



# Material digitization of scientific publications at KTH

Soon to be a pilot study



# KTH

# Royal Institute of Technology

# Stockholm, Sweden

**KTH is the largest institution in Sweden for technical education and research, founded in 1827.**

**17 000**  
students

**35%**  
women

**2 300**  
international

**4 000**  
staff (FTE)

**339**  
professors

**2 800**  
staff within research

**1 700**  
doctoral students

**100 000**  
alumni in 100 countries

**20**  
international alumni associations

# KTH has 27 departments divided over five subject-based schools

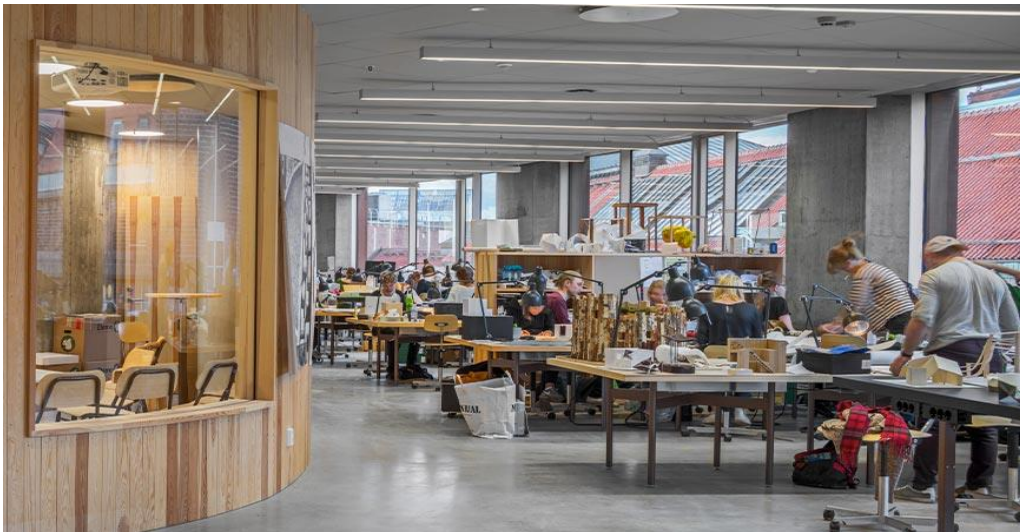
Architecture and  
community building

Electrical engineering  
and computer science

Industrial technology  
and management

Chemistry,  
biotechnology and  
health

Engineering science



# KTH Library

KTH Library is one of the country's largest scientific libraries and the collections reflect KTH's research and education in the core subjects of natural science, technology, architecture, industrial economics, social planning, history and philosophy.

- 42 FTE
- 2 Campus libraries
- 3 teams: Operational support and development, Library services and learning support and Publication infrastructure and media.





# KTH Digitalization Strategy 2023-2027

Digitalization is one of the four pillars of the institution's activities, together with Sustainability, Equality and diversity, Internationalisation.

KTH Digitalization Strategy for the period 2023-2027 presents the vision: "A digitized KTH secures creativity, accessibility, and utility for education and research."

Material digitization of previous printed research results or other relevant information are not always clarified in the strategies for digital transformation of organizations.

## KTH policy for publishing

- KTH strives to enhance the visibility of its research, making significant contributions not only to the global scientific community but also ensuring its impact resonates widely within society.
- Since 2011 there is a policy about scientific publishing (V-2010-0482, UF-243):
- KTH researchers are urged to publish their results in leading international scientific journals, or through other means of quality controlled publishing.
- KTH researchers are urged to publish in freely available journals or open archives, so called open access. This can be done through publishing directly in well-reputed journals that practice open access, or through self-archiving in the KTH publication database DiVA (since 2010).
- The Library supports all publishing and covers all APC:s.
- 2023: 7230 posts in DiVA



# DiVA, Research Catalogue and Invenio

## RESEARCH CATALOGUE

AN INTERNATIONAL DATABASE FOR ARTISTIC RESEARCH

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KTH STOCKHOLM



## Publications

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Student theses](#)

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☒ All publications ☐ Research publications ☐ Student theses ☐ Authority records

☐ Only documents with full text in DiVA

[Coming theses »](#) [Coming licentiate theses »](#) [Browse »](#) [Latest publications »](#)  
[Create feeds »](#)

The KTH Publication Database DiVA contains publications produced by the university's researchers and students.

Welcome to KTH data repo! 🦄

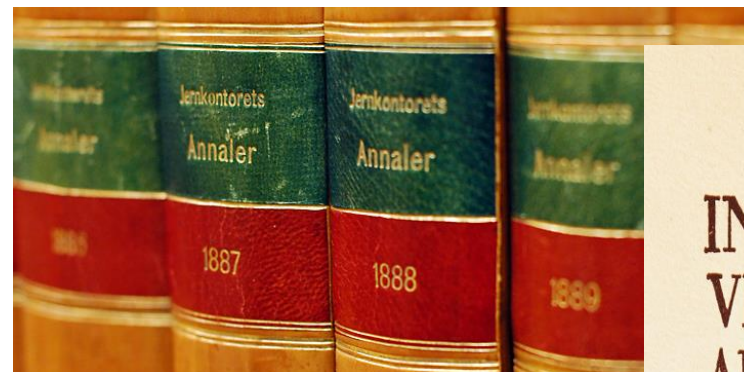


KTH Research data management system (V11 beta)

By using this service you agree to the [terms and conditions](#) of KTH Royal Institute of Technology

## KTH's earlier publishing

- Technological institute was founded in 1827, becomes KTH – Royal Institute of Technology in 1920.
- The Institute did not have publishing of its own, with one exception: *Beskrifning på en ny linberednings-machin, uppå hvilken linet kan, med ens, både bråkas, skäktas och borstas*. Gustaf Magnus Schwartz. 1837 (digitized)
- KTH established a publicationserie in 1947, followed by many different series. Prior to that, scientific publishing such as theses and reports were published in other swedish and international journals (partly digitized).





# Why digitize?

- Previously analogue published information and its metadata is a valuable resource. Unlike many other universities, KTH has no previous projects regarding material digitization of its earlier print production of research publications.
- Rediscovered or new knowledge can combine areas of expertise and provide opportunities to maximize research efficiency in research history as well as other areas.
- Digitized information can be easily accessible, not limited to a physical location or format and it is durable and interoperable.
- Preservation of collections.
- Cost efficiency – warehouse space (if weeding) and production/reassembly can be reduced.
- Securing and providing access to the collective knowledge of an organization is vital for research but can also benefit the brand and raise the organization profile.



# Why now?

kth.se

Student web

Intranet

Login



My employment ▾

Support & Service ▾

Education ▾

Research ▾

Organisation & Regulations ▾

🔍 Search

🌐 Svenska

[KTH Intranet](#) / [Information from KTH](#) / [KTH 200 years](#)

KTH celebrates its 200 year anniversary in 2027. The jubilee celebrations aims; to build pride among employees, students, alumni and partners, highlight successful and competitive reserach and emphasize the high quality education that KTH offers.

In 2021, a preliminary study was conducted, initiated by rector Sigbritt Karlsson. A project group was formed autumn 2021 following the study. The project group will manage the delivery of the anniversary celebration.

## Project owner

President of KTH

### How would you like to celebrate KTH's 200th anniversary?

Do you have an idea or are you working with something that could be part of the anniversary celebration?

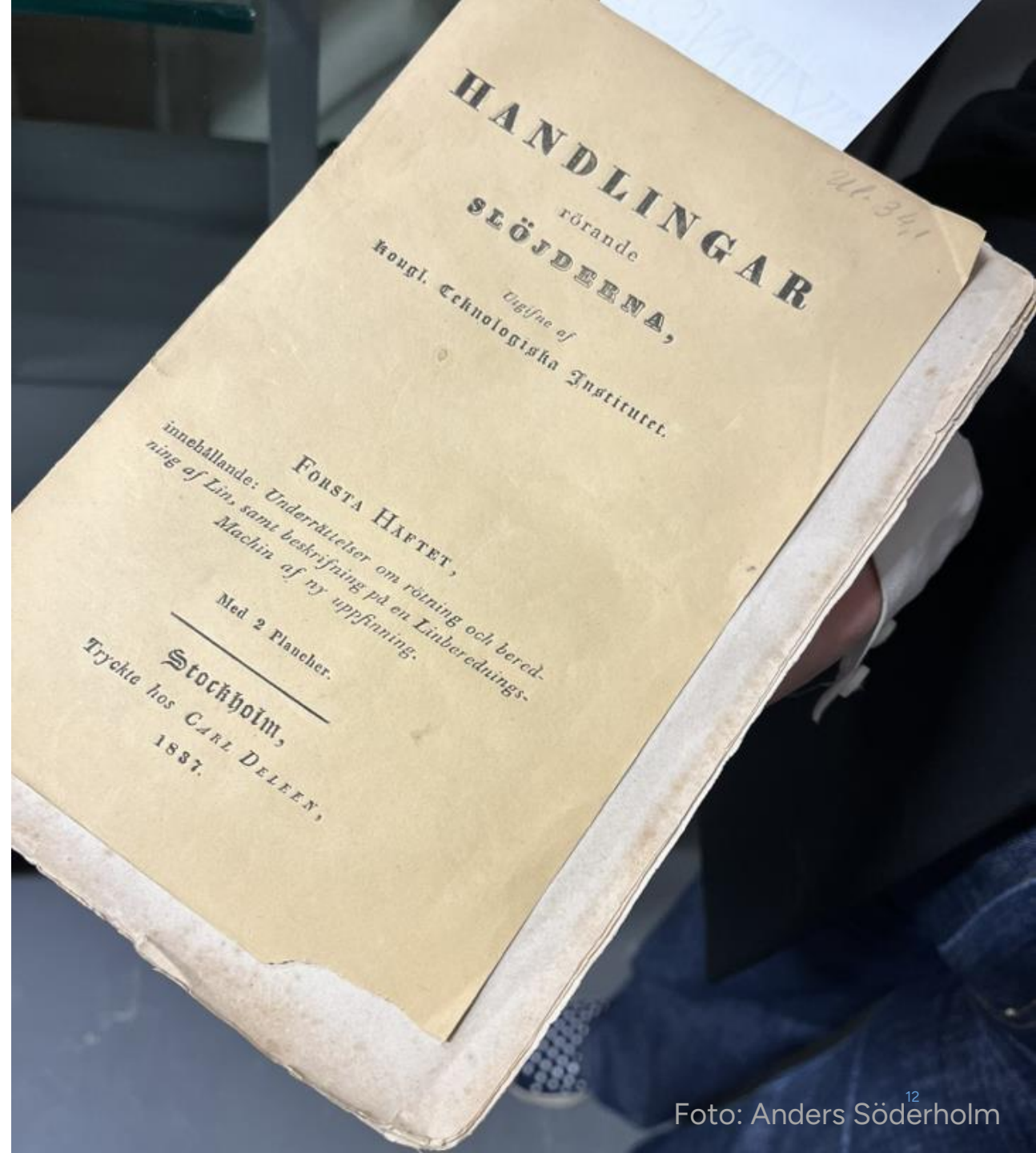
# Pilot study of material digitization at KTH

## Purpose

To investigate how KTH can ensure digital and open access to its analogue published research over time.

## Goal

A preliminary study in the form of a report which should summarize the conditions for digitizing the KTH material, as well as highlight opportunities and obstacles.



# National collaboration and support

Det nationella samarbetsprojektet-DST The national collaborative project

- The project aims to digitize and make 600 years of Swedish printing freely available and the project also develops an infrastructure for digital material. The project is a collaboration between the Royal National Library and the university libraries in Lund, Gothenburg, Stockholm, Uppsala and Umeå.

Digisam's guiding principles

- Digisam's principles are a support for the cultural heritage area in the work to digitize and make cultural heritage available. In total, there are 14 different principles that capture the entire digitization process and are divided into four different areas: control, produce, use, preserve.

National framework for thinning and conservation

- Royal National Library leads the work to determine the framework and implement the vision in the workshop. It takes place together with interested research libraries in Sweden through a letter of intent.



# Startup checklist

Clarify workprocess, routines and principles for the selection for material digitization:  
Access to copies, their condition, request level etc. **Started.**

Legal framework:

Investigate legal issues regarding copyright clearance and clarify how/if published material from KTH in other journals can be part of a digitization project. **Started, dialogue with copyright lawyer remains.**

The Web Directive – digital accessibility for all: **Suggested solutions are available.**

Investigate technical conditions (methods/formats). **Proposals for a solution exist**

Investigate how/by whom the material can be digitized. **Ok**

Calculate internal competency analysis. **Ok.**

But...



# Initial challenges – what and where?

KTH's previous volume of scientific publishing is extensive and still a relevant and in-demand research material, but also complex and very difficult to understand as a whole.

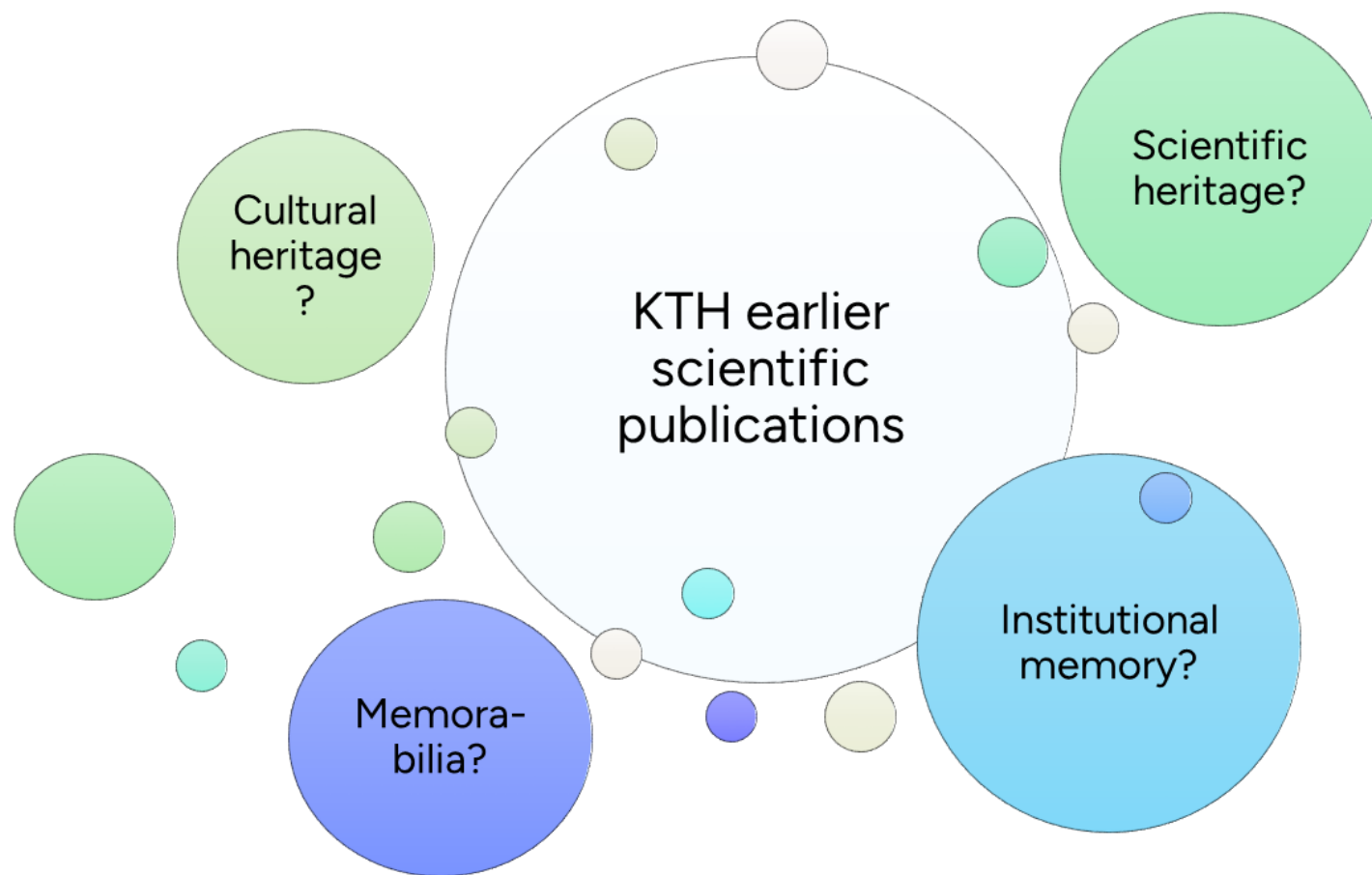
To ensure that the publications are found, structured and described is important both for the institution itself, but also from a national and international perspective.

Thoughts on priorities : highlights, some institutions, is “everything” really necessary, what if it is poor quality?

2 initial priorities:

- A collective review and secure metadata for scientific publications from all of KTH's schools, departments, center formations and other functions over the years. Including digital ones. Efforts have been made during the years but has not been pursued. The library has not all the answers.
- An updated review of what volumes are accessible in the library collections (no reference- or archival volumes available) or missing.

# The name of the game?



## Teamwork?

Material digitization is a task that requires collaboration between several different skills. Internally within the library, with the archive (inventory, supplier selection, management, selection, packing, unpacking, review of files, cataloguing), IT (format selection, storage of TIFF), law (clarification of copyright issues) and finance (procurement).

KTH's five schools is an important part of the project aswell, collaboration with researchers and staff.

No earlier experience within the organization from projects like that creates many obstacles.

## Budget & funds?

Upcoming step is to compile an approximate cost of the project, including image capture, handling, metadata, repository and management.

Extra resources (project form) are required at start-up and preparation but above all at the final phase of the project and include relocation of materials, review, cataloging and access after the completed conversion effort.

