PRESENTATION AND CONTEXTUALISATION IN THE ONLINE ARCHIVE OF INTERNET ART

Lozana Rossenova
PhD researcher
London South Bank University
103 Borough Road,
London SE1 0AA, UK
mehandzl@lsbu.ac.uk

RESEARCH QUESTION & METHODOLOGY

The evolution of network environments and the development of new patterns of interaction between users and online interfaces create multiple challenges for the long-term provision of access to online artefacts of cultural value. In the case of internet art, curating and archiving activities are contingent upon addressing the question of what constitutes the art object. Internet artworks are not single digital objects, but rather assemblages [1], dependent on specific software and network environments to be executed and rendered. They oftentimes change over time and require specific user input in order to be performed.

This research project seeks to better understand problems associated with the archiving of internet art and asks: How the artworks can be made accessible to the public in their native environment – online – while enabling users of the archive to gain an expanded understanding of the artworks' context?

The methodology of this project is multidisciplinary, combining qualitative research methods from the fields of the digital humanities, information sciences and human computer interaction (HCI). Following common HCI qualitative research approaches [2], the project involves contextual inquiry, ethnographic observation and user research towards the design of a new interaction design framework for Rhizome's archive of internet art – the ArtBase.
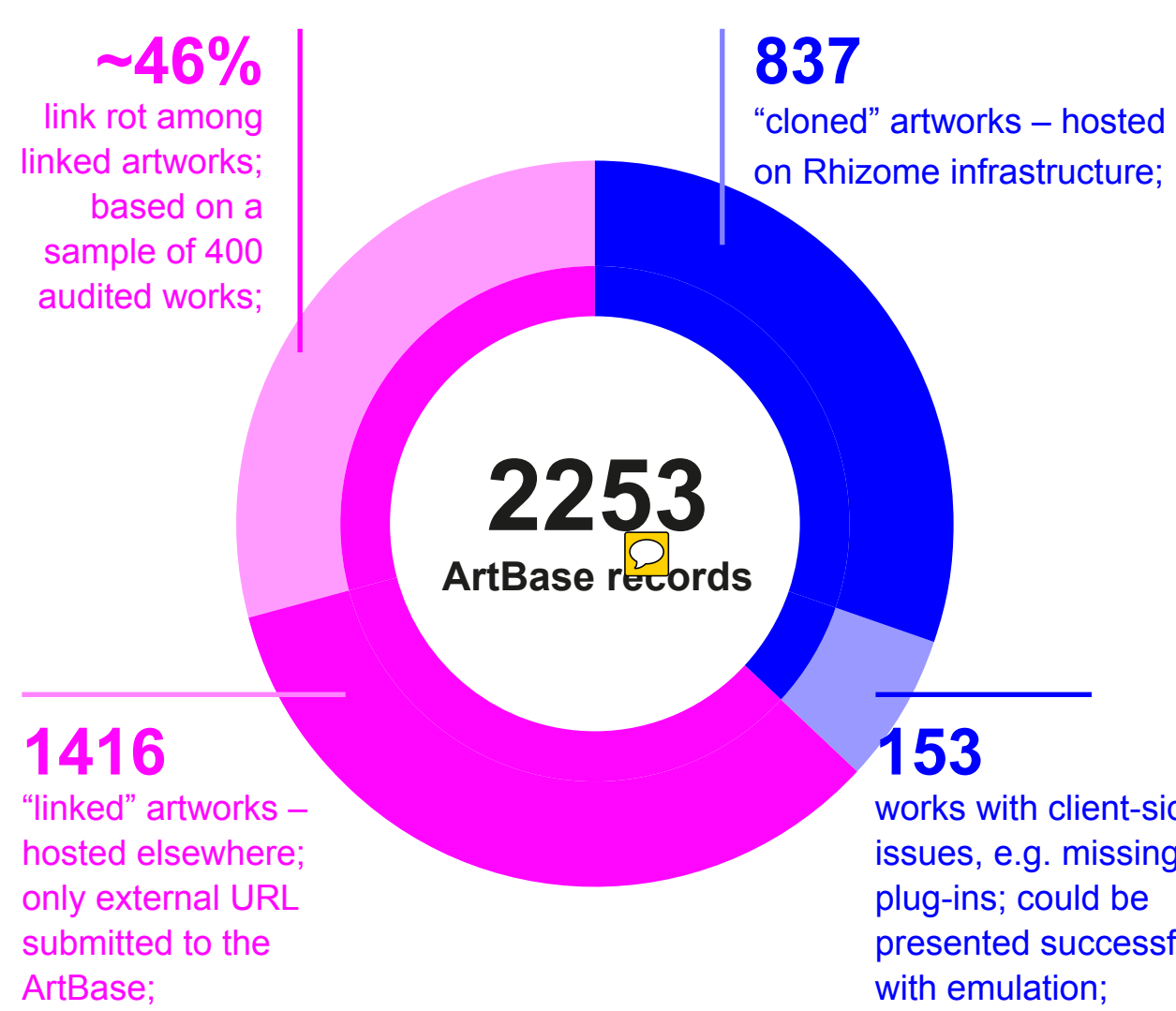
THE ARTBASE CONTEXT

Established in 1999, the vision and conception of the ArtBase is closely tied with Rhizome's position at the time as an influential listserv with an active community, including some of the first artists working on the internet.
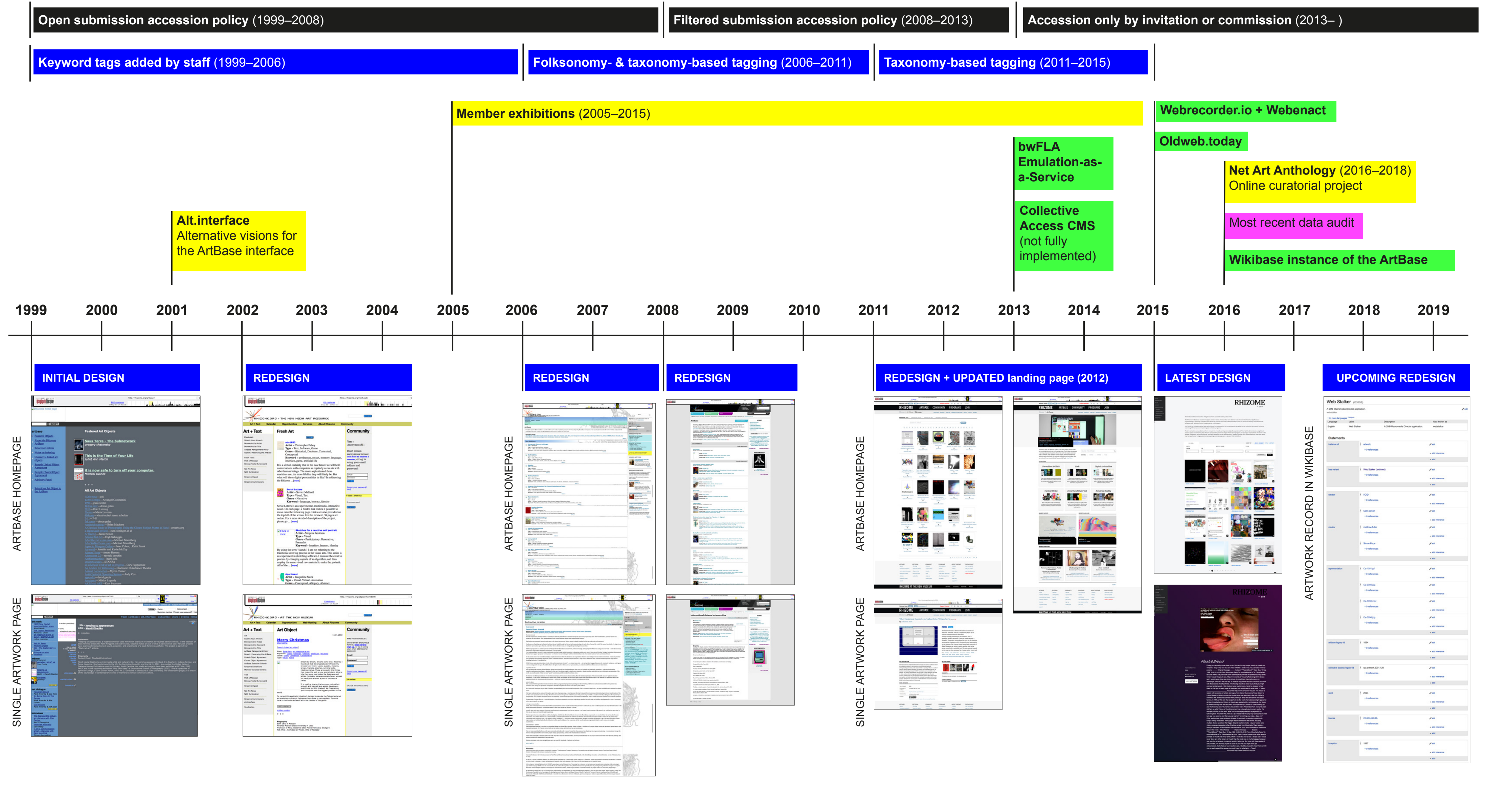
Besides its long history (almost 20 years) and its large volume (over 2000 artworks to date), the ArtBase is also an international and diverse archive, primarily hosting works of internet art, but also software-based works, moving images, games, and browsers. The diverse works in the ArtBase prove to be ideal test cases for the development of new tools and strategies for digital preservation [3], which aim to not only preserve the codebase of the works, but to allow users to experience the original form of the works through reperformance in legacy environments.

Over the last three years in particular, Rhizome has developed new preservation tools and strategies following a reperformance-as-preservation paradigm, wherein support for the performative qualities of internet artworks is seen as key both in terms of conserving the work for the future, as well as preserving social memory around the work and the specifics of its interaction affordances.

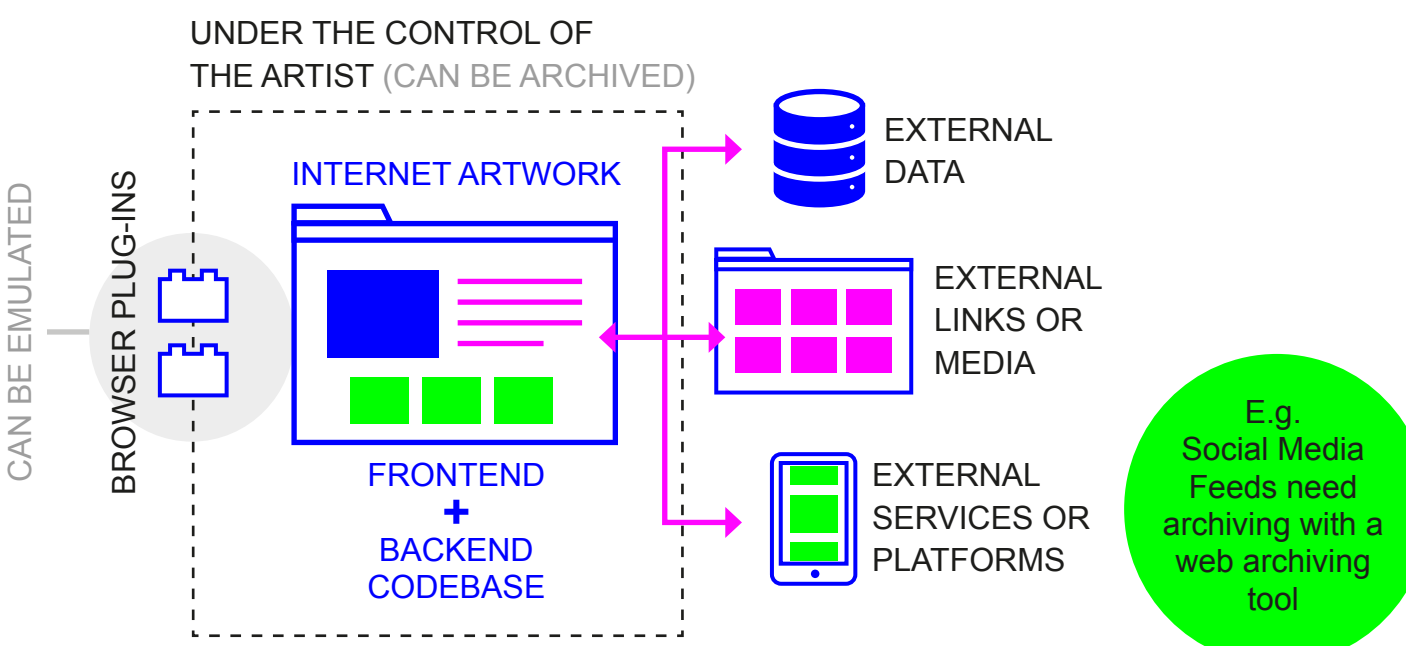ArtBase statistics based on most recent data audit, 2015 [4]:

- **~46%** link rot among linked artworks; based on a sample of 400 audited works;
- **837** "cloned" artworks – hosted on Rhizome infrastructure;
- **2253** ArtBase records
- **1416** "linked" artworks – hosted elsewhere; only external URL submitted to the ArtBase;
- **153** works with client-side issues, e.g. missing plug-ins; could be presented successfully with emulation;

TIMELINE OF POLICY & STRATEGY DEVELOPMENTS IN THE ARTBASE

- Open submission accession policy (1999–2008)
- Filtered submission accession policy (2008–2013)
- Accession only by invitation or commission (2013–)
- Keyword tags added by staff (1999–2006)
- Folksonomy- & taxonomy-based tagging (2006–2011)
- Taxonomy-based tagging (2011–2015)
- Member exhibitions (2005–2015)
- bwFLA Emulation-as-a-Service
- Collective Access CMS (not fully implemented)
- Webrecorder.io + Webenact
- Oldweb.today
- Net Art Anthology (2016–2018) Online curatorial project
- Most recent data audit
- Wikibase instance of the ArtBase
- Alt.interface Alternative visions for the ArtBase interface

Timeline years: 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

- INITIAL DESIGN
- REDESIGN
- REDESIGN
- REDESIGN
- REDESIGN + UPDATED landing page (2012)
- LATEST DESIGN
- UPCOMING REDESIGN

(Rows: ARTBASE HOMEPAGE / SINGLE ARTWORK PAGE; ARTWORK RECORD IN WIKIBASE)

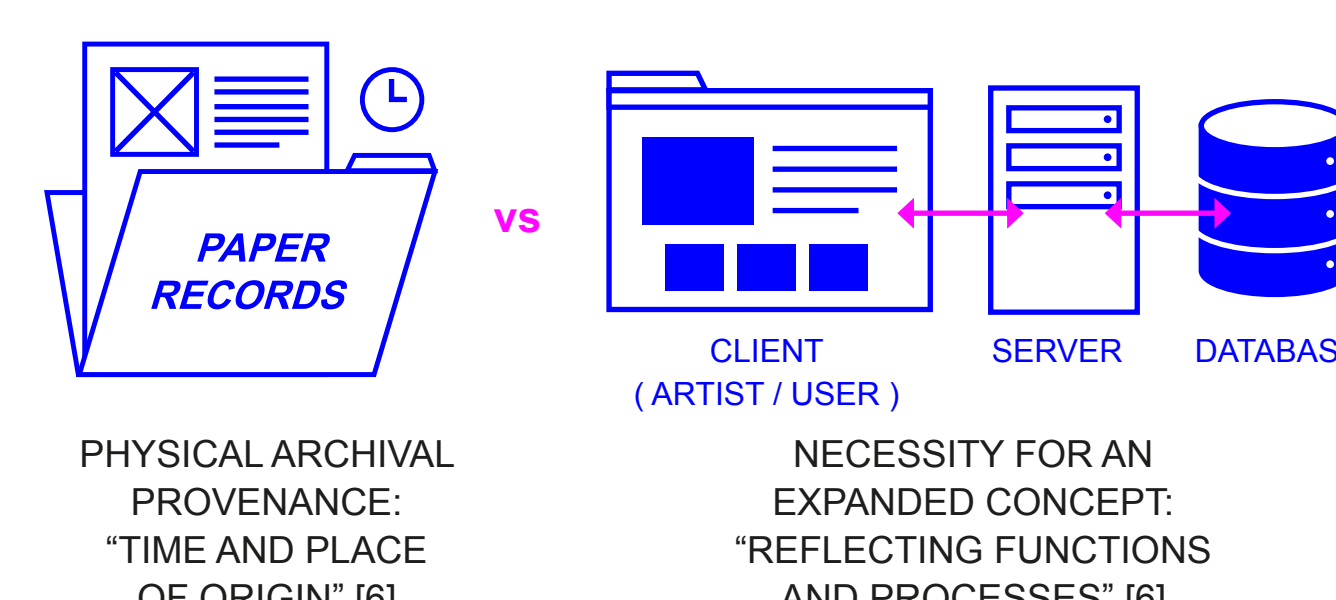## KEY CONSIDERATIONS FOR THE NEW ARCHIVAL FRAMEWORK

Diffuse digital objects

Internet art spans beyond the boundaries of a single digital object and can become "diffuse" [5], referencing external, dynamic and real-time data sources, or existing across multiple locations and platforms. The archive framework needs to recognise when certain external resources, such as Google Image Search or live Twitter feeds, for example, cannot become part of the archive record and need alternative treatment.

UNDER THE CONTROL OF THE ARTIST (CAN BE ARCHIVED)

- INTERNET ARTWORK → EXTERNAL DATA
- → EXTERNAL LINKS OR MEDIA
- FRONTEND + BACKEND CODEBASE → EXTERNAL SERVICES OR PLATFORMS
- CAN BE EMULATED / BROWSER PLUG-INS
- E.g. Social Media Feeds need archiving with a web archiving tool

### Reconceptualising provenance and context

A key concern for the backend of the archive remains the development of a provenance framework which can describe not only the origin of each artwork record and the transformations that may have been applied to the record, but also the dependencies of the performative and "diffuse" artwork and the context within which a (re)performance happens, a context which also includes the audience / (user) experience of the (re)performance.

- PAPER RECORDS vs CLIENT (ARTIST / USER) ← SERVER ← DATABASE
- PHYSICAL ARCHIVAL PROVENANCE: "TIME AND PLACE OF ORIGIN" [6]
- NECESSITY FOR AN EXPANDED CONCEPT: "REFLECTING FUNCTIONS AND PROCESSES" [6]
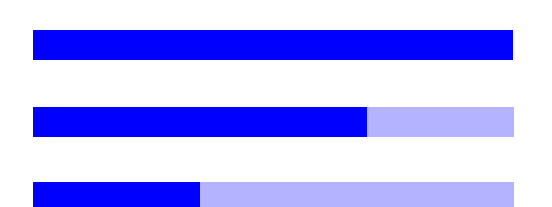
Metadata richness

Due to various stages in the history of the ArtBase, much of the archival metadata is not consistent or complete. Instead of forcing the metadata to conform to a standard schema, the archival framework could employ the concept of metadata *richness* (or *completeness*) to provide indication to users of the current state of each artwork record. Additionally, the data that is available can be expressed in a linked data model to enable interoperability (also see Wikibase diagrammes below).
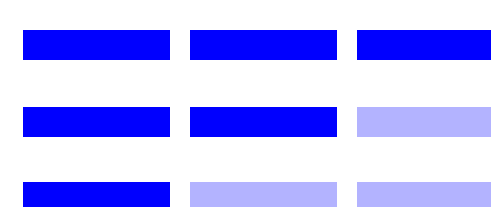
- **Record richness** — Example of the visual representation used in the online archive of the Auckland War Memorial Museum.
- **Record completeness** — Example of the visual representation used in the online archive of the Brooklyn Museum.

USER RESEARCH

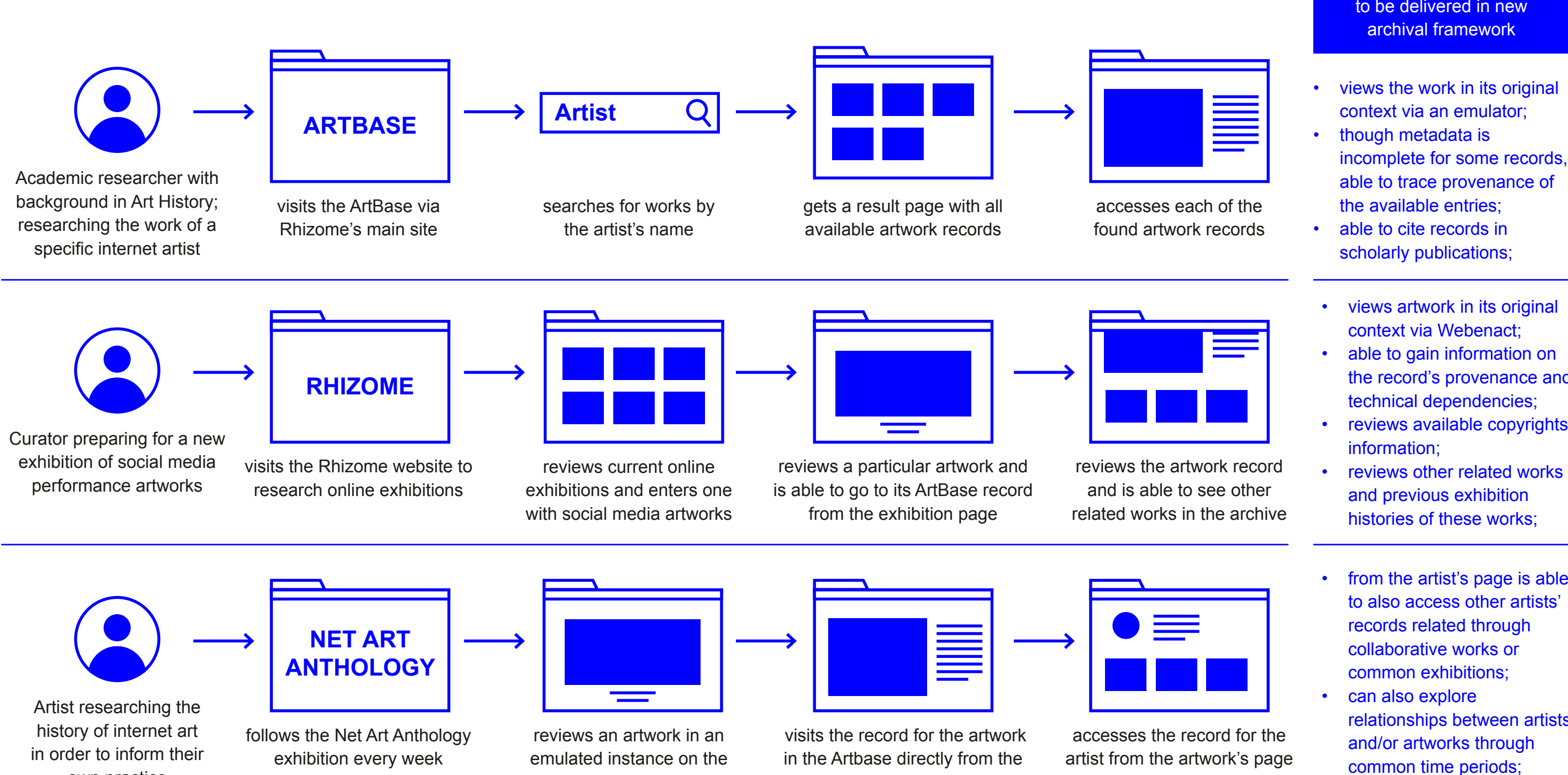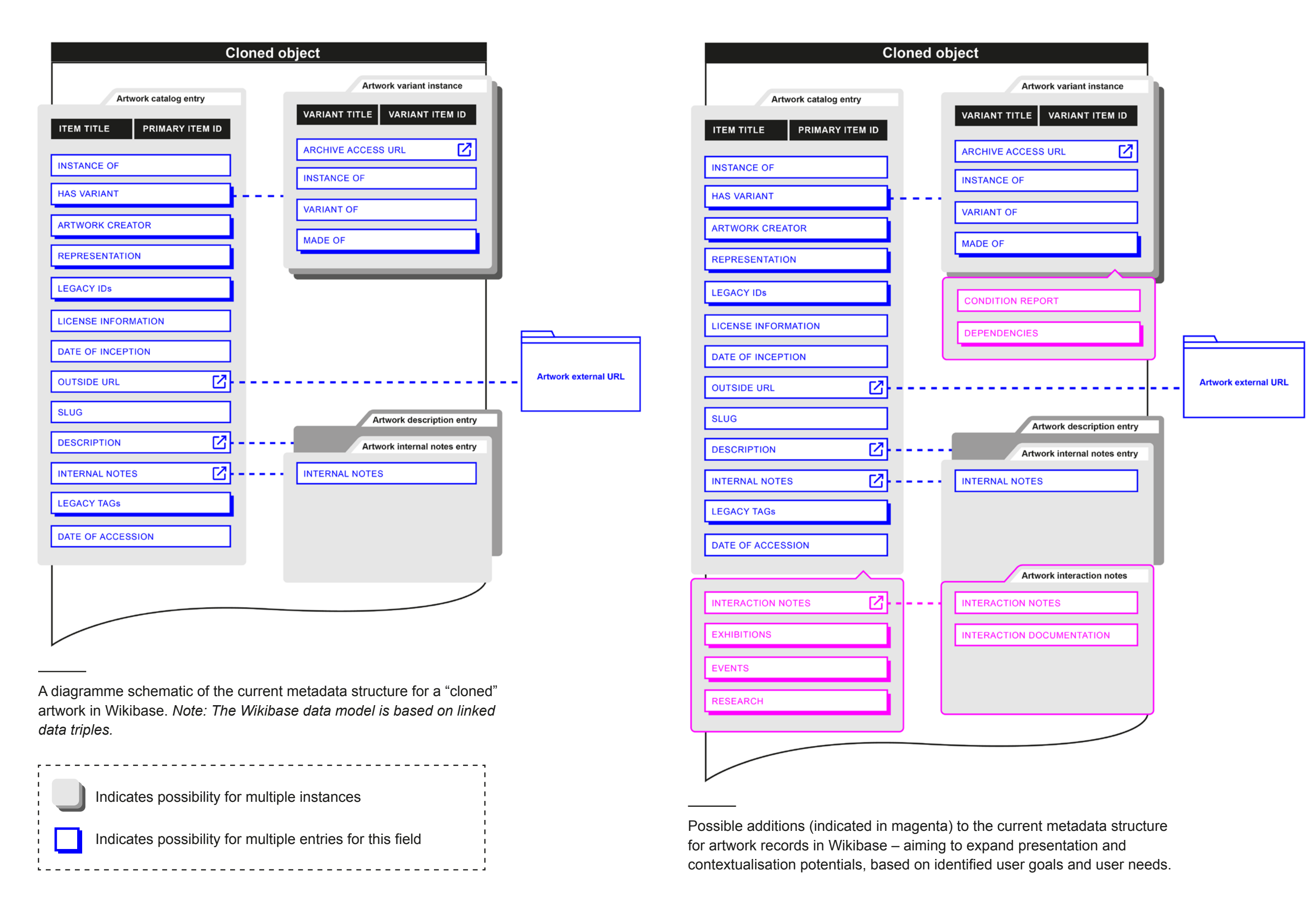| USER GROUPS	WHO?	GOALS?	NEEDS?
EXPERT RESEARCH USERS*	• artists • curators • academics (researchers and students)	• browsing & referencing historic artworks • researching the history of a specific artwork • researching the work of a specific artist • looking for artworks for an exhibition	• understanding the provenance of the version of the artwork presented in the archive • understanding who are the actors involved in the development and any subsequent changes to the artwork and its record • being able to look at artworks in sets, not just isolated instances • accessing any installation requirements / instructions, if available • accessing exhibition history for artworks, if available • understanding who to contact regarding any copyrights clearance • being able to cite artwork records in academic texts and online
GENERAL USERS**	• art enthusiasts • digital culture practitioners (designers, developers) • journalists	• browsing the archive • discovering new art and information about digital cultural history	• multiple entry points to the artworks in the archive • non-search-based methods for discovery in the archive • sharing and referencing capabilities
INTERNAL USERS***	• preservation staff • curatorial staff • editorial staff	• making historic works accessible and performative again • improving metadata expression models • accessioning new works	• adding differentiation (provenance) to description levels in metadata records • capturing new (or existing) research that has been carried out for artworks or artists in the archive • automating presentation of works in remote browser environments; automating deployment of emulation environments, when needed • identifying gaps in the collection, possibly using automated interface tools

* User testing sessions for this user group carried out between mid-August and mid-September 2017.
** Speculative proposals for this user group based on anecdotal information; dedicated session scheduled for October 2017;
*** Internal staff workshop at Rhizome carried out in February 2017 to determine internal user goals and needs.

USER SCENARIOS*

Academic researcher with background in Art History; researching the work of a specific internet artist → **ARTBASE** visits the ArtBase via Rhizome's main site → **Artist** searches for works by the artist's name → gets a result page with all available artwork records → accesses each of the found artwork records

Curator preparing for a new exhibition of social media performance artworks → **RHIZOME** visits the Rhizome website to research online exhibitions → reviews current online exhibitions and comes across one with social media artworks → reviews a particular artwork and is able to go to its ArtBase record from the exhibition page → reviews the artwork record and is able to see other related works in the archive

Artist researching the history of internet art in order to inform their own practice → **NET ART ANTHOLOGY** follows the Net Art Anthology exhibition every week → reviews an artwork in an emulated instance on the Anthology website, but wants to learn more → visits the record for the artwork in the Artbase directly from the Anthology page → accesses the record for the artist from the artwork's page and is able to access further artworks by that artist

Additional actions possible to be delivered in new archival framework

- views the work in its original context via an emulator; though metadata is incomplete for some records, able to trace provenance of the available entries; able to cite records in scholarly publications;
- views artwork in its original context via Webenact; able to gain information on the record's provenance and technical dependencies; reviews available copyrights information; reviews other related works and previous exhibition histories of these works;
- from the artist's page is able to also access other artists' records related through collaborative works or common exhibitions; can also explore relationships between artists and/or artworks through common time periods;

* These scenarios were developed based on insights from user testing sessions carried out between mid-August and mid-September 2017. User scenarios are a key element in interface design and usability testing practices. For more information: https://www.usability.gov/how-to-and-tools/methods/scenarios.html

METADATA EXPRESSIONS IN WIKIBASE

(Cloned object diagram — left)
Artwork catalog entry / Artwork variant instance
ITEM TITLE | PRIMARY ITEM ID / VARIANT TITLE | VARIANT ITEM ID
- INSTANCE OF — ARCHIVE ACCESS URL
- HAS VARIANT — INSTANCE OF
- ARTWORK CREATOR — VARIANT OF
- REPRESENTATION — MADE OF
- LEGACY IDs
- LICENSE INFORMATION
- DATE OF INCEPTION
- OUTSIDE URL — Artwork external URL
- SLUG
- DESCRIPTION — Artwork description entry
- INTERNAL NOTES — Artwork internal notes entry / INTERNAL NOTES
- LEGACY TAGs
- DATE OF ACCESSION

A diagramme schematic of the current metadata structure for a "cloned" artwork in Wikibase. Note: The Wikibase data model is based on linked data triples.

- Indicates possibility for multiple instances
- Indicates possibility for multiple entries for this field

(Cloned object diagram — right)
Artwork catalog entry / Artwork variant instance
ITEM TITLE | PRIMARY ITEM ID / VARIANT TITLE | VARIANT ITEM ID
- INSTANCE OF — ARCHIVE ACCESS URL
- HAS VARIANT — INSTANCE OF
- ARTWORK CREATOR — VARIANT OF
- REPRESENTATION — MADE OF
- LEGACY IDs — CONDITION REPORT
- LICENSE INFORMATION — DEPENDENCIES
- DATE OF INCEPTION
- OUTSIDE URL — Artwork external URL
- SLUG
- DESCRIPTION — Artwork description entry
- INTERNAL NOTES — Artwork internal notes entry / INTERNAL NOTES
- LEGACY TAGs
- DATE OF ACCESSION
- INTERACTION NOTES — Artwork interaction notes / INTERACTION NOTES
- EXHIBITIONS — INTERACTION DOCUMENTATION
- EVENTS
- RESEARCH

Possible additions (indicated in magenta) to the current metadata structure for artwork records in Wikibase – aiming to expand presentation and contextualisation potentials, based on identified user goals and user needs.

REFERENCES

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[3] Artbase Mission Statement. Available from: http://rhizome.org.art/artbase/

[4] McKeehan, M. (2016) Born-Digital Preservation in the Rhizome ArtBase. New York: National Digital Stewardship Residency. Available from: http://ndsr.nycdigital.org/wp-content/uploads/2016/08/mckeehan_final_report.pdf

[5] Fino-Radin, B. (2011) Digital Preservation Practices and the Rhizome ArtBase. Available from: http://media.rhizome.org/artbase/documents/Digital-Preservation-Practices-and-the-Rhizome-ArtBase.pdf

[6] Cook, T. (2001) Archival Science and Postmodernism: New Formulations for Old Concepts. *Archival Science*, 1 (1), pp. 3-24. DOI: https://doi.org/10.1007/BF02435636