshop at the higher levels of the pyramid? The point is that the model shows the *library's* unique value creation, and the book is created by an author and a publisher and could be provided by a bookshop or an e-book vendor. Indeed, there will be increased competition at the two lower levels of the pyramid and book loans will probably decline as DVDs and CDs have done. The pyramid is basically a value chain, and the strategy is to move towards the hotspots in the value chain. It is designed as a pyramid to reflect the way Copenhagen Public Libraries allocate their resources today. The resource allocation is largest at the bottom and the value creation is largest at the top: the pyramid should be turned upside down.

The red curly brackets suggest that the reallocation of resources will happen through digitisation, digital service and self-service at the lower levels of the pyramid and through user-involvement and partnerships at the higher levels.

This is an ongoing process and entails a very dramatic reduction in traditional services in the libraries. The objective is to move all citizen inquiries to a newly established library call centre and to use the freed-up staff for outreach services and programmed activities in the library space. Copenhagen Public Libraries have increased opening hours and have simultaneously reduced hours with access to staff at reference desks at the physical libraries by 40%.

The strategy means profound changes in the role of library staff. A number of new work roles have been designed with each staff member having a primary and a secondary role. A comprehensive competence development programme has been developed to support this shift.

A Bright or a Gloomy Future for Copenhagen Public Libraries?

The vice president of Amazon Kindle, Russell Grandinetti, in an interview with *The Guardian* summed up how digitisation is affecting the book business: 'The only really necessary people in the publishing process now are the writer and reader. Everyone who stands between those two has both risk and opportunity.'⁴ This point of view is reflected in figure 5, which is a rudimentary illustration of the value chain for the book business. The value creation is concentrated at each end of the value chain – with the authors and the readers.

4. Edward Helmore, 'Amazon's Russell Grandinetti: Kindle Champ Takes on the Books Trade', *The Guardian* (17 August 2014); accessible online at <http://www.theguardian.com/theobserver/2014/aug/17/russell-grandinetti-amazon-kindle-hachette-book-war-profile>

Public libraries have opportunities both in engaging authors and readers and in facilitating new communities between them. Additionally, public libraries can focus on promoting reading, literacy and literature through new activities rather than just being a repository or a distributor of literature. In the same way as research libraries should attempt to be an integral part both of the research and the study process, public libraries should work to be a part of a citizen's daily work and individual information universe. Poetry readings at nursing homes or library visits at day-care centres to promote literature and language development are part of that effort.

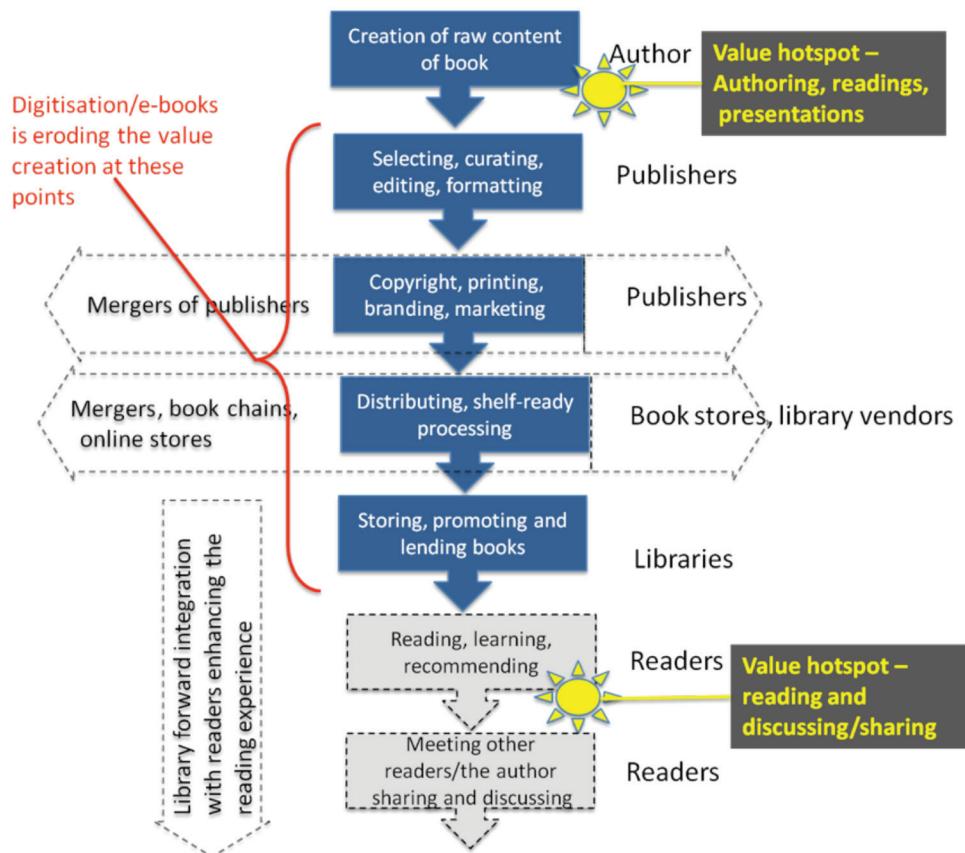


Fig. 5. Industry value chain for books.

From an optimistic perspective there is as much need for the library mission as ever before. The challenge is to persuade politicians and staff that the mission must be achieved through other means than by focussing on a book collection. Public libraries are no longer in the book business but in the people business. Another challenge is whether the libraries can handle the transition in terms of competencies, culture and organisation and provide new services that can actually help achieve the mission.

From a pessimistic point of view many public libraries may stay in the book distribution business and the downward spiral of decreasing loans. Some public libraries might think that they should concentrate on the digital book distribution business. That will be a difficult position in the long run. If they are successful in e-book loans they will be blamed for crowding out commercial activity and sales; and if the focus is on the public service role and providing what the market does not supply, they will have few loans and be blamed for wasting public money.

In the optimistic view the future public library is the physical library, and people will still want to meet. Learning will become increasingly informal, social and lifelong, and public libraries will use their customer intimacy and the citizens as resources to become platforms for citizen learning. An abundance of media and internet access does not in itself create an abundance of knowledge and learning.

In a more pessimistic view that might be a hard sell to politicians, they will have to alter a fixed conception of the library and replace it with a very different one. There could also be a significant risk of underfunding. Politicians tend to prioritise initiatives where there is a close connection between input and output both in terms of time and causality. The activities of public libraries often lack the urgency of immediate problem-solving, and there is typically little direct causality between library efforts and long-term results. Public libraries therefore risk becoming underfunded in the way much infrastructure also receives too little attention.

The basic question becomes whether public libraries can fulfil their new role as community platforms for knowledge creation and whether they are allowed to abandon their old role in time.

The National Library Supports the Library Network of Finland

Kaisa Sinikara

Video link: https://www.youtube.com/watch?v=tv9sX_iFIAM&t=1h22m30s

Introduction

My home institute is the University of Helsinki in Finland. The National Library of Finland and the Helsinki University Library both function as independent institutes of the University. Therefore, I will describe not only the National Library but also highlight the similarities, differences and synergies of these two institutes.

The establishment of universities in Finland followed that of international university history. Queen Christina of Sweden founded the first university in Finland, the Royal Academy of Turku, in 1640. Finland was for several hundred years part of Sweden. Finland's period of autonomy as a Grand Duchy of Russia was between 1809 and 1917. The University was named Imperial Alexander University. After Finnish independence in 1917, the official name was changed in 1919 to the University of Helsinki.¹

In Finland one of the main memory institutions is the National Library of Finland, founded in 1640 as a library of the Royal Academy of Turku. For historical reasons, it was the main library of the University of Helsinki until 2006.²

The establishment of seminar libraries and departmental libraries began at the University of Helsinki around 1850. The model of having a departmental library expanded up to the 1970s, when every faculty and institution had its own independent library. The number of branch libraries and separate collections grew to 170. The library network of the University of Helsinki followed the tripartite model of old European universities in the early 1990s.³

Currently, two large library entities are independent institutes of the University of Helsinki. One is the National Library of Finland. The other is the new Helsinki University Library, founded in 2010. A gradual merging process of what were formerly 170 faculty and department libraries between 1998 and 2010 has created the new Helsinki University Library, which consists of the main library and three local campus libraries.

1. The University of Helsinki is part of a network of European research universities dating back to the 17th century. In international university rankings, it typically ranks among the top 100. Today, the University of Helsinki has 11 faculties and 16 independent institutes, as well as 35,000 students and some 4500 teaching and research staff. It awards an average of 5500 first- and second-cycle degrees and 530 doctoral degrees (Statistical Data of the University of Helsinki for 2015).

2. Rainer Knapas, *The Helsinki University Library – The National Library of Finland, 1640-2010*, Helsinki: Suomalaisen Kirjallisuuden Seura, 2012.

3. Kaisa Sinikara, 'History of the Helsinki University Libraries, 1850-2010', manuscript, 23 January 2017; the research project will continue until 2018.

These two library entities collaborate with each other in the collection policy and through the use of a joint library system and a shared collection catalogue. The University Library uses the services of the licensing office FinELib as a member of the consortium. There is no need for the University Library to create services which are special services of the National Library, such as the digitisation centre.

The Main Mission of National Libraries

Let us look at some cases of how national libraries have expressed their mission, as well as some strategic targets. All national libraries support the national heritage and provide services for the whole nation. Some of them, especially the oldest and largest, describe their duties as global.

The first true national library was founded in 1753 as part of the British Museum. This new institution was the first of an original kind of museum – national, belonging to neither church nor king, freely open to the public and aiming to collect everything. The British Library expresses the mission as ‘Advancing the world’s knowledge’ and the vision, ‘In 2020 the British Library will be a leading hub in the global information network, advancing knowledge through our collections, expertise and partnerships, for the benefit of the economy and society and the enrichment of cultural life.’⁴

The mission of the Library of Congress in the United States is to provide Congress, and then the federal government, and the American people with a rich, diverse and enduring source of knowledge that can be relied upon to inform, inspire and engage them and support their intellectual and creative endeavours. The Library has approximately 162 million items.⁵

The National Library of Finland expresses its main vision and mission as a national focal point: ‘Our national treasures available for everyone’. The main mission is focussed on Finnish society and citizens: ‘We secure the availability of the national published cultural heritage in our society; we distribute and produce information content for research, studies, citizens and society; and we develop services in cooperation with the library network and other operators in the information society.’⁶

Some Differences among Scandinavian University and National Libraries

The Scandinavian countries have implemented different solutions concerning the organisational structures of university libraries and national libraries. In Finland, as mentioned above, the University Library and the National Library are separate, independent institutes as part of the University of Helsinki. In Denmark and Iceland the universities and the national libraries together form one organisation, which reports to a ministry. In Sweden and Norway the university libraries and the national libraries have been separated. The University Library is a part of the university, and the National Library reports to a ministry.⁷

4. Growing Knowledge: The British Library’s Strategy, <http://www.bl.uk/aboutus/stratpolprog/strategy1115/strategy1115.pdf>; last accessed 6 May 2016.

5. Library of Congress Strategic Plan: FY 2016 through FY 2020 Serving the Congress and the Nation, https://www.loc.gov/portals/static/about/documents/library_congress_stratplan_2016-2020.pdf; last accessed 6 May 2016.

6. Kansalliskirjastostrategia, 2013-2016, https://www.kansalliskirjasto.fi/sites/default/files/atoms/files/kansalliskirjaston_strategia_2013-2016.pdf; last accessed 4 May 2016. The National Library of Finland: Duties and Strategy, <https://www.kansalliskirjasto.fi/en/duties-and-strategy>; last accessed 4 May 2016.

7. Denmark, <http://www.kb.dk/en/kb/om-os/index.html>; last accessed 5 May 2016. Iceland, <https://landsbokasafn.is/>; last accessed 5 May 2016. Sweden, <http://www.kb.se/english/about/>; <http://su.se/english/library/about-us>; last accessed 5 May 2016. Norway, <http://www.nb.no/English/About-s/Strategy>; <http://www.ub.uio.no/english/about/strategy/index.html>; last accessed 5 May 2016.

Basic Facts about the National Library of Finland

The collections of the National Library of Finland represent diverse sources of knowledge. The Finnish collections include both large printed collections and electronic legal deposit copies (2008–) and online materials in the National Collection (2006–). It has special collections, the Finnish National Sound Archive, the Manuscript Collection, the Humanities Collection and the Slavic Library. Topics of the collections include research on Finnish history, culture and society; research on literary culture; research on learning and the history of science; literary research; and research on personal histories. The National Library is actively digitising older materials, such as Finnish newspapers and other valuable sources for researchers. In 2015 there were about 10 million digitised pages.

| COLLECTIONS 2015 | National Library | Helsinki University Library |
|----------------------------------|------------------|-----------------------------|
| Printed books (storage units) | 2,000,000 | 1,600,000 |
| E-books (titles) | 4000 | 650,000 |
| Printed journals (storage units) | 1,000,000 | 400,000 |
| E-journals (titles) | 41,000 | 38,000 |
| Maps | 78,000 | 13,000 |
| Music materials (storage units) | 180,000 | 7600 |
| Audio-visual materials | 440,000 | 4500 |
| Patent publications | 137,000 | - |
| Archive sources or creators | 740 | 4 |

Table 1. National Library of Finland / Helsinki University Library collections.

In Finland the National Library and university libraries are open to everyone. All of the collections can be accessed by visiting the Library or through its online services. The collections of the National Library are nowadays covered by a single search service.

Giving only some facts and figures of the use of the National Library would not be illustrative enough. Therefore, I will compare the use of some of the basic customer services of the National Library⁸ with the Helsinki University Library.⁹ These two libraries have different profiles.¹⁰

The National Library and the new Helsinki University Main Library are located near each other in the very centre of Helsinki. The Main Library was opened in 2012 and the other three campus libraries between 1998 and 2001. The National Library's beautiful building, which was finished in 1845, has undergone extensive renovation in recent years.

8. Annual Reports of the National Library, 2010, 2015: <http://www.doria.fi/handle/10024/92438>; https://issuu.com/kansalliskirjasto/docs/kansalliskirjasto_vk15/1; <https://www.kansalliskirjasto.fi/en/key-figures-2015>

9. Annual Reports of the Helsinki University Library, 2010, 2015: <http://www.helsinki.fi/kirjastot/vuosikertomus2010/tilastot/index.html>; <http://www.helsinki.fi/kirjastot/vuosikertomus2015/avainlukuja/index.html>

10. Research Library Statistics Database, 2010 and 2015: <https://yhteistilasto.lib.helsinki.fi/?lang=en>

| | Library visits | Loans and renewals | Downloaded licensed e-journals | Downloaded digitised material of the national heritage | User training / number of participants |
|-----------------------------|----------------|--------------------|--------------------------------|--|--|
| The National Library | | | | | |
| 2010 | 0.17 million | 0.5 million | | 6.5 million | |
| 2015 | 0.07 million | 0.38 million | | 14 million | 58 training events, with 6240 participants |
| Helsinki University Library | | | | | |
| 2010 | 1.6 million | 1.9 million | 1.9 million | | |
| 2015 | 2.1 million | 2.9 million | 3.2 million | | 7300 |

Table 2. National Library of Finland / Helsinki University Library statistics.

The use of digital materials is growing all the time in both libraries.¹¹ However, the number of visitors to the University Library has risen as well after the opening of the new building. Loans and renewals have also been growing.

One of the basic differences in supporting research and education is that the National Library is a research library for the humanities, but the University Library provides services to all fields of knowledge and 11 faculties at the University of Helsinki. Students are active users of the University Library, although the Library is open to everyone.

The operating costs of both libraries are about €25 million, but the sources of financing differ. The University Library is funded by the University, but the National Library only partly (about 20%). The main supporter of the National Library is the Ministry of Education and Culture.

The National Library Provides Services to the Whole Nation

The Finnish solution during the past 10-20 years has been successful for all partners. Strategic choices to separate the responsibilities between the National Library and the Helsinki University Libraries have created a clearer profile and division of duties for both libraries. The focus of the University Library is to provide up-to-date services for research and education at the University. The National Library is able to provide and develop services for the whole nation. When looking at the services today, the benefits are visible. The success of the Finnish model is reflected by the fact that the National Library of Finland offers a much wider service palette to the library network and a cooperation model with other actors than the national libraries in other Scandinavian countries. There are also several developing projects led by the National Library.

11. For the growing numbers of the use of the digital resources of the FinELib consortia and the National Library digital sources, see the website <https://www.kansalliskirjasto.fi/en/key-figures-2015>. At the Helsinki University Library, numbers of the use of e-books and the Helsinki University Open Access Repository grew from 2 million to 7 million between 2012 and 2015.

The most important services for the library network and other memory organisations are as follows:¹²

- **Licensing services:** The FinELib office working within the National Library negotiates the licensing of e-materials on behalf of consortium members. FinELib consortium members include Finnish universities, universities of applied sciences, public libraries and some other organisations receiving public funding.
- **System platform service:** The most important system platform service, Finna, is a search service entity. The National Library offers Finnish archives, libraries and museums the opportunity to upload their materials into the national Finna service, which is part of the National Digital Library [NDL] project of the Ministry of Education and Culture. Finna has been constructed using VuFind and other open-source software, and its source code is freely available to all. The National Library maintains publication archive and library system services as well.
- **Metadata reserve services:** The National Library is in charge of maintaining three information reserves. Melinda is a national metadata reserve, which collects the descriptive metadata of library materials in one place. ARTO is the reference database and metadata reserve of Finnish periodical and monograph articles. The reference data in Juuli has been collected from the research databases of Finnish higher education institutes.
- **Digitising and preservation services:** Centre for digitisation and preservation.
- **Evaluation tool services:** The Finnish Research Library Statistics Database; end user surveys.
- **Expert services of data description:** The National Library maintains and develops services to facilitate the data description of libraries and maintains subject indexes, ontologies and other glossaries. The description standard service gives instructions on how the rules are applied to the description of library materials. The description standards applied in Finland are RDA and ISBD. In Finland the National Library is in charge of distributing the standard identifiers.
- **The Finnish National Bibliography service:** Fennica – the Finnish National Bibliography – is a database dedicated to Finnish publication activities. Viola is the Finnish national discography and the national bibliography of sheet music.
- **Legal deposit service:** The duties of the National Library include collecting Finnish publications in cooperation with the publishing industry. Included in this collection are printed publications, sound and other recordings, digital publications and other online material. This activity is based on the Act on Collecting and Preserving Cultural Materials 1433/2007 (available in Finnish and Swedish). The Ministry of Education has defined the National Library's collections as one of the key national research infrastructures.
- **Conversion and transmission services of metadata:** The Europeana Formula service allows Finnish archives, libraries and museums to submit metadata on their materials to the pan-European digital cultural heritage portal, Europeana (www.europeana.eu).

Tools Supporting Collaboration

Functional structures and tools have also been created for supporting collaboration. The Finnish university libraries founded the Council for University Libraries in 1996 after the acquisition of the first common library system for all the university libraries, and the responsibility for these centralised services was given to the National Library. When the services of the National Library enlarged, other

12. For more detailed information, see the website of the National Library of Finland: <https://www.kansalliskirjasto.fi/en/services>

library sectors established their own councils, including the AMKIT Consortium coordinating the universities of applied sciences libraries, the Council of the Public Libraries and the Council of the Special Libraries. The councils define the joint needs for services for their own library sector. They form a stronger negotiating partner than an individual library in collaboration with the National Library. The National Library conducts regular surveys on the satisfaction of the partner organisations and about new needs for services.

From the perspective of the library user, this kind of collaboration creates good results. Among others, the material of Finnish archives, libraries and museums is accessible through a single search when using the new information search service.

Some Positive and Negative Perspectives on the National Library Model

The significance of the National Library is growing in the information society through partnerships with other service providers and memory organisations. The nationally growing importance of digital content requires compatibility between systems and effective and skilled background services.

The importance of the National Library is increasing as a developer of preservation methods for the printed and digital cultural heritage of the nation. Many new contacts have been made and collaborations formed between different partners in Finland and globally.

The current central threatening factor is the tightening of the economy in Finland. The University of Helsinki has reduced staff numbers by about 15%, the libraries included. Even though a part of these cuts can be managed through the retirement of staff, hundreds of people have been dismissed from the University, dozens of them in the National and University Libraries. The acquisition of collections has suffered as well. Growing space costs are a challenge to the National Library, with its large and growing collections. The economic cutbacks emphasise the significance of the centralised services of the National Library, but unfortunately they often direct decision-making to emphasise the priorities of the organisation itself (individual universities, universities of applied sciences or municipalities). This strengthens the competition between the separate libraries and can reduce the desire to direct resources to the National Library. Instead of benefitting from synergic advantages, libraries must compete more for resources.



Part II:

Insights into Potential Synergies and Future Prospects

Potential Synergies and Future Prospects of Library Models

Paul Ayris

Video link: https://www.youtube.com/watch?v=w6WwGfuJF_E&t=16s

Thoughts on the Library Models Presented

A number of conclusions can be drawn from the presentations in Nicosia on the future of the library. First, it is clear that no ‘one-size-fits-all’. Libraries serve their users in different settings. As a result services and facilities need to reflect local user needs. In times of change the traditional model, where the collection lies at the centre of provision, is being stood on its head. The customer is king, and it is this realisation which has dictated the shape and nature of the new Student Centre at University College London [UCL], which will provide 1000 digitally enabled learning spaces, open 24/7, with no additional paper provision.

Second, whatever new model for library provision is chosen, it needs to be flexible to allow for change and growth. This is underlined by the emerging Open Science agenda. Open Science represents a new set of issues which institutions need to embrace – for example, openness, research data management, new metrics and new forms of evaluation. Libraries are not immune from these trends and need to offer services which support their institutional missions.

Third, in terms of finance, what impact do cutbacks have on service provision? Is one of the effects to make libraries compete against each other for resources rather than to pool resources through collaboration? Under such pressures, do libraries turn inwards and concentrate on local, short-term goals rather than thinking of the wider good?

Existing Collaboration between Libraries

Libraries are natural partners in collaborating over the provision of resources, facilities and services. The Conference in Nicosia has revealed a number of important examples. OpenAire has demonstrated impressive levels of cooperation, with over 760 validated data sources. Finland has a well-established record in collaboration. Finland’s National Library provides services to the whole nation, underpinned by collaboration among Finnish libraries. The concept of sharing / joint working buttresses a very significant number of collaborative activities for libraries across Europe.

Expected and Potential Synergies among Different Library Models

All challenges are really opportunities, and the meeting in Nicosia identified a number of these. First, innovation or the possibility of innovation is a great driver for collaboration. The projected European

Open Science Cloud is a good example of the benefits that will accrue to research and to industry across national borders. The sharing which the Cloud will facilitate will encourage innovation, minimise duplication and foster a change in how research is recorded and disseminated – no longer via publications alone but also through the supporting research data.

Second, funding or the lack of it is a common theme in many of the papers that were presented in Nicosia. There is much to be learned from the Best Practice being shared amongst libraries. Libraries need to develop strategies for attracting philanthropic benefactions and actively to engage with potential funders. The partnership between the family of Stelios Ioannou and the new University of Cyprus Library is a shining example of how such collaboration can work. Another model presented in Nicosia, from which other libraries could learn, is MoMA's Library Council. This is a model which has been replicated in a number of research libraries in the UK.

Fundamental to all library models presented in Nicosia is the need for them to be supported by new skills and competencies, many of which are often not seen as library skills – for example, fundraising, change management and research data management. The development of such skills will encourage change and so facilitate the delivery of the library model which any particular institution / organisation wishes to adopt.

Suggestions for the Improvement of Library Management and Functions

There are a number of improvements which have been suggested in Nicosia. In terms of collection management and development, it is important to be culturally sensitive. Collections should not be dominated by white, male, Western and European perspectives. In this respect, MoMA's C-MAP represents that body's research and exchange initiative devoted to art in a global context. The change in the strap line used in the Copenhagen Public Libraries is most revealing in terms of collection management. The slogan has changed from 'Everything imaginable' to 'We get smarter together'. The change in culture in collecting which the new wording represents is very significant. It shows how a library service can change to match available resources to current need.

There are also changed roles for libraries, presenting new opportunities. Copenhagen Public Libraries are putting more emphasis on the strategy of supporting children and school libraries. At UCL, Open Access publishing activity has transformed the mission of the Library. UCL Library Services is no longer simply a collector, cataloguer and curator of knowledge. Through UCL Press, the UK's first fully Open Access university press, the Library has become a creator of knowledge.

A theme which has run through the meeting in Nicosia is that many libraries are undergoing culture change. This is manifested in a number of ways. For example, the user no longer feels they have to come to the library. Rather, the library needs to go to the user. This is often done digitally with services being made available 24/7 and/or with the creation of new types of learning space. Also, the collection is no longer necessarily the centre of attention, now that the citizen is king. Copenhagen provides a fine example of how to manage that change. Their strategy identifies where they add value, allocating resources and identifying mechanisms for delivering that value accordingly.

Conclusion

Libraries and cultural institutions are important in a digital age, but they will only remain so if they adapt to the changing academic and cultural settings in which they are rooted. Ongoing change is a theme of the presentations made in Nicosia on the Library of the Future. Perhaps the last word can be given to the University of London, which was established in Gower Street in 1826: 'The Council trust that they

are about to lay the foundation of an institution well adapted to communicate liberal instruction to successive generations of those who are now excluded from it [...] with the advantage that accrues to all from the outward aids and instruments of libraries, museums, apparatus [...].¹ The Council laid down a charge which is as relevant to us all in 2017 as it was in the 19th century. Libraries are important, but what is needed in the 21st century is change in order to deliver that vision.

1. From *Statement by the Council of the University of London Explanatory of the Nature and Objects of the Institution*, London 1827.

A Global Perspective for Meeting Challenges in Accessing and Sharing Information

Milan Hughston

Video link: https://www.youtube.com/watch?v=w6WwGfuJF_E&t=12m01s

After reviewing the papers of the four other participants, I have the following short observations regarding potential synergies and future prospects.

UCL Library

The UCL Library seems a fine example of a traditionally organised entity which serves both students and faculty but has identified a number of innovative strategies that move both of those constituencies forward. It is redefining what a 'learning space' is by moving outside the boundaries of the traditional library into digitally enabled learning spaces. This is in reaction to the decline in physical assets borrowed by an increase in visits digitally; something all information specialists in the 21st century need to consider.

However, UCL does acknowledge the dilemma of a rising number of students while also absorbing budget cuts. How will they provide those new learning spaces? I hope that the UCL leadership has a role in every new building planned for the campus, as a reflection of how learning can happen outside the classroom or library.

Two positive notes: the new London Centre for the Arts, Humanities and Recorded Word could provide a revitalised role for rare books, manuscripts and archives. Also, I really like the phrase 'The Library is not only a collector, curator and cataloguer of knowledge; it is now a creator of knowledge.' That is a phrase we can all adopt and embrace.

OpenAIRE

After reading this paper I felt that scientific research communities and information repositories have certain advantages over those of us in the arts and humanities. Even though there have been goals met in developing standard vocabularies in the arts and humanities, we are still behind the sciences in large-scale adoption and application. However, now that metadata and its use have entered mainstream applications, this situation is improving; but there is still some reluctance and resistance in sharing data among repositories with unique holdings; the library world is much-advanced in sharing data, where the museum world is not and remains somewhat myopic. Again, this is changing.

The paper also made me realise what an asset the European Union has been in developing multinational initiatives such as OpenAIRE. Sadly, our Library of Congress has historically lagged

behind in those efforts for the past 25-30 or so years, but with the recent change in leadership there is optimism that this will change.

My dream: an OpenARTS effort much like OpenAIRE.

Copenhagen Public Libraries

Like most large, cosmopolitan public libraries, the Copenhagen Public Libraries are moving from a classical, passive service model to a much more proactive one. Jakob Heide Petersen's paper is filled with activist words such as 'engaging citizens', 'learning as a social activity', 'smarter together'. Nonetheless, how to train staff to be more engaging? Perhaps this is less of a challenge in EU communities.

By creating new communities of users, Copenhagen Public Libraries seem to be moving away from a focus on the book or printed materials. Yet it sounds as if lifelong learning and literacy will continue to be a goal, regardless of the format.

National Library of Finland / Helsinki University Library

I was struck by how forward and public-facing the National Library of Finland is in its efforts to engage the public. Perhaps its partnership with the University of Helsinki provides more opportunities to engage with various audiences than more traditionally structured national libraries do.

The National Library takes very seriously its mandate to 'provide services to the whole nation', and the programmes described do just that. However, the positive and negative perspectives of this model, outlined in Kaisa Sinikara's conclusion, illustrate the challenges being faced.

Future Prospects / Observations

Training: There seems to be a trend, at least in the United States, for dual degree master's programmes which combine a master's in Information Studies with a master's in another academic discipline. For example, Pratt University in New York has dual master's programmes in Digital Arts and History of Art and Design. The University of Texas at Austin has seven dual degree programmes: English, Latin American Studies, Women's and Gender Studies, Middle Eastern Studies, School of Law, Global Policy Studies and Public Affairs.

Changing Roles of the Librarian: As echoed in several of the papers, the role of the librarian is more outreach and public-service driven, across every aspect of the library as opposed to limited to reference and reader services. To quote Erik Boeksteijn, Founder and Director of Doklab, a library services think tank providing thought leadership in linking people to collections: 'Librarians of today are the media guides of tomorrow.'¹

Changing Roles of the Research Library: From an Ithaka S&R Report (August 2016) by Roger Schonfeld entitled 'Organizing the Work of the Research Library': 'Research libraries are undertaking a number of radical transformations: from print towards electronic, from local towards shared, from licensed towards open, from general towards distinctive, from collections towards engagement, from selector towards partner.' Academic library administration is moving away from the old-fashioned siloed approach that distributed collections and responsibilities towards a shared, more transparent and digital resources enterprise focussing on research and learning through more innovative and engaged outreach.

1. <http://www.infotoday.com/mls/mar08/Boeksteijn.shtml>.

The OpenAIRE Perspective

Yannis Ioannidis

Video link: https://www.youtube.com/watch?v=w6WwGfuJF_E&t=18m53s

Some facts and key points evident from the papers in Part I (not in any particular order):

- The library model is changing. The transition from ‘classical to proactive’ library (see fig. 2, p. 39) successfully covers several key drivers for the emerging changes. Common across all types of libraries, the new goal is a people-centric library model, while maintaining all functionalities that serve the fundamental library objectives of institutional / national / cultural memory.
- Libraries need to address both physical and digital aspects. In trying to do so, they seem to be uncertain about how to maintain the right balance, that is, where their primary focus should be and, consequently, about the most appropriate resource allocation (particularly in challenging financial periods). Needless to say, digital services can go hand in hand with physical spaces and complement their utilisation, often by realising innovative and creative means of interaction.
- Users avail themselves of increasingly more advanced digital services. It is therefore imperative that libraries employ skilled personnel, 1) to serve the existing needs of their customers, but also 2) to be on the lookout for new trends and technologies that may be adapted to the emerging user behaviours. In short, libraries need to setup a form of an R&D division, which will be able to engage in new trends, making them truly proactive and on the forefront of technological and social developments.
- All types of libraries under consideration have more or less the same type of users: the public (communities, including schools), researchers, industry and government. Each of these groups uses the library services (especially the digital services) for slightly different purposes, but in the end they all seek to extract and absorb new knowledge, to support their research endeavours and to entertain themselves. Furthermore, the approaches may differ in scale (from a municipality to the global audience), in theme (arts and humanities, culture, science or all of the above) and in target audience (gender, age, etc.)
- Libraries offer quite a diverse typology of content (textual, audio, video, datasets, lectures, etc.). In many cases this is placed in distinct library departments or digital collections, with no semantic interconnection. This effectively forms digital silos and prohibits a more holistic view of the library material. This setback is in fact multiplied when we look into collections across libraries, of the same or different type. To overcome this, libraries must invest in effective curation and documentation practices for recording their metadata, which in turn requires the employment of skilled personnel that is continuously training. Collaboration is key to long-term viability of libraries, which should actually interact extensively with several *communities of practice* that are emerging at the regional (e.g. EU) or global level.

- The use, reuse and distribution of digital material face many legal challenges. Emerging text and data mining practices are good examples of technological developments that have exposed the current legal framework limitations around IP, copyright agreements, bilateral contracts and so on. It is desirable for libraries to provide legal advice to their users, especially regarding research practices that are emerging from Open Science policies.
- Libraries are tightly linked to education. What is not clear yet is how emerging learning approaches that involve personalised or collaborative mechanisms and (digital) entertainment characteristics (edutainment) can be fully embraced by a library, either within or outside its physical setting. On location, where they have direct access to and contact with their users, libraries need to foster creative learning processes via physical installations that mix traditional aspects with technological ones. Digital libraries need to move beyond static collections, open up to innovative ideas and present their content in engaging and flexible ways. Personalised and collaborative learning mechanisms and attitudes, as well as exploitation of user-generated content, should have a protagonistic role in future library development strategies.
- In general, libraries are, or seem to be, introvert organisations, which makes it hard for them to evolve quickly towards innovative concepts, falling behind society in general, which adopts them quite readily. Following the example of how Open Science and Open Innovation currently shape academic libraries and push them to be an integral part of a global and diverse research ecosystem, all types of libraries must follow suit and adopt similar models of openness. In particular, opening up to collaborations and synergies with major pertinent overarching initiatives (e.g. OpenAIRE and Europeana, in Europe) as well as industry (including start-ups and SMEs) will expedite their adoption of innovative ideas and shape up their operations accordingly.
- Libraries are considered part of the infrastructure of their immediate and general environment (organisation, municipality, region, country). As with all types of infrastructure, library services ‘are usually invisible and we only notice them when something goes wrong’,¹ a fact that is also very relevant to their financing. It is often the case that new or innovative operations that enhance an existing infrastructure are low in the priority lists of decision-makers. Therefore, it is crucial that any proposed services are aligned with the broader ecosystem (general public, researchers, peers), have clear objectives and are accompanied by some basic *exploitation plan*.

Insights for Common Ground Approaches and Potential Synergies

Libraries are living organisations reflecting our social views and values. With the speed in which technological and social change is occurring, it would be utopian to hope for a **single** ideal library model that encompasses all desirable features. Instead we can aspire to common approaches and exchange of best practices that will help us adapt to specific needs and conditions. The following sections try to capture possible cooperation and potential synergies on specific topics among libraries of different categories / models.

Skills

‘The Library is not only a collector, curator and cataloguer of knowledge; it is now a creator of knowledge.’ To fully embrace this, libraries need to address **jointly** the need for a skilled workforce and agree upon its characteristics, including several new job profiles:

1. Geoffrey Bilder, ‘The Enclosure of Scholarly Infrastructure’, at OpenCon2015, <https://www.youtube.com/watch?v=oWPZkZ180Ho&feature=youtu.be&t=245>

- **Data librarians:** Need to identify the necessary skills, see how these fit into current and emerging roles and responsibilities within the library and look out for synergies with local, national or regional data initiatives for outsourcing (e.g. university or national data centres).
- **Creative learning experts:** Need to describe the goals (what, for whom, what types of experiences) and identify the skills and roles needed for the design, implementation and assessment of creative learning mechanisms.

Collaborations and Standards

Libraries are becoming hubs in the global information network. Participation in the global ecosystem requires a convergence between *system* and *content*. Libraries address the latter adequately within their local domain but often lack expertise and infrastructure to address the former (at any level of abstraction, e.g. IaaS, PaaS, SaaS).

- **System:** In the new digital era, libraries must support complex, big and linked data. They need to identify the best models for operation and collaboration with data services, as well as to draw upon the relevant data science and data centre expertise.
- **Content:** Openness and (technical and legal) interoperability is a key prerequisite for content exchange and participation in the global knowledge ecosystem. Clearly, synergies are a priority for the identification and use of common protocols, formats and standards. These must take the form of **active**, bidirectional and **committed** participation in national, regional and global open initiatives that lead some of the developments in these areas, such as OpenAIRE.

Innovation and Financing Models

Libraries are the first and primary examples of a sharing economy. Coming to new sharing economy models, that is, participatory with no boundaries, libraries need to think beyond the traditional sharing of content / information / knowledge and adapt their financing models accordingly. They need to answer collaboratively the following questions: What types of innovative services would help them reach a people-centric model? What processes and procedures are needed? How can these services be cocreated with others (including the public)? How can these services be shared and operated to achieve economies of scale?

Shared Challenges: Defining a New Library Role Supported by Stakeholders

Jakob Heide Petersen

Video link: https://www.youtube.com/watch?v=w6WwGfuJF_E&t=28m10s

The five categories of libraries represented in the Conference have some tasks and objectives in common, but they also have some marked differences. Both similarities and differences provide good starting points for learning and collaboration.

The main difference among the library types is perhaps the extent to which they focus on the collection. Some library types are more collection-centric and less influenced by changing user needs than others. Both collection-centric and more customer-centric libraries will, however, probably have to adopt a more strategic and flexible approach to development as a consequence of the general media development. Such an approach could mean a reappraisal of the basic mission of the library model or fundamental changes in the way the mission is achieved.

Thoughts on the Future of the Library Models Presented by the Other Participants

Media development is challenging the different library models by introducing competition in the servicing of the target user groups and in some instances by contesting the basic mission. An increase in access to media can for instance challenge a library model that relies on creating value by providing access.

Following Mark Moore, it is therefore my view that all the library models share a challenge that is similar for most public sector institutions: they have to formulate a longer-term organisational strategy. A good starting point for that strategy development is ‘The Unique Competing Space Framework’ developed by George Tovstiga (see fig. 1).¹

1. G. Tovstiga, *Strategy in Practise: A Practitioner’s Guide to Strategic Thinking*, Chichester: Wiley, ²2013, p. 104.

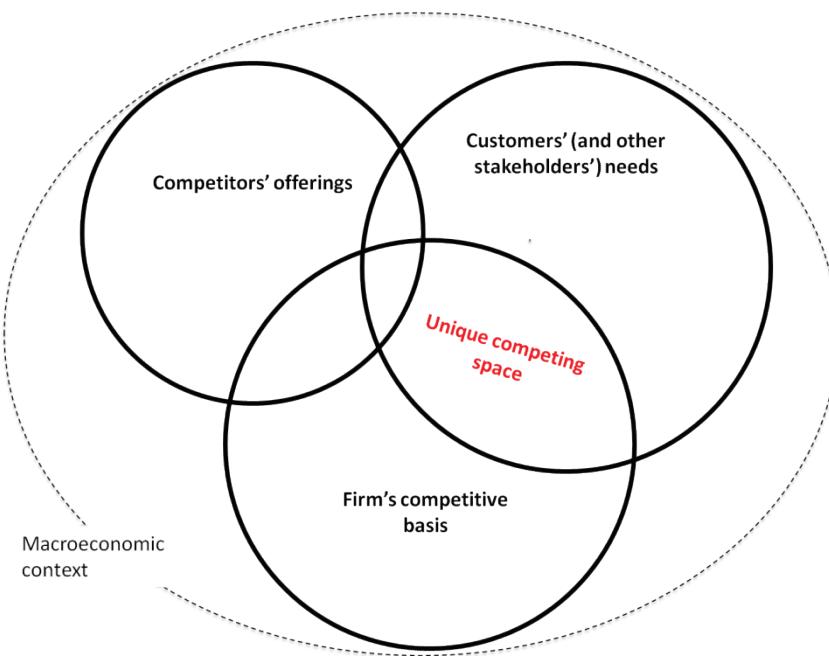


Fig. 1. The Unique Competing Space Framework (Tovstiga 2013).

This model encourages management to identify competitors' offerings, customers' need and those internal resources and capabilities of the organisation that are relevant to meeting the needs of customers. The focus of the analysis is the organisation's unique competing space and how to enlarge it. That can be done by increasing the organisation's relevant capabilities, by identifying new customer needs or by defending it against competition. The relevance of the framework for library development is that it encourages a critical view on current capabilities (for instance, staff competencies and the collection) from the perspective of stakeholders. It also emphasises the role of potential competitors (such as Google or Amazon) and makes it possible to map the organisation's specific services and identity possibilities and threats.

According to Moore, public sector institutions differ from commercial enterprises in the way they generate value and in the role of competitors. Moore's framework, the strategic triangle (see fig. 2), therefore has a boarder definition of value and a focus on legitimacy and support rather than just customer needs.²

2. M. H. Moore, 'Managing for Value: Organizational Strategy in For-profit, Nonprofit, and Governmental Organizations' *Nonprofit and Voluntary Sector Quarterly* 29/1 (2000), pp. 183-204, here p. 197.

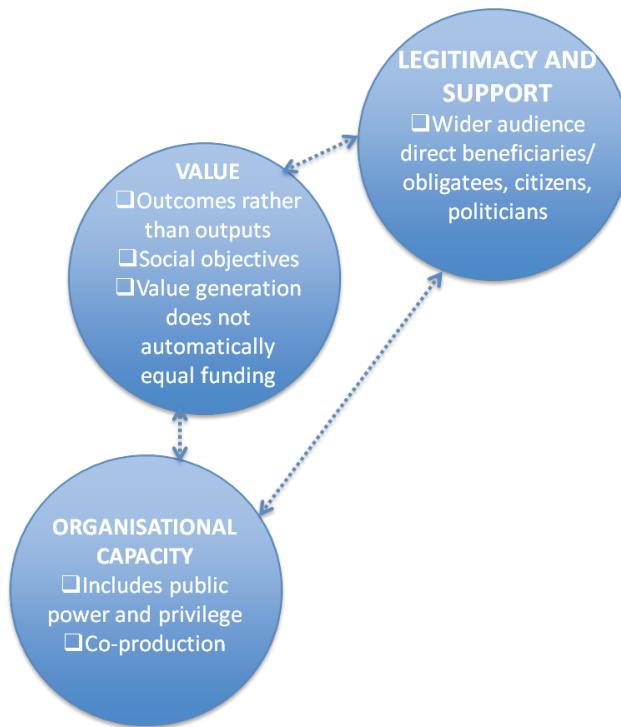


Fig. 2. Strategic triangle (Moore 2000).

The important point is the linkages between the elements: organisational capacity creates value, which generates support, which again produces resources for organisational capacity. Another important point is that the organisational capacity must generate value in the form of outcome (e.g. increased literacy) rather than just outputs (e.g. the number of loans). The value of a police department should, for example, perhaps be measured by the incidence of crime rather than the number of patrols.³

Public sector institutions do compete for funding the same way companies compete for investment, but the link between performance / value creation and support / funding is less direct. Value generation does not necessarily equal funding. In the case of libraries it does, however, seem relevant to include competitors in a strategic framework. This can be done by combining the two models. Figure 3 shows 'The Unique Competing Space Framework' with the strategic triangle superimposed.

Public sector institutions produce value for a wider audience and not just for the direct recipients of the service. The general public can have views on how schools or libraries should fulfil their goals even when the individual citizen is not a user of the institution. An important consequence is that some public sector institutions such as libraries have less strategic room for manoeuvre. The unique competing space [UCS] is limited by a political mandate and need for legitimate support for the libraries' mission. Moore talked of mission stickiness to indicate a public sector institution that sticks to its mission despite a changing environment.⁴ He juxtaposed this to mission creep / drift, where the institution adapts to the environment – perhaps through a new interpretation of the political mandate. In figure 2 that might entail moving away from the UCS towards the stakeholders.

3. J. Alford, 'The Implications of "Publicness" for Strategic Management Theory', in G. Johnson and K. Scholes, *Exploring Public Sector Strategy*, Harlow: Pearson Education Ltd, 2001, pp. 1-16, here p. 6.

4. Moore, 'Managing for Value', p. 192.

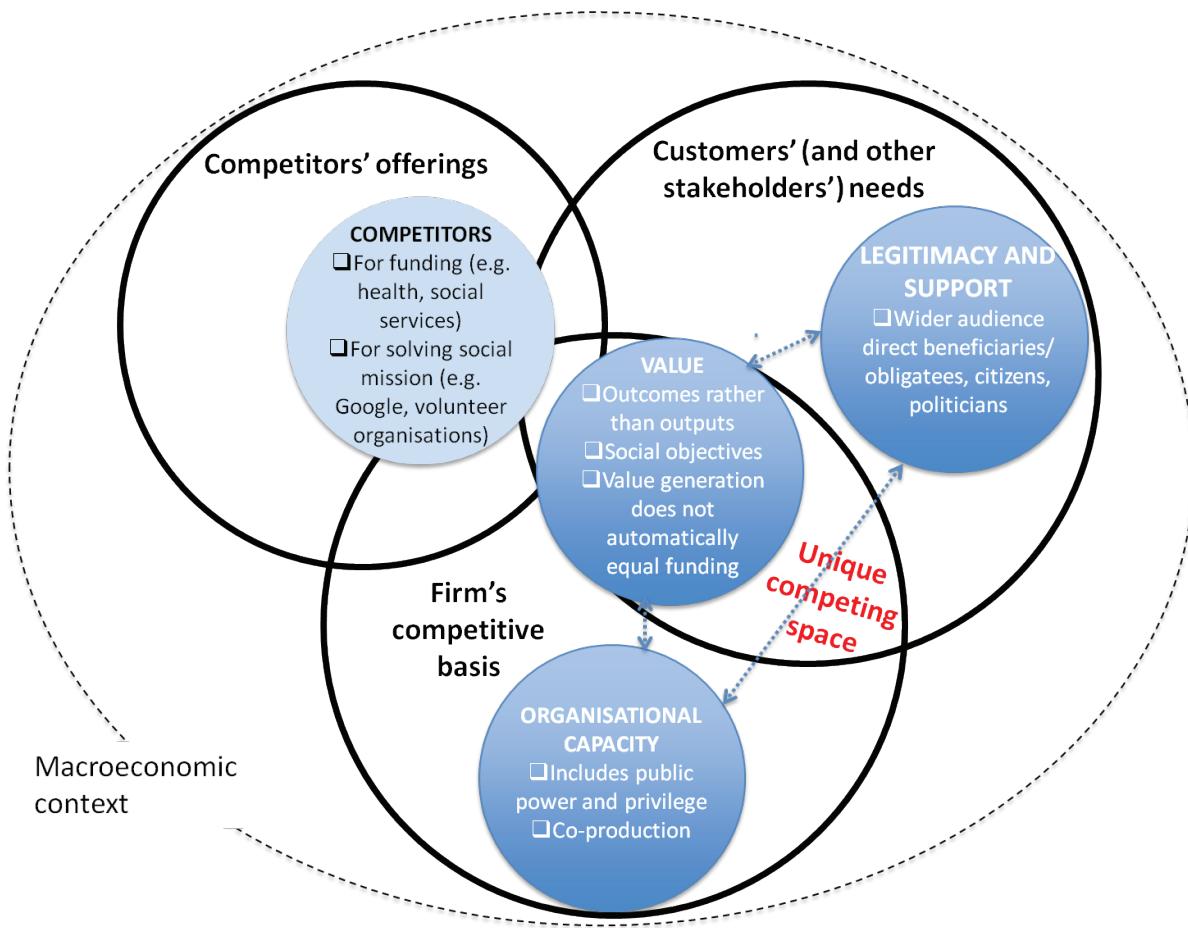


Fig. 3. UCS Framework with adapted strategic triangle superimposed (Tovstiga 2013 and Moore 2000).

The challenge for many libraries is precisely whether to ‘reinvent’ themselves as learning centres, IT functions, community centres, fab-labs or to insist on a more traditional role and mandate. Another important challenge is to strengthen the links between organisational capacity, value creation and support from stakeholders. Most of the contributions (including the one from Copenhagen) have a focus on organisational capacity and outputs, and libraries in general are perhaps not sufficiently skilled in translating their activities into outcomes and in focussing on generating support. That could explain the emphasis on new library key performance indicators and library advocacy at many library conferences. It also highlights why many libraries and some of the contributions to this Conference point to increased budgetary pressures. In my view, the strategic task for each of the library models is to define the unique competing space and find ways to expand it. Figure 4 is an illustration of how that might be done for a public library.

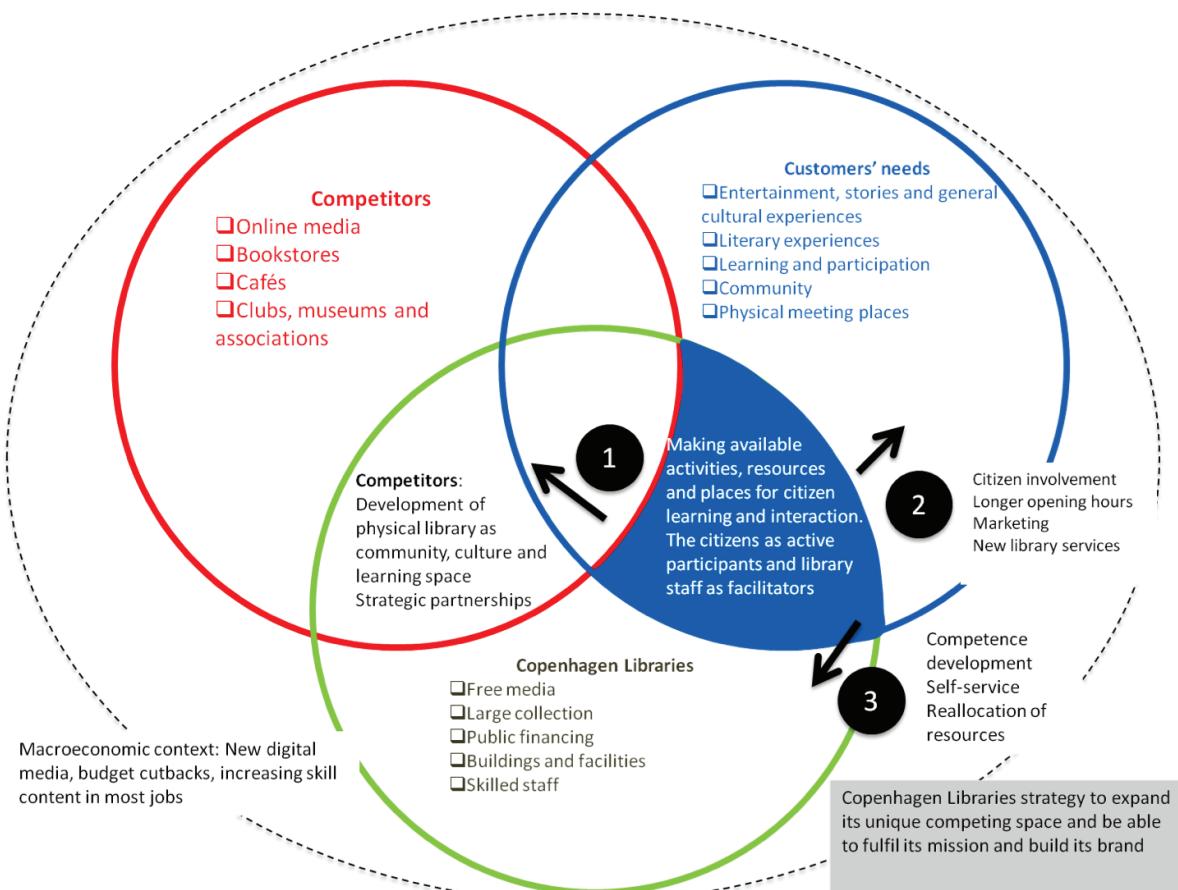


Fig. 4. Defining the UCS for a library.

Existing Collaboration

For Danish public libraries, the most important collaboration with other library models is through interlibrary loans. That is particularly important because the Danish library legislation places a strong emphasis on collaboration between public libraries and research libraries. There is, furthermore, a strong demand for interlibrary loans from research libraries as a larger part of the general population engages in lifelong learning facilitated by public libraries. Ideally, digitisation of materials could support this collaboration, but in reality interlibrary lending of digital materials is difficult due to copyright restrictions.

Expected and Potential Synergies

A very important potential synergy between public libraries and, for instance, national libraries could be the promotion and presentation of (parts of) the national collection to the general public. Danish public libraries have a wide audience and a strong focus on children and learning, which could be supported by access to and promotion of the national cultural heritage held by the National Library.

Public libraries can also learn a lot about alternative forms of presentation and exhibitions from museums and museum libraries. From research libraries such as UCL, public libraries can find inspiration for learning activities and the design of learning spaces. Many public libraries help citizens use public IT solutions and make use of data from Open Data initiatives or smart city initiatives. In that context, closer collaboration with digital libraries such as OpenAIRE might become increasingly relevant.

Suggestions and Insights on the Improvement of Library Management and Function

A major challenge for management in all library models is to communicate the value created by the library. That means explaining and perhaps reformulating the basic mission in regard to key stakeholders. It also means focussing more on the outcome of specific library services than on traditional output measures, such as loans and visits.

For a public library a narrow focus on traditional output measures would suggest buying a lot of bestsellers and making them available for a short loan period. That would increase the number of visits to the library website (for searching and reserving items), visits to the physical library (collecting and returning) and, of course, the circulation statistics. Such a policy might, however, undermine book production and local bookshops.

Instead, many public libraries use resources on children's reading clubs, which are more labour intensive, demand a longer stay on the library premises and do not boost traditional output measures much. Nevertheless, the reading clubs support the library mission better.

For most library models the challenge is for the library to remain or become a relevant part of the information environment of the target users. In the case of research libraries that might mean being a part of the workflow of researchers and students, and for public libraries it might mean engaging parents and schools in order to support literacy and reading among children.

In the words of Patrick Losinski of Columbus Metropolitan Libraries, one can distinguish between the library business and the business of the library.⁵ The former is about formulating a relevant library mission in a way that resonates with stakeholders. The latter is about identifying and enlarging the unique competing space and acting much like a commercial entity.

For library managers the challenge is to form consensus among key stakeholders, such as staff and funding authorities, on the specific library mission and the way that is achieved – and that is no small task, as both will change rapidly in the years to come.

5. Presentation by Patrick Losinski at an informal meeting with Danish politicians during an IFLA conference, 18 August 2016.

Thoughts on the Future of the Library Models Represented by the Participants

Kaisa Sinikara

Video link: https://www.youtube.com/watch?v=w6WwGfuJF_E&t=38m05s

All five library models have a long and rich history, but all libraries must look to the future. A few key terms to keep in mind are digital revolution, becoming smarter together, the library as a place of learning, Open Science, new services and investment in staff.

The library is flourishing as a place of learning and social gathering. The University of Cyprus is preparing an interesting new Learning Resource Centre. University College London will create new digitally enabled learning spaces that are open 24/7 – one centre with 1000 new learning spaces, and the other with 800 learning spaces. A new modern public library will be opened in the very centre of Helsinki in 2018. This was selected as one of the main projects to celebrate Finland's 100th anniversary.¹ The new, functional main library was opened at the University of Helsinki in 2012 and has been extremely popular.² In Copenhagen the public library focusses on children and schools. The library space is increasingly a place for learning, knowledge, work and social life.

The digital revolution (born-digital and digitised publications and data) extends the service opportunities of art libraries: the library of MoMA is a good example. Open Science, Open Access and Open Data especially challenge university libraries and other scientific libraries to develop structures and researcher services and to train staff in the skills needed. The digital world requires cooperation and division of labour cross-departmentally, nationally and internationally. The Library of University College London is a good example of an excellent library model of a top university.

Open Science also requires new network solutions, of which OpenAIRE is a fine case. Structures and services are needed which can connect actors to produce services in European networks or worldwide.

What is the future of national libraries? The basic mission of a nation's library, to preserve the publishing heritage for future generations, will remain an important task. The digital revolution adds challenges to the management of this task. The national library can also function as a national service centre for memory institutions. The question is how to secure sufficient financing and the support of society for the work, which focusses long into the future.

1. See the website of the Central Library of Helsinki, updated frequently: <http://keskustakirjasto.fi/en/>

2. <http://www.helsinki.fi/kirjasto/en/library-locations/main-library/>; 'Helsinki University Main Library', in Finnish Architecture with an Edge, photographed by Kari Palsila, edited and written by Tarja Nurmi, Helsinki: Maahenki, 2013, pp. 64-81; Kaisa Sinikara and Anna-Maija Lukkari, 'A Case Study on a Post-occupancy Evaluation of the New Helsinki University Main Library', in Karen Latimer and Dorothea Sommer (eds), Post-occupancy Evaluation of Library Buildings, Berlin: De Gruyter Saur, 2015, pp. 175-191.

Existing Cooperation with Libraries of Other Categories

The new slogan of the Copenhagen Public Libraries, ‘We get smarter together’, is an excellent message for all of us. Libraries are not successful alone but need collaboration inside their own home organisation, locally and globally.

Paul Ayris and Milan Hughston described the strengthening of cooperation between different partners inside a home organisation that has given a strong role to the library. As an example, Milan Hughston outlined a new research effort at MoMA entitled Contemporary and Modern Art Perspectives [C-MAP] for Art in a Global Age, composed of curators, educators, the Library, Archives and publications staff, which will concentrate on global research in the visual arts of Japan, Brazil and Central and Eastern Europe. The effort would not have any hope of success without this shared collaboration.

Most libraries in Europe are partners in several consortia, such as national e-licensing consortia. Collaboration with other memory institutions can produce integrated services for the benefit of users.

Cooperation networks, such as LIBER, the Association of European Research Libraries, or the global networks of the national libraries or of art libraries, are able to contribute new tools for managing the changes in the large information landscape. The international cooperation of libraries has been a key resource in pioneering the use of information technology and digital publishing inside universities. The objective of the OpenAIRE project is to gather all the European scientific libraries and researchers through the National Open Access Desks. An interesting international framework is the International Image Interoperability Framework [IIIF], of which the MoMA Library is a partner.

Expected and Potential Synergies between Different Library Models

The lowering of the borders between different types of institutions is not always easy. It requires vision and courage, the identification of common interests and usually much patience, as well as the funding and creation of financing models. However, collaboration is essential for the future of libraries. The border areas of different types of partners are extremely remarkable for their potential for the application of new, creative solutions.

The synergies involved can provide economic advantages or higher effectiveness, or even opportunities to produce better quality from the point of view of social advantages. A justified division of labour is able to produce financial benefits and increased efficiency. One example is when responsibility is placed on a national or other type of library for certain library functions of all the libraries, allowing other libraries to concentrate on their own strengths. The National Library of Finland provides national infrastructure services to the library network, in particular, but also to other institutions. To ensure the success of the cooperation needed for providing these national services, mechanisms such as councils, steering groups and consortia have been created to facilitate discussions and networking.³

I also consider the development of digital humanities to be extremely stimulating.⁴ Many digitised publications and much data are available in the different repositories of libraries, archives and other organisations. Born-digital new material is constantly being created. An important question is how researchers are able to use extensive amounts of material in the best way and to find totally new methods and new research problems in the digital world. Some of the largest university and national

3. For more about the networking of the National Library of Finland, see: <https://www.kansalliskirjasto.fi/en/networking>; last accessed 24 February 2017. Website of the Council for Finnish University Libraries: <http://yliopistokirjastot.fi/en/>; last accessed 24 February 2017.

4. Digital Humanities at Yale University, <http://digitalhumanities.yale.edu/>; last accessed 24 February 2017. At University College London, <http://www.ucl.ac.uk/dh/>; last accessed 24 February 2017. At the University of Helsinki the HELDIG: Helsinki Centre for Digital Humanities was opened in 2016.

libraries, among others, have established special units for this purpose and are working to find new tools for the use of research. A close cooperation between the library and the home organisation produces opportunities to engage in experiments and testing.

Open Access and Open Science create synergy. An example of shared open development outside the realm of libraries is the Linux operating system. Linux is one of the most prominent examples of free and open-source software collaboration. The underlying source code may be used, modified and distributed – commercially or non-commercially – by anyone under the terms of its respective licenses. In 1991, 25 years ago, while studying and working at the University of Helsinki, Linus Torvalds became curious about operating systems and was frustrated by the licensing of MINIX, which at the time limited it to educational use only. He began to work on his own operating system kernel, which eventually became the Linux kernel. The kernel work started in 1991, and version 1.0 of the operating system was released in 1994. Because of the dominance of Android on smartphones, Linux has the largest installed base of all general-purpose operating systems. Linux is also the leading operating system on servers and other complex systems, such as mainframe computers and virtually all supercomputers.⁵

Suggestions and Insights on the Improvement of Library Management and Function

The information landscape is changing rapidly. Therefore, libraries need strategic management and leadership. Choices need to be made on the focus of functions and resources. Networking skills and knowledge on how to lead networks are needed. Investment in staff competence is essential. Management should be evidence-based on data such as systematic user surveys and surveys of the welfare of staff members.

The strategy of the Copenhagen Public Libraries includes the idea of the proactive library and collaboration activities with customers. It will introduce increased opening hours and simultaneously reduced hours for access to staff at reference desks at the physical libraries. This strategy brings profound changes to the role of library staff, and a comprehensive competence development programme has been developed to support this shift. Denmark has placed a strong emphasis on children as a target group, with several consequences inside the libraries.

MoMA's Library and Archives have a new attitude that is not so much just about the valuable collections but rather about how to promote them.

The management and strategies of the UCL Library analysed by Paul Ayris include excellent models. The University has made a strategic choice to support Open Access, with many positive results. The Library has broad responsibilities. The priorities for the development of the UCL Library are user experience, staff, equality and diversity, finance, management information and value for money, systems and processes, sustainable estate and communication, and Open Access and outreach.

These priorities, in my opinion, should characterise the management of every library. It might be difficult to point to one model which could operate everywhere. However, an openness to experimentation is essential, as is the courage to make and to learn from mistakes and to build confidence together with stakeholders and staff members.

5. 'Linus Torvalds, Finnish Computer Scientist', *Encyclopaedia Britannica*, <https://global.britannica.com/biography/Linus-Torvalds>; last accessed 24 February 2017. Jon Brodkin, 'Linus Torvalds Named Most Influential Open Source Blogger; Tim O'Reilly Leads Overall Ranking in Open Source Social Media', *Network World* (17 March 2010), https://helka.finna.fi/PrimoRecord/pci.gale_ofa221738417; last accessed 28 February 2017.



Part III:
Roundtable Discussion

Roundtable Discussion

Roundtable discussion video link: <https://www.youtube.com/watch?v=l0vIt8V5RPc&t=1s>

Question 1: What are the main problems / issues you experience with regard to copyright?

Reply: <https://www.youtube.com/watch?v=l0vIt8V5RPc&t=58s>

Question 2: Libraries are faced with challenges of collecting and preserving all of the evidence for future scholarly work. How can our libraries ensure that the technology we employ and the methods we practise to organise the accumulative knowledge continue to exist for future generations to preserve knowledge and our cultural memory?

Reply: <https://www.youtube.com/watch?v=l0vIt8V5RPc&t=5m34s>

Question 3: Many fields in scholarship are becoming data intensive. This valuable data is being created in order to be shared and replicated to advance scholarship and to make scholarship more effective. What do you think are the growing demands for this kind of data transparency and accessibility in scholarly work?

Reply: <https://www.youtube.com/watch?v=l0vIt8V5RPc&t=11m25s>

Reply: <https://www.youtube.com/watch?v=l0vIt8V5RPc&t=22m58s>

Question 4: The user is king, and in an academic or national research library context she or he really needs to use the collections. Since catalogues and metadata cannot provide all the information that a user needs, the expertise of an experienced librarian / curator is needed to guide and mediate. Because of financial cuts and the growth of project-based funding, this knowledge is disappearing because it can take decades to learn about collections of a national library. The absence of experienced curators will have serious consequences for research and the growth of knowledge. Is there still a place in our libraries for this type of expertise?

Reply: <https://www.youtube.com/watch?v=l0vIt8V5RPc&t=19m28s>

Question 5: The decision to collect is perhaps the easiest decision and the most enjoyable decision. How do we build partnerships in library communities and nations to increase access to the accumulative knowledge and to future research with a greater commitment to making a difference for diversity and equity in collection building, in technology innovations and in system discoverability modules?

Reply: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=26m37s>

Question 6: There is a great movement about openness and Open Access to the literature in an increasingly global world. How do you see the Academy extending its role to the broader public with library expertise and technology innovations that invite society's cultural records?

Reply: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=32m29s>

Question 7: If librarians will cease to be curators and instead will become creators of content / knowledge in the future, what will artists, writers, editors, scholars and publishers do with all their ample spare time?

Reply: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=39m39s>

Question 8: Admiring what we have learnt today, at the same time I question and worry about the impact of the concept of separated 'data' and the use of 'technology', digitisation and downloading, because they end up in fragmenting knowledge and departing from the fundamentals of 'knowledge as a whole'. What is the panel's opinion?

Reply: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=41m26s>

Audience comment 1: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=50m58s>

Audience comment 2: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=53m45s>

Audience comment 3: <https://www.youtube.com/watch?v=I0vIt8V5RPc&t=54m29s>

Conclusion

Filippos Tsimpoglou and Elena Diomidi-Parpouna

During ‘Knowledge is Power’, the 3rd International Scientific Conference of the Sylvia Ioannou Foundation, organised jointly with the University of Cyprus, five library models were examined in the Meet the Experts Session:

- | | |
|---------------------------|---|
| A university library | – The UCL Library |
| An art and museum library | – Museum of Modern Art Library (MoMA) |
| A digital library | – OpenAIRE |
| A public library | – Copenhagen Public Libraries |
| A national library | – National Library of Finland / Helsinki University Library |

Obviously there exist several differences among these libraries, which concern mainly the target user groups they serve, the subject scope they cover in terms of collection and types of information sources as well as the organisations / authorities to which they belong. Beyond their differences, however, they also share characteristics, such as their common mission, which in all cases adopts the principle that ‘the user is the king’. Moreover, there is a shared need for specialists to serve the ‘king’ and the fact that those specialists need to be trained. Consequently, in order to have specialists, we need to invest in staff training and lifelong learning, so that they can be up-to-date and serve the ‘king’, who is none other than the end-user of information. Yet it is not only specialists who must be ready to fight: end-users also need continuous training, in which information literacy, provided by the specialists, is the main weapon.

During the Conference we agreed on a saying, ‘Neither knowledge, nor art, nor research, nor information are only for the elite’, and there are several ways to achieve this. By saying ‘elite’ we do not refer solely to individuals and social classes, but also to countries.

An additional common characteristic is the library buildings and premises as a necessary infrastructure. The space dimension is a real and important parameter for libraries, with the exception of OpenAIRE, which does not rely on a single space but rather on several digital ones, which in turn require their own physical spaces. Consequently, as this Conference took place in Nicosia in honour of the Stelios Ioannou Learning Resource Centre, the University of Cyprus’ new library building under construction, we have to admit that space remains very important for libraries and their users, both for knowledge storage as well as being a suitable space for the users to meet and collaborate.

Technical and technological infrastructure also forms a fundamental parameter, and this is another common characteristic of libraries. It consists of the general equipment (technical, technological, furniture) that completes a library's wealth, along with the valuable collections in electronic and printed information resources.

Cooperation is another highly important tool for libraries to achieve their goals. This regards not only interconnection of data, but also networking of organisations, individuals, flows and relations through synergies aiming for mutual benefit and more generally the development of each country's social and educational level – because in this way we become more intelligent and more efficient.

We are living in an 'information' revolution. We are not in the middle of it, but still at the very beginning. We do not know how it will develop, but we do try to detect the future and the abundance of challenges. One such challenge is called 'Open Access' and leads to the non-print library, a paperless library, beneficial not only for the forests but for its other characteristics as well, as an essential tool for electronic information. When we talk about electronic information we seek, at the same time, to achieve Open Access for everyone with no exception.

Another challenge we face is the conversion of the library as a space of study to the library as a space of action. How do we transform libraries from fragmented information to a universal approach to information, that is, to holistic knowledge? We would oppose the view that fragmentation is inherent in the digital age: we actually have available the technological infrastructure and through interconnected digital information we can achieve more 'holistic' information, since with interconnection and interoperability, which make much more available to us and allow the mind to focus on obtaining rounded and up-to-date knowledge, we can overcome the barriers of time and space.

An important task for every library is to approach non-users (potential users). Many of the library models we saw across the whole spectrum of library types are turning their development and activities from collection-oriented to user-oriented or at least they adopt a more user-oriented approach.

Information preservation is another significant undertaking. Books and manuscripts in national libraries, such as the National Library of Greece, are centuries old; digital documents are not. Twenty years of access to digital documents feel like an eternity. This should not make us technophobic, but aware of the need for preservation. For the time being, digital curation is a choice, but is considered much more difficult than digitisation.

Tools to face the challenges posed are national libraries, national policy councils that have a vision to shape the future of libraries, technical and semantic interoperability, supranational or international regulation of legislation (mainly for copyright), the utilisation of global technical tools/standards and so on. Our willingness to experiment and to not take for granted or constant today's realities is a necessary requirement for adaption to the new developments. We must adopt an 'Open Access' approach and invest in the younger generation, the new users, respecting their needs and particular characteristics. In addition to those mentioned above, a very important tool is measuring and evaluating user satisfaction, through which performance indicators derive. Users' views can be a valuable source of information for libraries.

Finally, in assessing the 3rd International Scientific Conference of the Sylvia Ioannou Foundation 'Knowledge is Power', we can admit that we conducted an experiment – we put the participants through the process of not only presenting their own library and their own views, but also of reading and commenting on the presentations of the other speakers, and we would like to thank them for this. There were no negative comments about this innovative approach. We believe that the audience found the content and organisation of the Conference to be particularly stimulating. Librarians have already praised the Conference for its important information approach, as well as the fact that they were informed about a range of topics in their field under the prism of current international developments. As there is always room for improvement, we would like to express the need for more time to be made

available for the audience to express their views and to pose further questions, something we promise to do at the 4th International Scientific Conference of the Sylvia Ioannou Foundation.

We would like to thank all who participated and we hope to see you again at the next Sylvia Ioannou Foundation Conference.

Online Continued Discussion

To access the online continued discussion, you need to create an account or log in to Facebook and join the following group:



Knowledge is Power | 3rd International Conference | Sylvia Ioannou Foundation

Biographical Notes of Authors

Paul Ayris is Pro-Vice-Provost (University College London Library Services). He is also the UCL copyright officer and in August 2013 became chief executive of UCL Press. He is a member of the Provost and President's senior management team at UCL. He was the president of LIBER [Association of European Research Libraries] from 2010 to 2014; he is now an advisor to the LIBER Board. He is co-chair of the LERU [League of European Research Universities] INFO [Information and Open Access] Community. He chairs the Open Archives Initiative organising committee for the CERN/University of Geneva workshops on innovations in scholarly communication. He is also the chair of the Jisc Content Strategy Group. He has a PhD in ecclesiastical history and publishes on English Reformation studies.

Elena Diomidi-Parpouna is a librarian working as a Senior Officer at the University of Cyprus Library; since April 2014 she has been Acting Library Director. She has a degree in Librarianship from the Technological Educational Institute of Thessaloniki (1991) and an MSc in Library and Information Science from Loughborough University (1996). She also has an MBA from the University of Cyprus (2009). She was employed briefly at the Municipal Library of Thessaloniki and later in the Cultural Services of the Cyprus Ministry of Education and Culture. She joined the University of Cyprus Library at its inception in 1992; she has earned valuable experience in setting it up and has contributed significantly to its quick growth, becoming the largest academic library in Cyprus. She has multilevel expertise in the operation of an academic library and a strong understanding of its core role in coping with the challenges and exploiting the opportunities faced by modern academic institutions. In addition, she has a clear vision of how academic libraries must contribute to the improvement of the educational level of the host society, as well as their role in preserving the relevant historical documentation. Her main scientific interests include library management, services quality, library networks (Cyprus Libraries Consortium), Open Access, etc.

Milan Hughston was a librarian at the Amon Carter Museum in Fort Worth, TX, from 1979 to 1999. During that time he published comprehensive bibliographies in museum publications, including Thomas Eakins (1996), the photography collection catalogue (1993), Eliot Porter (1989) and Laura Gilpin (1986). In September 1999 he became Chief of Library and Museum Archives at the Museum of Modern Art in New York; he retired in 2016. At MoMA he devoted his energies to planning and coordinating the opening of the Museum's research facilities in Manhattan and Queens. In 2000 he established, with May Castleberry, the Library Council, to promote the research resources of MoMA through a membership programme and publications of artist's books in a series called Contemporary Editions. He is also a

founding member of the New York Art Resources Consortium, which coordinates collaborative projects between the research libraries of MoMA, the Frick Collection and the Brooklyn Museum. A native of Clarksville, TX, Hughston received his BA in journalism and his MLS from the University of Texas at Austin. In 1978-1979 he was the recipient of a Rotary International Scholarship and attended the post-graduate programme in art gallery and museum studies at the University of Manchester.

Yannis Ioannidis (PhD, UC Berkeley, 1986) is the president and general director of the ‘Athena’ Research and Innovation Center in Athens and a professor in the Department of Informatics and Telecommunications of the University of Athens. From 1986 to 1997 he taught in the Department of Computer Sciences of the University of Wisconsin–Madison. His research interests include electronic infrastructures (digital libraries and repositories, data infrastructures), database and information systems, personalisation and social networks, data science, human–computer interaction and several application areas (life sciences, cultural heritage, biodiversity, physical sciences), topics on which he has published over 150 articles in leading journals. He also holds three patents. He has been a co-coordinator of all the OpenAIRE projects and a partner in many research projects, including the currently active Human Brain Project and OpenMinTeD. He is an ACM and IEEE Fellow, a member of Academia Europaea and a recipient of several research and teaching awards. He has also served as the chair of ACM SIGMOD, the international association of researchers on data management. He is the Greek delegate to the European Strategy Forum on Research Infrastructures [ESFRI], a member of the ESFRI executive board and the ESFRI representative to the e-Infrastructures Reflection Group [e-IRG].

Jakob Heide Petersen has an MSc in political science, a graduate diploma in business administration (management and organisation) and an MBA from Henley Business School. He is Library Director of the Copenhagen Main Library and chairman of the Danish public libraries’ e-book service. He is responsible for Copenhagen’s library strategy. He joined the City of Copenhagen in 2013 after a career in the national government. He supervised the libraries division at the Danish Agency for Culture and before that he was head of the secretariat of Denmark’s Electronic Research Library [DEFF]. He has worked extensively on national library policy and strategies for both research and public libraries and has written numerous reports, reviews, articles and analyses. He was secretary for the Committee on Public Libraries in the Knowledge Society, which published its report in 2010, and is co-author of a report on a joint digital library for the Danish public libraries.

Kaisa Sinikara is the former University Librarian of the Helsinki University Library (retired in 2013). In 2007 she completed her doctorate at the University of Helsinki on the change in the worldview of university library staff during the Information Age, 1970-2005. From 2002 to 2009 she worked as the Coordinating Director of the library sector at the University of Helsinki. In 2010 the new Helsinki University Library was founded, and all existing campus libraries were merged into one organisation; Dr Sinikara was its first director. Her other experiences include working as a Library Director and a library specialist, participating in academic administration and research projects, and teaching as a part-time lecturer at the University of Helsinki. She has collaborated with national and European library networks and has led several projects, including a development project for an African (Namibian) university library in 2011-2012. She has published approximately 30 scientific and 100 professional articles. She is currently writing a history of the Helsinki University Library Network from 1850 to 2010. She was awarded the honorary title of professor by the President of Finland in 2013. For a list of writings, see [https://tuhat.halvi.helsinki.fi/portal/en/persons/kaisasinkara\(dec9e7db-d5c2-4ec1-9f58-8022534156e9\).html](https://tuhat.halvi.helsinki.fi/portal/en/persons/kaisasinkara(dec9e7db-d5c2-4ec1-9f58-8022534156e9).html).

Filippos Tsimpoglou has a PhD in Librarianship and Information Science from the Ionian University and a BSc in Economics from the Athens University of Economics and Business. From 1983 to 1999 he worked at the National Documentation Centre of Greece, implementing a national information system by developing such projects as the National Interlibrary Lending Network, the repository of Greek PhD dissertations and the Archaeological Greek Online System. From 1999 to 2014 he was the Director of the Library and an ex-officio member of the Senate of the University of Cyprus, where his tasks included the development of new information services and the forging of strategic alliances; he also inspired the creation of the Cyprus Libraries Consortium. Since 2014 he has been the Director General of the National Library of Greece, charged with the preparation and transition of the collections and services of the NLG to its new premises at the Stavros Niarchos Foundation Cultural Center. His responsibilities include the organisation of the ‘idle services’ of a classical national library, the planning and development of infrastructure and services in order for the NLG to address successfully the challenges of the digital era and the creation of a series of innovative services of a public library within the NLG, acting as a standard for the Greek National Network of Libraries. His thesis, *Collaborations between Libraries: A Systemic Approach*, was published in 2008 (in Greek), and he is the author of numerous papers.



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