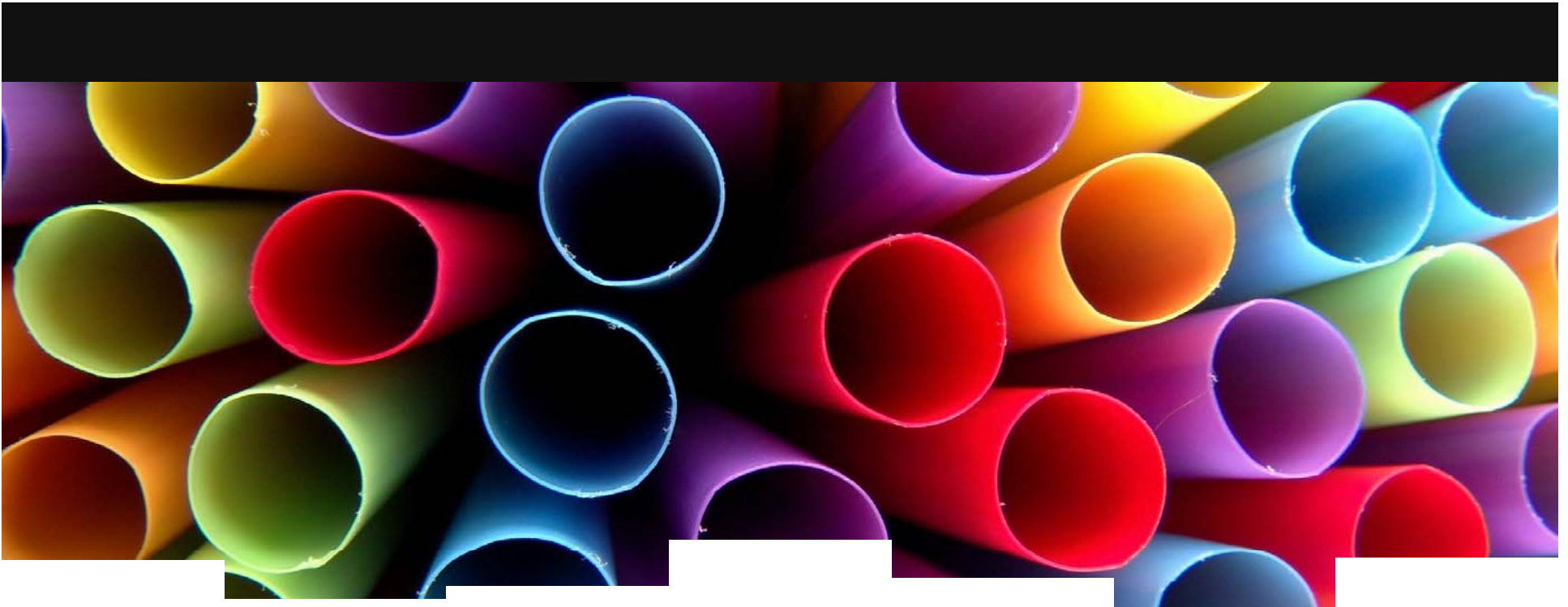


Metadata, the future of home entertainment



Christophe Diot

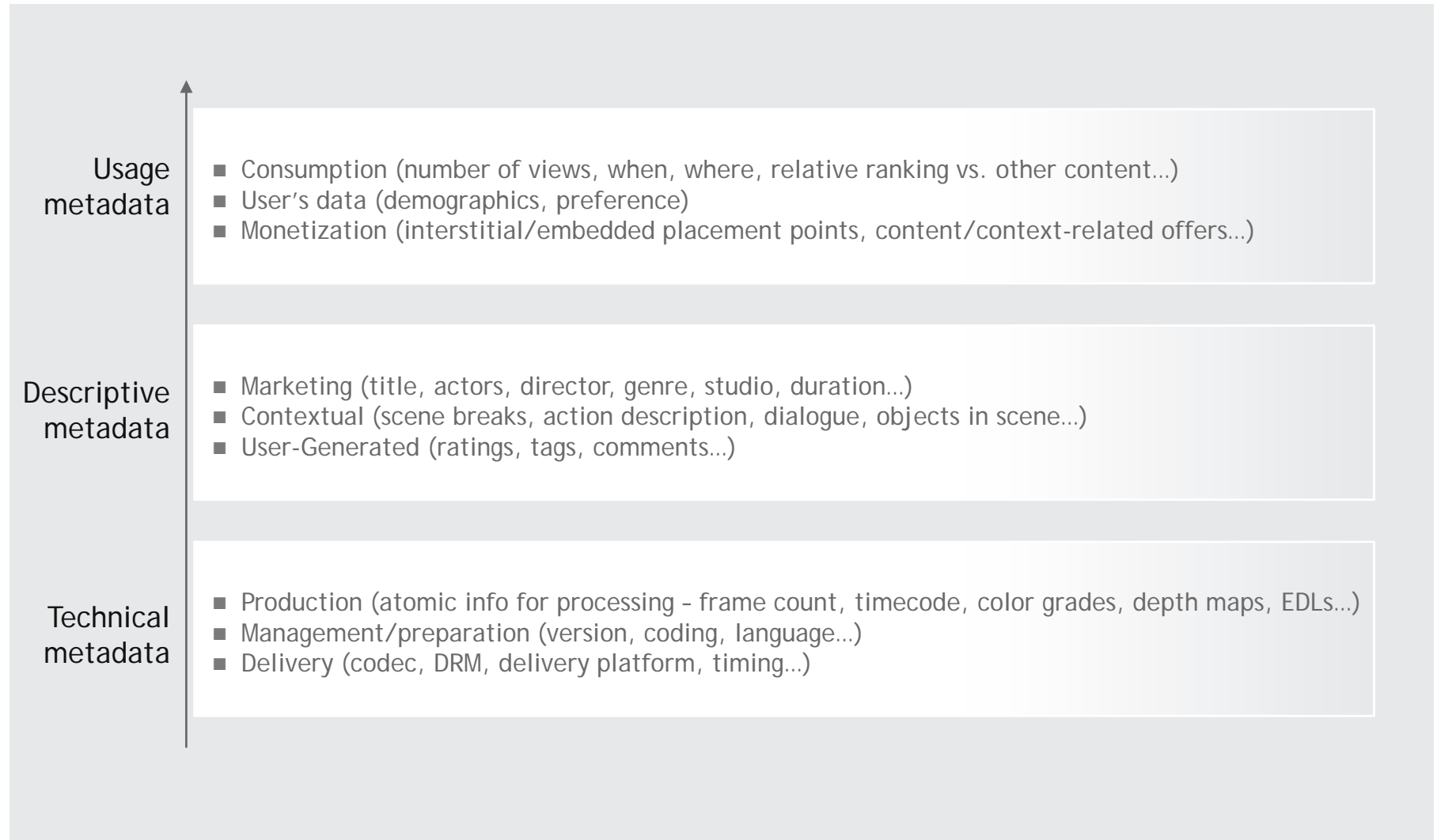
Chief Scientist @ technicolor

What is a metadata?

technicolor



Metadata taxonomy



Metadata lifecycle

- Metadata model definition
- Manual, automated, or semi-automated generation of metadata for new or catalogue video content

Metadata creation

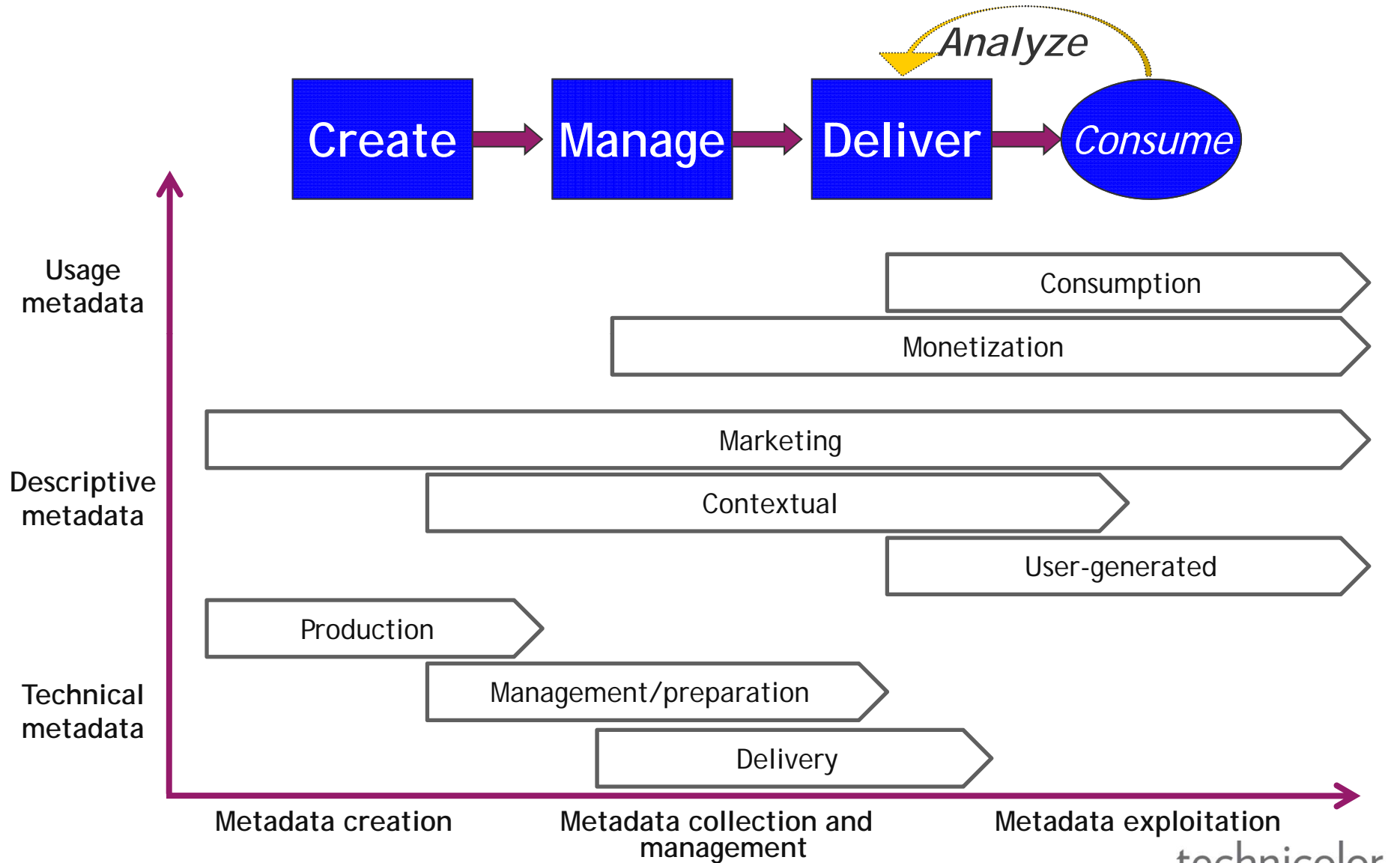
- Metadata storage
- Organization
- Enrichment
- Retrieval
- Delivery

Metadata collection and management

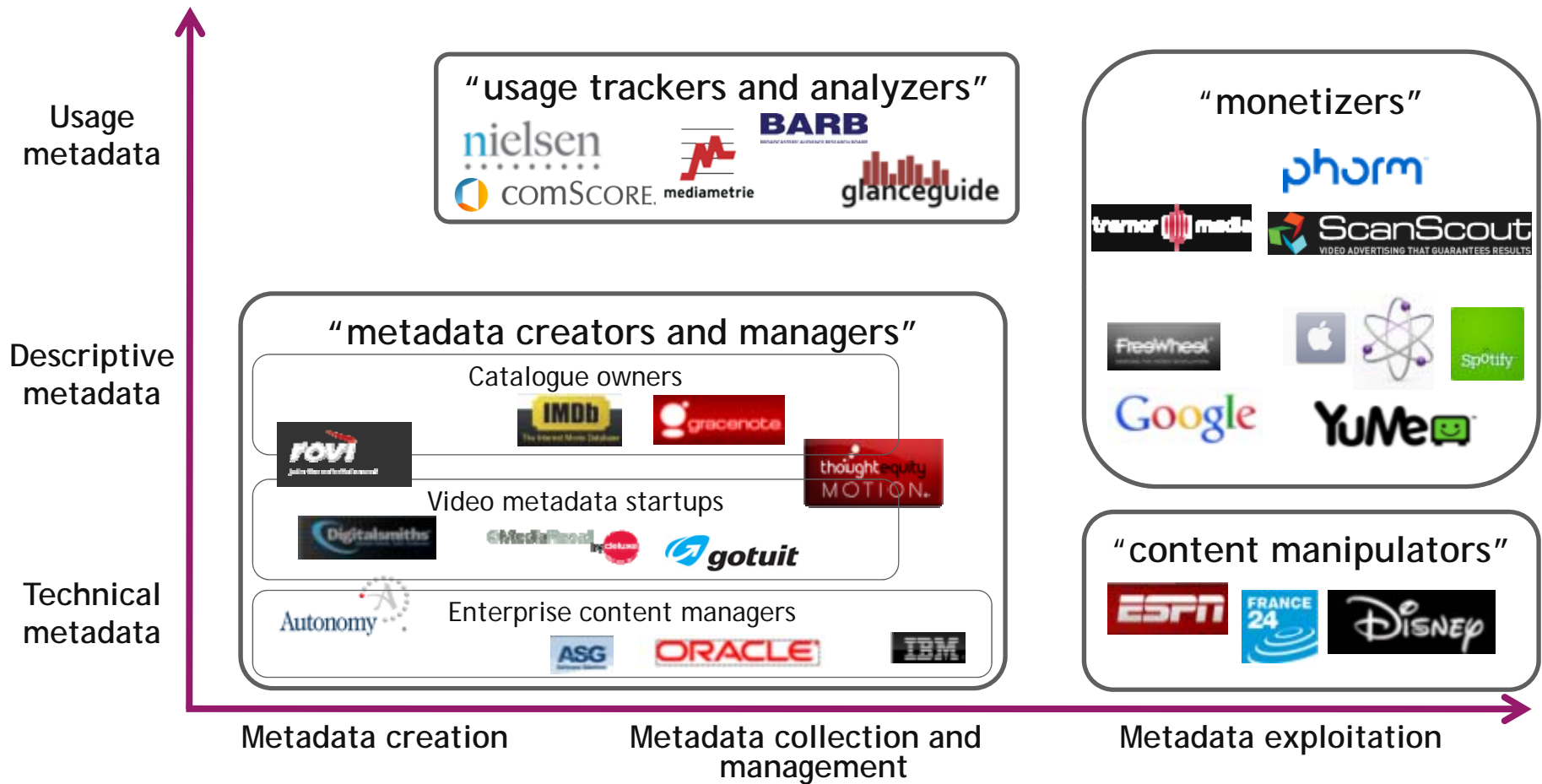
- Solutions to leverage metadata for
- Content access
 - Search
 - Recommendation
 - Discovery
 - Monetization
 - Advertising algorithms
 - Rule-based targeting
 - Customer insights
 - Licensing

Metadata exploitation

Metadata & content lifecycle



Metadata players



What drives the need for meta-data?

technicolor



The data deluge problem

Too much information available!

Results of Internet search are more and more irrelevant.

Selecting a movie among all available VoD services is a nightmare.

Too many TV channels.

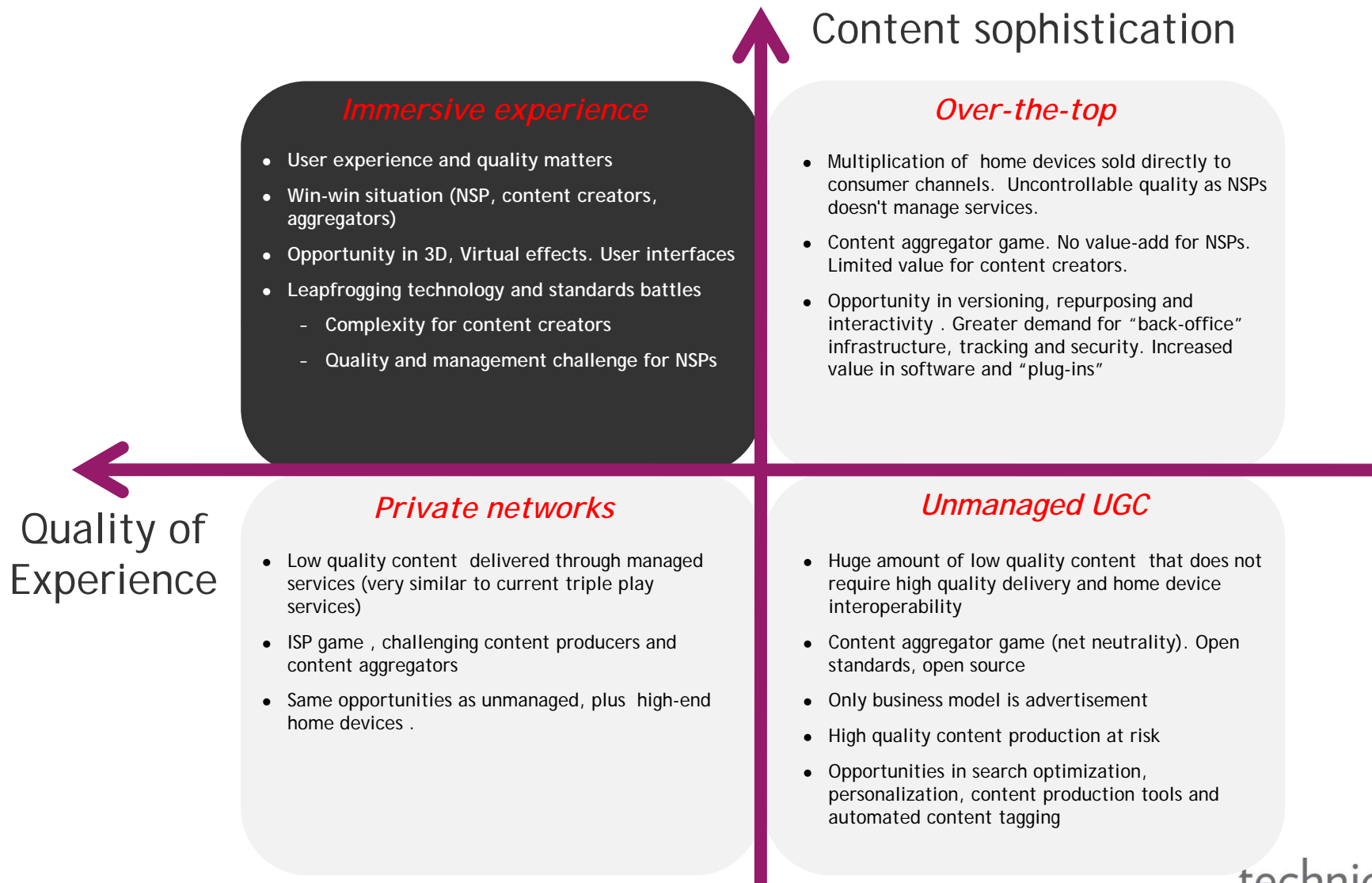
The end of the linear or bundle models?

Poor UIs

“Content” is more than just music and videos



Future of content and media industry



Content distribution challenges

Help the user find its way through the data deluge

- Personalized services

- Contextual recommendation

Provide a unique user experience

- Home network management

- Service portfolio personalization and management

Protect the customer

- Preserve privacy

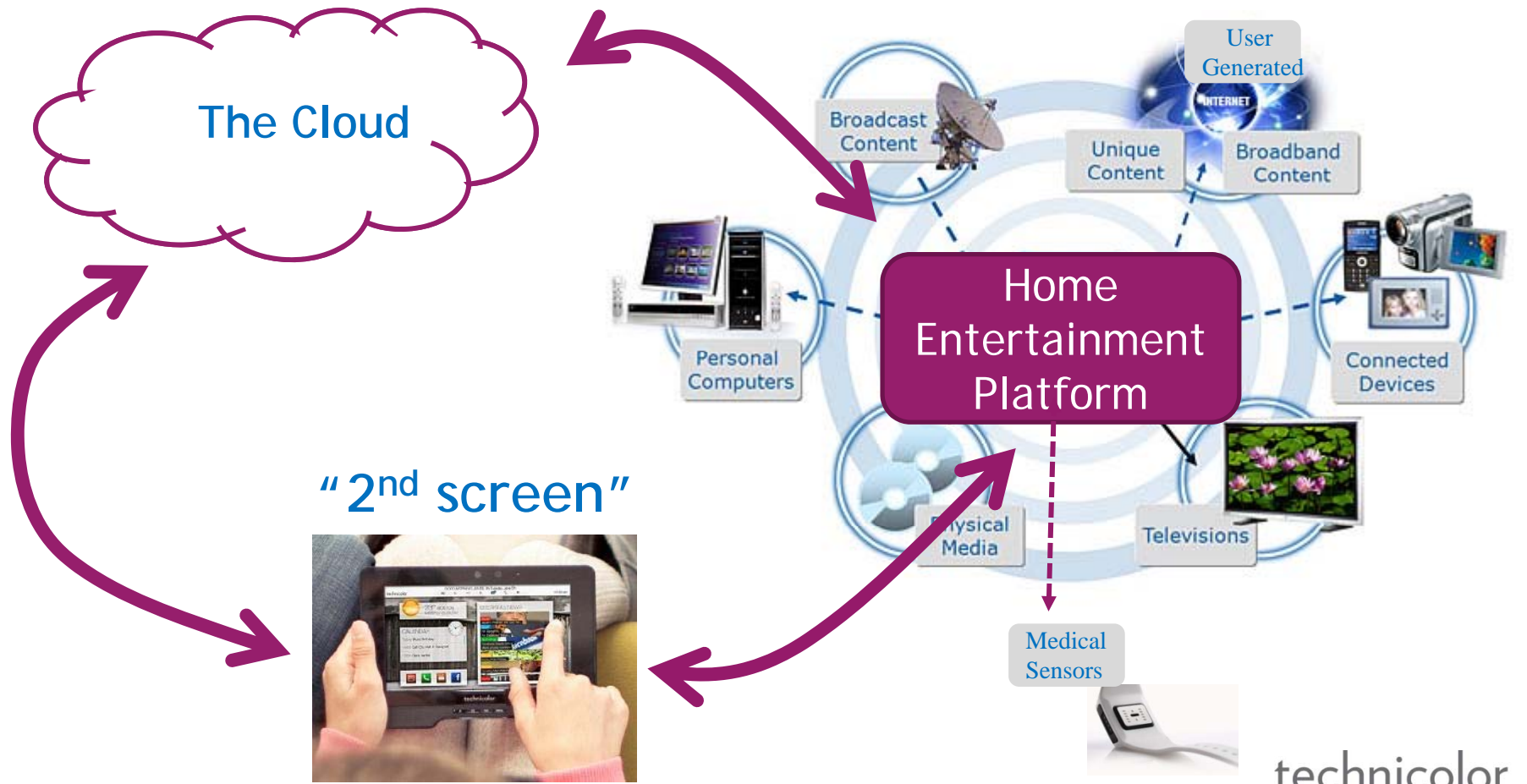
- Personal data monetization

Technicolor's approach to metadata



Technicolor's vision

Manage an outstanding digital home experience from the home



An open platform for home

Service personalization

- Run locally third-party applications
- Store personal/volatile content

Contextual recommendation

Data aggregation

Preserve privacy

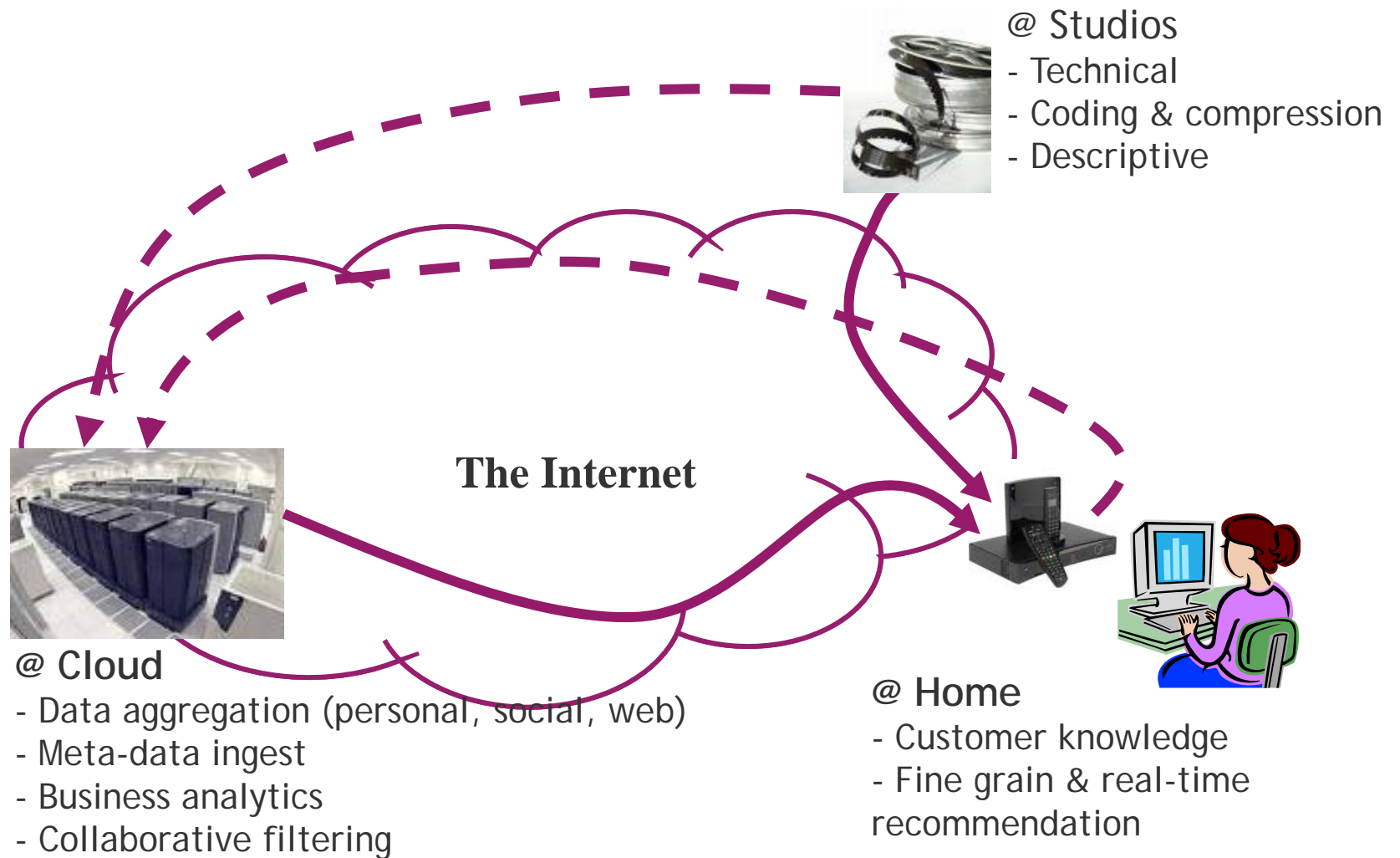
Management

- Home network
- Services

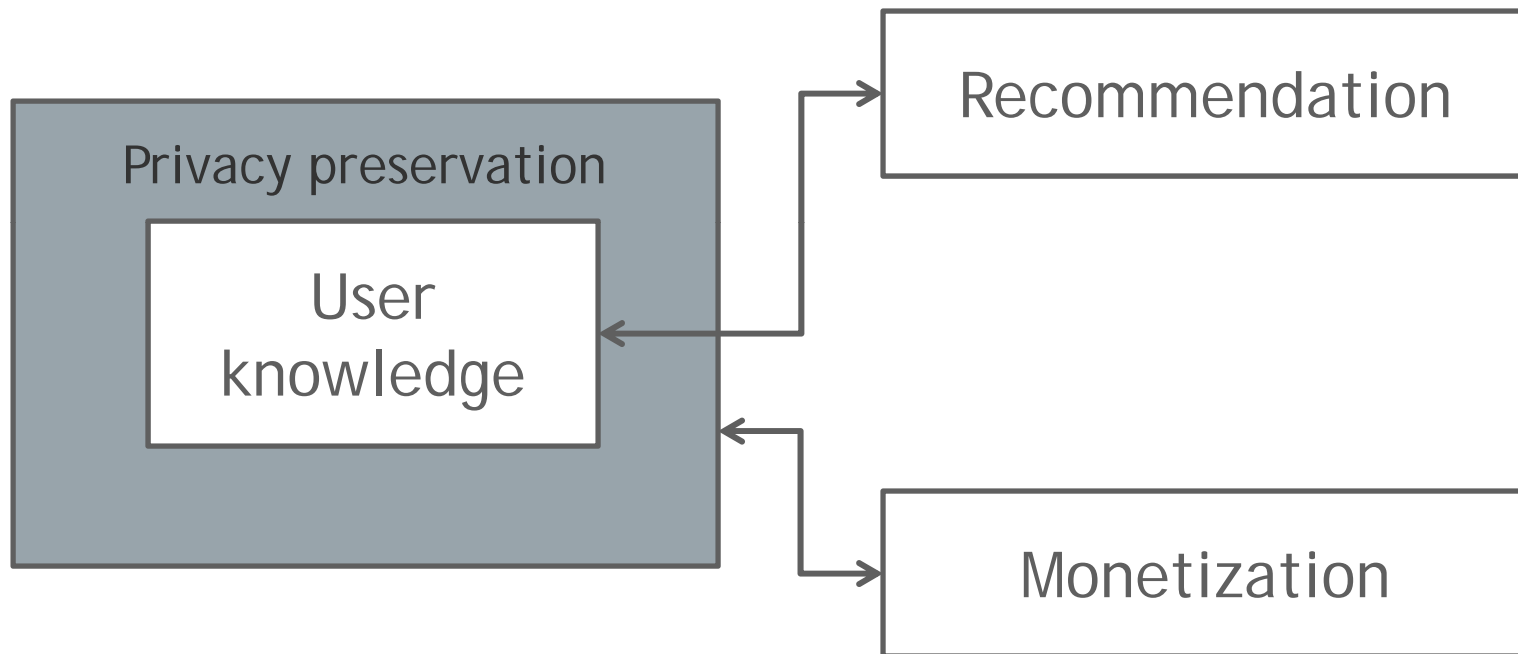
Personal data monetization

Proxy to the Cloud

The metadata ecosystem



Personalized User Experience



Understand the User

Collect personal data

- Sensors
- Internet services
- DPI
- Home devices

Recognize users

- Image recognition
- Home habits

Build “users” profiles

- Multiple profiles per user
- Groups of users

Recommend and Discover

Rich metadata tagging enables detailed search and discovery

- Take advantage of rich user profile and contextual data
- Group recommendation
- Recommend everything (not only music and movies)

The Second screen (e.g.: tablet) experience

- Synchronizing video streams to second screen
- Personalized content
- Additional information

Privacy preserving communication

Make personal data available while preserving privacy

- Who you are (user profile)
- Where the data is coming from

Applications

- Recommendation
- Advertisement
- Search

Approaches

- Do not export personal data!
- Add noise
- Use a trusted broker
- Peer-to-peer (Thor)

Balance privacy and monetization

Transparency to users

- identify potential threats
- inform users
- Give the user the control of her/his privacy

Privacy architecture for home management platform

Privacy preserving recommendation

Monetization

- Get paid for your data!

Limitations of meta-data tagging

Meta-data are not universal

- Cultural
- Personal
- Time dependent

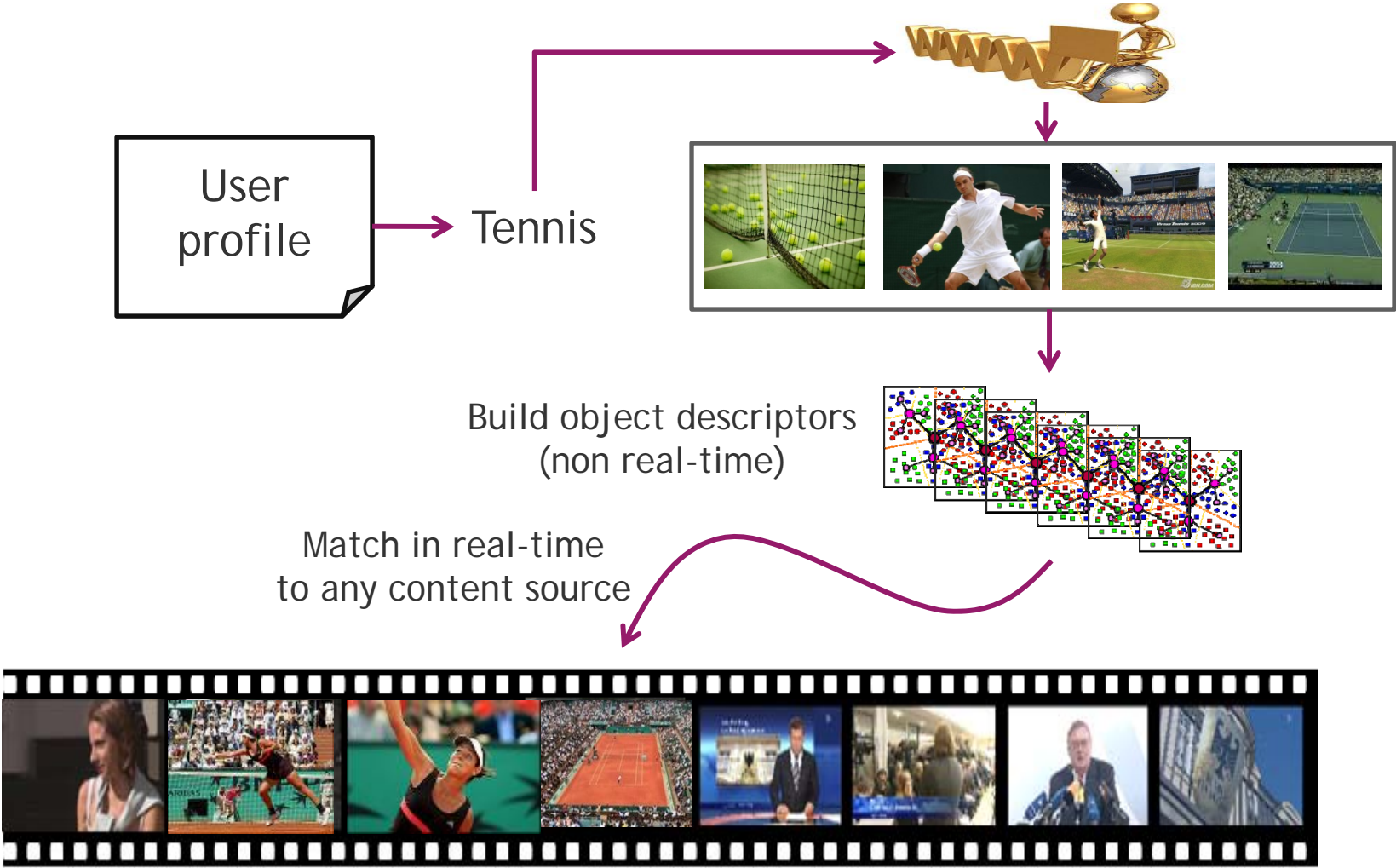
Meta-data are not ubiquitous

- Massive amount of content to tag
- Tagging is too expensive for some content
- No clear value for UGC

Meta-data can be voluminous

- Difficult to store
- Even more difficult to search

Real-time annotation



BACK-UP