



UiT Norges arktiske universitet

# MedNoreg+ :

## A possible contribution to systematic Information Retrieval and access for evidence-based-decision-making

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Addressing Lifecycles of The Literature in Health Technology Assessment  
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**Project idea:**

**To develop an Open Access (OA) Database system that will improve systematic search for biomedical scientific research for all users**



Why this project?

**The main OA database in biomedical Sciences,  
PubMed, seems to have problems in coping with  
the overwhelming number of new publications**

## For instance:

There is lag-behind in systematic retrieval of publications compared to what is actually published.

- ✓ The 2020 complete MeSH index analysis indicated ca. 2,6 million publications that still exist in the queue, to be MeSH indexed.
- ✓ By March 2022, there was a queue of ca. 4,35 million publications not yet indexed with MeSH.

## Implying that:

The recent publications are among those that lacks the MeSH terms, & hence problematic.

- ✓ In March 2022, > 40 % of the documents with a publishing year of 2021 or 2022 still did not have MeSH terms assigned (Per. com.).

**Besides:**

**The database, can only allow systematic search in English language.**

**At the University in Tromsø (UiT), this seems to be a barrier to some of the non-native English speaker, and especially students.**

## Target:

To create a new OA data system service called "MedNoreg+" that makes all available biomedical research publications systematically searchable in a local language, in addition to English.

- First target: Norwegian, Swedish, & English.



## Specifically, MedNoreg+” will enable:

1. Users to systematically search with Norwegian and Swedish terms, apart from English (room for expansion to other languages).
2. All PubMed posts will be loaded automatically into MedNoreg+
3. Auto index MeSH terms on all the posts, which NLM has not yet been able to index manually.

**The major goal behind all these efforts is:**

**To contribute to health services in delivering  
best possible and quality health care practices  
and research**



*Who is behind the idea?*

Universitetsbiblioteket  
i Tromsø,

UiT The Arctic  
University of Norway.

By

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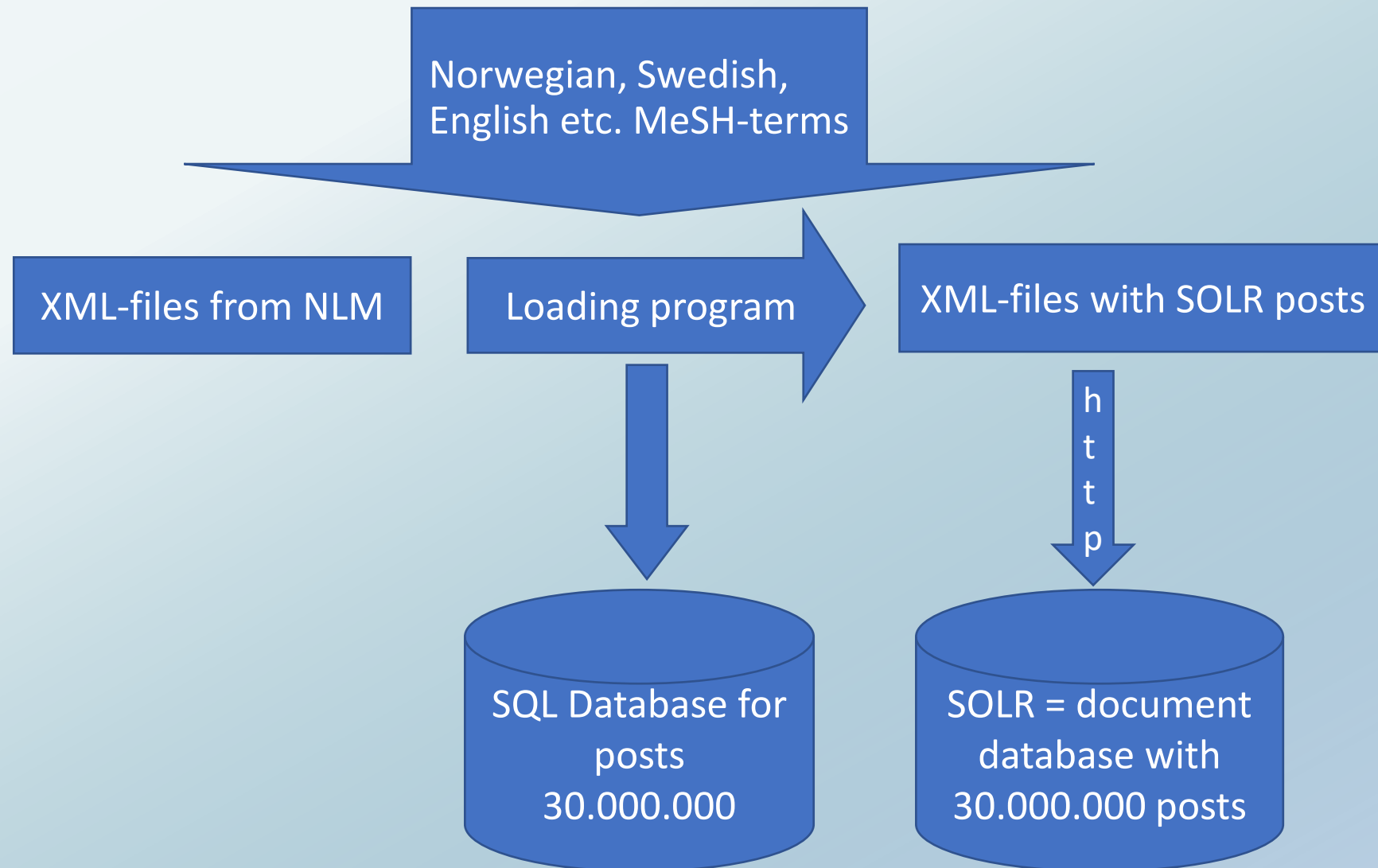
## **We believe that our project will:**

- Significantly contribute towards helping researchers, practitioners and students to access up-to-date HTA documented knowledge-evidence quickly and systematically.
- Enable the published-information to be quickly & systematically searched and easily available to all users as soon as published.

# MedNoreg+ will:

- Be based on well-known search interface (e.g., PubMed).
- Allow combinations with Boolean Operators in both Simple & Advanced Search modes.
- Allow to “Explode search” for MeSH terms in the query.
- Any search in this database will simultaneously systematically search all the entries published, be it in English, Norwegian and Swedish, + +
- Be easy to use and understand, even to those unfamiliar with MeSH will be able to systematically search and access needed literature.

# Data flow in MedNoreg+ system (mirror of PubMed)



# Some problems to solve?

- NLM cannot manually index all new posts.
- NLM decided to stop providing a translation service for non-English languages
- NLM do not have capacity to index non-English publications & especially those published in Nordic Journals within Medicine and Health.
- KIB stopped updating SveMed+ database, which contains references to Scandinavian articles (including Nordic journal articles) after 2019.



# Conclusion: MedNoreg+ will

- Automatically index all publications with MeSH terms.
- Give better overview of search results compared to other systems
- Allow possibility to systematically search, and access up-to-date biomedical research knowledge as soon as published.
- Be easy to search for all users.
- Enable researchers and students to systematically search in their local languages for retrieval of information results in all available languages.



# Thus, we believe our project's contribution will:

- Help in addressing “Lifecycles Of The Literature In Health Technology Assessment”
  - Enable systematic retrieval & quick access to up-to-date information
- Thereby a contribution to:
  - ✓ knowledge for decision-making in the healthcare- and social welfare services
  - Evidence for use in summarising research through systematic reviews (evidence syntheses) and health technology assessments

# Framdriftsplan (project plan incl. budget)

This will be sorted later together with our (tentative) partners

## 1. What has been so far done/started is

- ✓ Translation of 537 new MeSH terms from English to Norwegian (permanent translator needed for continuation)

## 2. Project plan with packages, & Partners

- ✓ Description of different project packages (how many) & deliverables
- ✓ Schedule of package (period/duration diagram, budget)
- ✓ Project proposal and submission for finance
- ✓ Implementation, Evaluation(s), Train, and Test platform for user-friendly, etc.
- ✓ Research: Machine Learning Techniques (Chowdhury & Schoen, 2020) for MedNorge+ to e.g. auto index MeSH terms on all the posts (can be for 1 or 2 MSc. or 1 PhD Student Project)