Linked Data: Music Related Vocabularies in the Netherlands

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STICHTING ‚EURIADE‘ — CORNEL BÜCKEN

Linked Data: Music Related Vocabularies in the Netherlands

- **Introduction:** *Podiumkunst.net*

- **Vocabulary:** *Medium of Performance*   *(published)*

- **Vocabulary:** *Dutch Classical Music Works*   *(published)*

- **Entities model:** *Musical Performance*   *(published)*

- **Vocabulary:** *Performing Arts Persons*   *(in progress)*

- **Vocabulary:** *'Functions/Roles'*   *(starting)*

Including Muziekweb.nl

Vocabulary:
Medium of Performance
(uitvoeringsmedium)

MIMO musical instrument museums online

INSTRUMENT FAMILIES

- Wind instruments
- Percussion instruments   12725 👁
- Stringed instruments   11191 👁
- Elements of musical instruments   3464 👁
- Keyboard instruments   2307 👁
- Mechanical instruments   493 👁
- Other instruments   114 👁
- Mirlitons   95 👁
- Electronic instruments   59 👁

DEWEY DECIMAL CLASSIFICATION

780 Music

781 General principles and musical forms

782 Vocal music

783 Music for single voices

784 Instruments and Instrumental ensembles and their music

785 Ensembles with only one instrument per part

786 Keyboard, mechanical, electrophonic, percussion instruments

787 Stringed instruments (Chordophones)

788 Wind instruments (Aerophones)

789 Not assigned or no longer used

RDA–ontology
medium of performance: attributes

Entities > Work > medium of performance of musical content of representative expression

medium of performance of musical content of representative expression

Definition and Scope

An instrument, voice, or ensemble used, or intended to be used, for performance of musical content of a representative expression of a work.

👁 Element Reference

IRI
http://rdaregistry.info/Elements/w/P10220

Domain
Work 🔗

Alternate labels
has medium of performance of musical content of representative expression

Entities > Expression > medium of performance of musical content

medium of performance of musical content

Definition and Scope

An instrument, voice, or ensemble and the number of parts, performers and hands used, or intended to be used, to perform the musical content of an expression.
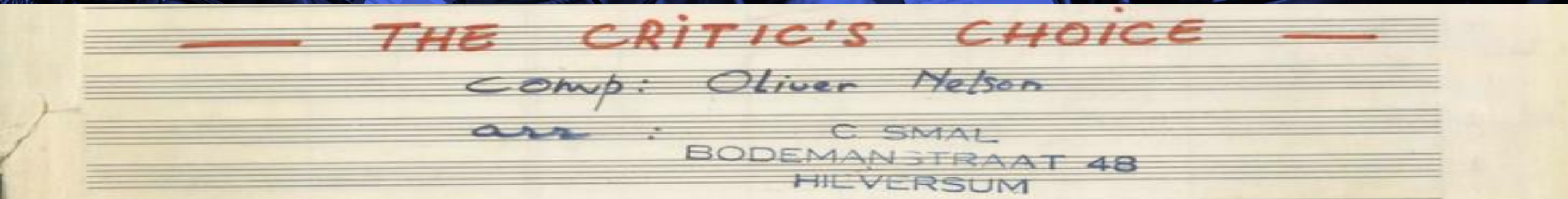
👁 Element Reference

IRI
http://rdaregistry.info/Elements/e/P20215

Domain
Expression 🔗

Alternate labels
has medium of performance of musical content

medium of performance

Value (term/iri) reflects full medium of performance

UITVOERINGSMEDIUM

- Six languages (**Dutch**, English, French, German, Italian, Spanish)
- Broader term for each vocabulary term (except for TopConcepts)
- Terms in singular form for individual instruments or voices
- Terms in plural form for homogenous ensembles (= one type of instrument or voice)
  Specify size (e.g. *Quintet / https://data.muziekschatten.nl/som/um1633*)
- Instruments in heterogenous ensembles represented by family name
  (e.g. *Ensemble of woodwind, brass, string, percussion / https://data.muziekschatten.nl/som/um912*)
- Distinguish between accompanied (*with accompaniment*) and unaccompanied vocal pieces
  Specify instrumental accompaniment of a vocal piece (e.g. *Basso continuo / https://data.muziekschatten.nl/som/um278*)
- Separate term for each solo instrument with each orchestral accompaniment
  (e.g. *Clarinet with wind band / https://data.muziekschatten.nl/som/um1513*)
- Pieces for a melody instrument and keyboard accompaniment are considered a heterogenous ensemble
  (e.g. *Ensemble of woodwind and keyboard instrument / https://data.muziekschatten.nl/som/um897*)
- Includes identifier links from various relevant lists of terms (MIMO, Dewey DC, Wikidata, MusicBrainz en Arts & Architecture)

Zoek uitvoeringsmedia / Seach module for Media of Performance

(en vind **uri's** voor instrumentnamen/instruments, stemsoorten/voices en ensembletypes)

ensemble of woodwind brass

ZOEK/SEARCH

Explanatory notes:

- Composite terms are available for orchestral music (more instruments per part) with one or more solo instruments (e.g. *oboe with symphony orchestra* or *solo instruments with big band*)
- In instrumental ensemble music (one instrument per part), a solo instrument is considered one of the instruments within the performing ensemble. Specific terms are available for standard settings: e.g. *string quartet* or *piano trio*.
- In instrumental ensemble music with heterogeneous instrumentation, the instruments are classified in the family to which they belong (e.g. *ensemble of woodwind, brass, strings*).

Concept-elaboration of examples using RDA and Performed Music Ontology (spreadsheet)

e-mail redactie (*voorlopig/temporary*)

- **ensemble van hout en koper**
- **ensemble van hout, koper, elektrofoon**
- **ensemble van hout, koper, elektrofoon, slagwerk**
- **ensemble van hout, koper, elektrofoon, slagwerk, toets**
- **ensemble van hout, koper, elektrofoon, toets**
- **ensemble van hout, koper, slagwerk**
- **ensemble van hout, koper, slagwerk, toets**
- **ensemble van hout, koper, snaar**
- **ensemble van hout, koper, snaar, elektrofoon**
- **ensemble van hout, koper, snaar, elektrofoon, slagwerk**
- **ensemble van hout, koper, snaar, elektrofoon, slagwerk, toets**
- **ensemble van hout, koper, snaar, elektrofoon, toets**
- **ensemble van hout, koper, snaar, slagwerk**
- **ensemble van hout, koper, snaar, slagwerk, toets**
- **ensemble van hout, koper, snaar, toets**
- **ensemble van hout, koper, toets**

data.muziekschatten.nl/som/um912

https://data.**muziekschatten.nl**/zoekmodule_uitvoeringsmedia.html

ensemble van hout, koper, snaar, slagwerk

https://data.muziekschatten.nl/som/um912

TYPE ENTITEIT: **Ensemble**

skos:**prefLabel**	DE EN ES FR IT <u>NL</u>
som:**DEPTMD**	Ensemble aus Holz, Blech, Saite, Schlagzeug
som:**ENPTMD**	Ensemble of woodwind, brass, string, percussion
som:**ESPTMD**	Conjunto de viento madera, viento metal, cuerda, percusión
som:**FRPTMD**	Ensemble de bois, cuivre, corde, percussion
som:**ITPTMD**	Complesso da legno, ottone, corda, percussione
som:**MSIDL**	https://data.muziekschatten.nl/som/d78552
skos:**scopeNote**	Gebruik voor ensemblebezettingen met instrumenten uit de genoemde instrumentenfamilies
skos:**broader**	som:um952 ↳ ensemble zonder toets en met slagwerk
skos:**closeMatch**	som:d78552 ↳ Ensembles van hout, koper, snaren, slagwerk

IAML Salzburg 8 July 2025:
Linked Data: Music Related Vocabularies in the Netherlands

Vocabulary:
Dutch Classical Music Works

INPUT:

Bibliographic descriptions of sheet music (*manifestations*) of classical music by Dutch composers

23.899 records

UNIMARC-*ish*-format
(local interpretation, subfields replaced by interpunction)

Rather rich and of fairly good quality
(thanks to ISBD-cataloguing rules and use of controlled vocabularies:
IFLA Names of Persons, LoC: countries and language, Dewey DC)

Several vocabularies available in LOD-format
(persons, languages, countries , medium of performance)

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OUTPUT:

21.658 WORK-entities (with URIs)
(+ ~25.000 part works)
category: *musical work*

20.226 EXPRESSION-entities (with URIs)
(+ ~25.000 part expressions)
content type: *notated music*

Basis for RDA-compliant publication from library management systems (for classical music)

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Zoek klassieke muziekwerken / Search module for (Dutch) classical music works

(en vind **uri**'s voor deze Werk-entiteiten)

| hout andriessen | ZOEK |

e-mail redactie (*voorlopig/temporary*)

- Andriessen, Jurriaan. Concertino, fagot, houtblazers (8), hoorns (2) (1962)
- Andriessen, Jurriaan. Concertino, fagot, houtblazers (8), hoorns (2) (1962). 1. Adagio
- Andriessen, Jurriaan. Concertino, fagot, houtblazers (8), hoorns (2) (1962). 2. Allegro deciso
- Andriessen, Jurriaan. Concertino, fagot, houtblazers (8), hoorns (2) (1962). 3. Adagio
- Andriessen, Jurriaan. Concertino, fagot, houtblazers (8), hoorns (2) (1962). 4. Allegro deciso
- Andriessen, Jurriaan. Hommage à Milhaud, houtblazers (5), koperblazers (3), strijkers (3)
- Andriessen, Jurriaan. Octet, houtblazers (8) (1948)
- Andriessen, Jurriaan. Octet, houtblazers (8) (1948). 1. Ouverture
- Andriessen, Jurriaan. Octet, houtblazers (8) (1948). 2. Ritournelle
- Andriessen, Jurriaan. Octet, houtblazers (8) (1948). 3. Sicilienne
- Andriessen, Jurriaan. Octet, houtblazers (8) (1948). 4. Ritournelle
- Andriessen, Jurriaan. Octet, houtblazers (8) (1948). 5. Scherzo
- Andriessen, Jurriaan. Sextet, piano, houtblazers (2), strijkers (3) (1985)
- Andriessen, Jurriaan. Sextet, piano, houtblazers (2), strijkers (3) (1985). 1. Lento-Allegro deciso
- Andriessen, Jurriaan. Sextet, piano, houtblazers (2), strijkers (3) (1985). 2. Largo
- Andriessen, Jurriaan. Sextet, piano, houtblazers (2), strijkers (3) (1985). 3. Scherzo
- Andriessen, Jurriaan. Sextet, piano, houtblazers (2), strijkers (3) (1985). 4. Rondo-Allegro vivace
- Andriessen, Jurriaan. Symfonie, houtblazers (8), nr. 6
- Andriessen, Jurriaan. Symfonie, houtblazers (8), nr. 6. 1. Lento-Allegro
- Andriessen, Jurriaan. Symfonie, houtblazers (8), nr. 6. 2. Andante tranquillo
- Andriessen, Jurriaan. Symfonie, houtblazers (8), nr. 6. 3. Menuetto
- Andriessen, Jurriaan. Symfonie, houtblazers (8), nr. 6. 4. Presto
- Andriessen, Louis. Hout

https://data.muziekschatten.nl/zoekmodule_NL_klassiek.html

data.muziekschatten.nl/som/work/1e77b1afddcb80291cf1828887e837bd

Andriessen, Louis. Hout

https://data.muziekschatten.nl/som/work/1e77b1afddcb80291cf1828887e837bd

<http://rdaregistry.info/Elements/c/**C10001**>

rdfs:**label**	Andriessen, Louis. Hout
rdaw:**P10069**	Paul Koek
rdaw:**P10086**	Wood
rdaw:**P10219**	1991
rdaw:**P10223**	Hout
rdaw:**P10287**	D.G. Simons
rdaw:**P10004**	<http://rdaregistry.info/termList/RDATerms/1118> ↳ musical work som:d78168 ↳ Western Art music
rdaw:**P10053**	som:0ee5b531a4557a7313de0f8d06ef1895 ↳ ANDRIESSEN, LOUIS

BLANK NODES

rdaw:**P10220**	_:abc4a61805368e08e19b6569932c06c8
rdf:**type**	<http://performedmusicontology.org/ontology/DeclaredMedium>
<http://performedmusicontology.org/ontology/**hasMediumOfPerformance**>	som:um922 ↳ ensemble of woodwind, string, percussion, keyboard instrument
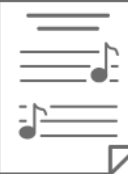
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DUTCH CLASSICAL MUSIC WORKS
(connecting)

Entities model:
Musical Performance

EVENTS

Three case studies:

1. Sesjun (Muziekschatten/Nederlands Jazz Archief):

A jazz radio program series with live performances,
used to explore modelling of broadcasted music events.

2. Architecture of the Invisible (Allard Pierson):

A dance program with multiple choreographic works, including a world premiere.

3. Kijk in mijn ogen (Nederlandse Dansdagen):

A site-specific music theatre piece, showing how performances recur across festivals.

EVENTS
Modelling

Six core identities:

1. **Work level**:
- o *Piece*: e.g., play, music, dance.
- o *Production program*: e.g., concert, dance program.
- o *Event program*: e.g., festival, radio show.

2. **Expression level**:
- o *Performance*: a specific execution of a piece.
- o *Production program performance*: a series of similar performances.
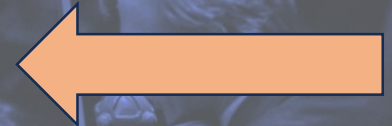- o *Event program performance*: a sequence of various performances (e.g., festival edition).
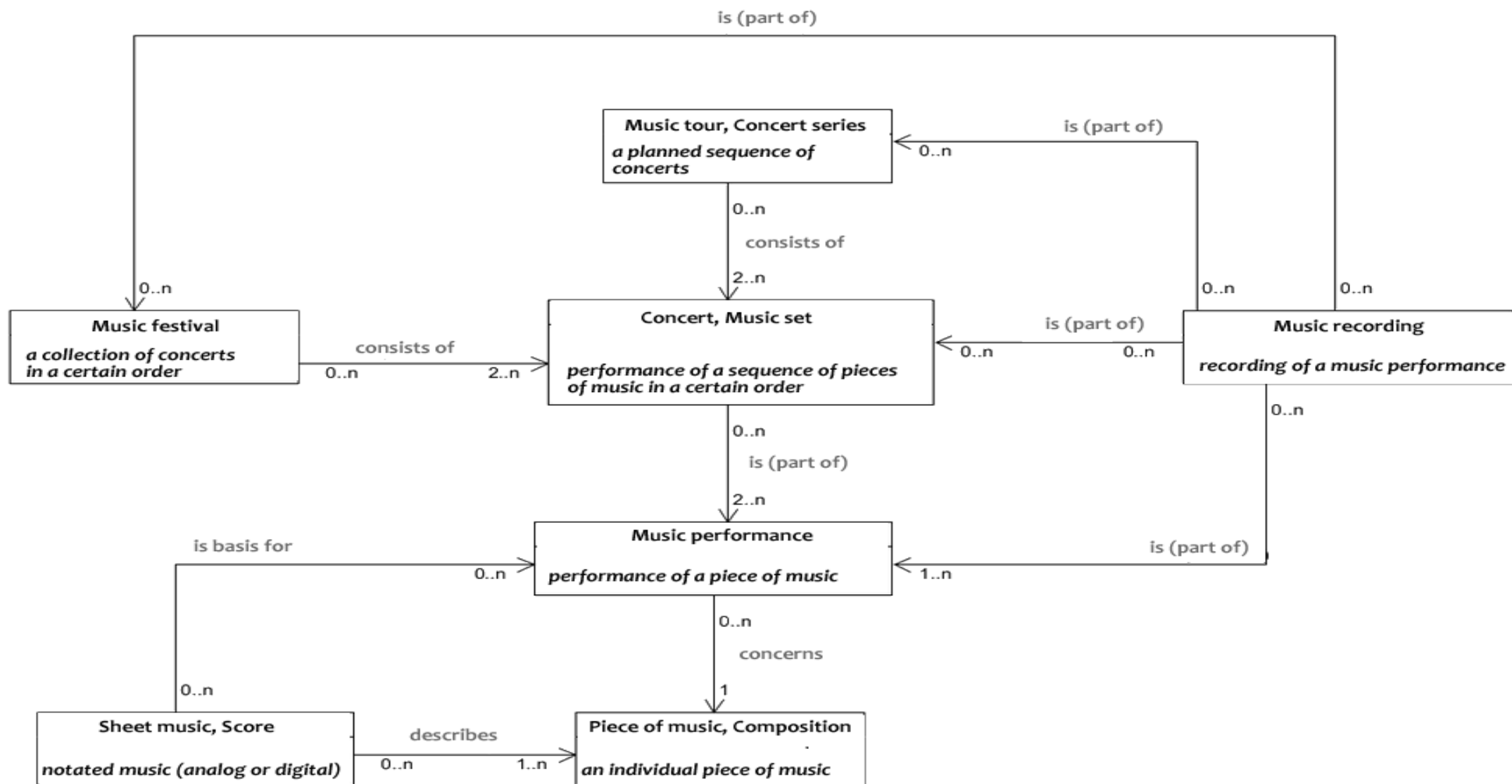
Vocabulary:
Performing Arts Persons

Proof of Concept:
https://zenodo.org/records/13968762

Performing Arts Persons
Proof of Concept

Person entities from three datasets: Muziekschatten, Muziekweb and the Common Thesaurus for Audiovisual Archives

Questions:

- Is it possible to create a distributed source using only linked data techniques?

- Can identical or similar name forms from different sources be merged into a single identity?

- Should a single be published in a central source?

- Is it possible to share subject matter expertise?

- Can users of the vocabulary easily select the proper identity?

- Can we find an efficient form of management (with quality/topicality as the most important characteristic)?

- Is it possible to apply the result on other types of datasets? (e.g. corporate bodies, creative works, functions/roles)

Performing Arts Persons
Proof of Concept

Constructing the vocabulary in four steps:

1. extraction of relevant persons from the three datasets

2. normalisation of personal names

3. pre-calculation of relationships

4. constructing a vocabulary

Result: 6.708 clusters of persons from all three sources

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Lessons learned:

- **Technically it is possible to construct a vocabulary of persons**

- **Conceptual handling of large amounts of sources and data is challenging**

- **Quality is more important than quantity**

- **Just using personal names is not enough**

Performing Arts Persons
Management and curation

Five scenarios:

1. **Termennetwerk (Dutch network of terms)**
   A linked data service that provides standardized Dutch terminologies and vocabularies for heritage, archives, and museums.

2. **Wikidata**
   A free, collaborative, multilingual knowledge base that stores structured data for use across Wikimedia projects and beyond.

3. **Wikibase**
   An open-source software platform developed by Wikimedia to create and manage custom structured data repositories.

4. **Omeka S**
   A linked data publishing platform for institutions managing digital collections.

5. **Distributed Vocabulary of Persons** *(see earlier)*

Performing Arts Persons
Management and curation

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General questions:

- What are the chances of this scenario?

- What are the disadvantages of this scenario?

- Which of the goals of the Proof of Concept will be achieved in this scenario?

- What does it take to make the scenario work?

- Who should/can carry out management and curation?

- Which are the financial consequences?

- Is the scenario easily accessible to users that have hardly any technical knowledge?

- Is the scenario easy to implement in existing collection management systems?

Conclusion:

"At this point there is no single scenario that provides a solution that can be put into practice without further ado."

Model:
Functions / Roles

QUESTIONS?