

New governmental LT initiatives in Denmark

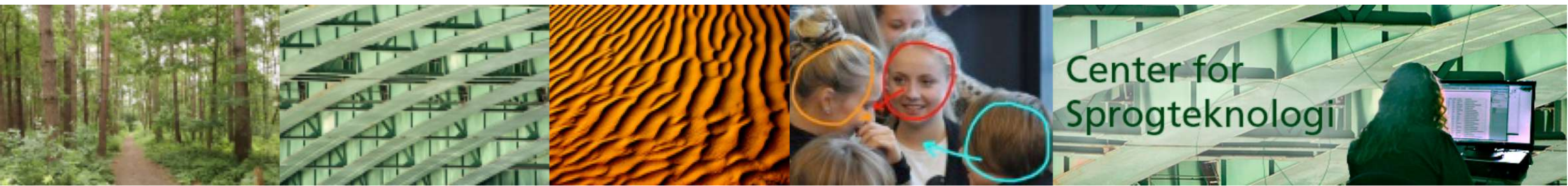
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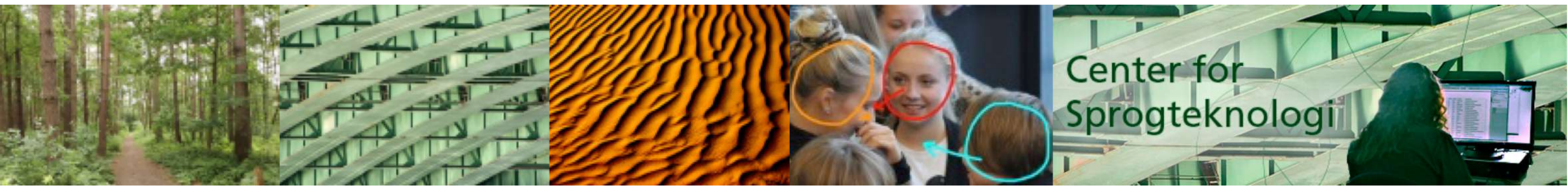
Looking back

- Recommendations for LT in previous reports *Sprog til tiden* (2009), *Dansk sprogs status* (2012)
- MetaNet reports 2012
- Parliament proposal for a Danish LT Language Bank 2012
- Parliament proposal for a Danish LT Committee 2016
- Set up of LT Committee under the Ministry of Culture 2018 led by the **Danish Language Council**



Looking back

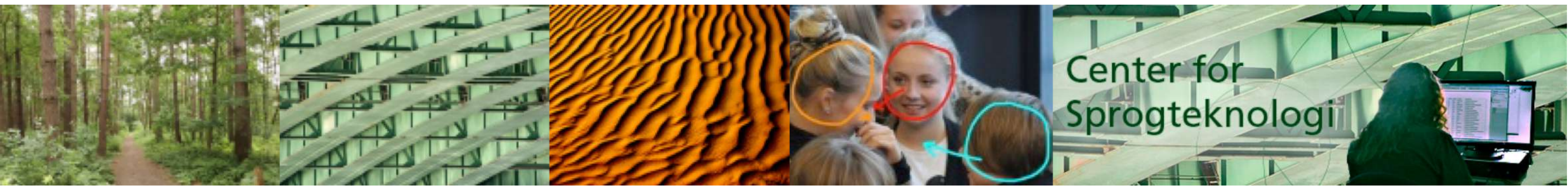
- October 2018: Government: *World-class digital service*
 - *World-class LT*
- March 2019: Government: *National strategy for AI*
 - *DKK 30 million (4 million euros) for a Danish language resource*
- April 2019: recommendations of the Language Technology Committee



The LT Committee led by the Danish Language Council

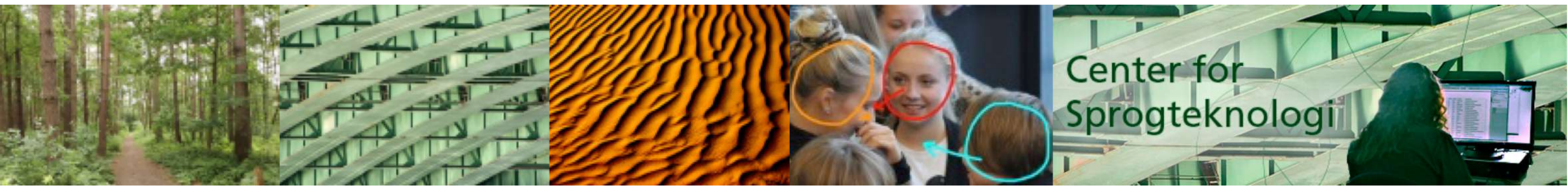
- Committee members: LT industry, LT researchers, LT users
- **Mission:** Investigate perspectives and challenges for language technology in a Danish context and make suggestions on how to best ensure the use of Danish (and other languages) in digital services and artificial intelligence.

Investigate the perspectives of a Danish Terminology Bank



Recommendations:

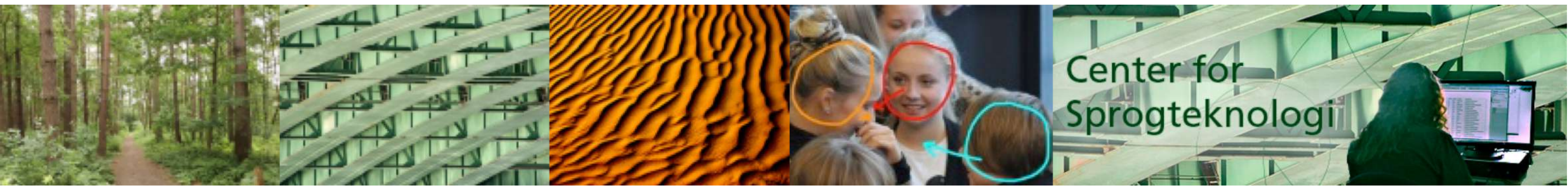
1. Establishment of **an organization** responsible for a Danish language bank and for planning and launching language technology development projects
2. Establishment of a **Danish Language Bank** which must be made available in high linguistic quality and optimized for language technology purposes.
3. Strengthening **education** in Danish language technology
4. Strengthening **research** in Danish language technology.



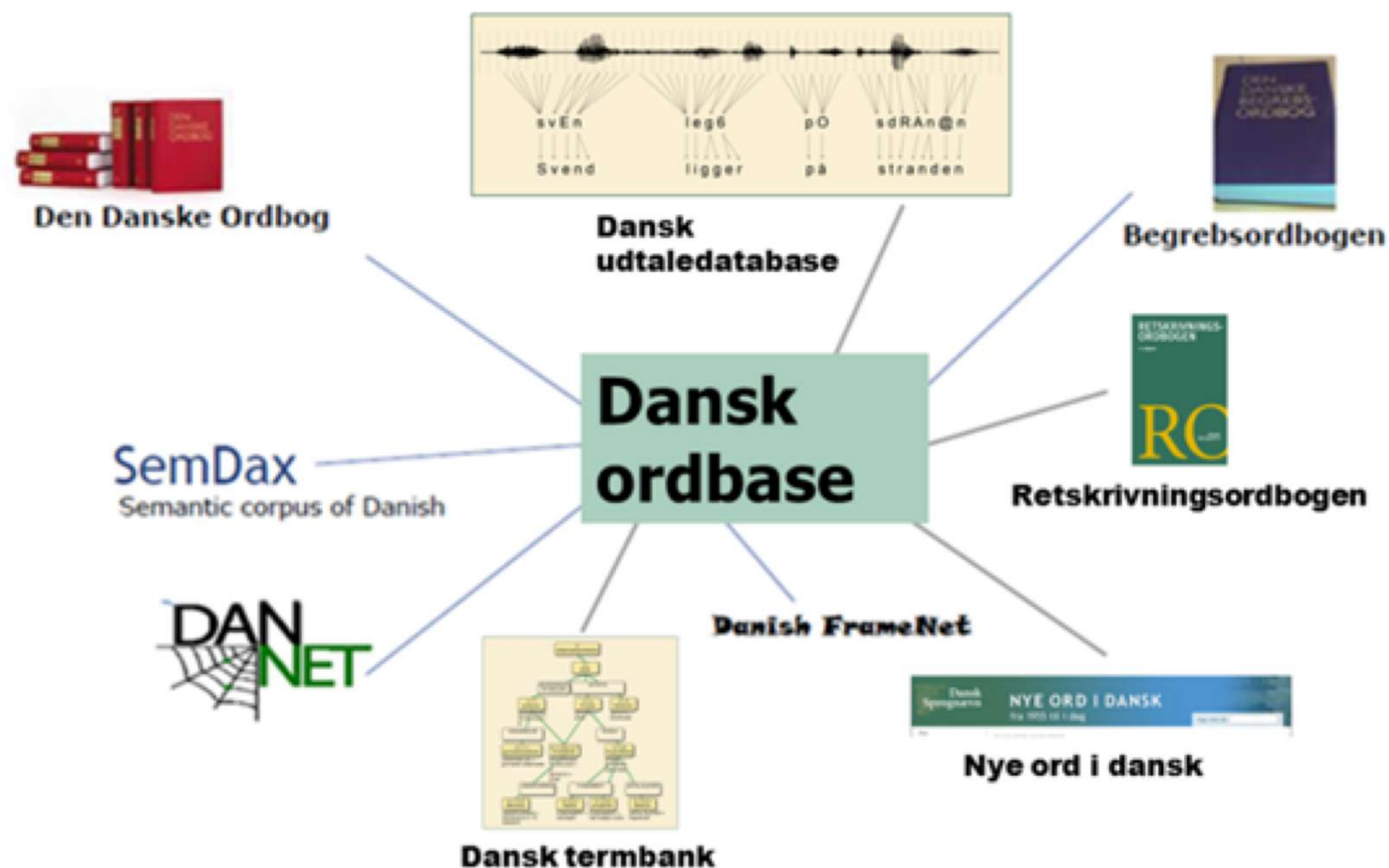
Recommendations:

The **Language Bank** should contain:

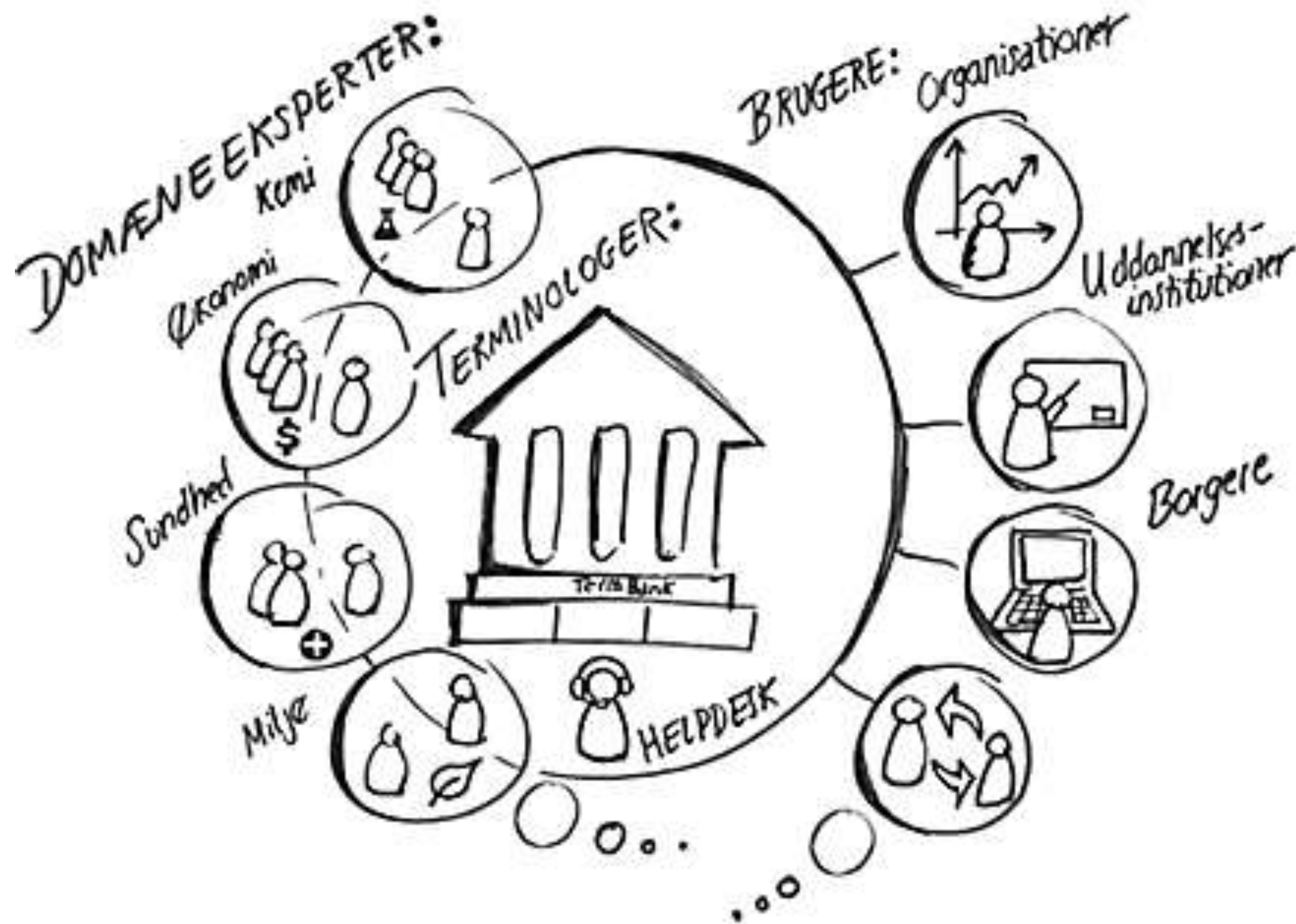
- A time-encoded speech corpus of Danish
- An LT toolbox
- Danish corpora and annotated gold standards/datasets
- An advanced lexical resource for Danish
- A Danish term bank
- A resource portal for distribution and sharing of LT resources from the Language Bank



An advanced lexical resource for Danish



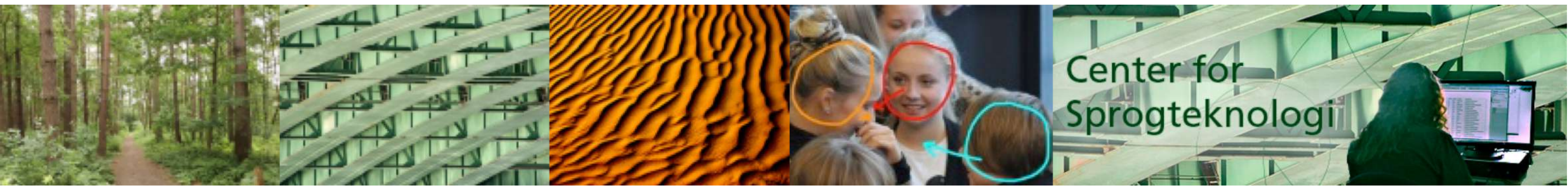
A Danish Term Bank



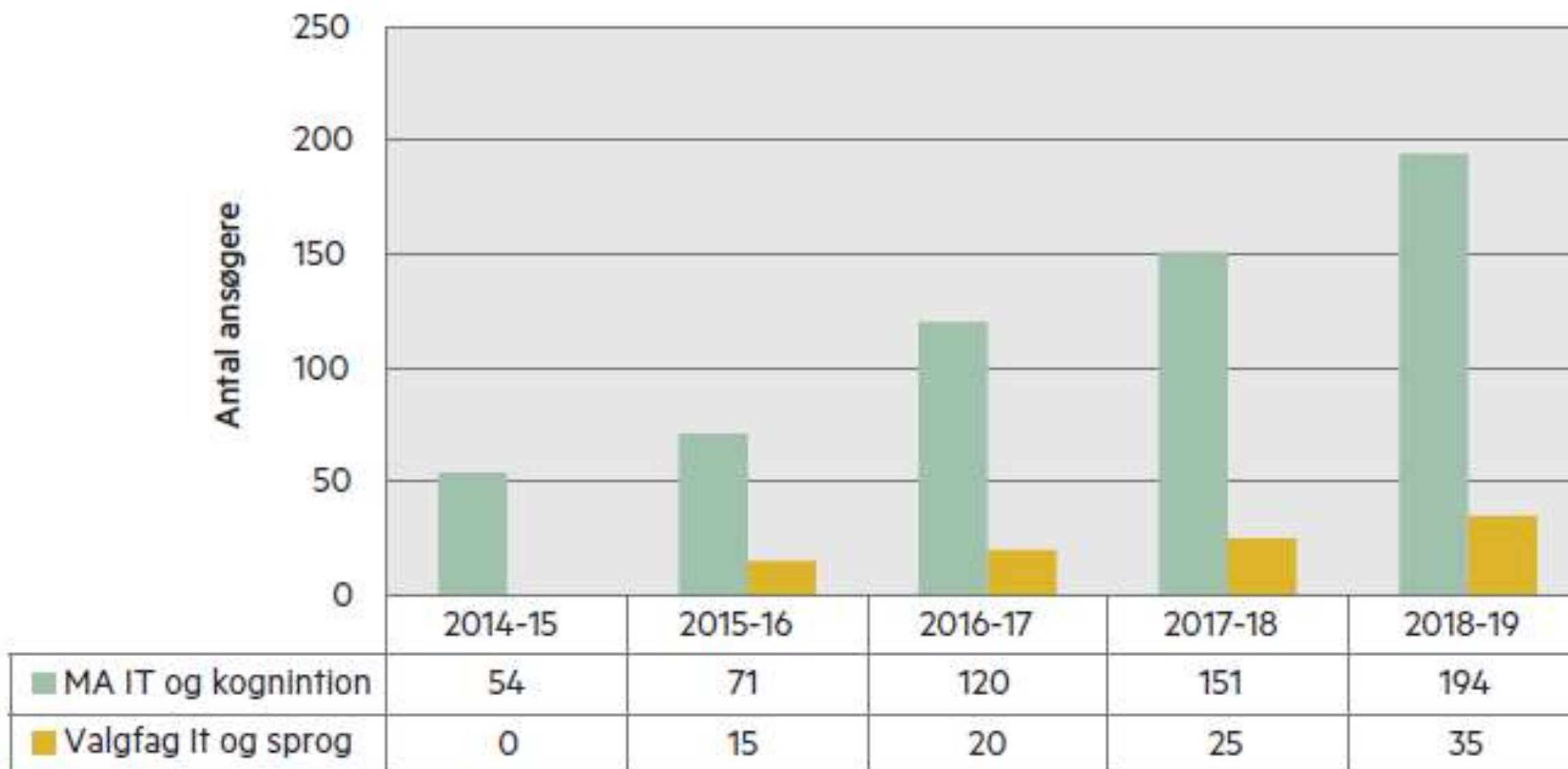
Strengthening education

The education and research ministries as well as the educational institutions are encouraged to

- Include teaching in Danish LT at existing data science and linguistic educations, provide better coordination between linguistic and computational curricula
- Provide courses for continued education in Danish LT and Danish language resources
- Establish a BA and a MA specializing in LT
- Earmark PhD scholarships in LT



Increased interest in LT-related education at UCPH

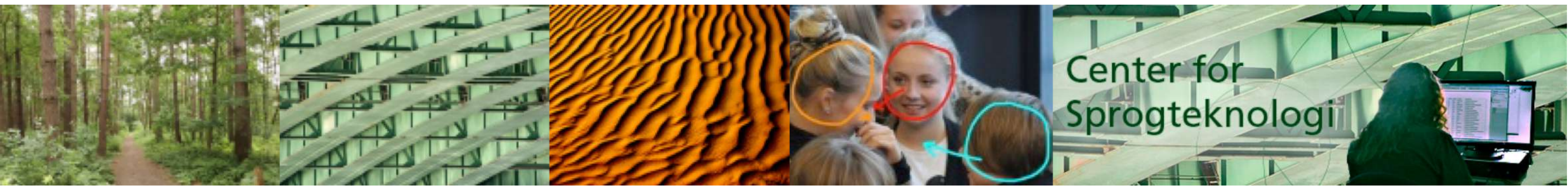


Søgning til sprogteknologiuddannelser på Københavns Universitet 2014-2019

Strengthening Research

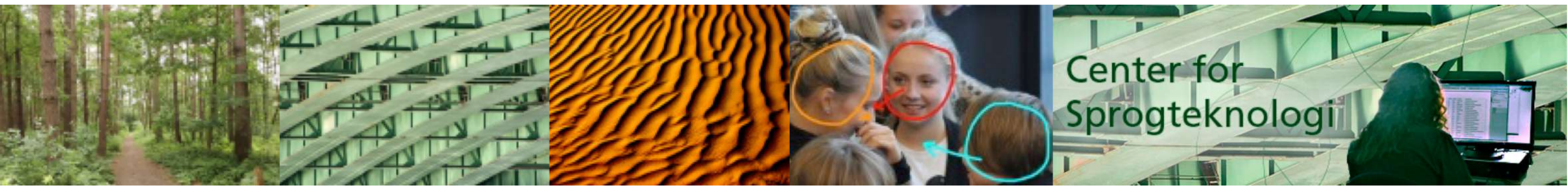
Recommendations:

- A targeted research effort in a wide range of LT fields
- Independent research programs for Danish language technology
- Tenure track arrangements to attract researchers interested in Danish language technology



Status autumn 2019

- The project is managed by The Danish Agency for Digitisation
- The project is currently at an early stage, where focus is on planning and organizing, how to deliver short term wins while still keeping a focus on the long term agenda
- The aim is to develop a technical platform containing various free Danish language resources and functionalities aimed for the NLP-industry.
- Next steps
 - Incorporating and upgrading existing Danish digital dictionaries, terms and lexical resources
 - The development and implementation of a time-encoded Danish speech recognition corpus in cooperation with stakeholders in Danish media
 - Identifying and developing new language technologies in cooperation with stakeholders



The Danish NCC and the ELG

- The Danish NCC can promote the language grid initiative in Denmark, and hopefully substantially increase **awareness of language technology** in Denmark as an important ingredient of **AI**
- Provide Danish policy makers with an **up-to-date platform of comparison** with other EU countries (updated MetaNet reports, awareness seminars etc.)
- Inspire and encourage Danish policy makers to engage more substantially in LT and **ensure long term investment** in the field – see it as an important feature of their mission to develop **human-centered AI**

