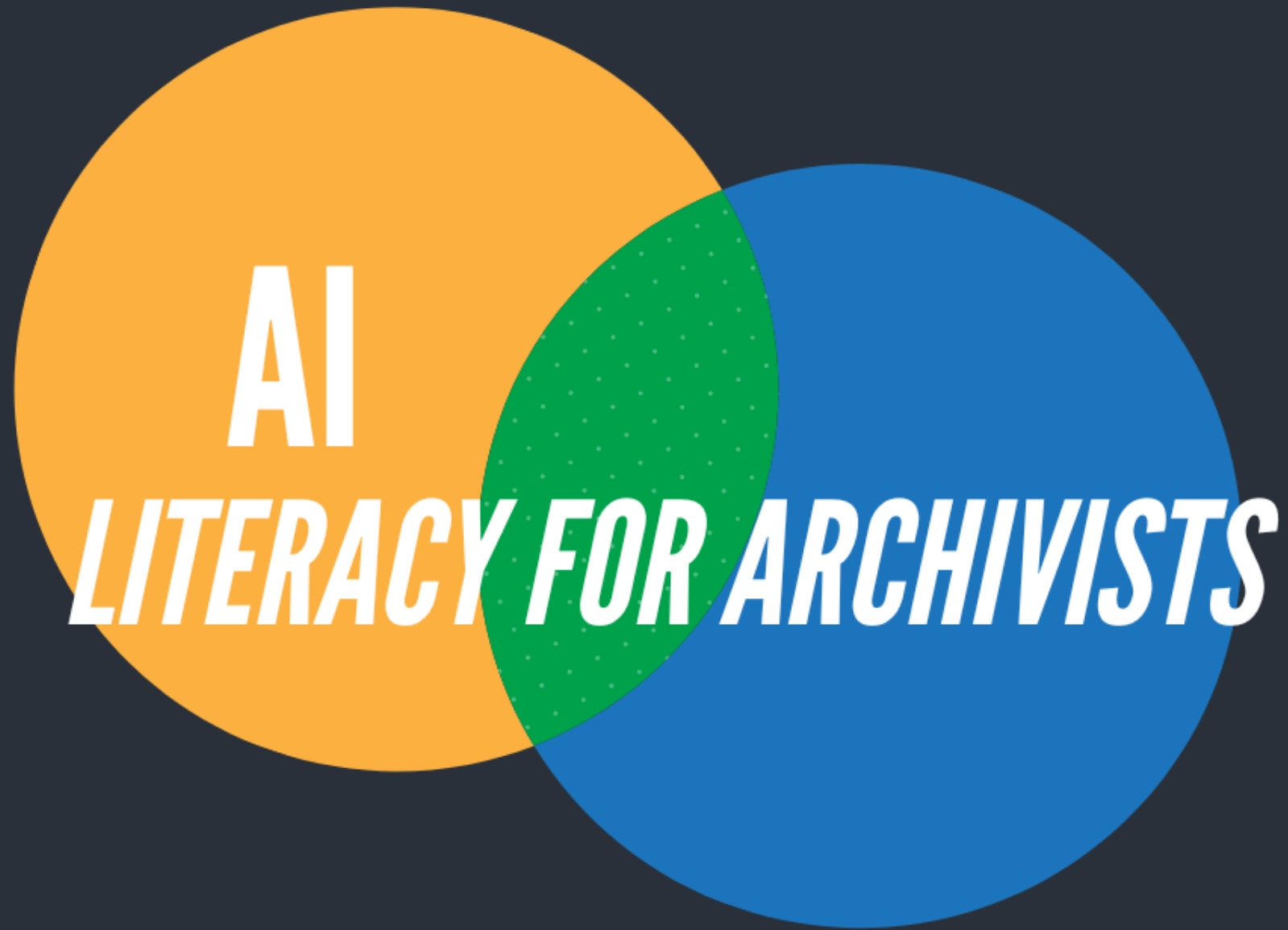




MOISES ROCKEMBACH

PROFESSOR, UNIVERSITY OF COIMBRA, PORTUGAL

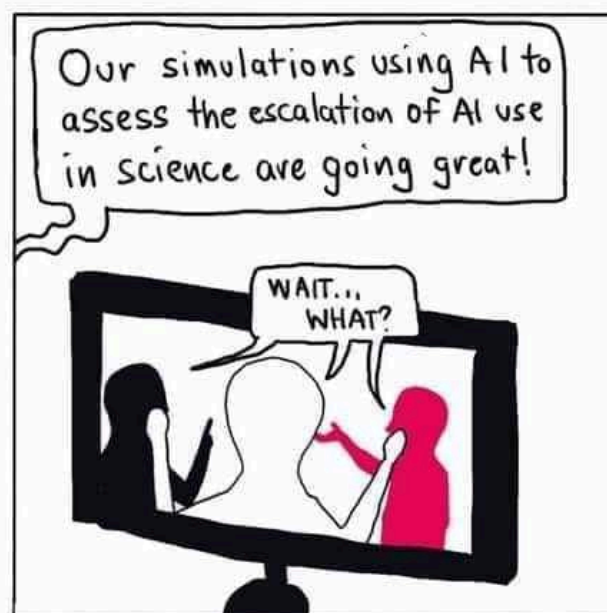
STATE CAPITOL AUDITORIUM, HAWAII

FEB, 2024

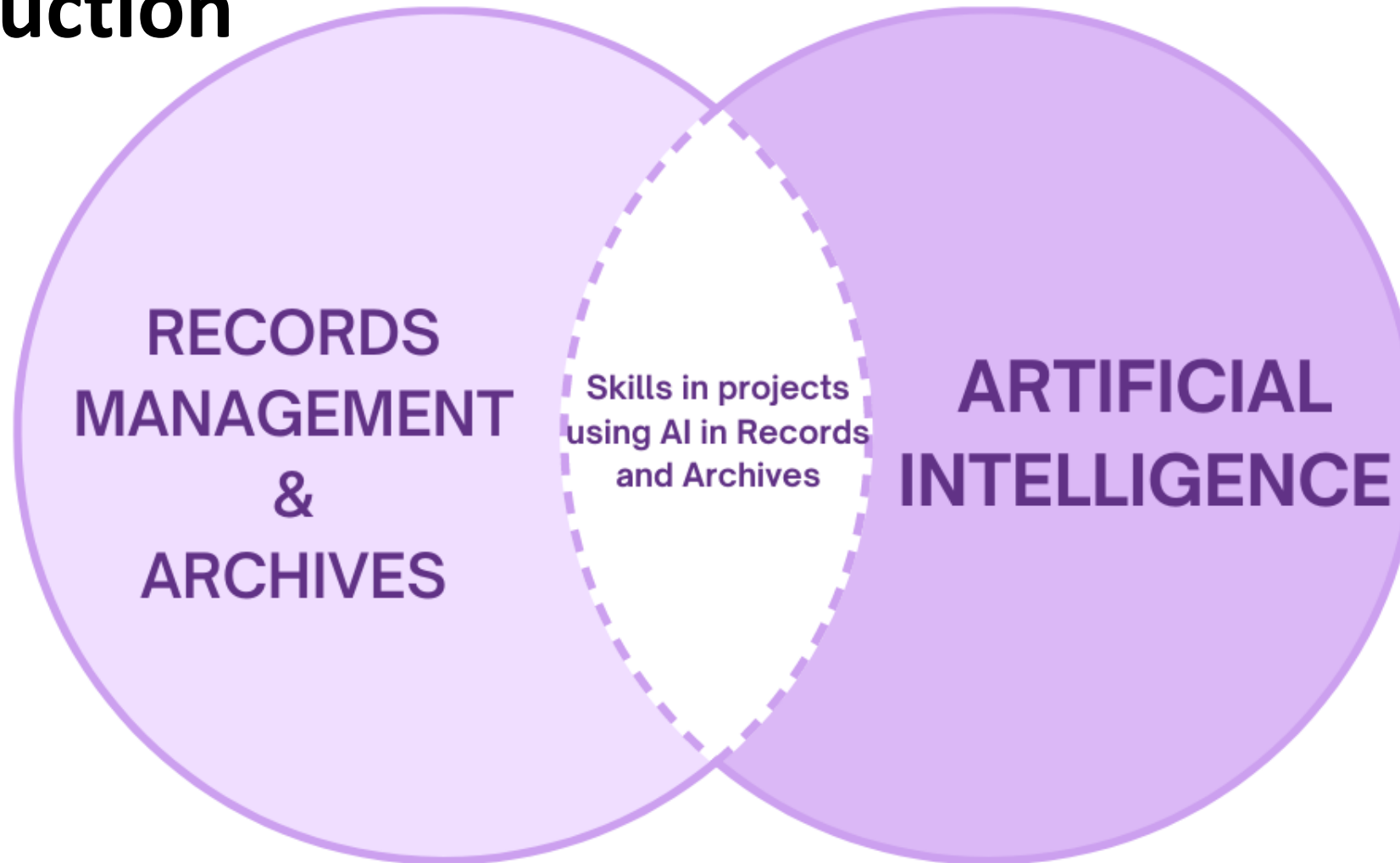
ITRUSTAI PUBLIC SYMPOSIUM

Agenda

- 1.Introduction
- 2.About the research
- 3.Some research findings
- 4.How can we develop cross Archival-AI literacy?



1. Introduction

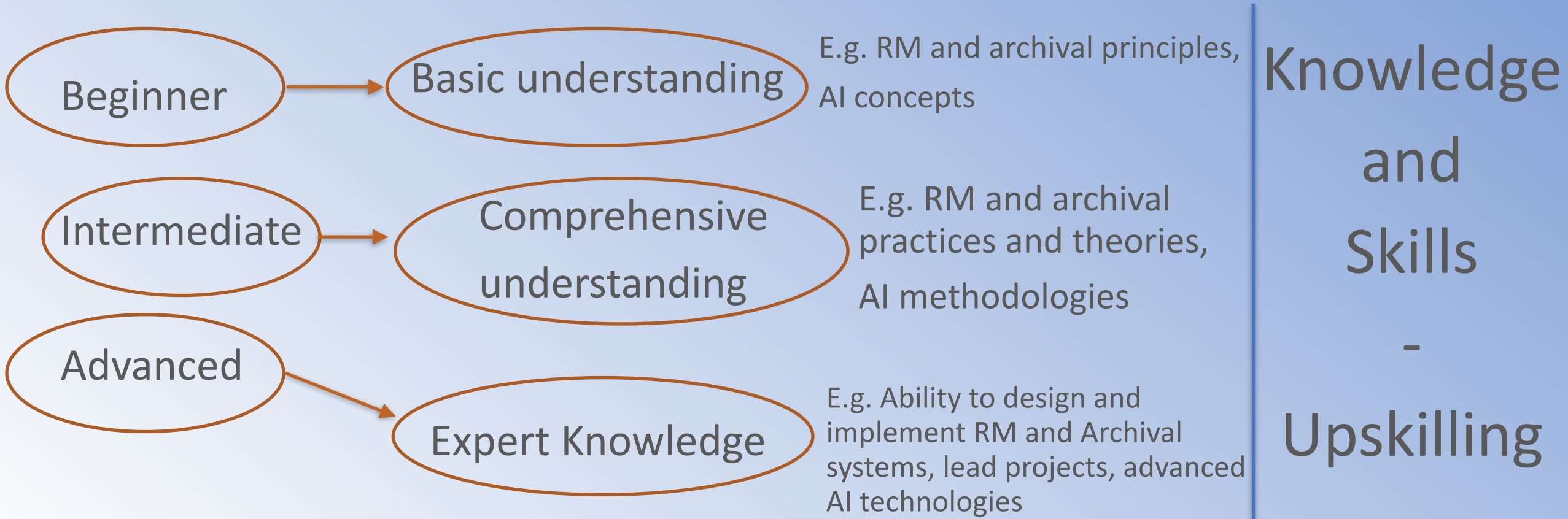


2. About the research

- InterPARES Trust AI / Education Cluster
- Literature review
- Documentary research
- Survey
- Content analysis and categorization

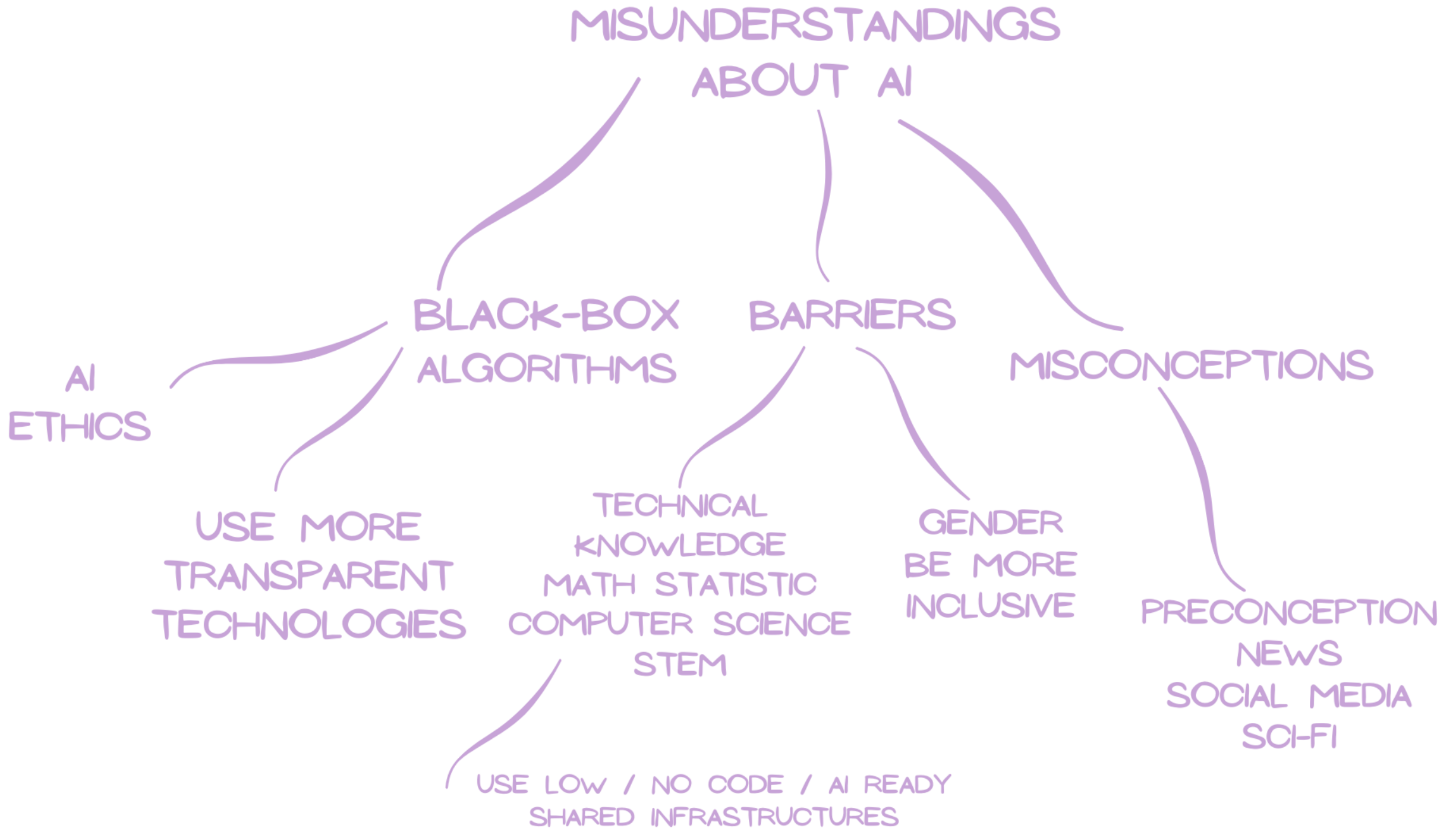
3. Some research findings

Levels of Literacy



Literature review

- The application of AI in various areas is something that is growing fast, and in records management and archives, it is no different
- However, there are still many misunderstandings about the uses of AI and AI itself.
- These misunderstandings tend to decrease with use and increased AI literacy. Also, with critical thinking about AI in various fields of activity.
- The importance to approach the Data Lifecycle: Acquisition, Cleansing, Modeling, Implementation, Optimization, Analysis, Visualization, Evaluation, Sharing, Erasing, Archiving



Survey

5

REASONS NOT TO ADOPT AI SOLUTIONS IN ARCHIVES

1

**Lack of
knowledge
or
competences**



2
Digitization
**Not enough
digital
documents**

3

**Lack of
reliable
technologies**



4

**Not
integrated
into
management
systems**

5

**Lack of Economic
and Human
Resources**

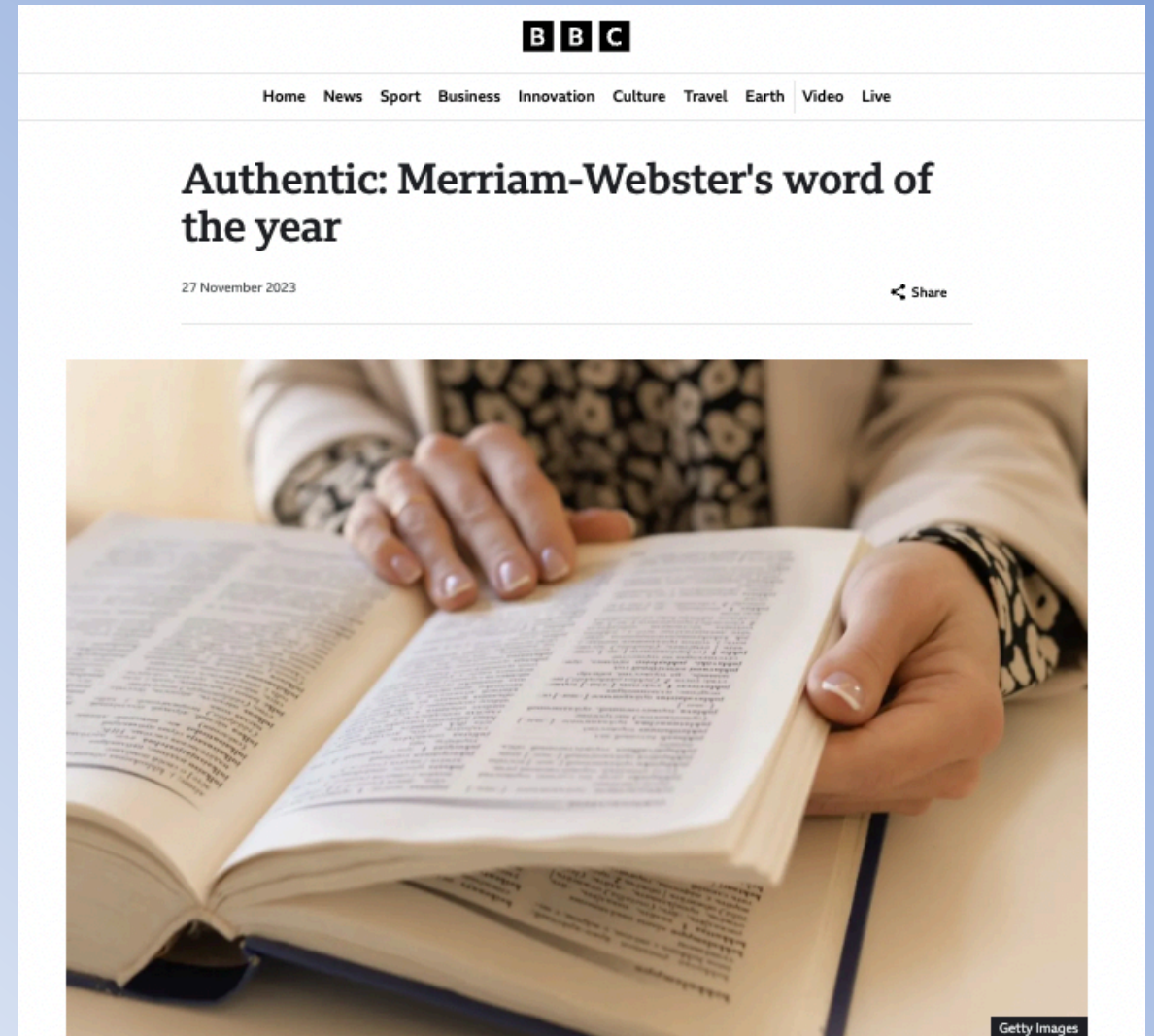


How can we develop cross Archival-AI literacy?

1. Concepts and theories (general)

CONCEPTS AND THEORIES

General
foundational
ideas and
theories in AI,
RM and
Archives



2. Records and Archives

DATA LITERACY

Understanding and working with data, recognizing patterns, and interpreting results

DATAFICATION AND DIGITAL TRANSFORMATION

The process of turning many aspects of society into data-driven ones

AI-INTEGRATED RECORDS MANAGEMENT LITERACY

RM principles in an AI-driven environment

AI-ENHANCED ARCHIVAL SCIENCE LITERACY

Integration of AI within the domain of Archival Functions

PROVENANCE AND PARADATA

Tracking the origin and context of data used in AI

2.1 Data literacy

DATA LITERACY

Understanding and
working with
data, recognizing
patterns, and
interpreting
results

2.2 Datafication and Digital Transformation

DATAFICATION AND DIGITAL TRANSFORMATION

The process of
turning many
aspects of
society into
data-driven
ones

2.3 AI-Integrated Records Management Literacy

**AI-INTEGRATED
RECORDS
MANAGEMENT
LITERACY**

RM principles
in an AI-driven
environment

2.4 AI-Enhanced Archival Science Literacy

AI-ENHANCED ARCHIVAL SCIENCE LITERACY

Integration of
AI within the
domain of
Archival
Functions

2.5 Provenance and Paradata

PROVENANCE AND PARADATA

Tracking the
origin and
context of data
used in AI

3. Computing

MACHINE LEARNING

Supervised,
semi-
supervised,
unsupervised

COMPUTER VISION

AI applications
that involve
visual
processing and
interpretation

GENERATIVE AI

AI applications
in natural
language
processing and
content
generation

ALGORITHMS

Implementation
of algorithms
and contextual
analysis

3.1 Machine Learning

MACHINE LEARNING

Supervised,
semi-
supervised,
unsupervised

3.2 Computer Vision

COMPUTER VISION

AI applications
that involve
visual
processing and
interpretation

3.3 Generative AI

GENERATIVE AI

AI applications
in natural
language
processing and
content
generation

3.4 Algorithms

ALGORITHMS

Implementation
of algorithms
and contextual
analysis

4. Ethics

BIAS AND DIVERSITY

Addressing biases in AI.
Promote diversity

ACCOUNTABILITY AND ETHICS

Ensuring AI systems are accountable and align with ethical standards

DATA PROTECTION AND SENSITIVITY

Ensuring the security and appropriate handling of sensitive data

TRANSPARENCY AND EXPLAINABILITY

Making AI operations understandable to the public.

LEGAL CONCERNS

Regulations and legalities surrounding AI, such as the AI Act

4.1 Bias and diversity

BIAS AND DIVERSITY

Addressing
biases in AI.
Promote
diversity

4.2 Accountability and Ethics

ACCOUNTABILITY AND ETHICS

Ensuring AI
systems are
accountable and
align with
ethical standards

4.3 Data protection and sensitivity

**DATA
PROTECTION AND
SENSITIVITY**

Ensuring the
security and
appropriate
handling of
sensitive data

4.4 Transparency and explainability

**TRANSPARENCY
AND
EXPLAINABILITY**

Making AI
operations
understandable
to the public.

4.5 Legal concerns

LEGAL CONCERNS

Regulations
and legalities
surrounding
AI, such as the
AI Act

5. User-centric

PROBLEM- SOLVING WITH AI

Using AI to address complex issues and find solutions

AI DESIGN AND INTERACTION

Designing AI systems that are teachable and user-centered.

TESTING AND ITERATION

Methods for evaluating and refining AI systems

5.1 Problem-solving with AI

PROBLEM- SOLVING WITH AI

Using AI to
address
complex issues
and find
solutions

5.2 AI Design and Interaction

AI DESIGN AND INTERACTION

Designing AI
systems that
are teachable
and user-
centered.

5.3 Testing and Iteration

TESTING AND ITERATION

Methods for
evaluating
and refining
AI systems

6. Organization

AI ADOPTION AND GOVERNANCE

Strategies for
adopting AI
and overseeing
its use

COLLABORATION AND COMMUNICATION

Enhancing
collaboration
across disciplines
and effective
communication
about AI

6.1 AI adoption and Governance

AI ADOPTION AND GOVERNANCE

Strategies for
adopting AI
and overseeing
its use

6.2 Collaboration and Communication

COLLABORATION AND COMMUNICATION

Enhancing
collaboration
across disciplines
and effective
communication
about AI

Archives, Records and AI Literacy Framework



E.g.

Evaluation - trained models

Provenance and Paradata

Generative AI

Bias and diversity

AI adoption and Governance



Generate an image of a 1943 German Solidier



Sure, here is an image of a 1943 German soldier:



Generate more

Thanks

Acknowledgments: Ivan Despot, Mashilo Modiba, Mia Steinberg, Olefhile Mosweu, Richard Arias-Hernandez, Samuel Tweneboah-Koduah, Thays Lacerda (Research Team), Luciana Duranti, Muhammad Abdul-Mageed, Corinne Rogers (InterPares Coordination/Management), special thanks Adam Jansen (State Archives of Hawaii).

Thank you!

moises.rockembach@uc.pt
moises.rockembach@gmail.com