**Motivation**

Online archives (social media, cloud storage) accumulate hundreds of billions of posts and files.

**Current practice:** “set it and forget it” approach for access-control permissions and privacy settings.

**Shortcoming:** Life changes over time (life events, relationships).

Users need to **retrospectively re-evaluate the sharing settings** of old content.

Multiple mechanisms exist for changing the past.

Which mechanisms are suitable for which contexts?

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**Challenges for improving retrospective data management**

**Manual management is insufficient**

- Do users want to manage past data?
  - Yes, but only for some content [Mondal et al. 2016]
  - Moreover residual activities remain in system Repercussions for shared content

**Need to model sharing preferences**

- What are potential predictive features?

<table>
<thead>
<tr>
<th>Possible Feature</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>Relationship with those who can access the file or are connected to post changed</td>
</tr>
<tr>
<td>Life changes</td>
<td>Less willing to keep sharing content after some life events</td>
</tr>
<tr>
<td>Relevance</td>
<td>Less willing to share content no longer relevant to friends or colleagues</td>
</tr>
</tbody>
</table>

Developing these models requires:
- Collecting real-world data from users
- Investigating their privacy preferences
- Understanding temporal changes in preferences

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**Our vision: Making retrospective data management usable**

[Diagram showing the process of selecting content, desired sharing setting, machine-learning model, recommended access-control setting, and visualizing the recommendations]