

# For an **ethics** of **personalized** **recommendation** at the French national library

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{BnF

# Introduction

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What is personalized recommendation

○ and why is it useful?

DISTANCE, INTROSPECTION

NEED, SUSTAINABILITY

SKILLS, KNOWLEDGE

What is ethical algorithm-based recommendation?

○

AWARENESS

TRANSPARENCY,  
EXPLAINABILITY

HUMAN FIRST

Dealing with ethical concerns at the BnF:

○ a systemic approach

ADVOCACY, ENGAGEMENT

DIVERSITY, COMMUNITY,  
SHARING



What is personalized recommendation and why is it useful?



What is ethical algorithm-based recommendation?



Dealing with ethical concerns at the BnF: a systemic approach



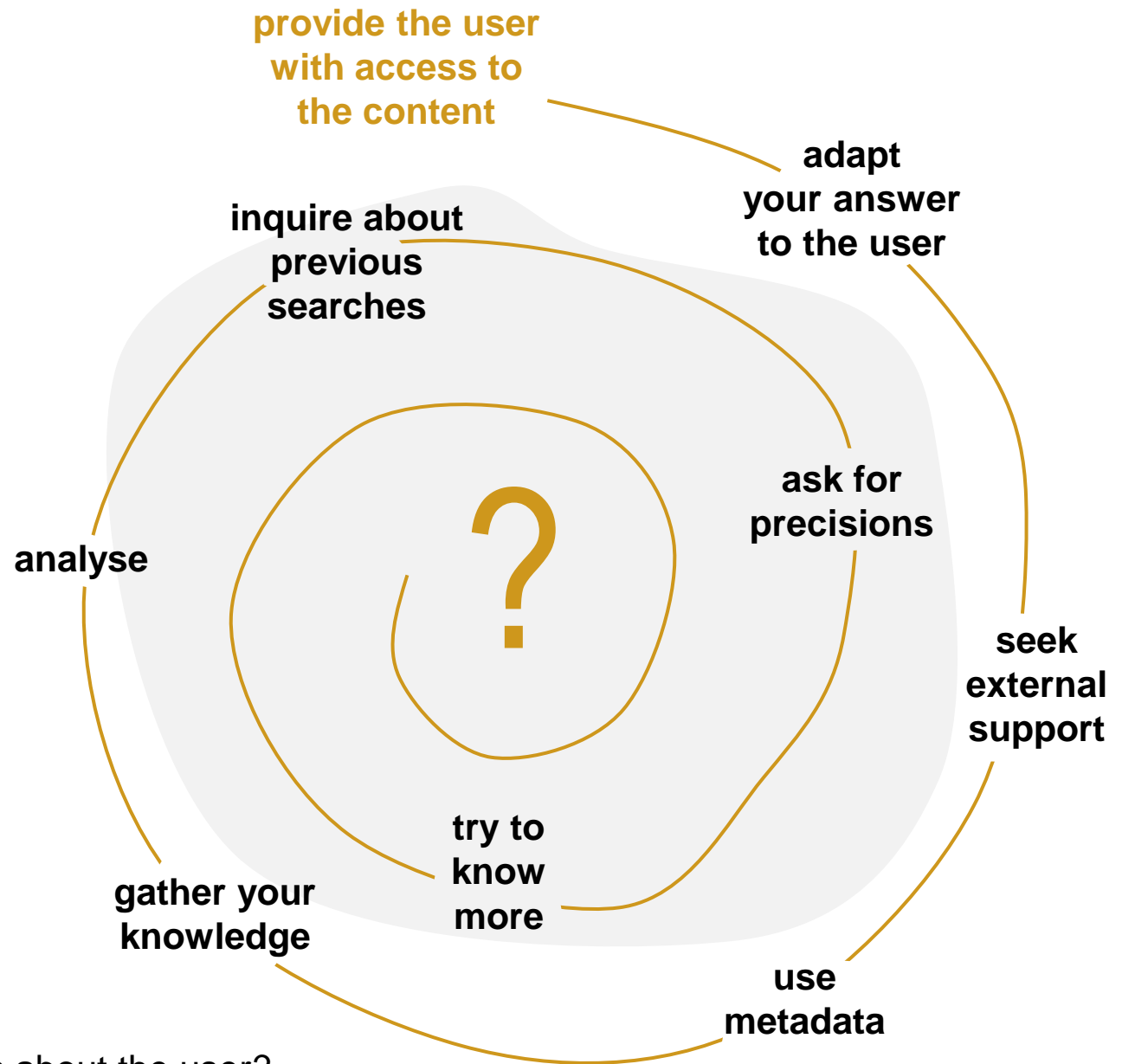
What does  
recommendation  
stand for in  
libraries?

**DISTANCE,  
INTROSPECTION**

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Challenge our professional  
practices and habits

# Operations covered by recommendation



Isn't my answer biased by my prejudices about the user?

Where is the limit between recommendation and prescription?



Gary Campbell-HallSuivre - *Eiffel Tower, Paris* - Flickr

Why do we need  
algorithm-based  
recommendation?

**NEED  
SUSTAINABILITY**

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Is the service  
really needed?

9M

documents in Gallica,  
of many  
different types



Newspapers



Books



Manuscripts



Objects



Maps



Images



Videos



Scores

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2020 uses observatory: 90% Gallica users satisfied but...

“ The search engine frequently returns a large amount of results that are difficult to sort. ”





Charles Maindron – *Viaduct [Construction of Paris Underground]* – Heritage Libraries, Paris

How do  
recommendation  
systems work?  
How can they help?

**SKILLS**  
**KNOWLEDGE**

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What is there  
in the black box?



DATA  
COLLECTION

### Description of items

- Descriptive content metadata
- Use data
- Content scoring

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### Users' profiles & contextual parameters

- Authentication data
- Behavior data (browse & log)

RS MODEL

### CONTENT BASED FILTERING

« Show me  
more of what I like »

### HYBRID SYSTEM

### COLLABORATIVE FILTERING

“Tell me what is popular  
with my peers”

RS  
TECHNIQUES

Text mining  
KNN  
Clustering  
Neural Network

### LIST OF RECOMMENDED ITEMS

Item	Score
i1	0,9
i2	0,12
...	

EVALUATION



What is personalized recommendation and why is it useful?



What is ethical algorithm-based recommendation?



Dealing with ethical concerns at the BnF: a systemic approach



Henri Cartier-Bresson - *Quai St.-Bernard, Paris*, 1932 - Fondation Henri Cartier-Bresson/Magnum Photos

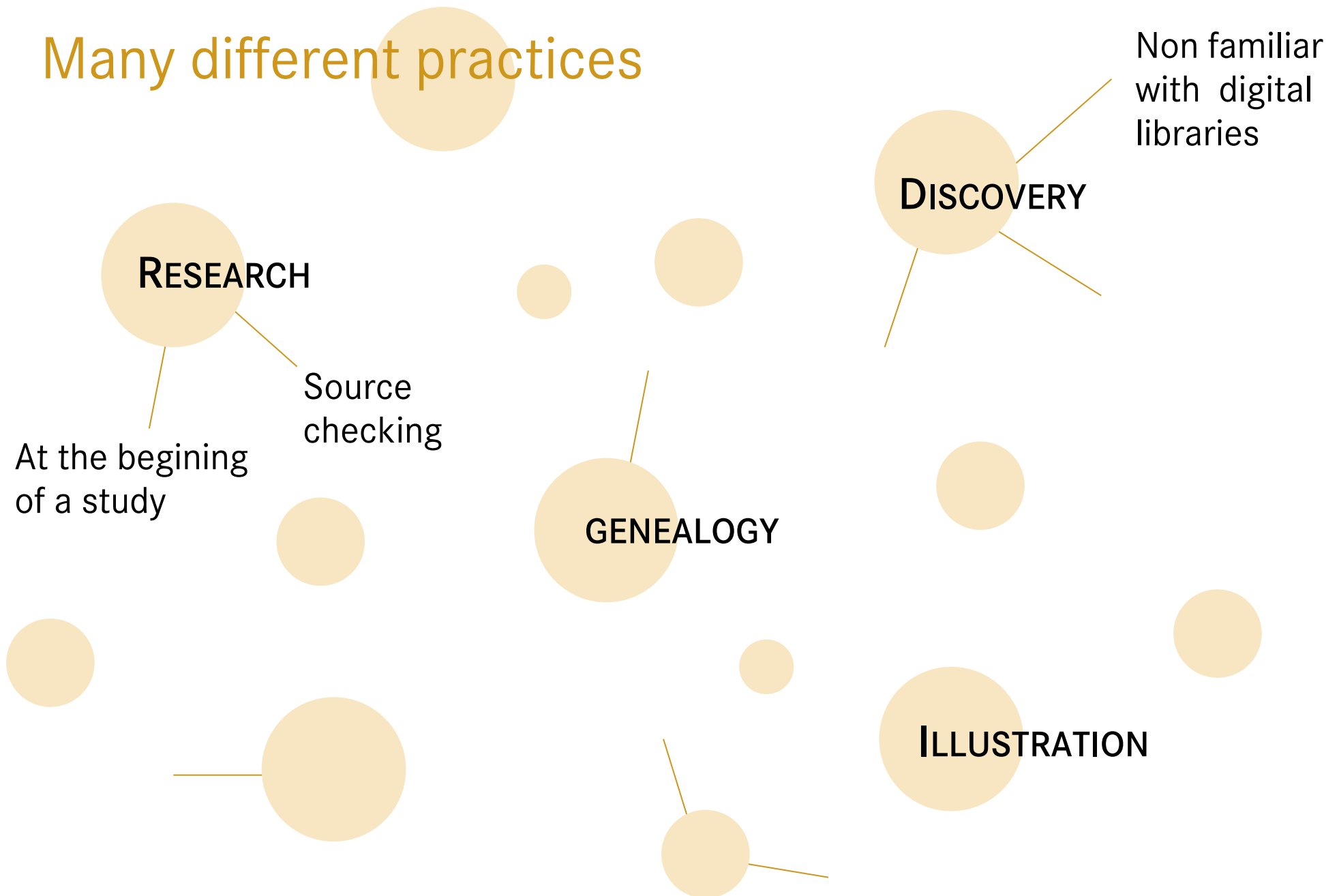
How to build  
users' trust in  
the system?

**AWARENESS**

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What are the  
risks and  
limits?

# Many different practices



## Different types of audiences

Need for autonomy & confidentiality  
VS need for guidance

## Respect of user's privacy

Lack of consent

Anonymization

## Evolving needs over time

Need for flexibility  
in the user's profile definition

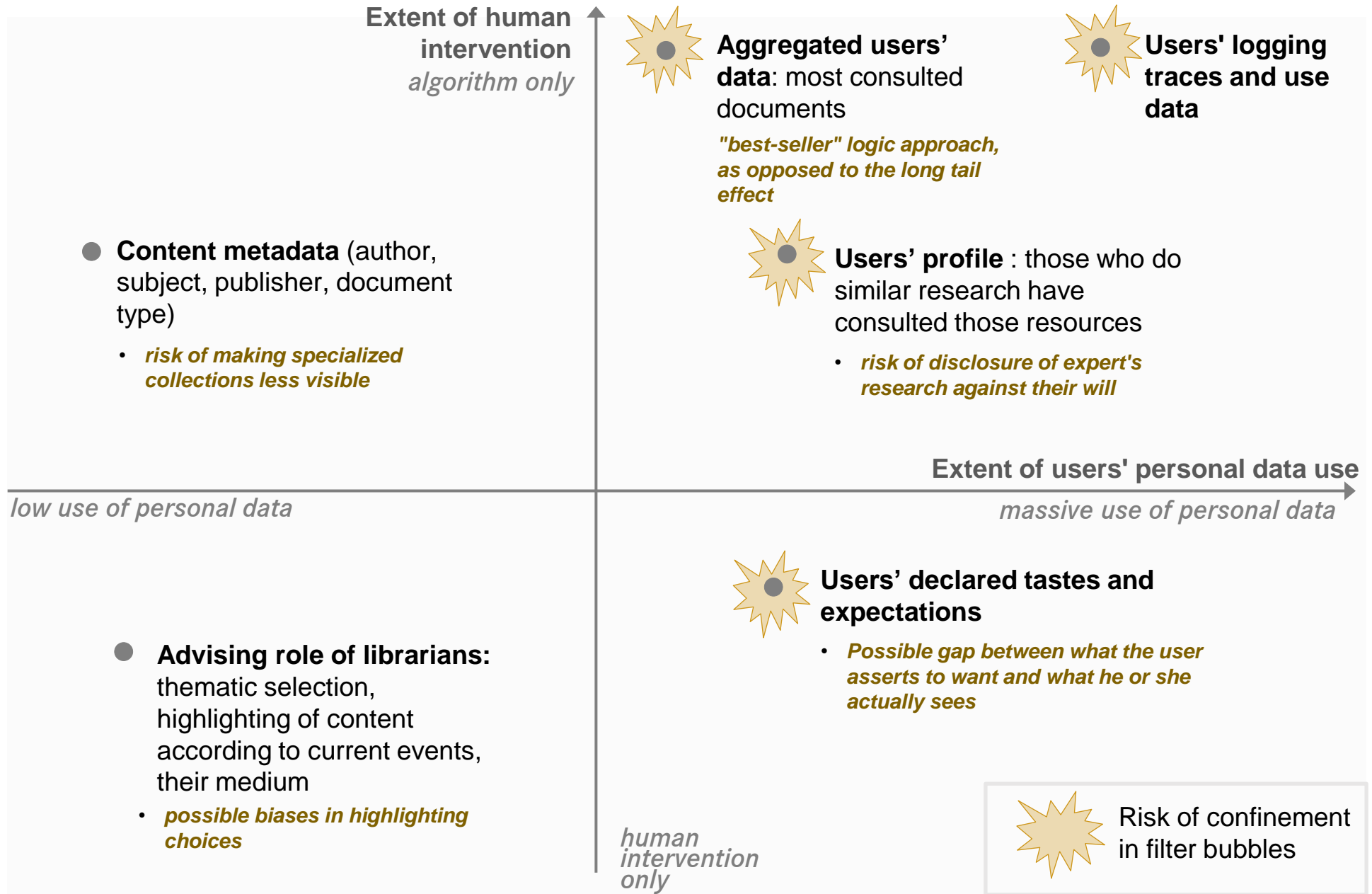
## Relevance & diversity

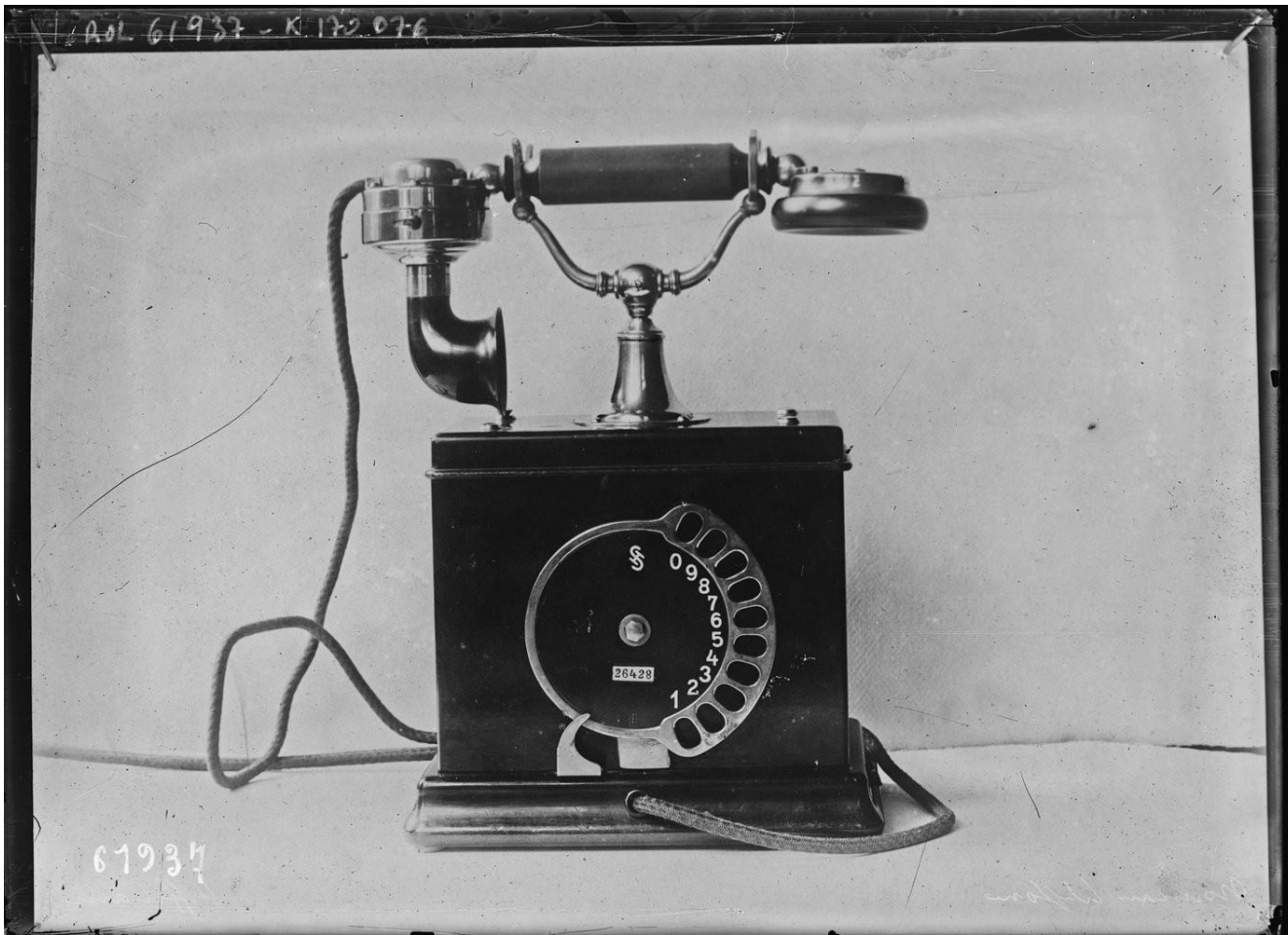
Diversity

Filter bubbles

# Levers for setting up a recommendation algorithm

## *and their limits from an ethical point of view*





Agence Rol - New telephone, 1920 - Gallica

Source gallica.bnf.fr / Bibliothèque nationale de France

The interface  
design  
as a means  
to empower  
the user

**HUMAN FIRST**

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How to enhance  
trust, awareness  
and usability?



Different types of audiences

Evolving needs over time

## Interface design

Relevance/  
diversity  
slider

Explicit naming  
of criteria

Free  
configuration  
of settings

**Relevance &  
diversity**

Filter  
bubbles

Lack of  
consent

**Respect of  
user's privacy**



What is personalized recommendation and why is it useful?



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Céline Leclaire - *National Library of France, François-Mitterrand site*

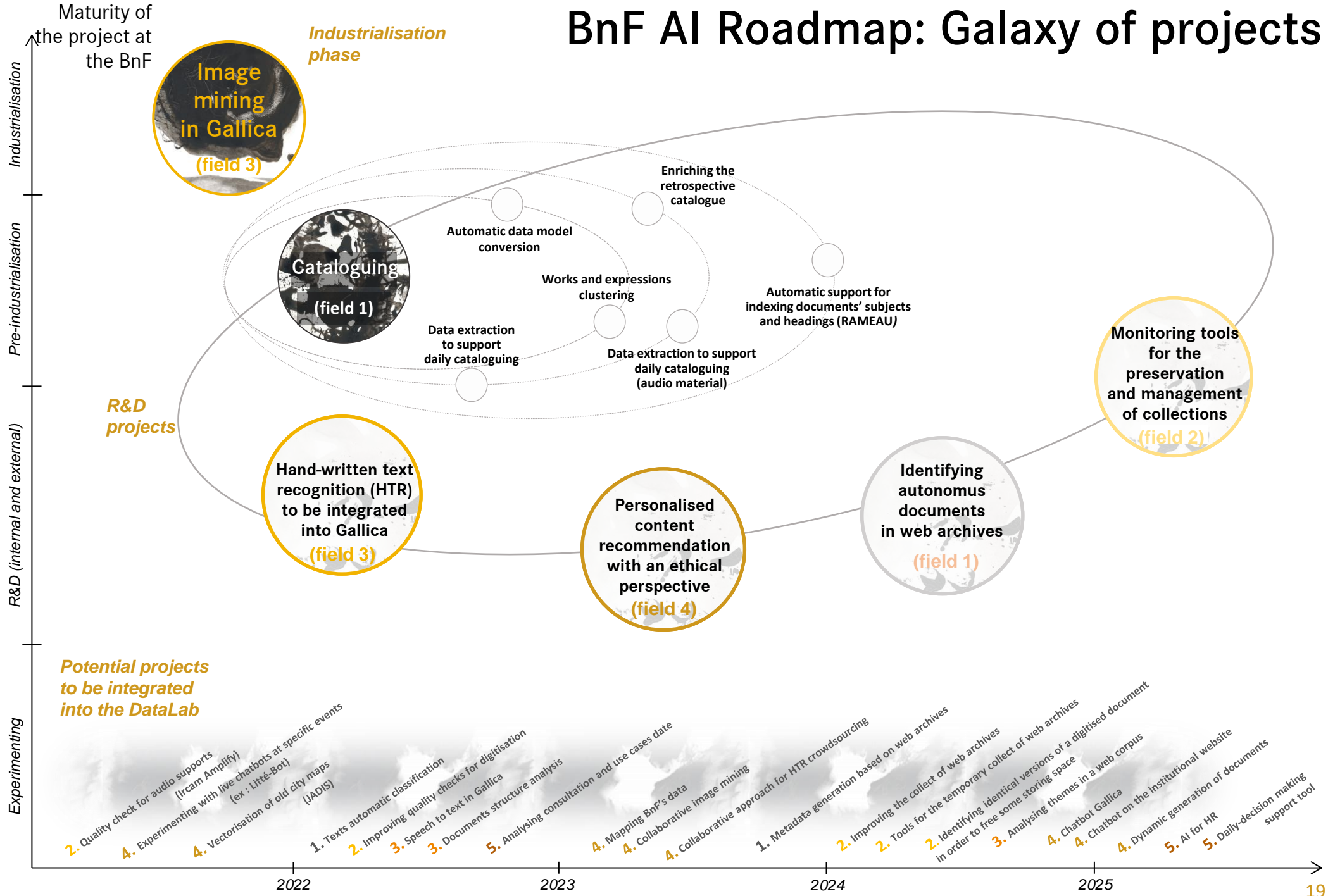
The RS project  
within the BnF's  
global strategy

**ADVOCACY,  
ENGAGEMENT**

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AI technologies  
as a means,  
not an end

# BnF AI Roadmap: Galaxy of projects





Agence Rol - Villette Pool (Paris), start of swimming championship (1500 m 2d series), 1920 - Gallica

Seeking for  
partnerships

**DIVERSITY,  
COMMUNITY,  
SHARING**

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Never think  
alone



Thank you!

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MORE

BnF AI Roadmap: <https://www.bnf.fr/en/feuille-de-route-ia>

Article by Leclaire & Termignon: <http://library.ifla.org>

(Additional slides)

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2021	2022	2023	2024	2025	2026
<p>AI strategy integrated into BnF's wider COP strategy (objectives and performance contract) (action 1A)</p> <p><b>International conference « Futurs Fantastiques »</b> (action 3B)</p> <p>First AI project ready for the industrial phase (action 3C)</p> <p>Services offer available for the DataLab infrastructure (action 4B)</p>	<p>Charter on ethical use of digital technologies and AI, with related indicators (action 1B)</p> <p>First partnerships with the DataLab (action 2C)</p> <p>Seminars « les débats de la science » on AI (action 3B)</p> <p>3 to 4 experimental projects running (action 3C)</p>	<p>At least 10 staff members with advanced AI skills (action 3A)</p> <p><b>Launch of the multi-year AI programme</b> (action 5B)</p>	<p>Global index for the elaboration, implementation and monitoring of R&amp;D projects (action 2A)</p> <p>15 to 20% of BnF staff aware of AI issues and technologies (action 3B)</p>	<p>Management plan for the evolution of skills and workforce (action 1B)</p> <p>New IT services plan (action 1C)</p> <p>Map of BnF's data and governance scheme (action 4A)</p>	<p>Assessment of the DataLab network (action 2B)</p> <p><b>5 to 10 projects implemented</b> as part of the multi-year AI programme (action 5B)</p>



1

Making AI challenges and projects a part of the Institution's **global strategy**



2

Improving **R&D** organisation and implementation at the BnF



3

Developing **new skills**



4

Adapting **infrastructure** and **data management**



5

Designing a **multi-year programme** with other stakeholders

# Projects from the multi-year programme

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These projects fall under 5 fields:

**1.** Support to cataloguing activities

**2.** Collections management

**3.** Searching, analysing content and improving access to content

**4.** User engagement, putting content in perspective

**5.** Decision-making and governance

SURVOLEZ LES CURSEURS, FIXEZ VOS CHOIX PUIS VALIDEZ. LES RÉSULTATS S'AFFICHENT EN BAS DE L'ÉCRAN.

- Drôle
- Contemplatif
- Décalé
- Violent
- Emouvant
- Spectaculaire
- Effrayant
- Intimiste
- Sombre
- Léger
- Onirique
- Sensuel
- Dépaysant
- De l'amour

- Fiction
- Documentaire
- Policier
- Fantastique / SF
- Horreur
- Films musicaux
- Dessin animé
- Expérimental
- Jeunesse
- Théâtre
- Arts / Spectacles
- Histoire
- TV / séries
- Pratique

# Films

