The State and University Library’s Metadata Policy
version 2
March 2014
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Introduction to version 2, March 2014

The following amendments have been made in relation to the first version of the metadata policy.

- Sections 2.4.9 “Subject heading” and 2.4.10 “Classification” have been replaced by a revised section 2.4.9 “Subject data”
- Chapter 5 “Rights to metadata” has been completely rewritten
- Two new chapters have been added:
  - Chapter 6 “Administrative metadata”
  - Chapter 7 “Standards”.
- Two appendices have been added:
  - Appendix “Administrative metadata”
  - Appendix “Standards”

The metadata group has been working throughout 2013 on focus areas from the first version of the metadata policy. Elements of this work will continue into 2014. In the new version of the metadata policy a number of new focus areas have been defined (see sections 2.4.9, 2.4.9.1, 5.2.2, 6.3, 7.3)

In addition to these areas of focus, the metadata group will be working with a new type of metadata – user-generated metadata. A project day is being planned for the group in 2014, as well as an after-work meeting for the entire State and University Library.

As of 1 March 2014 the group consists of: Bente Herborg Christensen, Ditte Laursen, Dorete Bøving Larsen, Erik Bertelsen, Henrik Haagensen, Kirsten Anette Christensen, Kåre Fiedler Christiansen, Lars Lundegård Olsen, Lou Næraa, Margit Sørensen Helbo, Susanne Bisgaard, Søren Ærendahl Mikkelsen and Vibeke Christensen.

1 Introduction to version 1, February 2013

Metadata is data about data. Metadata for a single item of material or a collection of materials is important because it provides access to the content. It is particularly important for resources of text, images, audio and film that cannot be searched in the same way as text. Without metadata such collections would not be accessible, or else only accessible to a very limited extent. Metadata is also crucial in terms of the preservation of collections and for access control to collections.

Work with metadata means maintaining and developing an information architecture which ensures:

- Qualified basis for the choice and use of metadata specifications and standards
- Optimum integration of metadata in existing systems, e.g. systems for preservation, access control and accessibility
- Documentation of specifications, standards, knowledge and decisions.

1.1 Background

The State and University Library has previously drawn up a metadata policy. In 1997 it produced a report, “Catalogue Policy of the State and University Library”, in which focus was on the library catalogue for physical materials.

The catalogue of materials in physical form is still an important metadata product at the State and University Library, and the catalogue policy from 1997 is still largely relevant when working with metadata for these materials.
In the meantime, many new metadata products have appeared, e.g. metadata for the State and University Library’s own e-resources in the form of the Internet archive, Radio/TV archive and digitised newspapers. Furthermore, there is metadata for purchased e-resources in the form of e-books and e-articles, as well as purchased metadata, full records and enrichment for display.

The present policy is a policy for all work involving metadata at the State and University Library. In some areas, the metadata for the library’s own e-resources and purchased e-resources is similar to the bibliographic metadata referred to in the catalogue policy from 1997. This applies, for instance, to the metadata that is used when searching for and identifying specific materials.

More resource features have emerged, e.g.:
- Technical metadata concerning the provenance and format of electronic materials
- Licensing metadata concerning access conditions and permitted forms of delivery
- Administrative metadata concerning the state of the material, acquisition or any outstanding issues concerning borrowers

In the years to come the State and University Library will need to develop many new digital solutions for the State and University Library’s internal and external users. This development can only be realised if the content resources in the digital solutions have sufficient metadata, since search, access control, delivery, presentation and preservation are controlled by metadata. In order to ensure optimum information architecture, it is also important that the metadata is structured and handled according to universal concepts independent of material types and systems.

1.2 Objectives of the metadata policy
The aim of the metadata policy is to describe actual specifications and to identify focus areas for working with metadata at the State and University Library.

Specifications are defined as requirements concerning size, content and structure of the metadata which describe a physical or electronic material. When working with metadata at the State and University Library these specifications must be met.

It has not been possible to provide specifications on all aspects concerning metadata in connection with work on the policy. This is due to different practices for handling a particular aspect or because that area has not previously been addressed as a metadata challenge. The policy highlights the most important of these issues as focus areas. The State and University Library should work on these focus areas during 2013 and 2014. The result of this work will typically be the drawing up of new specifications that have to be incorporated into the policy.

1.3 Content and limitation of the policy
This version of the State and University Library’s metadata policy provides specifications and identifies focus areas within the following:
- Bibliographic (descriptive) metadata of materials
- Technical metadata of materials
- Rights management and licensing metadata of materials
- Rights to metadata.

Chapter 2 of the policy concerns bibliographic metadata. In this context bibliographic metadata is understood as data which identifies and describes the content of a resource.
In this version of the policy, Chapter 3 concerns the technical metadata for files which are generated or received with a view to digital preservation. Technical metadata is information about the provenance of the files and their properties. In a future version of the policy, the technical metadata is to be extended to other types of material.

Chapter 4 of the policy concerns metadata for rights management and licenses. In this context rights management and licensing metadata is understood as data which identifies who may have access to a resource, or a collection of resources, and in which form this access can take place. The importance of rights management has increased due to the fact that libraries often purchase access to the resources rather than acquiring them.

Chapter 5 of the policy concerns rights to metadata. Rights to metadata are understood here as how the metadata may be made accessible and exchanged.

The policy does not yet include administrative metadata, the standards which metadata should meet or the workflows that should be used in the production of metadata. Specifications concerning these matters can be obtained by contacting the metadata sub-groups (see section 1.5).

1.4 Overall action plan in relation to the policy

- In spring 2013 all relevant employees at the State and University Library must be informed about the metadata policy, the standards used and the working processes in the metadata sub-groups. This activity has been launched in order to upgrade the qualifications of the State and University Library’s employees in relation to working with metadata in the future, as well as to ensure that the specifications and action plans of the policy are observed
- The policy must be further developed on an ongoing basis. This will initially take place at the end of 2013, when an updated version of the metadata policy must be presented incorporating initial feedback and new initiatives

1.5 Control – the Metadata group

A metadata group at the State and University Library has been set up which is responsible for the ongoing work involving the maintenance and development of the State and University Library’s overall metadata portfolio. The metadata group has been subdivided into three groups, each focusing on their particular area:

- Metadata for physical materials: FY
- Metadata for purchased e-resources (licenses): KE
- Metadata for own e-resources (digital cultural heritage): EE

Each sub-group can be consulted with regard to how the metadata policy’s specifications and action plans are implemented within the sub-group’s focus area. The sub-groups have actual knowledge of standards and workflows used.

Enquiries concerning metadata at the State and University Library must be addressed to the metadata group leader or the co-ordinators for each sub-group.

The drawing up of the metadata policy stems from the metadata group’s mandate to maintain and develop the State and University Library’s metadata portfolio. The following have participated in the writing process:
Bente Herborg Christensen, Ditte Laursen, Dorete Bøving Larsen, Erik Bertelsen, Henrik Haagensen, Karin Guldborg Petersen, Kirsten Anette Christensen, Kåre Fiedler Christiansen, Lars Lundegård Olsen, Lou Næraa, Margit Sørensen Helbo, Susanne Bisgaard, Søren Ærendahl Mikkelsen and Vibeke Christensen.
2 Bibliographic metadata

2.1 Definition
Bibliographic metadata is understood here as data which identifies and describes the content of a resource (also referred to as descriptive metadata).
It includes data such as titles, authorship, subject headings, classifications, notes, abstracts, publication data, physical description and size.1

Bibliographic metadata can be procured in different ways.
1. Manual registration
2. Reuse/conversion of data from other sources
3. Enrichment of data
4. Automatic registration

These methods can be combined.

2.2 Objectives
Catalogue policy 1997:
According to the State and University Library’s catalogue policy from 19972, bibliographic metadata should be able to answer the following questions:
1. Does the library have a particular, named document?
2. Does the library have one or more documents about a particular subject?
3. Does the library have one or more documents by a particular creator?

However, a precondition of this policy was that bibliographies could be used for more exhaustive searches, and the policy had been developed at a time when large parts of the collections were not registered.

However, in the meantime these conditions have changed: today the State and University Library registers materials that are not found in bibliographies (e.g. minor publications), and unique materials are also registered (e.g. digitisations and radio/TV broadcasts). Furthermore, the State and University Library to a great extent has access to registrations at article level of the collections. The catalogue today is thus a lot more comprehensive, and since the users’ expectations are that the catalogue reflects the majority of the collections, it is justified that greater demands are made to the registration of certain types of material.

Catalogue policy:
Today the objectives of the policy can be expressed even shorter:
The aim of bibliographic and descriptive metadata is to be able to:
1) Find resources
2) Identify resources
3) Select resources3

1 Different definitions can be seen here:
Digitalbevaring.dk.: http://digitalbevaring.dk/metadata/
2 KatPol report on the State and University Library’s catalogue policy, drawn up by the KatPol committee, 1997
3 In this case we are in line with FRBR (Functional Requirements for Bibliographic Records), see http://www.loc.gov/cds/downloads/FRBR.PDF for a brief description.
Re. 1: Find resources

The user must be able to find particular named resources, resources by a particular creator, versions of a particular work, resources about a particular subject and resources with other characteristics.

In order to meet this objective, it must be possible to perform a search aimed at a particular category of data – e.g. it must be possible to differentiate between a person as the creator or as the subject of a resource. Furthermore, the data must have a form, which makes it possible to extract information in a standardised way, so that it may be used for facetting (e.g., limited to author, material and language).

Finally, data in particular categories (typically subject headings, classifications, creators, titles) can be used to automatically find other resources with one or more shared data elements and to rank them according to the degree of shared data ('Similar items').

Re. 2: Identify resources

The user must be able to determine whether the resources presented correspond to the user’s need.

For example: Is it the correct periodical or another one with a similar title? What is the work about? Who is the creator of this resource? Does the search result correspond to what is expected? In order to meet the objective, the result of the search should be helpful, e.g. by being ranked with the most relevant results first.

Re. 3: Select resources

The user must be able to make a qualified selection between several similar resources.

When the user is selecting a particular resource, it is typically based on the age, format, language, content, size and accessibility of the resource.

2.3 Requirements for bibliographic metadata

When the registration level and practice is to be established, there are three aspects in particular that should be incorporated into the assessment of metadata, irrespective of whether this data is to be produced in-house or is procured externally, and irrespective of which types of resources are to be treated:

- The user’s needs: Are descriptions and standardised data aimed at the needs of the target group? Is the language in descriptions and standardised data the same as that used by the majority of the users?
- Consistency and standardisation: Are descriptions and normative data described consistently and standardised seen in relation to the desire for the greatest possible uniformity and possibilities for exchanging bibliographic and normative data?
- Economy: Where and how is the best value for money achieved if there are different options?

The relevant types of bibliographic metadata and the requirements specified by the State and University Library in connection with these are described in the following. Primary and secondary requirements are specified for each type:

- Primary requirements describe the data which as a minimum must be present in order to be able to reliably identify and retrieve a resource, i.e. the goal is primarily "stock management"
• The secondary requirements describe the data which, in addition, concerns presentation of the resource to the end user.

Work is currently being carried out both nationally and internationally on replacing the current Anglo-American cataloguing rules with RDA (Resource Description and Access). As the majority of the State and University Library’s data is procured via import, we will need to address the challenges this may entail. After each data type the requirements regarded as minimum requirements in RDA (core elements)\(^4\) are listed.

The key element in RDA is clustering, i.e. the idea/wish to be able to show all expressions of a particular work on the basis of the same search, regardless of medium. This is a considerable change in relation to the current cataloguing rules, where only the present manifestation of the work is catalogued.

### 2.4 Types of bibliographic metadata

#### 2.4.1 Title information

Title information is an important search element, both as a phrase search to find an exact title and as a free text search to find 'something about'.

Title information is used to identify the fact that the user has found the work that he/she was searching for if searching for a particular title, but also to determine whether the work falls within the required subject field in a subject search.

The title’s distinguishing elements are used to distinguish between two works with the same title (e.g. place of publication for a periodical with an ambiguous title, or, for a musical work, the conductor).

The title is also important for presentation – title proper and first subtitle are extracted for an overview format, and are used to link to the full format.

Titles are often used for shelving material in physical form, but also for the sorting of a search set.

In the State and University Library’s current search system, Search, and the library system, Aleph, it is also possible to scan titles, which is important, not least in relation to periodicals (otherwise the number of search results for terms such as Science and Philosophy would be almost endless).

Primary requirement:
• Main title: as an absolute minimum a main title is required, in addition to which the subtitles that are necessary to identify the work are reproduced. It is required that a distinction can be made between main titles and subtitles, as it will not otherwise be possible to separate the main title for web presentation, etc. In the event that no title exists, a suitable title must be invented (this was, for example, the situation on registration of the Ruben wax cylinders, where each wax cylinder has been given a made-up title). Character set and language pose a special challenge\(^5\)

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\(^4\) A key element of RDA is that the focus in this case has shifted from the description of each manifestation to seeing the manifestation as an expression of a work instead. Important concepts are Work, Expression, Manifestation and Item.

\(^5\) It is necessary to know the standards used for transliteration, in the event that this has taken place. If that is not the case, it should also be indicated – it is important information when having to retrieve Cyrillic and Arabic titles, for instance.
Secondary requirements:

- Parallel titles, original titles, work title ("uniform title"), titles of earlier and later editions. All these enable clustering, and provide important information for navigation.
- Identification of definitive/indefinite articles that enable extracts to phrase indexes both with and without the articles.
- Alternative titles with variant forms if titles contain figures, symbols, etc. (are they to be listed/searched by e.g. § or Paragraph). Other alternative titles, e.g. titles by which the work is known, titles in other written languages, additions that enable the differentiation of one title from another similar title, other subtitles.

Core elements in RDA: Title proper, title of the work, distinguishing characteristics of work title.

2.4.2 Authorship/statements of responsibility

Authorship/statements of responsibility are necessary in order to find what the library can offer by a particular creator, just as they are used to identify the creator(s) of a resource and to select one particular resource instead of another.

Authorship/statements of responsibility can be divided into the cited statements of responsibility (the name as it is described in the resource) and authorship as access point (preferred form of the name).

2.4.2.1 Cited statements of responsibility

Primary requirement:

- In the event that the form of the name in the material (e.g. Bob Greenblatt) deviates from the standardised form (Robert Greenblatt), it should always be cited so that a search will include both forms and the creator can be recognised.

Secondary requirement:

- Citation of all creators (though no more than 3 with the same function).

Core elements in RDA: The element is a core element in RDA, although it is only a requirement that the first creator of the manifestation is cited.

2.4.2.2 Authorship access points for persons

Statements of responsibility as look-up are used for both searching and facetting. Furthermore, the authorship is used in the preferred form to identify the work.

Primary requirement:

- That the name is divided into surname, first name and identifying additions (e.g. that at least the name is inverted correctly). If there is both a standardised and an alternative form of the name for the same creator of the same item, it must be possible to distinguish between these, as only the preferred form will be used for facetting.

Secondary requirement:

Since 2010 citations have only been made in the Danish national bibliography if it is considered that there are major differences between the two forms of the name. In the above case, Bob Greenblatt would not be considered a major deviation. The countries we otherwise import items from retain citation, and so does the State and University Library when cataloguing.
• Choice of the same form of name every time, additions to the name in order to be able to distinguish between different persons with the same name, additions of codes for function, linking the standardised form of the name with variant forms of the name for the same person (in the forms of references, (links to) items to standard forms (=authority items) or similar.\footnote{Work is currently ongoing internationally on joint initiatives such as \textit{VIAF} (Virtual International Authority File), in which efforts are being made to try to link standardised name forms from different countries. It is important to follow these initiatives, as they are also gradually being extended to include works and expressions. If the State and University Library is to benefit from this work in local catalogues, it requires that the State and University Library’s own data is so good that it can be used in record exchanges. If the State and University Library is to be able to use the data for automated look-up in external sources (biographies, encyclopaedia or similar), it is also important that the form of the name appears in standardised form.}

Core elements in RDA: Standardised name and all subsequent information when it is 'applicable and readily ascertainable': (noble or religious) title, date of birth and death, other identifying additions, and if required to differentiate: full written name, period of activity, profession or occupation

2.4.2.3 Corporate bodies as creators

Corporate bodies can be creators of publications such as company accounts, committee recommendations, district plans and conference reports, but they can also be creators of artistic works, i.e. works of a more unique character such as musical works, theatre performances, etc. In the latter case, the corporate body is an important search element, whilst in the former it is not always an element that the end user will regard as the creator.

Primary requirements:

• That a corporate creator is always cited.
• That in the case of artistic works, access point(s) is/are made for the corporate creator(s).

Secondary requirement:

• That access point is made on the corporate creator(s).

Core elements in RDA: Preferred name and all subsequent information when it is 'applicable and readily ascertainable': location of conference, date associated with a corporate body, associated institution, conference number, and if necessary to differentiate: geographical location of the headquarters, associated institution, other designations associated with the corporate body.

2.4.2.4 Choice of primary creator

This constitutes a particular problem. In the event that a resource has several creators, one or more of these must be chosen for use in different contexts: in the overview format in the user interface, for index scanning, for export to reference tools and other citations. Not least in connection with research publications that often have several contributors who all have an interest in appearing as a reference, the order of appearance constitutes a very significant problem.

Primary requirement:

• That the principal (first) creator(s) appears as a result of format or order

Secondary requirement:

• That a 'creator responsible for the work' is always specifically identified
Core elements in RDA: First creator cited; as access point: (first) primary creator of the work, expression and manifestation

2.4.3 Edition
Data describing edition is primarily used to prefer one particular resource to another.

Primary requirement:
- Specification of actual edition

Secondary requirement:
- Cited statements of responsibility referring to a specific edition. As a legal deposit of published material, the State and University Library should also include information about reprints, if applicable only in connection with stock specification, as is the case today

Core elements in RDA: Edition, or designation of a named revision of an edition

2.4.4 Series
Series title is used as search element and as identification. The title of the series is particularly important when a continuous row of publications cannot be defined clearly as a periodical or a number of individual monographs or a single work in several volumes.

Primary requirement:
- Series title, number, subseries title, subseries number

Secondary requirement:
- Parallel series title and ISSN

Core elements in RDA: Title proper of series, numbering within series, title proper of subseries, numbering within subseries.

2.4.5 Publication
Publication information for published material is typically location and publisher, or alternatively distributor. For unpublished material, it may be manufacturing location and manufacturer. This helps to identify and select resources and is important in connection with reminders for material subject to legal deposit.

Primary requirement:
- At least one of the following elements:
  - Place of publication /distribution location/ place of manufacturing
  - publisher/editor/distributor/manufacturer

Secondary requirement:
- The remainder of the above data

Core elements in RDA: At least one place of publication/distribution location/manufacturing location, at least one name of publisher/distributor/manufacturer.

2.4.6 Dating
Dating is used for searching, sorting, filtering search results, identification and when selecting one resource ahead of another. It is therefore important that dating appears in coded/pure form. In
addition, it can appear in cited versions (where, for example, an Arabic year is written as it is along with a 'translation' to a Western year, or a date when the year is uncertain and is specified as such).

Primary requirement:
- For completed/monographic resources: at least one year in searchable form

*Core elements in RDA: Publication date/distribution date/production date/copyright date*

2.4.7 Physical description

The physical description tells something about the scope and the physical medium; see also Chapter 3 on technical metadata. It is therefore important for identification and when selecting one resource rather than another (e.g. a 300-page main report or the 50-page summary of the same report in physical and digital form respectively).

As a number of electronic resources are analogous to physical resources, there will often be information about, for example, page numbers in e-books or running time on a TV broadcast that is available online.

Primary requirement:
- Physical medium for main material and appendixes, size (when this can be determined) of the main material

Secondary requirement:
- Scope of documents

*Core elements in RDA: Carrier type and scope (if the resource is complete)*

2.4.8 Language

A term for the language of the resource is used for searching, filtering and selection of a resource. In order to meet these objectives, the language description should be in standardised form.

Primary requirement:
- Specification of the main language of the resource if the resource is in textual form or contains speech

Secondary requirement:
- Specification of original language, parallel language, dubbed language, language in subtitles and summaries

*Core elements in RDA: Only if necessary to distinguish one expression from another*

2.4.9 Subject data

In principle, choice of subject data does not depend on whether the material is published in physical or electronic form, but rather on which types of material are concerned, as this will generally determine which subject data will be available.

In reality, however, there is a difference. There are, for example, currently several options in connection with the manual import of catalogue data for books in physical form, as opposed to the automated import of catalogue data for e-books, in which data is delivered and updated directly in the search system on the basis of a general agreement with the data provider.
For other types of material subject data is not an option in connection with the purchase of metadata, and the State and University Library has to decide on a case-by-case basis whether there is a need/possibility of allocating resources to enrich with subject data in a separate process, if necessary by applying the data manually.

In order to ensure the greatest possible usability of the subject data, as few classification systems and languages in subject headings as possible should be used.

In order to ensure the greatest possible uniformity in the use of the chosen classification systems and subject headings, subject data that has been created as part of a national bibliography or a corresponding institution (national library/archive) should be given the highest priority.

Focus area:
High priority is given to the catalogue being – by means of special updates – enriched retrospectively with both subject headings and classifications, cf. specifications below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>53,395</td>
</tr>
<tr>
<td>2009</td>
<td>188,030</td>
</tr>
<tr>
<td>2010</td>
<td>210,286</td>
</tr>
<tr>
<td>2011</td>
<td>260,395</td>
</tr>
<tr>
<td>2012</td>
<td>283,576</td>
</tr>
</tbody>
</table>

Focus area:
High priority is given to examining how the use of "linked data" from external sources can enrich the catalogue: for example VIAF [http://viaf.org/](http://viaf.org/) for names of creators and the option of cross-referencing between different classification systems. In light of the rapidly increasing quantity of purchased monographs in e-form, greater priority should also be given to try to ensure that relevant subject data is part of purchased metadata deliveries.

### 2.4.9.1 Subject headings

Subject headings are designed to describe the subject of the resource. Subject headings can be free or controlled (i.e. appear in a pre-defined list of words with fixed meanings – a list that can be hierarchical and contain relations). The purpose of subject headings is to increase the chances of retrieval and to provide a description of the subject that can be understood by end users.

Subject headings act as filters, but can also be used to choose 'Similar items' in the catalogue, as well as they can be used for chain searches.

Primary requirements:
- If subject headings appear, they should primarily be in Danish, English or the language of the resource in question.
We recommend the following, listed according to priority:

**For Danish materials:**
- a. DBC's controlled subject headings
- b. Other controlled subject headings in Danish
- c. Controlled subject headings in English
- d. Other subject headings in Danish or English

**For all other materials:**
- a. Controlled subject headings:
  - Library of Congress Subject Headings (LCSH)
  - Library of Congress geographical headings
  - Uniform titles
  - MEdical Subject Headings (MESH, from National Library of Medicine)
- b. Other English-language controlled subject headings
- c. Other English-language subject headings
- d. Subject headings in the language of the resource in question

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**Focus area:**
Great emphasis should be placed on increasing the number of registrations with subject headings, either by the assignment of subject headings during registration or by automatic enrichment in the form of regular or special updates.

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**Core elements in RDA: At least one 'subject relationship element'**

2.4.9.2 **Classification**

Classification normally consists of a code which represents a subject in a hierarchical subject overview, e.g. Dewey Decimal Classification, DK5 and NLM classification. Classification is designed to extend the search options and makes it possible to search for other items within the same subject ('Similar items').

The State and University Library has long ago given up on the requirement that all resources should be assigned a classification within one single classification system.

**Secondary requirements:**
- Classifications are useful when finding other resources and are particularly good at finding resources within a hierarchy of terms. Therefore importance should be attached to the reuse of classifications within generally known and used classification systems.

If classification data appears, we recommend the following:

**For Danish materials:**
- DK5

**For all other materials**
- a. Dewey Decimal Classification (DDC)
- b. National Library of Medicine (NLM)

**Core elements in RDA: At least one 'subject relationship element'**
2.4.10 Other content description
This covers notes, abstracts, tables of contents, title pages, full text, user-generated data, etc. This data can boost retrieval when searchable, but can in certain cases also have a negative impact on searches. Searchability will often be an advantage, however, particularly when the search result is ranked by relevance, so this type of information has lower relevance than, for instance, titles and subject headings. Furthermore, it can be a help when choosing one particular resource ahead of another.

Primary requirement:
- Content data receives a very high rating in user surveys and should therefore also be given priority when the State and University Library evaluates data sources

Focus area:
The State and University Library should work to ensure that tables of contents in printed non-fiction publications are searchable.

Core elements in RDA: None

2.4.11 Identifiers
Includes concepts such as ISBN, ISSN, publishers’ numbers for music, publishers’ plate numbers and numbers, FAUST-no., URLs, URIs, URNs, DOIs, local IDs, bar codes, etc. These identifiers are used locally and to exchange unambiguous information, enrich items, etc.

Primary requirement:
- At least one identifier, though normally all international standard numbers

Core elements in RDA: at least one identifier for the manifestation, at least one for the work (can be the same when there is only one manifestation of the work)

2.4.12 Material type
Material types are very important elements in relation to all functions: searching, filtering, identification, selection of resources. Material types can appear in different ways, either coded form or as defined material types. In the State and University Library’s current search system, all the codes of “Praksisregler for søgeveje” are available to the professional user.9

Across the different data sources a manageable number of common material types have been defined that are presented to the end users for filtering searches.

Primary requirement:
- Data that makes it possible to split a search result in a reasonable way

Secondary requirement:
- As much data as possible that can be mechanically translated into the scope of “Praksisregler for søgeveje” and/or used for display in overview format (e.g. codes that can show that the material in question is a children’s book)

9 For information concerning “Praksisregler for søgeveje”, please see: http://www.kulturstyrelsen.dk/fileadmin/publikationer/andre_publikationer/praksisregler_soegeveje/index.htm
Core elements in RDA: Content type and carrier type

2.4.13 Other (including coded information)
Examples: codes for festschriften, bibliographies, fiction/non-fiction, level, country of publication. In coded/structured form the information can be made available for searching and/or display. However, a minimum number of items that have this information should be defined before they are displayed.

Primary requirement:
- Country code 'dk' in material published in Denmark

Secondary requirement:
- Codes for academic level, as well as codes for fiction and non-fiction, are highly desirable to be widely represented in the catalogue

Core elements in RDA: None
3 Technical Metadata

3.1 Definition
In this version of the policy the definition of technical metadata is limited to digital files that are generated or received with a view to digital preservation. Technical metadata is information on the provenance of the files and on the properties of the files. In a future version of the policy the technical metadata will be extended to other types of material.

3.2 Objectives
Technical metadata is crucial for the dissemination and preservation of digital collections. Technical metadata can explain the origins of a collection. It can specify aspects concerning the physical condition of the collection when it was digitised, and thereby be crucial to the preservation plan for the collection.

Focus area:
There are a number of standards for technical metadata, and it is an ongoing task to clarify which standards may be suitable for a specific collection.

3.3 Types of technical metadata

3.3.1 Provenance metadata
Metadata concerning the provenance of the material provides information about why the file looks the way it does. When considering how to present the file, it can be relevant to understand the file in its context in order to support understanding and credibility.

Primary requirement
- Documentation of tools used internally at the State and University Library. This can be software, hardware, version no., settings, etc., used in connection with digitisation projects

Secondary requirement
- Enough information must be available to be able to perform the operation again: if you have comprehensive metadata concerning the digitisation process, then in principle you can repeat the process and end up with a file identical to the file from the original digitisation process.
  - E.g. conditions such as humidity, temperature, noise
  - E.g. tools, including software, hardware, version no., settings used
  - E.g. individuals/firms involved

3.3.2 Information about the file
Metadata concerning the properties of the files can be used to recreate and interpret the file and can be used to plan and carry out preservation actions.

Primary requirements:
- Documentation of tools used internally at the State and University library. This can be documentation of software, hardware, version no., settings, etc., used in connection with internal digitisation.
- Checksum of the file:
  - i.e. the result of an algorithm run on the file that provides an almost unique fingerprint
- File format (though not the Danish Netarkivet):
i.e. information about the file format, with reference to where you can read about the format – this can be a link to a standard or similar

Secondary requirements:

- Enough information to interpret bits in the files.
  i.e. an accurate and adequate description of the format.
  e.g. a description of how you could play mpeg video stream if you did not have the software to do so

- Properties of the file are extracted
  e.g. resolution, colour depth, size, etc., in the case of still pictures
  e.g. resolution, frame rate, length, codecs\textsuperscript{10}, etc., in the case of moving pictures
  e.g. size, layout, etc., in the case of text
  e.g. frequency, length, codecs, etc., in the case of audio

- Relevant embedded formats
  Documentation of tools, including those at/from external suppliers. This can be documentation of software, hardware, version no., settings, etc., used in connection with projects.

\textsuperscript{10} The word \textit{Codec} comes from \textit{compressor}-decompressor or \textit{coder}-decoder. A codec is a program (an implementation) of how you code and decode between the original data representation and a compressed data representation – and back again. Data for a codec might be digitised sound, images and video.
4 Rights management and licensing metadata

4.1 Definition
Rights management and licensing metadata is defined in this section as information concerning who may get access to a resource or a collection of resources, and in which form access may take place.

4.2 Objectives
The objective is primarily documentation and configuration of manual and automatic access control processes:

- Manually, which takes place by an employee looking up in the metadata to find out whether a resource may be retrieved or copied
- Automated, whereby a system carries out the look-up and on this basis decides whether the user has access

Generally speaking, rights management and licensing metadata relates to large collections of materials. This metadata can either be embedded in the individual metadata item or be related to a large collection of items. Rights management and licensing data is frequently not digitised, but appear on contracts or legislation in the area. For resources in electronic form it is essential that the rights management and licensing data is digitised in a way so the handling of the rights can be automated and implemented in relation to what is permitted.

A pre-requisite for digitisation is that the rights and licensing conditions are expressed by means of standard terms and that this is in focus from a contract is drawn up until implementation has taken place.

There are three basic questions to which an end user should be able to find the answer, when searching for a resource:

1. Is the resource accessible?
2. Where, when and how is the resource accessible?
3. For whom is the resource accessible?

In connection with changes to conditions of accessibility, the library staff may also need to contact the owner of the resource, licensor or copyright holder.

Rights management and licensing metadata can therefore be divided into the following four categories:

1. Accessibility
2. Permitted forms of delivery
3. Authorisation and authentication
4. Owner, licensor and copyright

4.3 Types of rights management and licensing metadata

4.3.1 Accessibility
Accessibility is defined as: Is the resource accessible to the users who have the right to access the resource? User profiles, etc., are described in section 4.3.3.

A resource can be inaccessible if:

- It is underway in a purchasing or acquisition process
- The physical or electronic copies available are lent or have been used up
- A license has expired or will not start until later
• The resource is subject to an embargo (qualifying period)
• A copyright holder has secured an injunction against the resource being made accessible

Primary requirements:
• It should be specified whether a resource is accessible or not, as well as why it is not accessible, if possible
• It should be specified where the resource is accessible, e.g. via a particular URL or physical location
• It should be specified when the resource is accessible

4.3.2 The resource’s permitted forms of delivery
A resource can be delivered via different media and presentation forms.

Metadata concerning the resource’s permitted forms of delivery describes how a resource may be used in relation to agreement or legislation:
• May it be copied electronically?
• May it be printed?
• Can the user retrieve the resource online from the provider or must this take place via the library?
• May the resource be sent to the borrower electronically or as a paper copy?
• May the resource be transferred to an e-learning or syllabus system?
• May the resource be used in ILL (interlibrary loan) to another library?
• May the resource be borrowed or only used in a reading room or not be used at all?
• May the resource be streamed or downloaded?

Focus area:
Standards or specifications must be drawn up for how the resources’ permitted forms of delivery are digitised. In addition, workflows must be developed so that permitted forms of delivery are digitised on an ongoing basis when acquiring new resources.

Under the auspices of the Digital Library Federation, specifications for permitted forms of delivery for purchased e-resources have been drawn up which have been implemented in standard Electronic Resource Management systems¹¹.

4.3.3 Authorisation and authentication
Metadata concerning user profiles that have access to the resource and requirements concerning user validation. Examples are “all students studying computer science” or “everyone showing up at a particular physical location”. Common standard profiles are private individuals, students, employees and "walk-in" users (i.e. users who visit the library physically). Furthermore, organisation or unit in organisation is often used to identify/describe the user’s affiliation.

Requirements for user validation concern how the user indicates his role to the access system.

Within the library domain, two different validation concepts are primarily used:
• IP address-based validation
• Login-based validation

In the case of IP address-based validation, access is given to users at computers with particular IP addresses – e.g. a computer at the State and University Library or a computer on the campus at Aarhus University. In the case of login-based validation, access is given to users who have a login account with authorised user roles at an approved institution – e.g. users who can log on to Aarhus University’s login system, and who have the role of “student”.

Primary requirement:
- Possibility to derive roles providing access from the metadata of the resource

4.3.4 Owner, licensor and copyright holder
Metadata concerning owner, licensor and copyright holder describes the individuals or organisations that own, disseminate or have created the resource. These individuals or organisations must be contacted if an agreement on the use of the resource is to be amended. These individuals or organisations can demand that the library in question changes its practice with respect to exhibition of the resource.

For physical resources the owner is the library that has purchased the material. The owner can decide whether the resource may be exchanged with other libraries and which types of user can borrow the material, when observing applicable copyright legislation.

Copyright holders are the individuals who have created the resource, or the organisation that represents the copyright holder (e.g. CopyDan). The copyright holder can impose restrictions with regard to exhibition of the resource, e.g. that the resource may not be part of a service or that certain manifestations of the resource may not appear (e.g. cover photos, sound snippets, etc.).

For purchased e-resources the licensor is the organisation from which the license was purchased.

Primary requirement:
- Metadata shall contain references to contract and resource owner, e.g. the name or an alias for the contract that specifies the rights management aspects
5 Rights to metadata

5.1 Definition
Rights to metadata are crucial in terms of how metadata is made accessible and can be exchanged.

5.2 Objectives
A great deal of foresight is required when formulating agreements concerning the use and accessibility of metadata. When metadata is purchased or produced, it is important to clarify how the metadata may be made accessible and exchanged via the services intended. It is important to consider the user in the long term, as metadata is rarely replaced once it is in use.

Rights to metadata are complicated and require a contract assessment by legally competent persons as and when each new contract is formulated. For the same reason this chapter of the policy does not contain specifications concerning the securing of metadata rights on formation of contract, but must help ensure that the rights aspect is evaluated and incorporated. The purpose of this chapter is limited to presenting a number of application-oriented problems that should be evaluated in connection with the formation of contracts on the procurement of metadata.

5.2.1 Publication channels
One of the primary objectives of metadata is to develop search indexes and search interfaces that help the end user to search and select the library’s resources. It is in the State and University Library’s interest that metadata is completely free, and that it can be distributed for download and unrestricted use by all interested parties. This provides the maximum potential for developing search systems that everyone can use, and for enabling metadata to be incorporated into third-party search engines such as Google, Danbib or WorldCat. Completely unrestricted metadata generally requires that the State and University Library owns the metadata, that the copyright of the metadata has expired or that the metadata is made available by a third party without any restrictions.

The following list of the State and University Library’s typical publication channels should be considered when assessing the use of metadata:

1. **The State and University Library’s portals**: May the State and University Library allow metadata to be incorporated into the State and University Library’s indexes and portals?
2. **API for external harvesting**: May the State and University Library develop an API\(^{12}\) from which external parties can harvest metadata?
3. **API for external searching**: May the State and University Library develop an API from which external parties can look up metadata items?
4. **Export to other portals**: May the State and University Library export metadata, e.g. to Danbib, whereby other libraries can import metadata, and metadata is exhibited via bibliotek.dk? Other relevant examples of portals, to which the State and University Library exports, are: EUROPEANA, danmarkshistorien.dk and danskkulturarv.dk
5. **Indexing of Google and other web crawlers**: Should barriers be set up in relation to Google and other web crawlers, so that metadata cannot be retrieved by these search engines?
6. **Restricted user-groups**: Are there restrictions regarding which target groups metadata may be displayed for? The segments that so far have been in focus on the State and University Library are:
   a. Access to the legal deposit institutions
   b. Walk-in access at the State and University Library
   c. Access for researchers
   d. Access for students and employees at institutions of higher education

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\(^{12}\) API: Application Programming Interface, abbreviated to API, is a software interface that enables a piece of software to interact with other software.
5.2.2 Copyright

It is important to be aware that there must be clarification of questions of copyright when using metadata, in the same way as there must be copyright clarification in relation to the work itself. An issue that often restricts the State and University Library’s possibility of exposing metadata is in fact copyright restrictions on the content of a resource. The State and University Library often regards abstracts, thumbnails of front pages, snippets in the form of video sequences or extracts of text as metadata, as it is data that helps to describe a resource, and which can help the borrower to select a resource.

There are also often copyright restrictions on descriptive metadata (title, author, publisher and year of publication, etc.), in which case it is important to distinguish between metadata produced by the State and University Library itself or metadata purchased/retrieved from an external database.

When agreements are drawn up with a copyright holder or the organisation that represents the copyright holder, it is important to review the publication channels from section 5.2.1 in the evaluation of the contract.

Focus area:
Traditionally, not much importance has been attached to describing and enforcing rights to Marc-items in the library sector once an agreement on the right of use had been drawn up, since the users were in practice only the library sector itself. However, many libraries have now begun to consider making data available to third parties (Open Data strategy), which makes it necessary to examine which possibilities exist for this, among others in relation to companies’ wishes for a commercial application of metadata. The State and University Library will therefore, e.g. via Bibliografisk Råd, exert pressure such that the re-use of Marc-items from Danbib, OCLC, LC and BL will be subject to clear and preferably unrestricted and open rights agreements. Any restrictions must be made clear.

5.2.3 Termination of agreement

When purchasing access to bases with metadata or similar services it is important to clarify the rights to metadata in the event of termination of the agreement. Is the State and University Library still allowed to use metadata retrieved within the term of the agreement, or should metadata be removed from the State and University Library’s systems?

It is easy to remove metadata if it is simply an enriching element on a search page. For instance, the State and University Library purchases book covers from a DBC database with a view to enriching the user interface. The book covers can easily be removed from the user interface without a major deterioration in service if payment stops.

It is much more difficult to remove metadata if it is incorporated as an important element in the State and University Library’s collections, e.g. program data from Ritzau.

5.2.4 Reference to metadata provenance

When using metadata from a third party, requirements are often made concerning reference to the metadata owner, e.g. via an announcement on the portal that uses metadata or in connection with each display of metadata. Requirements such as these can be difficult to meet, particularly when a portal uses metadata from many different metadata owners.
5.2.5 Documentation
Contracts concerning the purchase or production of metadata must be stored in an appropriate manner, so that they can be retrieved and interpreted when new services are developed, or if questions are put forward concerning present use.
6 Administrative metadata

6.1 Definition
Administrative metadata is used to register local conditions concerning acquisition, storage and disposal of the library’s collections. Data shall ensure that the following can be seen at all times:

- what the library owns/rents/keeps
- why the library has a particular material
- how it is acquired
- where the material is
- how it may be used and by whom
- whether it is discarded/cancelled/lost
- etc.

This data flows to various specialist and administrative systems.

The descriptive metadata (see Chapter 2) is also an output from the above process, but in the library world there is consensus about not separating it from the administrative metadata, since the descriptive data concerns the material itself and in principle does not reflect local conditions.

As the amount of resources in electronic form has increased, the technical metadata (Chapter 3) and the rights management metadata (Chapter 4) have attained greater importance. This data is also regarded as administrative metadata.

The State and University Library wishes to have greater conceptual control of the different types of administrative metadata. In the following, metadata which falls outside the categories of descriptive, technical and rights metadata is therefore described.

6.2 Objectives
Information concerning this type of administrative metadata easily disappears in staff mailboxes or on a local drive if an effort is not made to accumulate and systematise this information. This information is important when producing statistics and optimising administrative processes. It documents the reason why material has been purchased, rejected or discarded. It is good administrative practice to have control over administrative metadata, and it often makes up the basis for auditing routines.

6.3 Process model for administrative metadata
In overall terms the same administrative processes are used in connection with acquisitions and access control to collections across the departments of the State and University Library.
The process consists of five steps as illustrated in Figure 1. In the “Administrative metadata” appendix the data elements of each step and the associated system support are described for resources in physical form, purchased e-resources and own e-resources respectively.

Each stage of the model is described in the following.

The first process is “Idea/proposal made”. This might, for instance be a user or a specialist who wants the State and University Library to subscribe to a new e-periodical or purchase a new book. It may also be a private individual or institution who donates a collection of audio or image recordings for posterity. Finally, it may also be the launch of a project concerning the establishment, revision or enrichment of metadata. Examples of administrative metadata in this process are contact information, proposer and description of the product or the collection.

The second process is “Acquisition considered”. It is checked whether the State and University Library already holds all or part of the product or collection. It must also be checked whether the product/collection falls within the State and University Library’s objectives, whether there are finances available to purchase and acquire the product/collection, and in which form the product/collection shall be acquired. For e-resources trial access may be established, if applicable. The investigation can be based on an evaluation from a number of employees/users. Examples of administrative metadata in this process are evaluations, trial access configuration and various analyses.

The third process is “Formation of contract and renewal”. Prices, financing, rights in relation to use (license) have to be negotiated. A contract may have to be drawn up. For e-periodicals and e-books in particular, the agreement must be renewed after a couple of years, and in conjunction with this, price, financing and licenses will need to be renegotiated. Examples of administrative metadata in this process are prices, financing and contracts.

The fourth process is “Implementation”. The product/collection must be delivered, paid, restored if necessary, be given barcodes and be shelved or configured. Descriptive metadata must be created and made accessible in search systems, and access systems must be updated in relation to licensing issues. Any functional preservation must be created via DOMS and bit preservation via the Bit repository.
Examples of administrative metadata in this process are invoice, stock data, configuration and access conditions.

The fifth process is “Utilisation, operation and disposal”. Transaction data and statistics concerning lending/download. Discarding of materials not worthy of preservation. Examples of administrative metadata in this process are circulation data, outstanding charges, download statistics, registration of discarded materials and storage needs.

Primary requirements:
- The administrative metadata must be system-supported or documented on an ongoing basis so that colleagues can understand, optimise or migrate the processes.
- The administrative metadata must support statistical use to enable extraction of relevant statistics.
- The administrative metadata must be independent of persons concerned, so that new employees can be gradually introduced in connection with sickness or other changes of staff.
- The administrative metadata must show how and under which conditions the material has been acquired, as well as the cause of any shortcomings, i.e. the administrative metadata forms the basis of good administrative practice and thereby also auditing routines.

Focus area:
In projects concerning the establishment, revision or enrichment of metadata, a lot of effort is often applied in the form of metadata analyses, selection and mapping rules. These efforts often get lost following the completion of a project, the consequence being that new projects cannot build on previous choices and experience. Efforts must be made to secure and preserve the above documentation in the long term, and as far as possible retrospectively. At the same time, guidelines must be drawn up for how and where this documentation can be secured.
7 Standards

7.1 Definition
The formal definition of a standard is as follows:
“Document for universal and repeated use that specifies rules, guidelines or characteristic features
of activities or the results of these. The document is determined by consensus and approved by an
accredited body. The intention is to achieve optimum order in a particular context.” (From
http://www.ds.dk/da/standardisering/ds-universitetet/hvorfor-laver-vi-standardder)

7.2 Objectives
This chapter of the State and University Library’s metadata policy describes the metadata standards
most frequently used at the library at present.

In order to make things easier, we have tried to give a picture of the linkage between process,
function and standard via flow diagrams (see “Standards” appendix; OBS: only in Danish).
Unfortunately it has not been technically possible to insert links to the standards directly into the
diagrams, so it will be necessary to supplement with lists with the applicable links in the next
version of the policy.

It is important to use recognised standards and norms both for content (content format) and for
structure (data format), when wishing to exchange data with other users and systems, and/or to
secure long-term preservation of data, including the possibility for access, use and - in due course -
migration to revised formats.

There are generally several standards for the same task, and irrespective of which standard is
chosen, it is necessary to compromise. No standard can cover all materials for all users.
It is necessary to decide which material type is to be described, which level of detail is required, the
prospective users, etc., and not least which types of standards are already the most frequently used
for the task in question.

7.3 Types of standards
There are different types of standards which can roughly be grouped as follows:

a. National and international standards (e.g. ISO standards and DS standards), for example:
   ISO 2709 Information and documentation -- Format for information exchange
   ISO 9735:1988 (EDIFACT) Electronic data interchange for administration, commerce and transport
   -- Application level syntax rules

b. Sector-specific standards (including NISO, which is actually an American national standard, but is
   often used internationally), for example:
   Protocol Specification
   DCMI (Dublin Core Metadata Initiative)
   MODS (Metadata Object Description Schema)
   MARC (MAnchine-Readable Cataloguing)

   MARC in local adaptation:
   DanMarc2, which is further modified in
   The State and University Library’s complete format
c. Examples of standards for special descriptions:
   - Radio and TV broadcasts: PBCore (Public Broadcast Core)
   - Visual objects: VRA Core (Visual Resources Association)
   - Data set for social sciences: DDI (Data Documentation Initiative)

d. De facto standards (e.g. vendor-specific standards, typically for administrative metadata; cataloguing rules, etc.)
   - Item status codes (the structure is determined by the library system vendor, but is interpreted locally)
   - Cataloguing rules and bibliographic standard for Danish libraries
   - "Role-based authorization" (description of rules for users’ access to e-materials)
   - COUNTER (statistics concerning the use of e-resources)

Primary requirement
- Use of metadata standards and formats at the State and University Library must be documented. It is not enough to describe which standard is used in a particular situation. It is also necessary to document how the standard is used, i.e. the local interpretations.

Focus area:
Areas must be identified where there is a need to improve documentation for the State and University Library’s use of metadata standards and formats. At the same time guidelines are to be drawn up for how and where this documentation is secured.
## Appendix “Administrative Metadata”

### Administrative metadata for resources in physical form

<table>
<thead>
<tr>
<th>Part of flowchart</th>
<th>Data elements</th>
<th>Where is data accessible?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idea/proposal made</td>
<td>Specialist&lt;br&gt;Input from AU library/end user (incl. reservation queue and lost material)&lt;br&gt;SBCI purchase</td>
<td>Vendor bases&lt;br&gt;Aleph&lt;br&gt;Misc. mails&lt;br&gt;E-case</td>
</tr>
<tr>
<td>Acquisition under consideration</td>
<td>Remote borrowing or purchase?&lt;br&gt;Legal deposit of published material: Definition of legal deposit (e.g. print-on-demand)&lt;br&gt;Sorting of legal deposit (what is included) for example publication reduction</td>
<td>Aleph&lt;br&gt;Danbib&lt;br&gt;E-case&lt;br&gt;Internet</td>
</tr>
<tr>
<td>Contracting and renewal of contract</td>
<td>Discounts&lt;br&gt;Copying agreement&lt;br&gt;Rules for use of AV + radio/TV in physical form</td>
<td>Book purchasing agreement?&lt;br&gt;Copydan&lt;br&gt;Legal deposit legislation</td>
</tr>
<tr>
<td>Implementation</td>
<td>Vendor&lt;br&gt;Invoice&lt;br&gt;Bookbinder&lt;br&gt;Access/use (item/process status codes)</td>
<td>INDFAK&lt;br&gt;Bookbinder module/Aleph&lt;br&gt;Aleph</td>
</tr>
<tr>
<td>Usage and disposal</td>
<td>Transaction data (borrowing, orders, debts, user register information)&lt;br&gt;Usage statistics&lt;br&gt;Service to unregistered users&lt;br&gt;Discarding: legal deposit - no other – yes</td>
<td>Aleph&lt;br&gt;E-sag&lt;br&gt;User register&lt;br&gt;Registration of unregistered users</td>
</tr>
</tbody>
</table>
### Administrative metadata for purchased e-resources

<table>
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<tr>
<th>Part of flowchart</th>
<th>Data elements</th>
<th>Where is data accessible?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idea/proposal made</td>
<td>Vendor</td>
<td>Serials Solutions Resource Manager</td>
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<tr>
<td></td>
<td>Product</td>
<td>Misc. mailboxes</td>
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<tr>
<td></td>
<td>Proposer</td>
<td></td>
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<tr>
<td>Acquisition under consideration</td>
<td>Vendor</td>
<td>Serials Solutions Resource Manager</td>
</tr>
<tr>
<td></td>
<td>Product</td>
<td>Misc. mailboxes</td>
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<tr>
<td></td>
<td>URL</td>
<td></td>
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<tr>
<td></td>
<td>Trial period</td>
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<tr>
<td></td>
<td>Access: IP or username/password</td>
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<tr>
<td></td>
<td>Feedback</td>
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<tr>
<td>Contracting and renewal of contract</td>
<td>License</td>
<td>Serials Solutions Resource Manager</td>
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<tr>
<td></td>
<td>Platform</td>
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<td></td>
<td>Price</td>
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<td>Internal financing</td>
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<td>Statistics</td>
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<td>Implementation</td>
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<td>Serials Solutions Resource Manager</td>
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<td>Invoice</td>
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<td>Statistics URL and username/password</td>
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<td>Admin URL and username/password</td>
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<td>Usage and disposal</td>
<td>Statistics</td>
<td>Serials Solutions Counter</td>
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<td>Renewal prices</td>
<td>Misc. spreadsheets</td>
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<td>Misc. mailboxes</td>
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<td>DEFF’s licensing portal</td>
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<td>Swetswise</td>
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### Administrative metadata for own e-resources

<table>
<thead>
<tr>
<th>Part of flowchart</th>
<th>Data elements</th>
<th>Where is data accessible?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idea/proposal made</td>
<td>Contact person/ donor, Mandate</td>
<td>Misc. mails, Media</td>
</tr>
<tr>
<td>Acquisition under consideration</td>
<td>Legal deposit? Gift?, Is there overlap with existing collections?, Is it worthy of preservation?, Size of collection?, Format(s) of collection?, Metadata?, Legal assessment?</td>
<td>Internet and other media, Misc. mails and memos, Legal deposit legislation</td>
</tr>
<tr>
<td>Contracting and renewal of contract</td>
<td>Source/ donor incl. contact information, Preservation, Rights, Metadata rights, Accessibility</td>
<td>Agreement document, Misc. mails, Tender material, Requirement specification</td>
</tr>
<tr>
<td>Implementation</td>
<td>Collection history, Year of content, Year of digitisation, Size (no. of files, hours, programmes), Formats, Quality, Location, Owner of collection, Metadata, Risks, Functional preservation (DOMS), Bit preservation (Bitmagasinet), Access, Legislation – with respect to access, User groups, Quality assurance</td>
<td>Reception form, Wiki: digital collections, Wiki: metadata for digital collections, Collection preservation plan, Checklist for digitisation, Documents with documentation of QA process</td>
</tr>
<tr>
<td>Usage, operation and disposal</td>
<td>Statistics, No. of copies, No. of checksums, Geographical separation, Organisational separation, Different technological platforms, Checksum-check, Quality check, Max. retrieval time (from order until data is online), Access, Stock requirements, Ingest per year, Temporary online stock</td>
<td>Mediestream statistics module, Table for bit preservation level</td>
</tr>
</tbody>
</table>
Overview of data sources and formats in Search/Corporate (in addition to data sources for purchased e-resources)

1. OAI items from various data providers
   Harvested (The State and University Library) by means of OAI-PMH protocol
   http://www.openarchives.org/pmh/ in Dublin Core format
   http://dublincore.org/documents/dces/ in an XML transport format
   http://www.openarchives.org/OAI/2.0/oai_dc.xsd

2. PURE items from Aarhus University
   Harvested (The State and University Library) in mxd format
   http://mx.forskningsdatabasen.dk/mxd/1.3.0/DDF_MXD_v1.3.0.pdf

3. CMS pages at www.statsbiblioteket.dk (only Corporate interface)

4. Commercials 1 (mini-doms)
   Danish-language (proprietary) xml format

5. Commercials 2 (mini-doms)
   other xml format

6. The Danish newspapers – Jette Søllinge (mini-doms)
   Wrapping FOXML http://fedora-commons.org/download/2.0/userdocs/digitalobjects/introFOXML.html

7. Car yearbook and other digital yearbook (mini-doms)
   oai_dc mm wrapped in FOXML

8. Danish specialist bibliographies 1 (no increase) (Nordicom – older items)
   Proprietary Marc-like format wrapped in MarcXML

9. Danish specialist bibliographies 2 (no increase) (Nordicom – newer items)
   danMarc2 items (with local letter fields) wrapped in MarcXML

10. Danish specialist bibliographies 3 (no increase) (MissNord)
    Proprietary Marc-like format wrapped in proprietary XML format

11. Danish specialist bibliographies 4 (no increase) (DPP, DUB, DKB)
    danMarc2 items wrapped in proprietary XML format

12. Specialists
    Proprietary XML format

13. Tracks on ripped CDs