

# AUDIOVISUAL CULTURAL HERITAGE

BRIDGING THE GAP BETWEEN  
DIGITAL ARCHIVES AND ITS  
USERS




# CONTENTS

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- ☼ Introduction:
  - ❖ myself
  - ❖ the project
- ☼ Problem description / Background
- ☼ Research objective
  - ❖ Information science research
  - ❖ A research paradigm
- ☼ Research Methodology
  - ❖ User needs and technical possibilities
  - ❖ Service(s) and viable business model
  - ❖ Justify and evaluate
- ☼ Research so far
- ☼ Research gaps / Expected contribution

## INTRODUCTION: MYSELF

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- ✻ Graduated in February 2008 in Business Informatics at Utrecht University
- ✻ Master thesis in eHealth domain
- ✻ Worked for small research and consultancy firm  *dialogic*  
innovatie • interactie
- ✻ Started 1 December with PhD track at University of Twente



# INTRODUCTION: THE PROJECT (1)

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## ☼ Funding partners:



- Strengthen relationship NL-BE
- Similar cultural heritage: dutch language plus both felt the need for disclosure of content

## ☼ Executors:



## ☼ Partners:



## INTRODUCTION: THE PROJECT (2)

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- ✻ Title: Archives on the move
- ✻ Aim: disclosure of digital archives from a user point of view

- ✻ Supervisors:



prof. dr. Jan van Dijk



prof. dr. Erik Huizer



dr. L. van de Wijngaert

- ✻ Roughly 3 steps defined:
  - Investigate demand and possibilities
  - Create demonstrator and business model
  - Evaluate demonstrator

## PROBLEM DESCRIPTION / BACKGROUND (1)

- ✻ 2 conditions for useful disclosure:
  - Digitization of content
  - High capacity infrastructure for the users
  
- ✻ Dutch situation:
  - 60% of audiovisual heritage is digitalized (funded by the government)
  - 78% of the population has an broadband internet connection
  
- ✻ Time to bring the content to the users

## PROBLEM DESCRIPTION / BACKGROUND (2)

### ☼ Different users:

Broadcasters

Profit organizations

Non-profit organizations

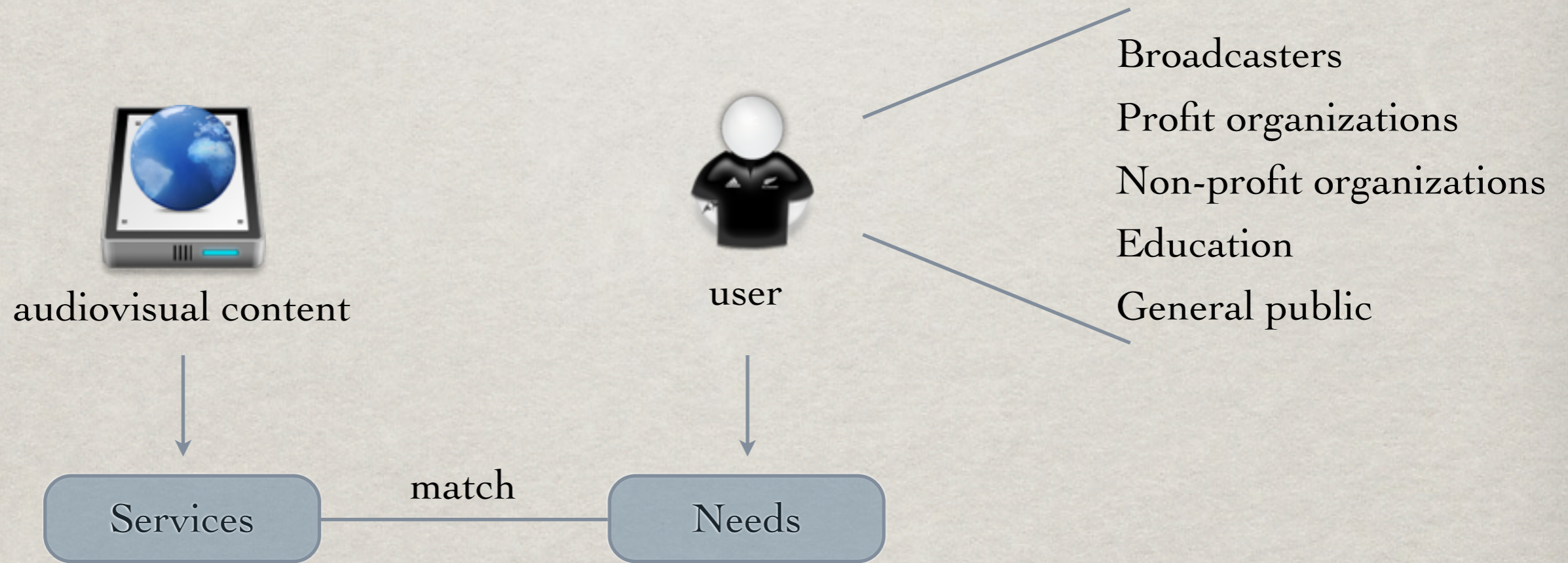
Education

General public



# RESEARCH OBJECTIVE: IS RESEARCH

## ✻ Practical focus



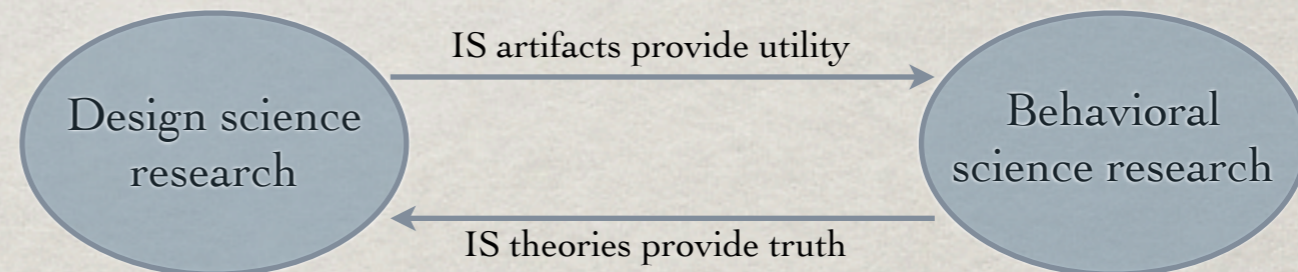
# RESEARCH OBJECTIVE: RESEARCH PARADIGM

☼ Scientific focus

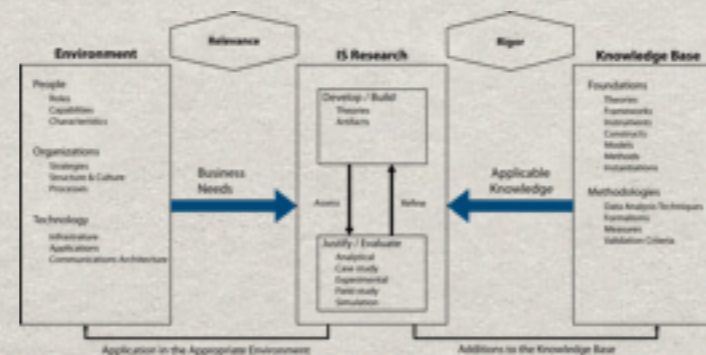
☼ Two IS Research paradigms:

- Behavioral science: goal is truth
- Design science: goal is utility

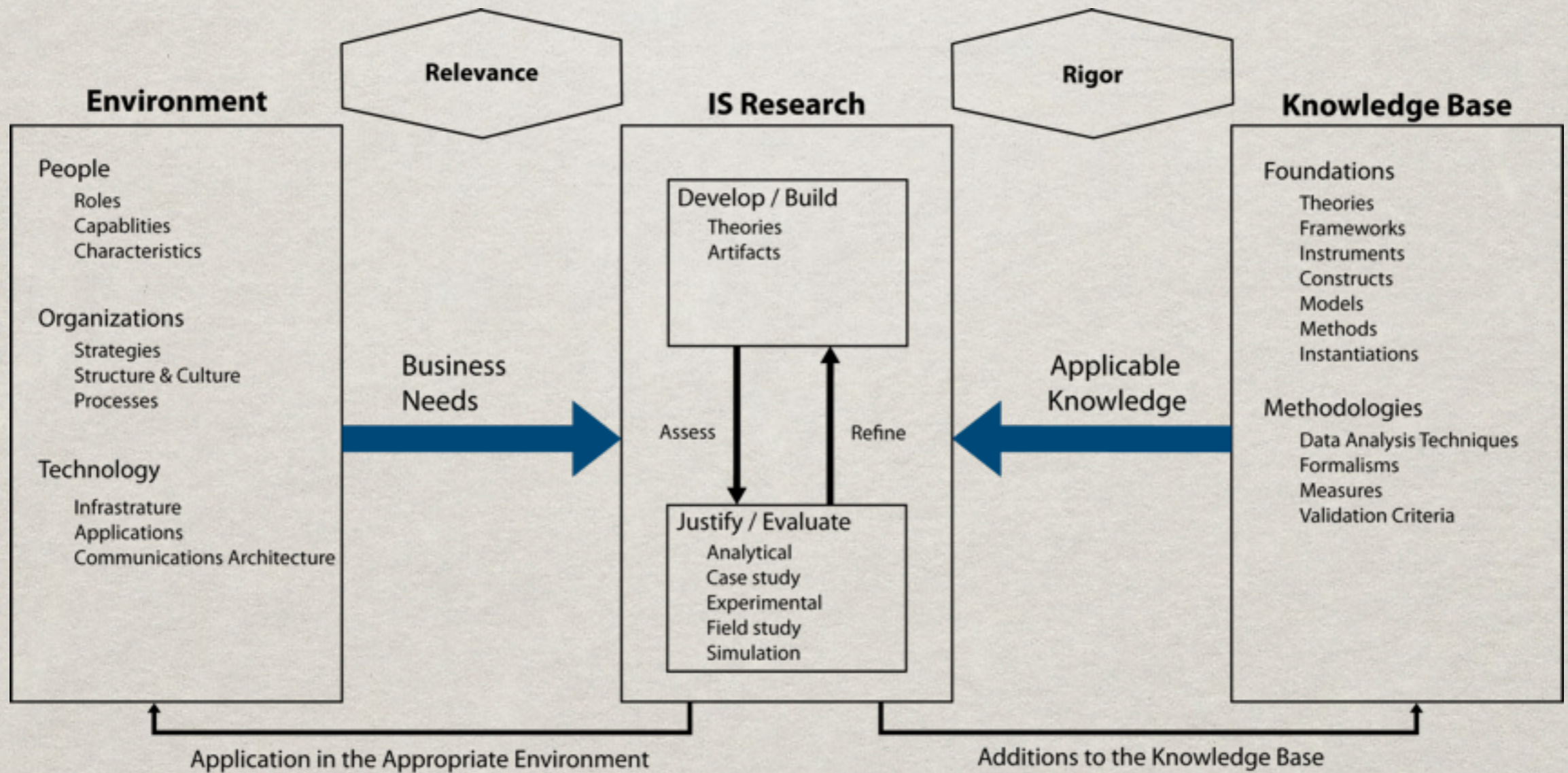
☼ Design cycle:



☼ Resulted in IS Research Framework:



# RESEARCH OBJECTIVE: RESEARCH PARADIGM



# DESIGN SCIENCE: GUIDELINES

#	Guideline	Description
1	Design as an Artifact	Design-science research must produce a viable artifact in the form of a construct, a model, a method, or an instantiation.
2	Problem Relevance	The objective of design-science research is to develop technology-based solutions to important and relevant business problems.
3	Design Evaluation	The utility, quality, and efficacy of a design artifact must be rigorously demonstrated via well-executed evaluation methods.
4	Research Contributions	Effective design-science research must provide clear and verifiable contributions in the areas of the design artifact, design foundations, and/or design methodologies.
5	Research Rigor	Design-science research relies upon the application of rigorous methods in both the construction and evaluation of the design artifact.
6	Design as a Search Process	The search for an effective artifact requires utilizing available means to reach desired ends while satisfying laws in the problem environment.
7	Communication of Research	Design-science research must be presented effectively both to technology-oriented as well as management-oriented audiences.

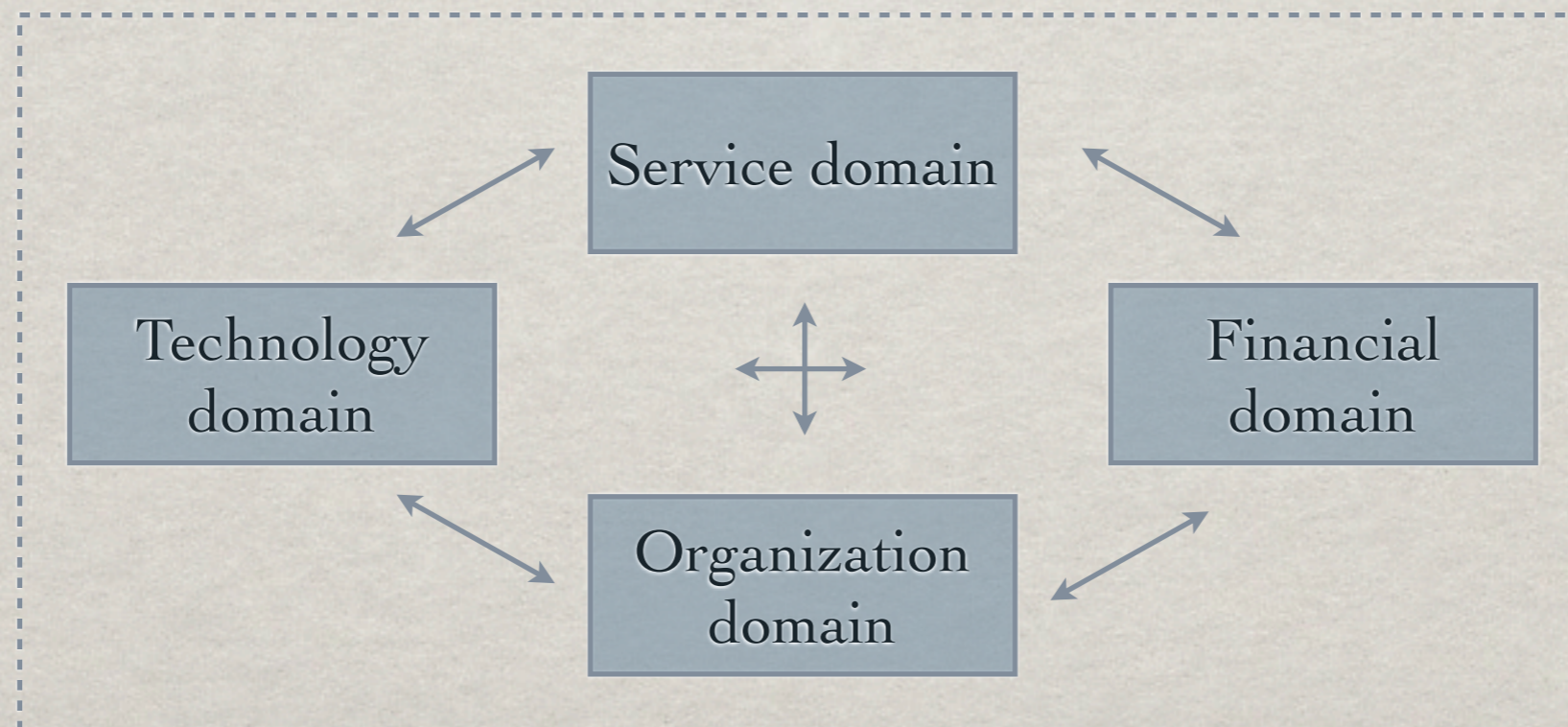
## WORK TO BE DONE / METHODOLOGY (1)

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- ✻ What is the current situation  
(stakeholders analysis and content flow)
  - Desk research / Literature study
  - Interviews with stakeholders
  
- ✻ State-of-art techniques
  - Desk research
  - Field study
  
- ✻ Define user needs
  - Vignette method
  - Search log files of 'Sound and Vision'

## WORK TO BE DONE / METHODOLOGY (2)

- ✱ Development of a service  
(in collaboration with other parties)
- ✱ Development of viable business model based upon STOF model



(Bouwman et. al., 2008)

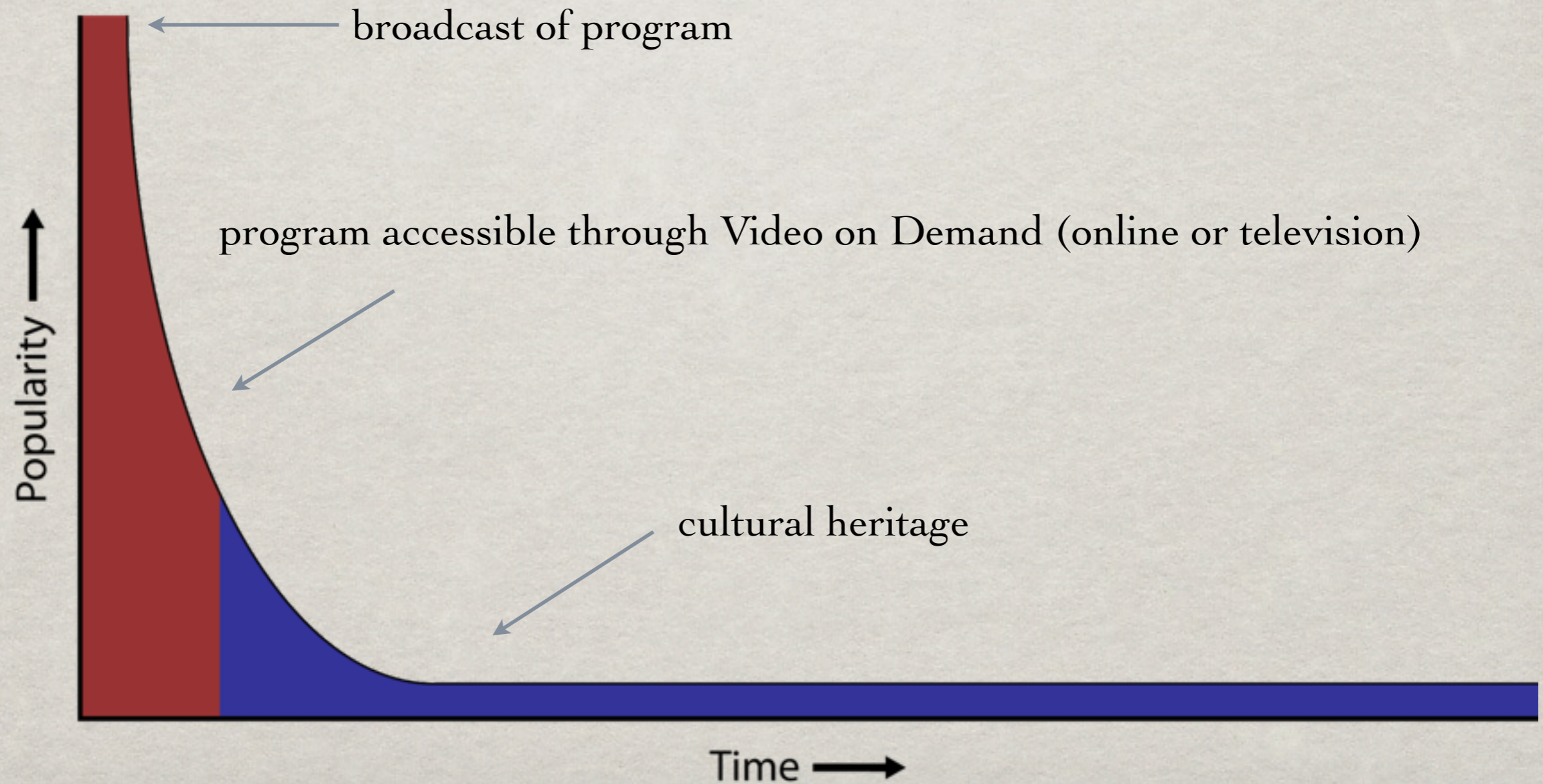
# WORK TO BE DONE / METHODOLOGY (3)

## ✻ Evaluation of the service/demonstrator

Design evaluation methods		
1	Observational	Case Study: Study artifact in depth in business environment
		Field Study: Monitor use of artifact in multiple projects
2	Analytical	Static Analysis: Examine structure of artifact for static qualities (e.g., complexity)
		Architecture Analysis: Study fit of artifact into technical IS architecture
		Optimization: Demonstrate inherent optimal properties of artifact or provide optimality bounds on artifact behavior
		Dynamic Analysis: Study artifact in use for dynamic qualities (e.g., performance)
3	Experimental	Controlled Experiment: Study artifact in controlled environment for qualities (e.g., usability)
		Simulation - Execute artifact with artificial data
4	Testing	Functional (Black Box) Testing: Execute artifact interfaces to discover failures and identify defects.
		Structural (White Box) Testing: Perform coverage testing of some metric (e.g., execution paths) in the artifact implementation
5	Descriptive	Informed Argument: Use information from the knowledge base (e.g., relevant research) to build a convincing argument for the artifact's utility
		Scenarios: Construct detailed scenarios around the artifact to demonstrate its utility

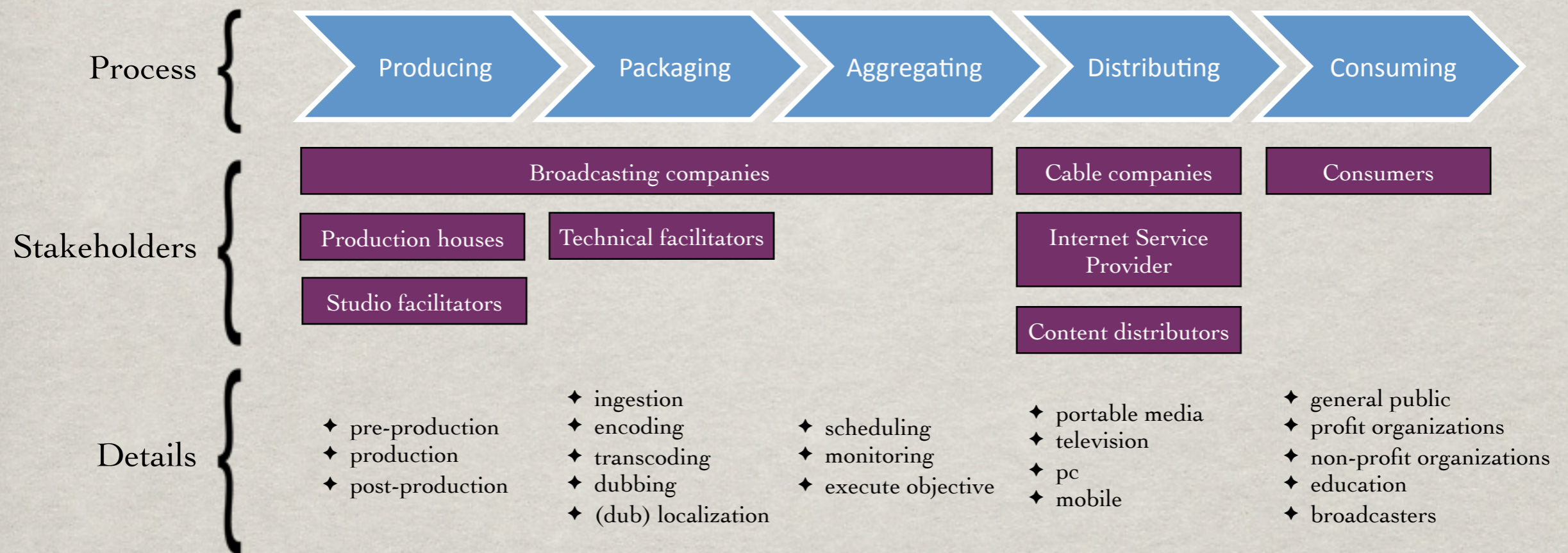
## RESEARCH TILL SO FAR (1)

### ✻ Premature thinking: long tail



# RESEARCH SO FAR (2)

## ☼ Stakeholders and content-flow are identified



# RESEARCH GAPS / EXPECTED CONTRIBUTION

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## ☼ Practical relevance

- Service for general public
- Business model for “Sound and Vision”

## ☼ Scientific relevance

- Evaluation of design research
  - ◆ e.g. how does a vignette study fit in design research?
  - ◆ e.g. is the model of Hevner et al. complete?
  - ◆ e.g. how are the guidelines connected and fitted into the model?
- Contribution to several domains:
  - ◆ User modeling
  - ◆ Business models for cultural heritage
  - ◆ Use and usability of services

# THANK YOU FOR LISTENING

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