



Strategies for a Digital National Library

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Abstract:

The 27th of May 2009 the National Library of Norway launched our newest digital service: Bokhylla.no (The Bookshelf).

The service will make available published copyright-protected material in full text on the net. Within three years about 50.000 copyright-protected books will be available on the net through the National Library's web-site.

The background for this is a contract between the National Library and Kopinor – an organisation who represents right-holders from about 30 different interest organisations, be it authors, publishers, visuals etc.

The National librarian was given the authority to negotiate such a contract with Kopinor from the Minister of Cultural Affairs. The minister himself officially launched the service and said it will be a pilot to see if one can find permanent principal criterias to pay right-holders for giving access to copyright-protected material.

The Digital Bookshelf

On the 27th of May 2009, the National Library of Norway launched our newest digital service: Bokhylla.no, as shown below (The Bookshelf). The home page unfortunately is in Norwegian.

NBdigital BOKHYLLA

Velkommen til Bokhylla.no

Velkommen til Nasjonalbibliotekets nye tjeneste, Bokhylla.no. Det er en glede for oss å gjøre ti tusen bøker tilgjengelige på Internett i fulltekst. I løpet av de kommende to-tre årene regner vi med at vi kan tilby 50.000 bøker - gratis på nett.

[Les mer...](#)

Søk i alle bøker i NBdigital

[hjelp](#)

Om bokhylla

Norges største digitale bokhylle er gratis for brukerne. Her kan du lese 14.000 bøker fra 1990-tallet på nett, pluss 3.500 eldre bøker.

[Les mer...](#)

Bokhyllablog på NBdigital Beta

Sagt om Bokhylla / 10 på topp / Spørsmål og svar /

[Les mer...](#)

1990

Gulfkrigen, Kong Olavs død. OL på Lillehammer. I løpet av året blir over 100 000 titler pliktavlevert til Nasjonalbiblioteket. Enkelte av dem vil være leng.

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1890

Et av de mest fargerike tiårene i norsk litteraturhistorie, med politisk brytning, unionskonflikt, språkstrid, estetisk opprør og demokratisk kamp.

[Les mer...](#)

1790

Litteraturen er preget av stor bredde i emner og genrer, men skrifter om religiøse og teologiske emner dominerer fremdeles det litterære bildet.

[Les mer...](#)

1690

Skrifter med religiøst innhold preger mye av litteraturen på 1690-tallet, men vi finner også historiske og topografiske fremstillinger, samt en del avhandlinger fra universitetet i København.

[Les mer...](#)

Digitalisering av bøker i Nasjonalbiblioteket

Hva er det som må til teknisk for å lansere den digitale bokhylla? Vi ser på metodikk og erfaringer fra ett og et halvt år med digitalisering av bøker i Nasjonalbiblioteket.

[Les mer...](#)

Vademecum

Vademecum er en samling karikaturer Henrik Wergeland laget i 1824, seksten år gammel. De fleste tekstene er skrevet på vers. Heftet inneholder fargelagte tegninger med satiriske tekster om aktuelle hendelser i Norge og utlandet. Blå i fornøyelige og burleske tegninger og les teksten og kommentarene.

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Euklid

Grekeren Euklid levde i Alexandria fra 305-285 f. Kr., og etterlot seg ett av de mest kjente verkene i matematikkhistorien. Elementa var kopiert med geometriske figurer i de antikke greske papyri, og disse figurene fulgte med da verket ble til arabisk og latin. Her kan du bla i boka, og finne ut hvorfor dette er et viktig verk, både bokhistorisk og matematisk.

[Les mer...](#)

This service makes available published copyright-protected material in full text on the net. Within three years about 50.000 copyright-protected books will be available on the net through the National Library's web-site.

The background for this is a contract between the National Library and Kopinor—an organisation who represents right-holders from about 30 different interest organisations representing authors, publishers, and creators of visual materials, among others.

The National librarian was given the authority by the Minister of Cultural Affairs to negotiate such a contract with Kopinor. The minister himself officially launched the service and said that it would be a pilot agreement to see if one could find permanent principle criteria for paying right-holders for giving access to copyright-protected material.

On the net, on our web-site you may search by title, author, word/text – or quotations. I guess you all know the Norwegian play-writer Henrik Ibsen.

In Ibsen's play "An Enemy of the People" the main character doctor Stockman says "The majority never has right on its side. Never, I say". So if we put this phrase in the search-field we get a list of books containing this phrase.

The screenshot shows the National Library of Norway (NB) search results page. The search query is "Flertallet har aldri retten på sin side." The results are displayed in a list format, with each entry including a book cover, a title, and a brief description. The first result is "All verdens sitater" by J.B. Holmgård, which is a collection of quotes. The search interface includes a search bar, a "Søk" button, and a "Nullstill søket" button. There are also filters for "Digitalt", "Ikke digitalt", and "Nettsider". The sidebar on the left contains navigation options like "Forside", "Om Nasjonalbiblioteket", "Fag", "Opplevelse", "Kontakt", "Logg inn", and "English".

In addition to general search-engine technology (title, author...) it is possible to specify and maneuver by using the left column. Here you can specify what kind of material you search, whether you search only digital fulltext - and you can also specify subject/topic, year and place.

Back to Ibsen and quotations:

When we open the book we are guided to the specific page by a yellow tag (upper left hand corner). And the phrase itself is highlighted on the actual page.

To turn the pages, one can merely click on the coloured tabs.

Sok i NB - Windows Internet Explorer

http://www.nb.no/utlevering/nb/0e268709597fc65db7f5e37c20fa7e6a#&struct=DIV82

Fil Rediger Vis Favoritter Verktøy Hjelp

Favoritter Suggested Sites ABC ABC Startside - Topp CAPLEX nettleksikon www.c... Gabriel Gateway to Europe'... Google News Google Toolbar Gratis Hotmail

Sok i NB

NBdigital

Forside

En folkefiende med innledning av Halvdan Koht : ny rettskrivning ved Oluf Holck utgitt av Gyldenreger

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det behøves ingen doktors hjelp til å påskynde deres dødelige avgang. Og det er heller ikke de n slags folk som er samfunnets overhendingste fare; det er ikke de m som er de virksomste til å forgifte våre åndelige livskilder og til å forpuste grunnen under oss; det er ikke de m som er sannhetens og frihetens farligste fiender i vårt samfunn.

Rop fra alle kanter. Hvem da? Hvem er det? Nevn dem!

Doktor Stockmann. Ja, dere kan lite på at jeg skal nevne dem! For det er nettopp den store oppdagelse jeg har gjort i går. (*hever stemmen.*) Sannhetens og frihetens farligste fiender iblant oss, det er den kompakte majoritet. Ja, den forbannede, kompakte, liberale majoritet, — de n er det! Nå vet dere det.

(Umåtelig larm i salen. De fleste skriker, tramper og piper. Noen eldre herrer veksler stjalne øyekast og later til å gotte seg. *Fru Stockmann* reiser seg engstelig; *Eilif* og *Morten* går truende hen til skoleguttene, der gjør opptøyer. *Aslaksen* ringer med klokken og formaner til ro. *Hovstad* og *Billing* taler begge, men kan ikke høres. Endelig blir det stilhet.)

Aslaksen. Ordstyreren forventer at taleren kaller sine ubesindige ytringer tilbake.

Doktor Stockmann. Aldri i verden, herr Aslaksen. Det er det store flertall i vårt samfunn som berøver meg min frihet og som vil forby meg å uttale sannheten.

Hovstad. Flertallet har alltid retten på sin side.

Billing. Og det har sannheten også; Gud døde meg!

Doktor Stockmann. **Flertallet har aldri retten på sin side.** Aldri, sier jeg! Det er en av disse samfunnsløgner som en fri, tenkende mann må gjøre opprør imot. Hvem er det som utgjør flertallet av beboerne i et land? Er det de kloke folk, eller er det de dumme? Jeg tenker vi får være enige

Opphavsrett
Legal Notice

Fullført

Start Inbox - Microsoft O... SV: Milanofila - Mel... Technology News ... Sok i NB - Windo... iTunes Music

You will also be guided to where you may find the book in a library. Solutions to provide information on where the material can be bought will also be implemented.



Forside



- Vil du ha hjelp?
- Vil du låne denne boka?
- For BIBSYS-brukere
- Kommentarer til våre tjenester?
- Tilbake til treffliste**

Opphavsrett

Legal Notice

En folkefiende av Henrik Ibsen utgitt av Gyldendal

◀ ◀ Gå til side ▶ ▶ Kvalitet: Lav URL: http://um.nb.no/URN:NBN:no-nb_digibok_



Fullført

The Scope of the contract

The project relates to printed books published in Norway during the years 1790-1799, 1890-1899 and 1990-1999, including translated literature. The contract regulates that part of the copyright-protected material covered by the project, up to 50000 books.

The right given to the National library to make available the copyright-protected material includes the necessary reproduction of viewing copies of the digital storages copies that the National Library of Norway makes, pursuant to the regulations issued pursuant to the Norwegian Copyright Act.

The contract applies to Norwegian and foreign publications whose right-holders are represented by Kopinor and competition law rules.

The provision stated—pursuant to the extended collective license in the Norwegian Copyright Act—that published materials created by right-holders that Kopinor does not represent, are also covered by the contract.

The material is to be made available on the National Library of Norway's web-pages for users with Norwegian IP addresses.

The material is to be made available as individual pages in a digital format for viewing on a computer screen.

The users will be able to search in the text and search for covers, title pages and tables of contents, as well as to browse sequentially through individual pages.

No arrangements are to be made for downloading or printing the material until the copyright-protected period has expired.

“An endless tail”

This is the second project in the National Library when it comes to make available copyright-protected printed material in digital format on the net.

The first project, called “The High North” is an agreement with about 6000 different right-holders to give access to 1400 books in full text on the net.

A report written after two years, based on statistical analysis of the behaviour of users on the online service, of library lending figures and of sales statistics during the same period, in addition to findings from an online questionnaire, shows interesting results about and how much the users read on the net.

They read more on the net than we expected. Especially it show how older content scores high – as Chris Anderson predicted in his “The long Tail” (2006)

To study the details in this report, see

http://www.nb.no/content/download/3480/24549/version/1/file/An_Endless_Tail.pdf

It is the knowledge we received from this project that made the Minister of Culture establish a working group to suggest criteria for negotiations with right holders on how to pay for access to digital full text on the net in the National Library.

So on this basis, the National Librarian negotiated the agreement that gives the library the right to give access to about 50.000 books in full text, books from different periods of Norwegian literature.

E-material will be made searchable via search engines. Solutions to provide information on where the material can be borrowed or bought will also be implemented.

Bookshelf Contract vs. Google Settlement

We can of course not compare ourselves to Google. But since Google is so central in the discussion of digitization both when it comes to how to digitize and to give access, I have made a brief comparison as the principle in our agreement and that of Google Settlement:

	Bookshelf Contract	Google Settlement
Scope	Extended Collective Licensing	a preceding class action lawsuit
	Right to digitise according to law	The fair use doctrine
Access	All content to any user (Norwegian IP), on-screen only, no printouts	20 % of the pages of a book for all users, all content for free on request on terminals in specified institutions
Compensation and distribution	€ 0.06 per page distributed via Kopinor	the rights holders receive 63 % of the income from: sales of institutional subscriptions, sales to consumers, advertisements, printing fees. Distribution via The Book Rights Registry
Opt. out and removal/exclusion	no opt-out possibilities	opt-out within September 4 th , 2009
	the rights holders may exclude any books at any time (Bokhylla and Google) The NL will digitise all	a rights holder may direct that his book is not digitised

The Digital National Library

This agreement is a result – or rather a part of our strategies.

The vision of the National Library of Norway is to be a living memory bank, by being a “Multimedia Centre of Knowledge” with focus not only on preservation but also on mediation.

To succeed with this ambition, one of our main goals is to be a digital national library, as the core of a Norwegian digital library.

A digital library is just another way of being a National Library. It is important to have as much digital material as possible—not only historical material but also the modern aspects of the cultural heritage, to give access to as much content as possible and to as many as possible whenever required.

To be able to do this, we have two main important strategies:

To get as much material as possible deposited in digitised format

To scan our total collection as fast as possible

Therefore in 2006, The Norwegian National Library started a systematic digitisation of our whole collection. According to The Norwegian Copyright Law, we can do this for the purpose of preservation.

To scan as much as possible, we are now streamlining the process from when an object is selected for digitisation until it is placed digitally in our **digital long-term repository**, simultaneously offering web access for authorized users within the National Library’s premises.

With the multimedia collection of the National Library this poses special challenges, as we need to establish separate production lines for the digitisation of different types of material. In addition, there are usually several variants within each type of material, which again demand different adjustments. Today we have 15 different production lines.

Putting these things in place is a challenge, both in terms of technology, logistics, organization, manpower and financing. Not least, it is a challenge when it comes to copyright issues.

Since the beginning of 2009 we have invested 2.3mill EUROS in machines and software, as well as reorganised our budget to give priority to digitisation. We have also received budget increases for the task. We will also receive a budget increase to pay for copyright, but we do not know how much yet.

Modern Legal Deposit Act

Based on a modern Legal Deposit Act the National Library receives everything that is produced and is of interest to the public, be it books, newspapers, periodicals, photos, film, music or broadcasting.

All broadcasters with a license in Norway may be asked to deliver copies of their programmes for preservation. Furthermore, we have an extensive collaboration with the national broadcaster (NRK) about preservation and dissemination.

At present the programmes of five radio channels are transferred every night to the National Library as digital files via the Internet. The Norwegian Broadcasting Company can find and use their own material from the Digital Radio Archive, and part of the material is also available at certain libraries. In 2008 we also started the digital legal deposit of the television programmes from two broadcasters.

All content can be accessed on the premises of the National Library.

It is a part of our strategy to negotiate with the publishers to get as much material as possible deposited in digital formats.

The National Library's agreement with NRK, the national broadcaster, both to receive their programmes transferred digitally and to function as their archive, has also been a model for others.

We have recently signed an agreement with the most important newspaper and publishers to get digitally deposited material and to give access to the material on certain conditions. For more details on the contact with the publishers, see:

http://www.nb.no/english/facts/about_the_national_library/agreement_on_digital_deposit_between_the_norwegian_publishers_association_and_the_national_library_of_norway

We also have the task to preserve those digital signals that stay digital all the way from production until they reach the user. Starting in 2003 we have harvested large parts of the Norwegian web domain *.no* ("dot no").

Thus, some material is already delivered to us in a digital format. We have a relatively large digital collection when it comes to the audio-visual. We have less when it comes to printed material, but this is also increasing every day, not least because of the Bookshelf agreement.

Our objective to establish as many digital resources as possible by getting digital material deposited is, thus, making progress.

With as much raw data as possible as soon as possible, we will establish a "data bank" that will both be a repository for future use, but also a source both for the National Library and other institutions to build various digital services to give access to the material today.

To digitize systematically

We used large parts of 2006 carrying out the process of inviting tenders for the purchase of digitisation software, digital storage and other ICT solutions required. In addition, we hired a project manager and some system developers. Since 2007 we have systematically digitised material. The list on the image shows the status of our digital collection at the end of 2008. In quantity this represents 3 Peta byte.



Depending on the funding, collaborators—and of course the technological development—we estimate that we will digitise most of our collection within 20 years. Naturally, there is considerable uncertainty associated with an extensive and long-term effort such as this.

We expect developments in technology, both in terms of digital storage, digitisation equipment and of tools that will enable retrieval in a way that reduces the need for manual indexing.

However, it is difficult to accurately predict the consequences of such a development, in terms of both cost and increased efficiency.

From 2009 there was a good increase of our funding for this.

Digital now	Total	Type
208 000	of 5 000 000	newspapers
450 000	of 1 300 000	pictures
110 000	of 450 000	books
600	of 250 000	hours moving img
23 000	of 4 000 000	manuscripts
50	of 180 000	maps
40	of 2 500	audiobooks
5 000	of 75 000	hours of music
7 200	of 80 000	posters
390 000	of 1 200 000	hours of radio
300	of 2 000 000	periodicals
1 000	of 1 900 000	ephemera

To digitise on demand



Systematic digitisation is the foundation of the digitising process. In addition, we will carry out on-demand digitisation which can be both initiated by our users and based on the strategic priorities of the National Library.

On-demand digitisation will be given priority over the systematic work. We have agreements with several other libraries, museums and research institutions to digitise material of interest for users, be it material from the National Library or material of interest as indicated by the other institutions.

And of course, we digitise material for use in national anniversaries where the National Library is responsible, for example the celebration of authors, such as Ibsen or Hamsun.

Priority

There is also a challenge in deciding how we shall prioritize material for digitisation. Should we start with what we consider most important in a cultural heritage perspective? Should we take one kind of medium at the time? Should we be most concerned about what is important from a preservation aspect? Should we primarily digitise and give access to what others demand?

Should we give priority only to the material where the rights are “in the free”, out of print or orphan works, to minimize the difficulties in negotiating agreements with right-holders?

Our solution is the combination of mass digitisation and digitisation on-demand, as shown above. This is a challenge to workflow, since it takes different work tools and different approaches to the digitisation of the multitude of media types.

The digital long-term repository



Everything that is digitised as part of the National Library’s digitisation programme is to be preserved as digital objects in the National Library’s digital long-term repository.

The digital long-term repository separates the use of digital content from the technology which is employed for the storage.

This allows for easy migration to new generations of storage technology without affecting the systems for the retrieval of digital content. This is very important in a 1000-year perspective.

All digital content is stored in three copies on two separate storage media in the digital long-term repository. At present, one copy is stored on disc while two are on tape.

In spring 2009, a whitepaper on digitisation given by the Government also confirmed that the National Library is to be a trusted repository for digital material in the Norwegian society, as you may see on the image.

It is important to have institutions that take care of cultural heritage, which also includes the digital material. What happens, for example, when the knowledge disseminated via the Internet is no longer interesting as news?

An important issue is who will serve as the stable element when we go from the permanent to the transient. Who will secure the data's integrity, organize the media so that they can be found in one thousand years, convert them when necessary; who will be the trusted repositories?

An important strategy for the National Library is therefore:

To be a digital archive for other institutions, such as publishers and newspapers.

In addition to what I have already mentioned about the national broadcasters and newspapers. The National Library also functions as a digital archive for different photo and music collections.

In this respect, we have agreements to disseminate—within the scope of copyright, of course. We experience that different institutions—within and outside the library world—want to discuss with us the possibility that we function as their digital archive. This is an important strategic challenge. Which criteria should be used to define these priorities and who shall pay?

At the time being, we have chosen to give priority to newspapers that are much used, and if it becomes our priority, we may share the cost with the newspapers.

It is important for us to do this to be able to give access to as much as possible, for example, to research and documentation.

Of course, the national libraries around the world will be trusted repositories for cultural heritage, which it is our mandate to preserve.

Because we develop systems and standards for preservation and are aware of the necessity for a sustainable quality, others who need trusted repositories, such as for research data, also want to cooperate with us.

I think that in this field in the future, there will have to be cooperation between the public and private sector.

It is important

To find strategic partners to cooperate with, financially and on know-how

It is, of course, important to cooperate with other libraries, knowledge and cultural institutions to ensure that we do not do double work on material that is found in more than one place.

We regularly meet with the university libraries and the Agency for Libraries, archives and Museums to coordinate the development of digitisation.

This spring the government gave a white paper to the Parliament on the issue in the ALM sector, where the National Library in cooperation with the State Archive is given the responsibility to be the repository for the whole ALM sector.

I have already mentioned some of our strategic partners in broadcasting, newspapers, publishers etc. We are also in contact with the Norwegian Research Council to see how we can be partners in research programmes, and we have meetings with system providers and others to follow up on the development in the technological field.

We already participate in a national research project on digital preservation. The project, called LongRec, is financed by The Norwegian Research Council. The international strategic cooperation in IIPC (Internet Preservation Consortium) is also important to us.

Today, there are several organisations that offer to digitise the book collections of cultural institutions for free or at a very low price; in return the organisations ask for the right to store the digital copies and to offer search and display of the books.

Examples of this are Google and the Internet Archive. In our National Library book collection, there are relatively few books which are no longer protected by copyright, and to which free access accordingly can be offered. It is important to the National Library that books still under copyright will only be stored in our digital long-term repository.

Access to such books will only be given in accordance with agreements made with right-holders, like the one I presented in the introduction to this speech.

Also, it has been a fundamental principle in the National Library that other service providers must be given equal opportunity to offer services based on our collections.

We invite search engines to disseminate what we have digitised, and invite other institutions to establish services as added value to our digitised material.

It has also been part of the picture that the National Library has been able to reassign existing staff to tasks associated with the digitisation production line. This has meant that the total cost of in-house digitisation of books is lower than it would have been for outsourcing the digitisation.

For other types of material, we have chosen to outsource digitisation. For instance, this applies to digitisation, OCR and structural analysis of newspapers on microfilm.

Technical quality



The quality to preserve must be much higher than what is normally needed for dissemination. At the same time, the formats used for mediation have a shorter lifespan, partly because new advanced formats are constantly developed and partly because of improved versions of existing formats.

Therefore, we have chosen to generate formats for dissemination based on the formats for preservation. The resolution requested by the user is generated at the moment when the image is sought by the user. Our preservation format is JPEG 2000 and the dissemination format per today is JPEG.

To give access to us much as possible of our cultural heritage, e.g. through search engines

Based on the whitepaper that I already mentioned, the parliament has given the National Library a central position when it comes to responsibility for digital access to cultural heritage.

One important strategy is:

To give access to as much as possible of our cultural heritage, e.g. through search engines

The issue now is how we shall take advantage of having established a digital repository for preservation in order to give access to this material to scholars, students and the public, as such.

This is a challenge in many aspects, not only when it comes to technical quality as discussed above, but mainly when it comes to copyright and dissemination pedagogy, or the pedagogy of the net.

Search engine

In order to realise searches across large aggregations of data, the National Library has chosen to employ search engine technology, rather than traditional data base solutions.

Both metadata and full text are indexed by the search engine, and searches are performed without regard to types of material.

We have also implemented a so-called “drill-down” search in the metadata.

Metadata for objects satisfying the search criteria is analyzed in real time during searches, and alternate paths of navigation and different ways of narrowing the search results are built and displayed to the user.

The search engine that we use is delivered by FAST.

Dissemination pedagogy



National libraries have always given access to their material through the use of metadata. The digital access challenges the way that we manage our collections and organise knowledge.

Digital access to fully digitised material on the net also creates expectations about what kind of services we should provide.

To which extent should we give added value to the material, such as serving a blog, giving access to the material in a similar way that, for example, YouTube and Facebook do?

We are in a constant and ongoing discussion with experts – who are our users - about this.

Net pedagogic

It is important to take part in discussions and the development of the pedagogy of the net. Libraries' knowledge about the users' needs is a good basis for developing search methodology that is at the intersection of metadata and the methodology of search engines.

Our aim is to give access to information, knowledge and experience on a given topic—across media types.

We create a common search engine for all media types through the integration of different catalogues.

Challenges for the future

The challenges for the future are many – and they are exciting.

Challenges for the future

- Dissolving of structures,
 - ✓ Content producers
 - ✓ Content providers
 - ✓ Structures for communication
- New business models,
 - ✓ who pays - who benefits?
- National responsibility,
 - ✓ Still to be taken care of?
- Legal framework,
 - ✓ Individual agreements or collective bargaining



Copyright and user behaviour

The Intellectual Property rights are a challenge. Negotiating with the right-holders is therefore a vital issue. What kind of models should there be for paying for use (access)?

Today in the Nordic countries, we have a tradition of collective models.

When digital access (use) makes it easier to define and trace the use of each right-holder's artistic works, will this be create pressure towards individual payment for use?

How can we define who the right-holders are?

To what extent will there be licensing instead of permanent agreements for use?

Is it possible to have agreements based on the principle for printed material also in the digital format or is the digital environment a separate starting-point for finding solutions?

Is the fact that books are, for example, available through Digital National Libraries a marketing point for commercial use?

Furthermore can this be a factor in negotiations?

Should the public fund the libraries' payment for rights—or will this new situation open up for more pay-services in National Libraries?

This is, of course, already different in the European countries and national libraries in the whole world.

The agreement that the National Library of Norway has now signed with Kopinor—which I referred to at the beginning of my paper—will give us new insight into these issues.

Through our agreement with Kopinor we will acquire more knowledge about user patterns, frequency of use, and the interest in digital text on net: Will the user read from the net, download and if so, when and how? Are there differences between various kinds of material, for example, fiction and reference works?

To be in the forefront of the development, it is also important to analyse how net and digital services are used and preferred by users in other sectors than in the libraries.

It is equally important to try to foresee the alternative scenarios for development.

Who will own the digital future?

Who adds value or where is value added in relation to knowledge?

What will the end product be—net? Disc?

Is the digital content of the national libraries widespread—in a large number of copies or in everyone accessing it from centralised repositories?

This is important in all national libraries.

I am sure we will find many different solutions.

Thank you for listening to the outlines of our strategies—and business models thus far.