

ENABLING CO-CREATION IN AUGMENTED REALITY: A USER-FRIENDLY NARRATIVE EDITOR FOR CULTURAL HERITAGE EXPERIENCES - STATE OF THE ART

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PROBLEM

curators/historians/tour guides can't create interactive experiences
These tools are usually gated by lack of programming experience





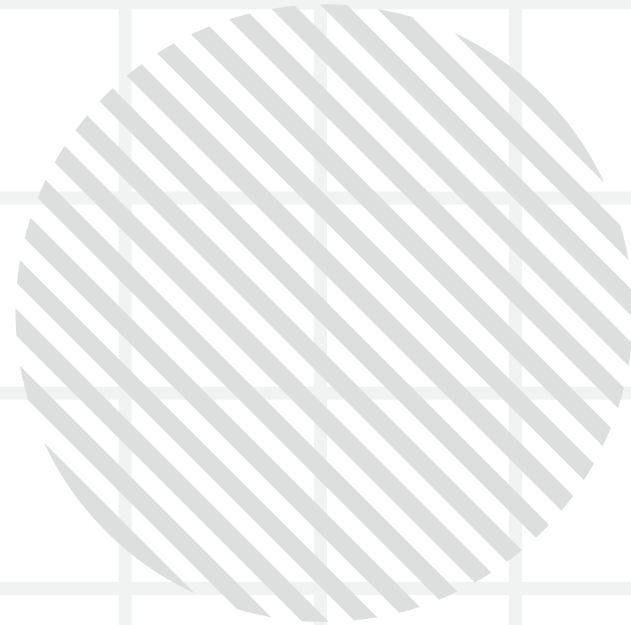
MOTIVATION

Usually, the people with the skills and knowledge to expose our cultural legacy are not the people with the most technical knowledge, so there's a great possibility of knowledge being locked up because of technical difficulties

OBJECTIVES



Democratize content creation



REVIEW



INITIAL QUESTIONS

What degree of freedom should users have?

How can the user interface of the AR story editor be designed to ensure usability for individuals without programming backgrounds?

How can we implement features that contribute towards enhancing the collaborative creation of narratives?

REVIEW PROCESS



```
graph TD; A[REVIEW PROCESS] --> B[LITERATURE REVIEW]; A --> C[SYSTEMATIC REVIEW];
```

The diagram illustrates the Review Process. At the top, a light gray rectangular box contains the title 'REVIEW PROCESS' in bold black text. Two large black arrows point downwards from this box to two separate light gray rectangular boxes below. The left box is titled 'LITERATURE REVIEW' and the right box is titled 'SYSTEMATIC REVIEW'. Both boxes contain the same placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi vitae mauris ut nunc feugiat tincidunt ac et purus. Suspendisse et cursus dui.' The background of the entire slide is a light gray grid.

LITERATURE REVIEW

Lorem ipsum dolor sit amet,
consectetur adipiscing elit.
Morbi vitae mauris ut nunc
feugiat tincidunt ac et purus.
Suspendisse et cursus dui.

SYSTEMATIC REVIEW

Lorem ipsum dolor sit amet,
consectetur adipiscing elit.
Morbi vitae mauris ut nunc
feugiat tincidunt ac et purus.
Suspendisse et cursus dui.

LITERATURE REVIEW

Axis definition

Define axis



Obtain definition for each axis



Get more terms for each axis



Paper gathering

Define search engine and databases



Define search queries (based on the axes)



Search for papers (filtering out papers older than 2018)

LITERATURE REVIEW

Paper filtering

Gather papers' information in spreadsheet (N=104)

Remove duplicates (N=99)

Access paper relevance by title (N=14)

Access paper relevance after reading abstract (N=6)

Data collection

Define research questions

Search papers for answers to research questions

Extract themes and terms from data

Group themes and terms into a spreadsheet

Review planning

Update each axes' terms

Define research questions, PICOC, keywords and synonyms, sources and selection criteria, based on the results of the literature review

Paper collection

Define search engine and databases

Define search queries

Search for papers

SYSTEMATIC REVIEW

Paper filtering

Define criteria for paper acceptance



Gather papers' information in spreadsheet (N=994)



Remove duplicates (N=780)



Determine paper relevance by title (N=67)



Determine paper relevance by abstract (N=16)



Data collection

Define relevant categories for data extraction



Search papers for data that fits the categories

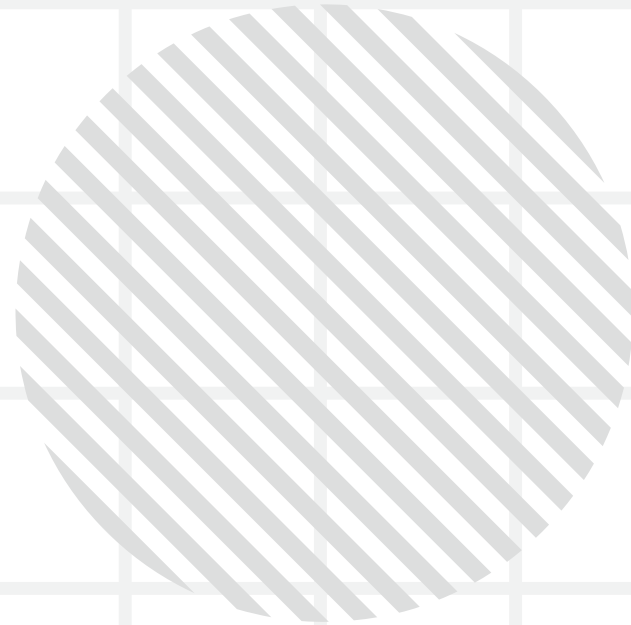


Extract themes from data



Group themes into one file

SYSTEMATIC REVIEW



RESULTS



STORY CREATION METHODS

Story representation - how to visually represent a narrative

Collaboration in story authoring processes

Digital design vs in situ creation

STORY AUTHORIZING FEATURES

Visual story authoring assistance

Story Debugging

Core functionalities

Additional functionalities

ACCOMODATIONS FOR NON-DEVELOPOERS

Managing assets

Authoring Tool Terminology

Error Messages

Educational material & Community Support

USABILITY CONCERNS

Inconsistent interfaces

Compilation times

Platform independence

Lack of feedback



DISCUSSION



DISCUSSION

**ACCESS A
FUNCTIONALITY'S
FEASIBILITY**

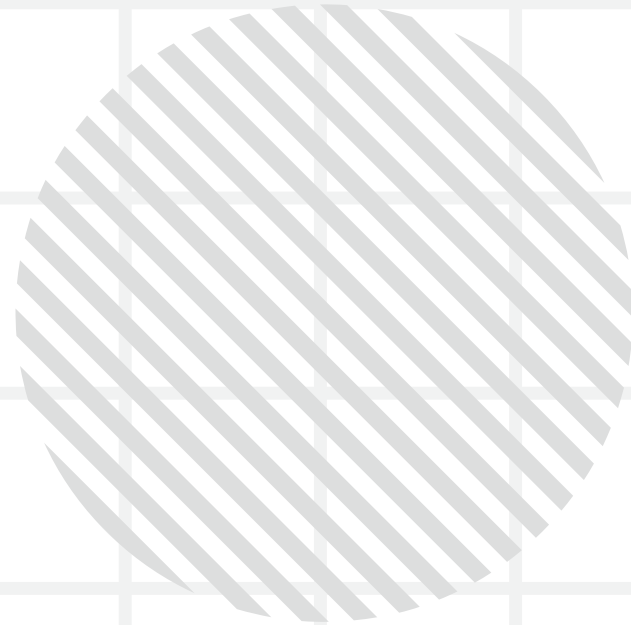
**LIMITATIONS ON
RELYING SOLELY ON
ACADEMIC
PUBLICATIONS**



CONCLUSION

Access a feature's probability of implementation



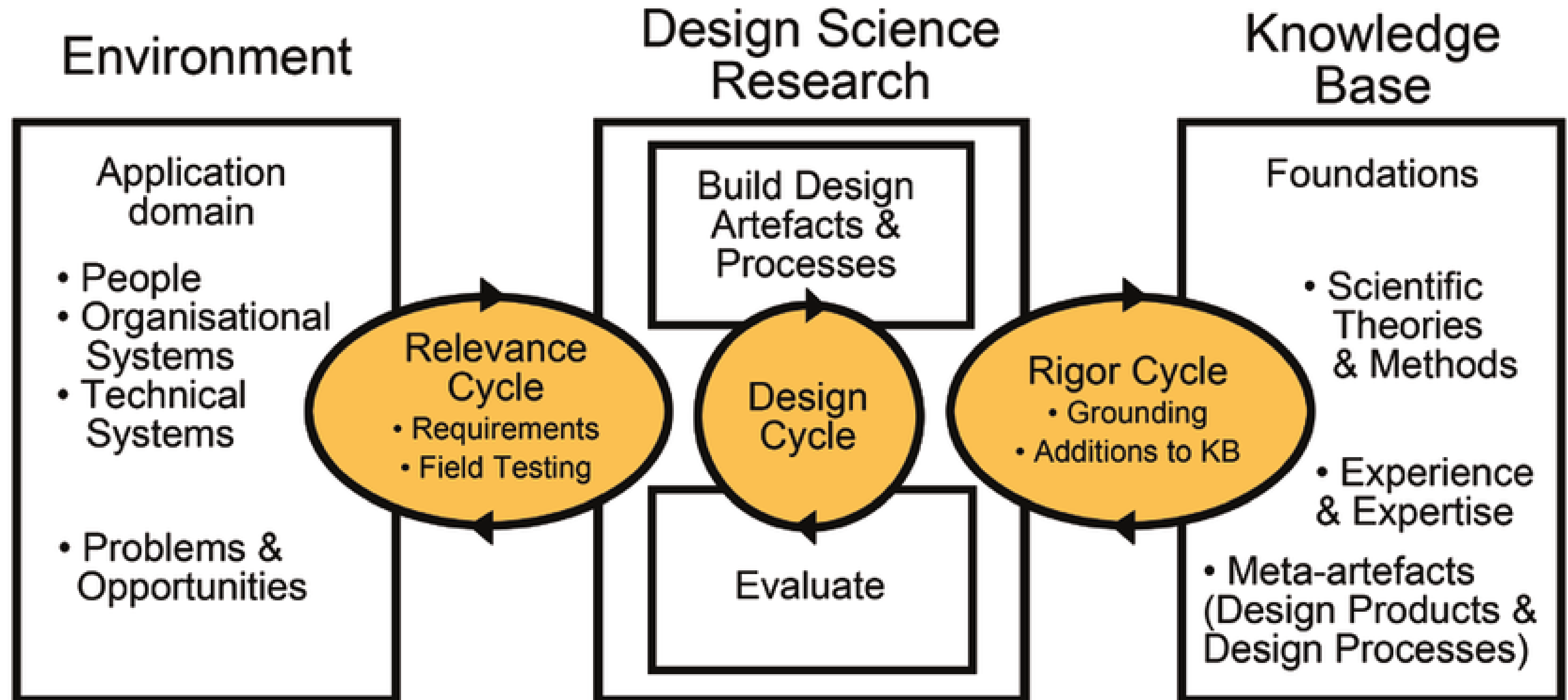


WORK PLAN





METHODOLOGY



THANK YOU

Presentation by Alexander Aronowitz

