INTERPARES TRUST AI · RP04 WORKING GROUP

Toward Accountable AI Systems

The Function of Paradata

Preserving AI Techniques as Paradata — summary of findings and significance from five years of interdisciplinary research on documenting the AI process for archives, accountability, and trust.

Final InterPARES AI Trust Symposium
October 2026 · Presented by Alex Richmond, Enterprise Information Architect

THE STUDY

A five-year, multi-national research collaboration

Preserving AI Techniques as Paradata (RP04) is one of 40+ studies in InterPARES Trust AI — an interdisciplinary project designing and leveraging AI to keep public records trustworthy, available, and accessible.

THE CENTRAL QUESTION (2021)

When AI is used to automate an archival or recordkeeping process, how much of the AI technique — its code, training data, parameters, and technical environment — should be preserved, and as what context?

The team quickly found that records, metadata, and explainable AI were not enough. The missing element was paradata.

40+
InterPARES Trust AI studies

2021–2026
Study span

4
Industry use cases developed

13
Researchers & graduate assistants

THE PROBLEM

Accountable AI depends on documentation

Organizations — not the systems themselves — are accountable for the decisions AI supports. Demonstrating that outcomes were reached through transparent, responsible, auditable processes requires evidence. Yet AI complicates this in three ways:



The black box

Algorithmic opacity obscures why a model produced a given output, making responsibility hard to pinpoint.



The problem of many hands

AI systems are built and deployed by many parties, and they learn from data — diffusing responsibility further.



Contested norms

Many rules for AI are not yet codified in law. Records let us assess conduct case-by-case, even when norms are still emerging.

DEFINITION

So what is paradata?

Paradata *(n.) information about the procedures and tools used to create and process information resources, together with information about the persons carrying out those procedures.*

InterPARES Trust AI Terminology Database (2021–2026)

The evidentiary layer of AI documentation

Transparency

Makes how a system is built and managed visible to stakeholders.

Accountability

Records who did what, when, why, and with which tools.

Auditability

Enables internal audit, compliance evidence, and external review.

Reproducibility

Lets practitioners understand and, where apt, reproduce AI processes.

Trust & risk

Supports bias investigation, incident response, and organizational memory.

DISTINCTIONS

Paradata is not metadata — nor data, nor XAI

Four complementary forms of information support transparency and accountability. Each answers a different question.



Data

What information?

AI inputs & outputs



XAI

Why this prediction?

Model reasoning



Metadata

What is this resource?

Information management



Paradata

How, why, who, when?

Process · governance · accountability

Paradata captures the decision-making processes that let organizations demonstrate how AI systems were designed, deployed, governed, and evaluated across their lifecycle.

THE FRAMEWORK

Paradata spans the whole AI lifecycle

The team mapped paradata to the AI development lifecycle (CRISP-DM). Different types surface at every stage — from framing the problem to ongoing monitoring.

Business Understanding	Data Understanding	Data Preparation	Modeling	Evaluation	Deployment & Monitoring

Every artifact can be read along three facets

Interpretation

Explicit vs. implicative — is the paradata named outright (documentation, record, plan) or only implied by an action (testing, training, auditing)?

Generation

Human-made vs. automated — plans and manuals authored by people, or audit trails and test outputs produced by the system.

Purpose

Intentional vs. incidental — created deliberately as a record, or generated for another purpose but usable as evidence.

CRISP-DM The Cross-Industry Standard Process for Data Mining is a proven, structured methodology used to guide data science and AI development projects from conception to completion. It organizes the project lifecycle into six iterative phases—ranging from initial business understanding to final deployment—ensuring a rigorous and repeatable approach to solving problems with data.

GROUNDED IN PRACTICE

Four use cases across four industries

Because paradata needs are contextual, the team tested the concept against real deployments — not a one-size-fits-all checklist.



CULTURAL HERITAGE

Saint Louis Zoo

Automated indexing & extraction for 40 years of digitized microfilm. Outcome: AI was set aside — but the documented decision is itself valuable paradata.



CENTRAL BANKING

Bank of Canada

LLMs for oil-market sentiment analysis. Proposed a minimal mandatory paradata set (training, architecture, evaluation, user) and tools to automate its capture.



HEALTHCARE

Clinical AI

Synthesized 7 clinical AI frameworks into 113 documentation elements across a three-tier lifecycle architecture aligned to NIST RDaF 2.0.



ARCHIVES (CU05) *

Records Aggregation

An ex-post framework documenting an AI project (NATO Archives–RecordPoint) against lifecycle phases from the practitioner's perspective.

* CU05 The role of AI for records management: findings from case studies - Final Report. February 2026.

WHAT WE LEARNED

Five key findings

Paradata and metadata blur

Most AI transparency needs exceed standard metadata schemata. The team deliberately kept the boundary soft rather than forcing a hard line.

Governance is the driver

Because AI governance is risk-based, paradata emerges naturally as a by-product of active, ongoing risk management across the lifecycle.

A common set of facets

Necessary paradata can be evaluated by interpretation (explicit/implicit), generation (human/automated), and purpose (intentional/incidental).

Context is everything

Four cases showed requirements scale with risk and vary by domain — high-risk work produces far more organizational paradata.

From object to process

The biggest shift: paradata is not a static artifact to file afterward, but a creation-and-preservation process embedded from design onward.

OPEN CHALLENGES

Realising the promise is not straightforward

The obstacles are practical, conceptual, and institutional at once — and they compound one another.

01 Capturing paradata

It is dispersed across logs, model cards, procurement docs, minutes, and tacit knowledge — and much is never recorded at all.

02 Uneven visibility

Technical paradata is auto-generated; the organizational 'why, by whom, under what mandate' rarely leaves comparable traces.

03 Standardization

Shared vocabularies and schemas are needed for interoperability and automation — but remain fragmented and unaligned with archival standards.

04 How much is enough

A wicked appraisal problem: complete documentation buries accountability; too little leaves the record incomplete.

05 Agentic & multimodal AI

New agents multiply where paradata is generated and complicate attribution; self-generated explanations may be plausible but not accurate.

SIGNIFICANCE

A shared evolution in thinking

Perhaps the study's most important outcome is how the researchers' own understanding changed over four years.

EARLY ASSUMPTION		REVISED UNDERSTANDING
Standardization might solve the problem	→	**Contextual, domain-specific work is essential**
AI documentation is mainly technical	→	**Organizational & human factors are central**
Manual documentation is feasible	→	**Automation & workflow embedding are required**
AI is primarily a tool	→	**AI processes are sociotechnical systems**
Paradata is supplementary	→	**Paradata is foundational to accountability**

Category/Catégorie:
Non-Sensitive/Non-Délicat

WHY IT MATTERS FOR THE PROFESSION

Redefining the archivist & records manager

The study repositions the profession — not as passive custodians of digital outputs, but as active designers, regulators, translators, and ethical stewards of AI-enabled recordkeeping.



From objects to systems

Overseeing the dynamic sociotechnical systems that generate records — not just the records themselves.



AI literacy as core skill

Interrogating tools before, during & after use, and asking what paradata each lifecycle phase provides.



Paradata in procurement

Treating transparency and documentation support as a primary factor when evaluating AI vendors.



Interdisciplinary bridge

Translating archival principles to engineers, and technical realities to users, scholars & society.

CONCLUSIONS

Where this leaves us

Four conclusions

1. Paradata is conceptually necessary and practically indispensable for documenting AI systems.
2. It repositions documentation as an embedded lifecycle function — not after-the-fact compliance.
3. AI documentation is sociotechnical: organizational and human factors are as central as technical logs.
4. The profession's future lies at the intersection of accountability, technology, and interdisciplinary governance.

Where the work goes next

- A core set of paradata standards drawing on emerging AI regulation and guidance.
- Domain-specific paradata templates — starting with healthcare.
- Collaboration with ECM vendors to automate paradata capture and preservation.
- Automated AI governance to optimize cost and manage risk.
- Methods balancing the public's right to know against individual privacy.

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“Paradata is the 'everything else' that must be created, captured, and preserved to hold AI accountable.”

Thank you

Alex Richmond

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Full report: Preserving AI Techniques as Paradata (RP04 Final Report, 2026)