The Access System for Archived Databases at the DNA

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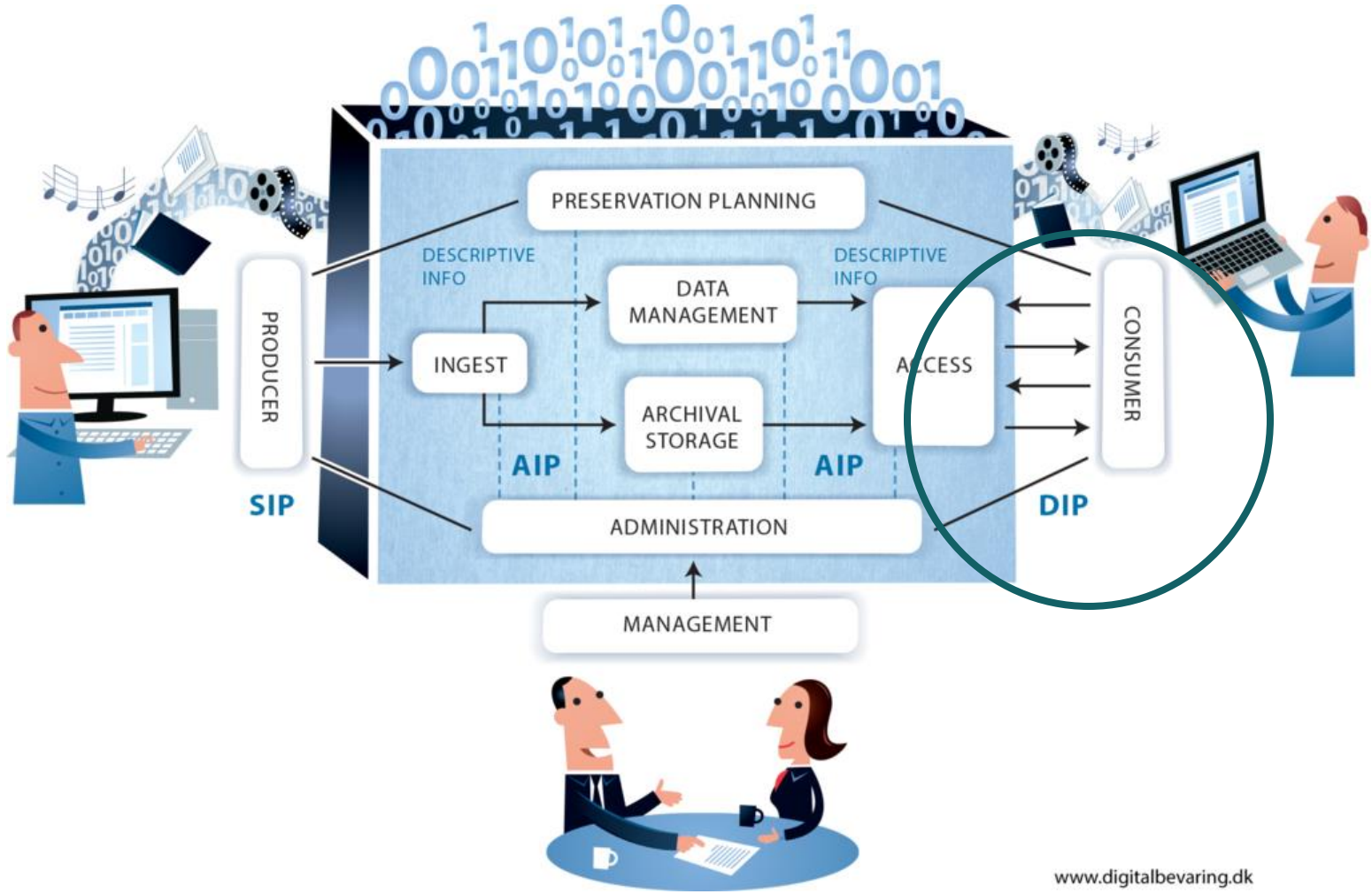
Brussels 14th May 2025

Data Science @ DNA

- Responsible for the business side of the development and maintenance of systems that give access to archived born-digital data and metadata about them
- Creation of new data sets based on paper records, either through crowd sourcing or the use of technology (Transkribus, Machine learning, AI…)
- Development of methods to link historical person data and the creation of a historical person register (HisPeR).

The OAIS-model



www.digitalbevaring.dk

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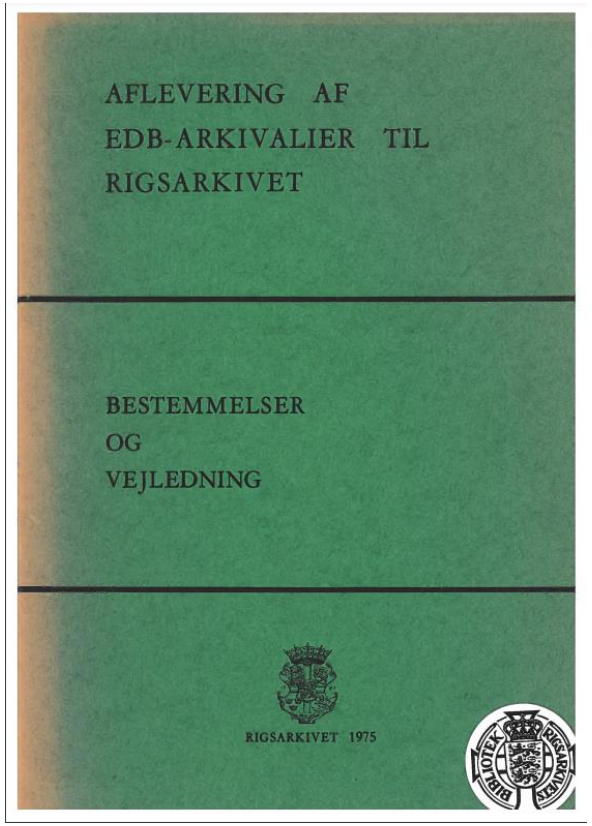
A Bit of History

- Structured regulations for SIP's since 1975
- The first access system for born digital records, "Sofia", was developed around 2008
- The amount of born-digital records is now more than 1 Petabyte (approximately 10,000 data sets)

"Submission of EDP-records to the National Archives"



"Regulations and guide"

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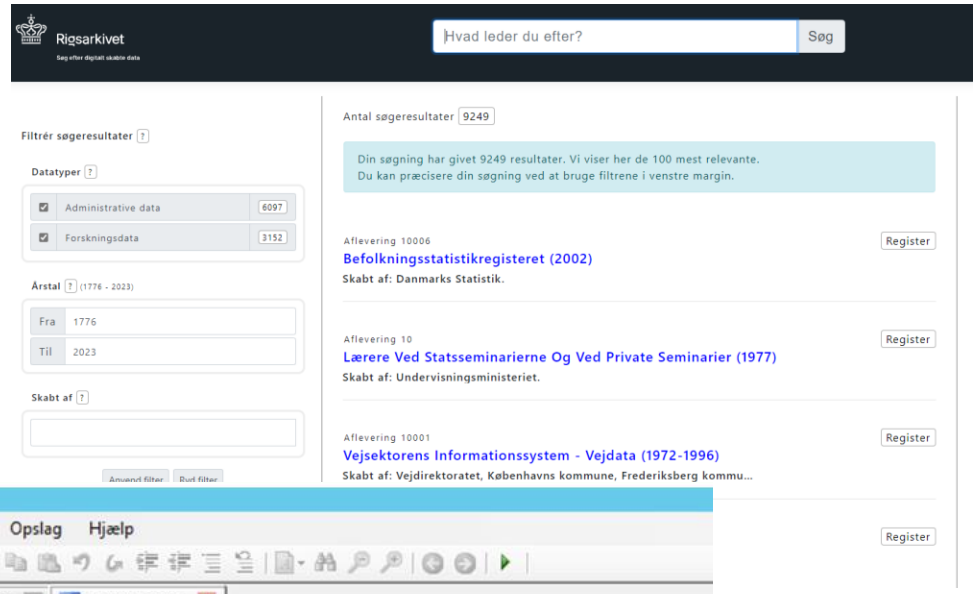
Dissemination of born-digital data at the DNA

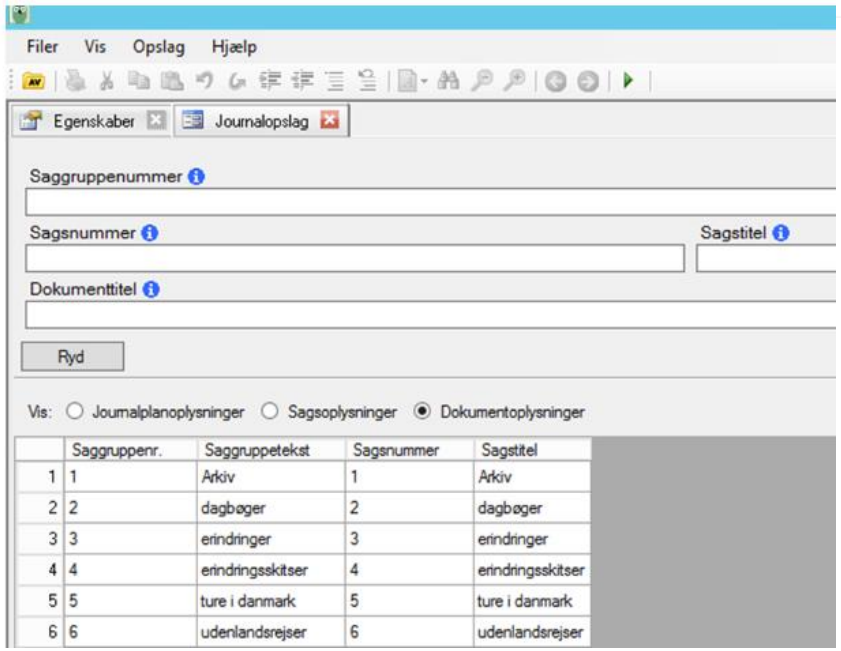
- Dissemination is a broad term used for all the ways in which we make our data available to our users

- Two main ways:

  1. Publication of metadata and freely available data (as download packages) on digidata.rigsarkivet.dk

  2. Conversion from AIP's to DIP's (relational databases) for use in our search and access system Sofia





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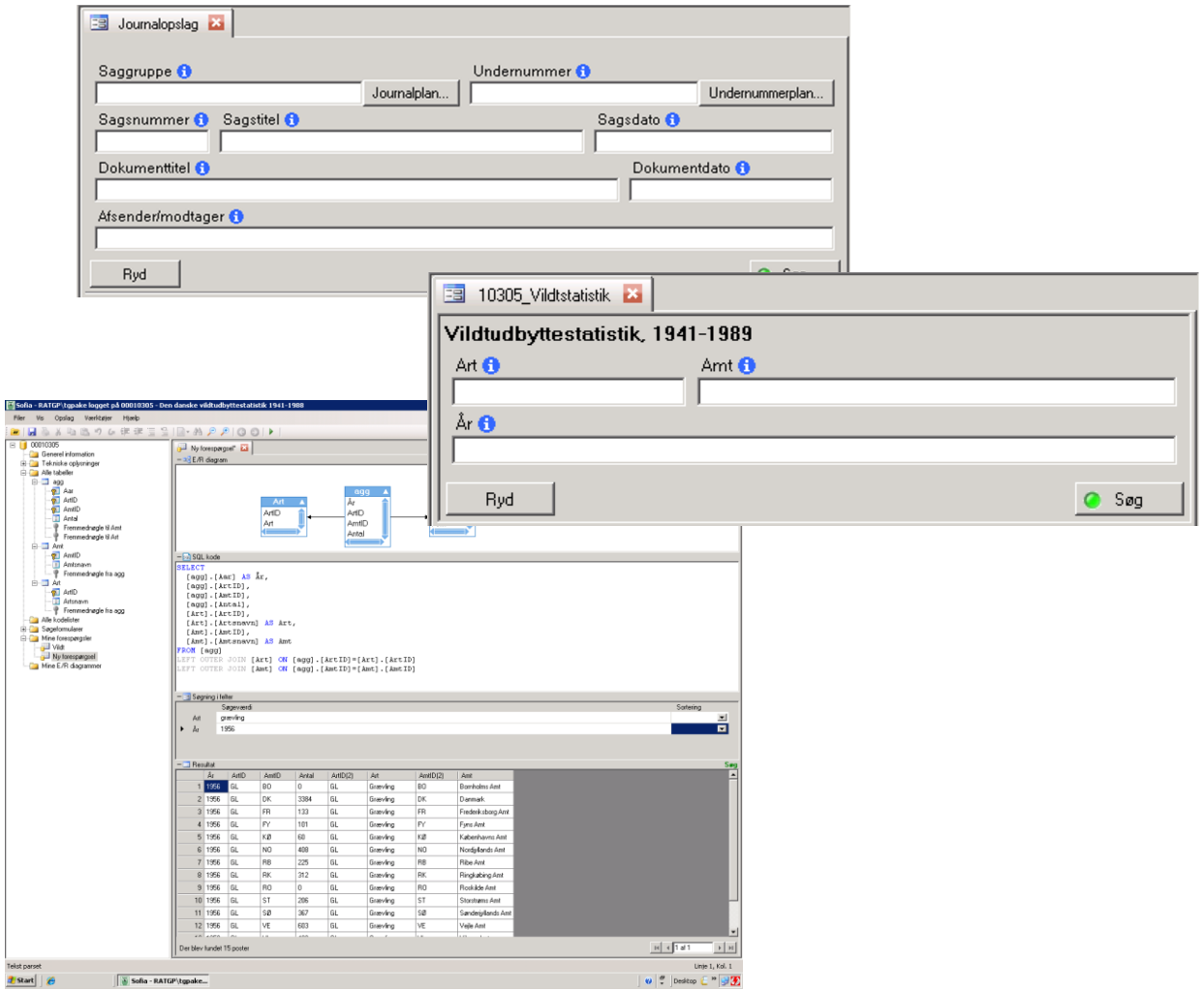
Searching in Sofia



Sofia has three different search templates:

1. Records management systems for AIPs with documents
2. Other kinds of digital records for AIP's without documents
3. SQL-queries

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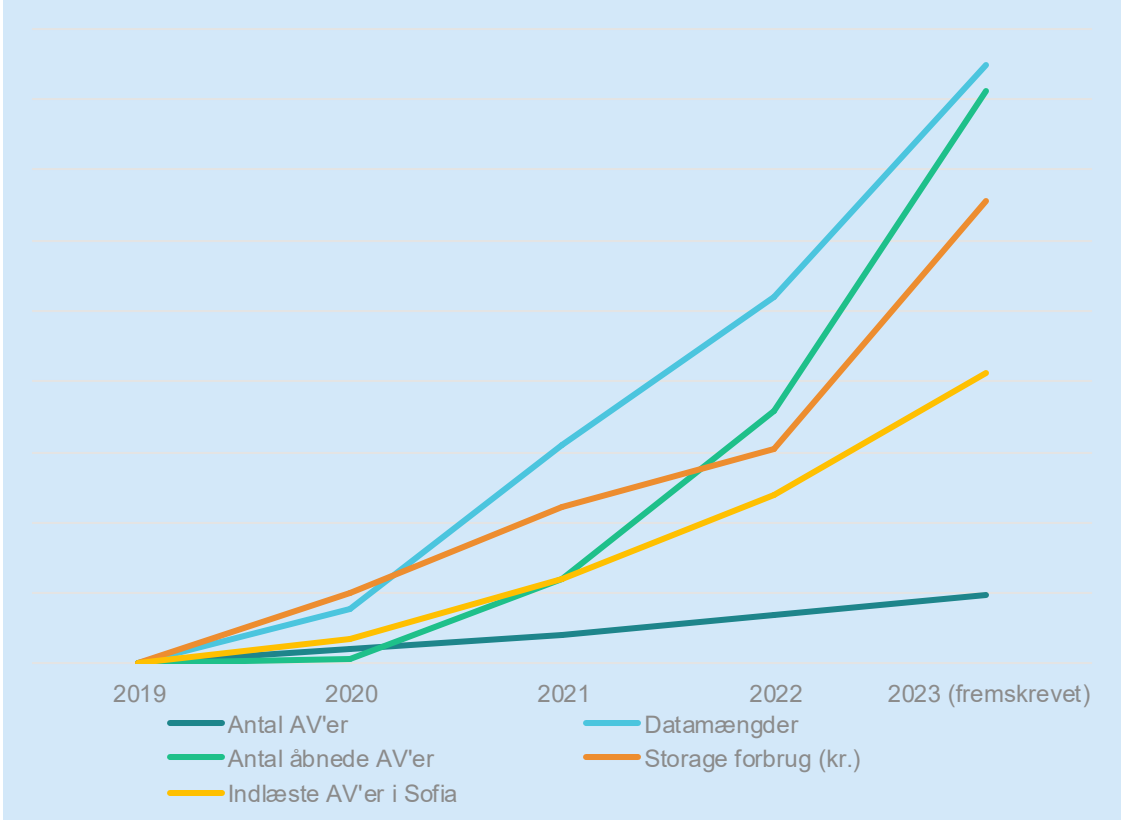
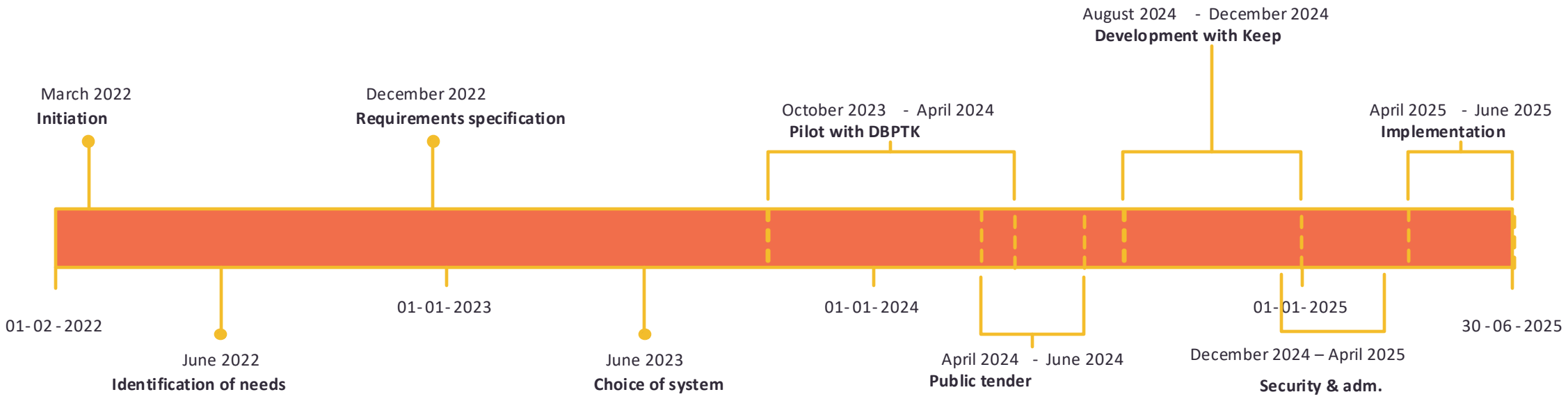
Why did we need a new access system?

- We have implemented SIARD (in a Danish variety) as preservation format for databases and Sofia has only been partially adapted to this
- Sofia had reached end of life and had become really costly to maintain
- The use of Sofia requires manual pre-processing of data (e.g. mapping to file name, document name etc.)
- The requests for information have gone up considerably, and Sofia and the infrastructure around it could not scale sufficiently



The process



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Choice of system

- Develop a system ourselves or buy ”off the shelf”?
- It is costly to develop yourself, but there was no system on the market that could fulfill all our requirements, including:
  - Faster (and more automatic) load and indexing of data
  - Better search facilities
  - Management of user access and user rights
  - Better support for LOBs
  - Better possibilites for the export of data and documents

Database Preservation Toolkit (DBPTK)

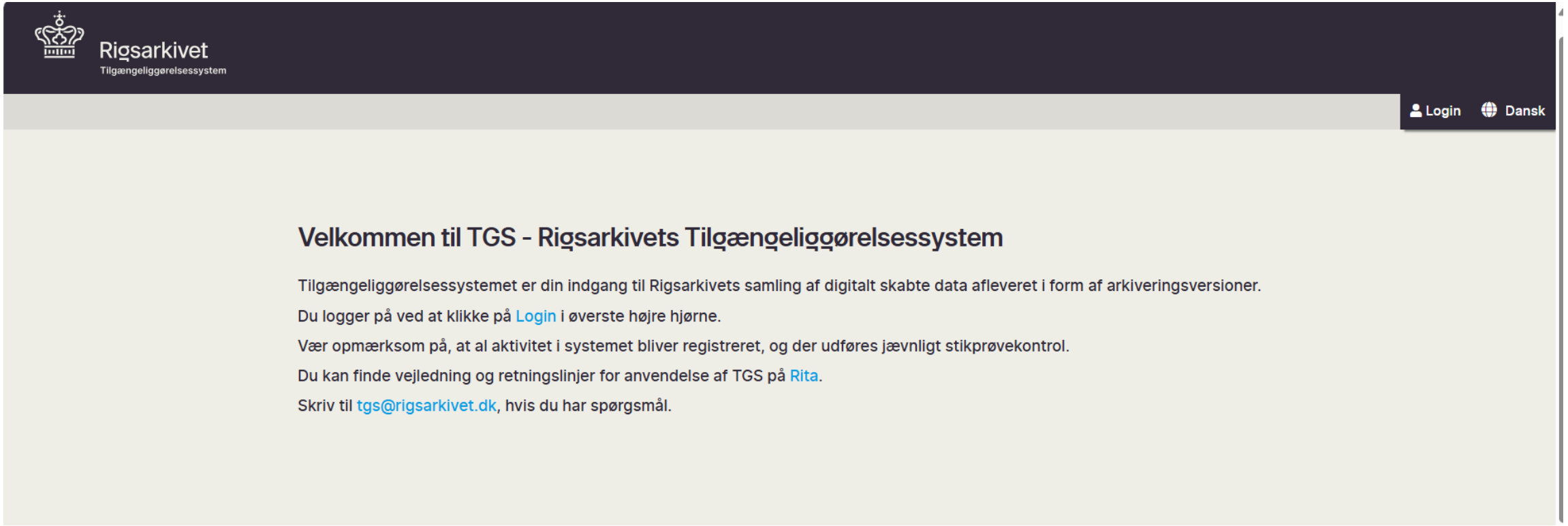
- DBPTK is a collection of multiple tools developed in relation to the E-ARK project
- DBPTK consist of two primary tools: a SIARD-creation tool and a SIARD-viewer, where it is possible to search through data in a ”Google-like” manner
- DBPTK exists in three editions: Desktop, Enterprise and Developer

database.toolkit
preservation

Necessary developments

- DBPTK met ≈ 80 pct. of our requirements ”out-of-the box”
- Identified needs for development:
  - Support for SIARD DK
  - User management
  - Integrated document viewer (TIFF, sound, video)
  - Search across databases
  - Translation to Danish

DNA ”look and feel”



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Why such a long process?

- Important to make sure that the business needs were identified
- Regulations regarding procurement
- Increased focus on GDPR, data protection etc. made a revision of the security set-up necessary

Some final thoughts…

- It is difficult to find enough internal developer resources to maintain all our systems
- The European cooperation in the E-ARK-project (etc.) has paved the way for our ability to use external developers for archival core systems
- The use of standards such as OAIS and SIARD is really helpful!
- Open Source reduces the risk of vendor lock-in

Thank you

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