



Platforms' content moderation and accountability: evaluating the present and looking into the future

COPYRIGHT CONTENT MODERATION IN THE EU

EMPIRICAL RESEARCH

***Christian Katzenbach,
Daria Dergacheva & Selim Basoglu***

Workshop - Online

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Measuring Impact on Access and Diversity

Task 6.4: Measuring the impact of moderation practices and technologies on access and diversity

**T6.4A
Transparency
Reports**

Aggregated and
Idiosyncratic
Data

**T6.4B
Data Collection
via API**

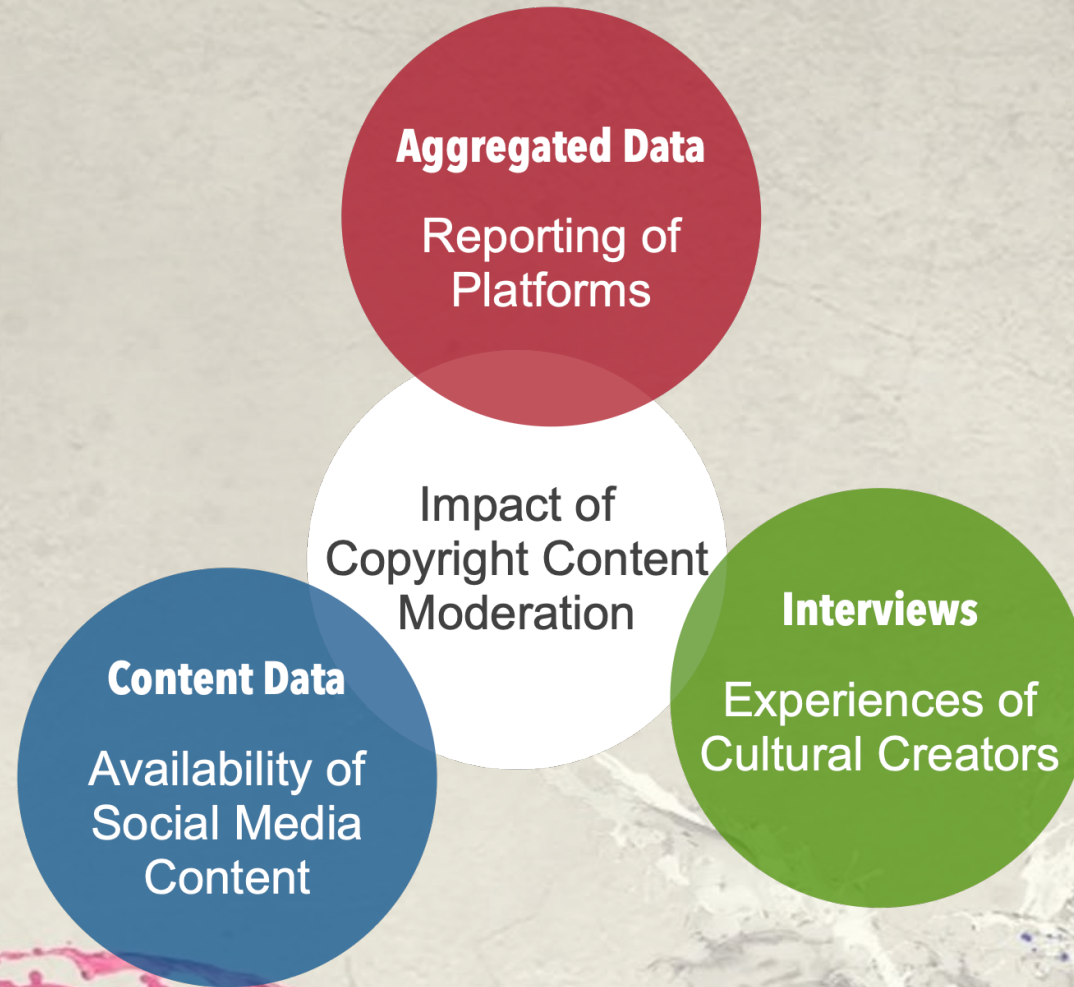
Some Data on
Content

**T6.4X
Mandatory Data
Access?**

**Actual Data
Needed!**

**T6.4C Interviews
with Creators**

Data about
Creators'
Perspective





Aggregated Data

Reporting of
Platforms

Impact of
Copyright Content
Moderation

Interviews

Experiences of
Cultural Creators

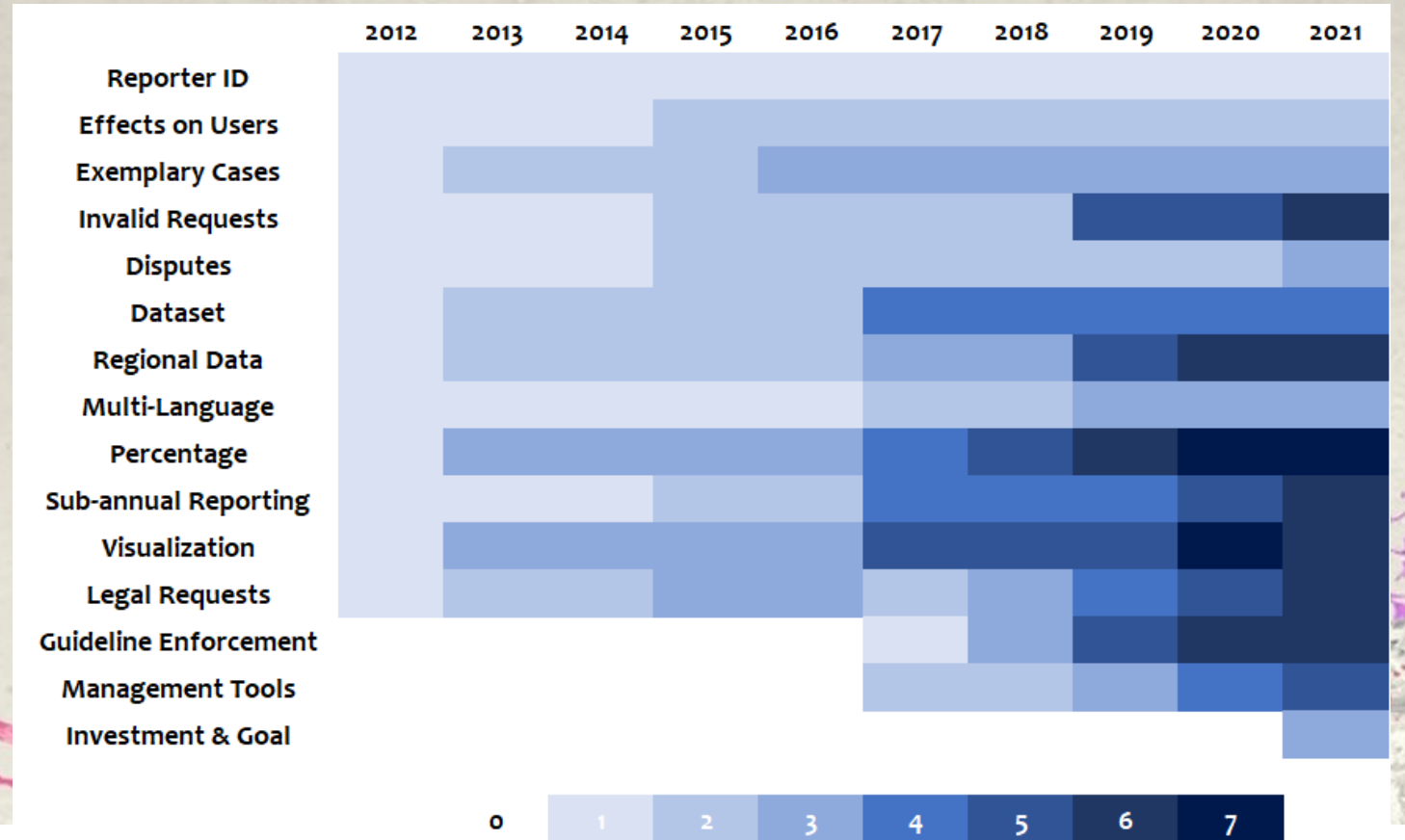
Content Data

Availability of
Social Media
Content

Transparency Reports: What Kind of Data?

T6.4A Transparency Reports. Results

- a significant trend toward convergence can be observed.
- transparency reports have added additional categories for reporting

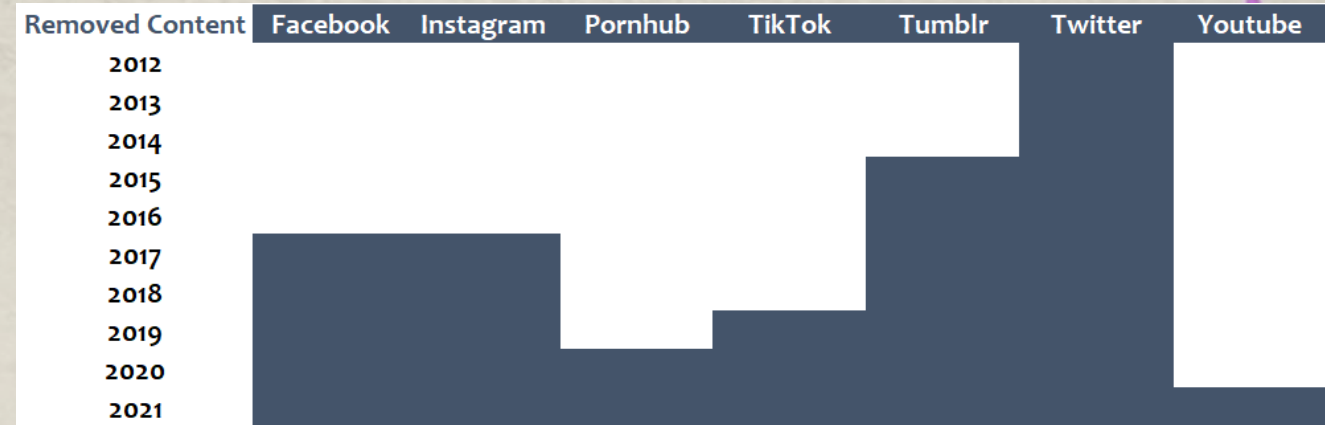


Inclusion of reporting criteria in platform transparency reports over time (cumulative)

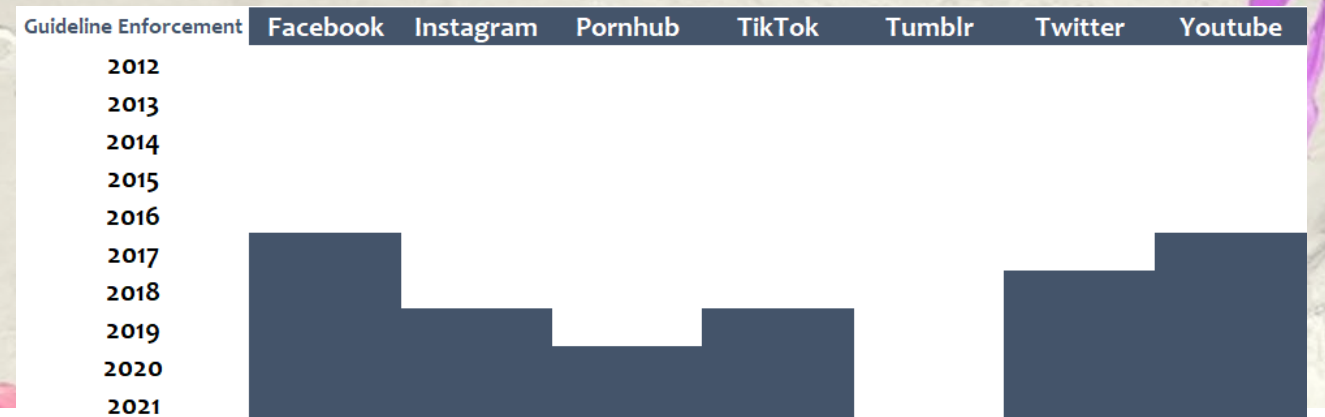
Transparency Reports: What Kind of Data?

T6.4A Transparency Reports. Results

- **Reporting of Copyright-removal data**
Twitter leads by starting to reveal data for removed content items in 2012
- **Reporting of Content Moderation data**
The number of moderated content was first shared by Facebook and YouTube in 2017, then 2018 by Twitter



Comparative chronological inclusion of copyright-based removal data in platform reporting



Comparative chronological inclusion of policy-based removal data in platform reporting

Transparency Reports: Data on Content Moderation

2021

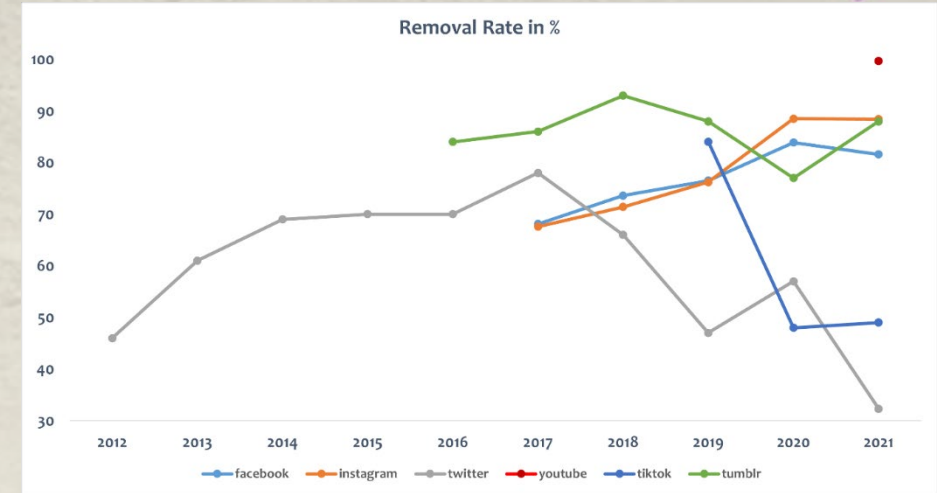
A general increase in copyright-related numbers and content moderation due to guideline enforcement is observed in the long term

	Facebook	Instagram	Twitter	Youtube	Pornhub	Tiktok	Tumblr
Copyright Removal	5,7 M	3,4 M	2,5 M	1,5 B	8,547*		49,545
Copyright Reports	1,6 M	709,651	318,653	1,5 M	6,585	139,607	7,581
Removal Rate	81.6	88.4	32.3	99.7		49	88
Disputed Claims			20,057	7,5 M			16
Disputes resulted in favor of Uploaders			100	61.2			
Disputes resulted in favor of Reporters			0	38.8			
Guideline Enforcement Removal	10,7 B	162,2 M	11 M	25,8 M	245865	320,7 M	
Legal Removal Requests	123,100	14,600	15,135	528,025	388	23,033	9,201

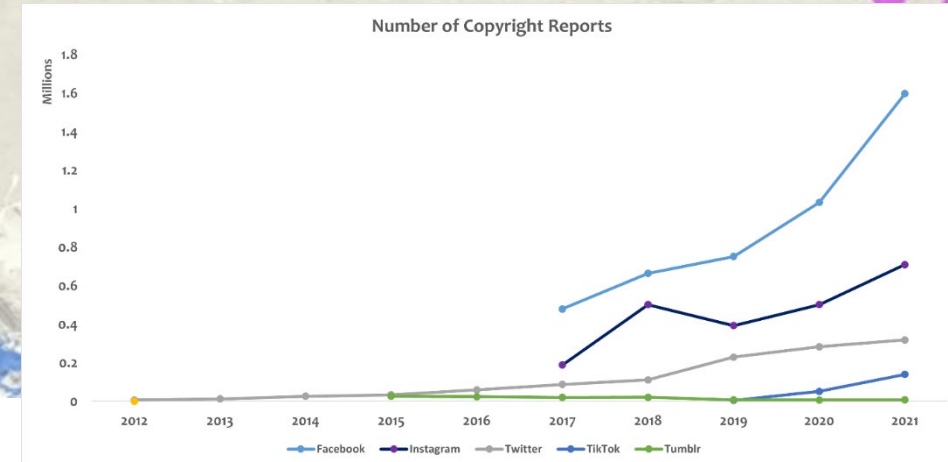
Transparency Reports: Data on Content Moderation

T6.4A Transparency Reports. Results

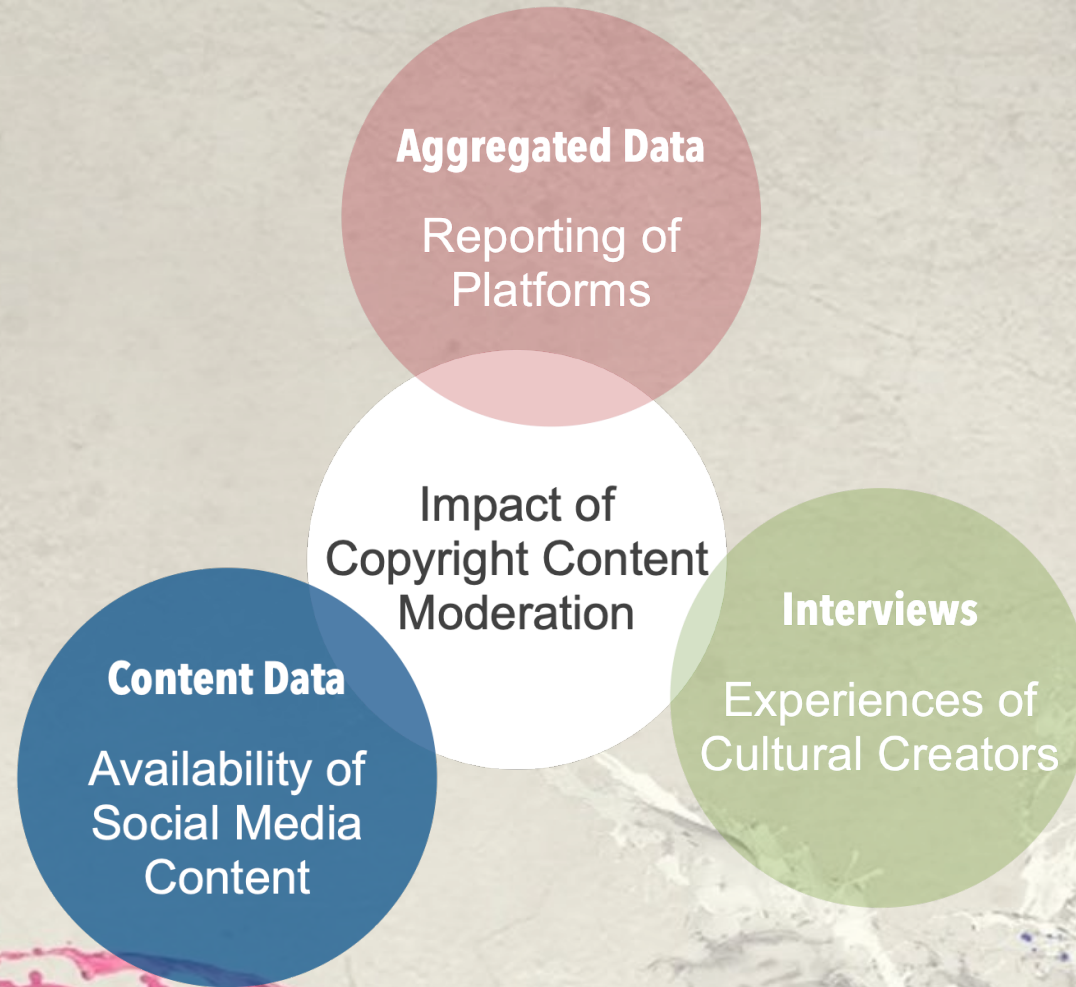
- Twitter, displays a remarkable downturn starting in 2017 after consistent increase, pointing at some structural change
- For Facebook and Instagram, a general increase is significant.
- Except for Tumblr, almost every year platforms receive more such takedown notices compared to the previous year.
- There has been a considerable acceleration in the number of notices received by Facebook, particularly: from 2019 to 2021



Removal rate for copyright-based moderation per platform



Number of takedown notices received per platform





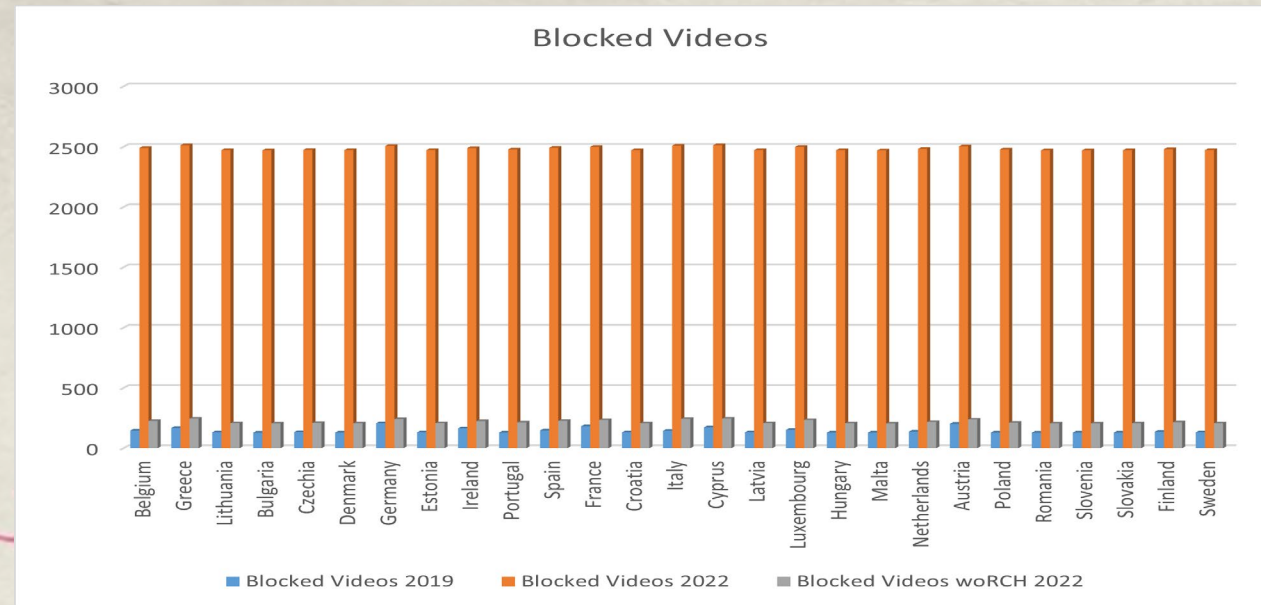
Availability of Content

T6.4B2 Measuring Availability of Content. Results

Almost 3.8% of videos were deleted or blocked on YouTube in the EU member states (2019 -2022)

Videos blocked in a sample of 91 000 videos

**More than
in previous research
(e.g. Gray & Suzor,
2020)
which showed 1%.**



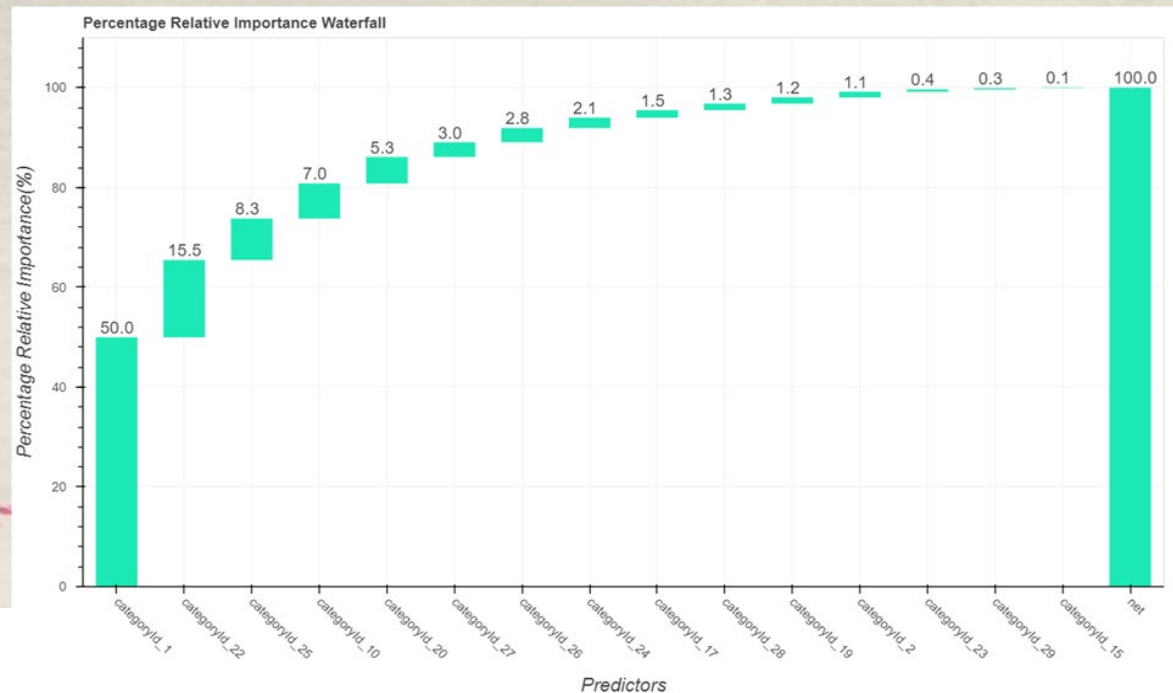
Availability of Content

T6.4B2 Measuring Availability of Content. Results

Relative importance of categories as predictor of a video being blocked/deleted, Dominance-analysis approach for comparing predictors in multiple regression (Azen & Budescu, 2003)

Most blocked categories:

- Film & Animation
- Entertainment
- Gaming



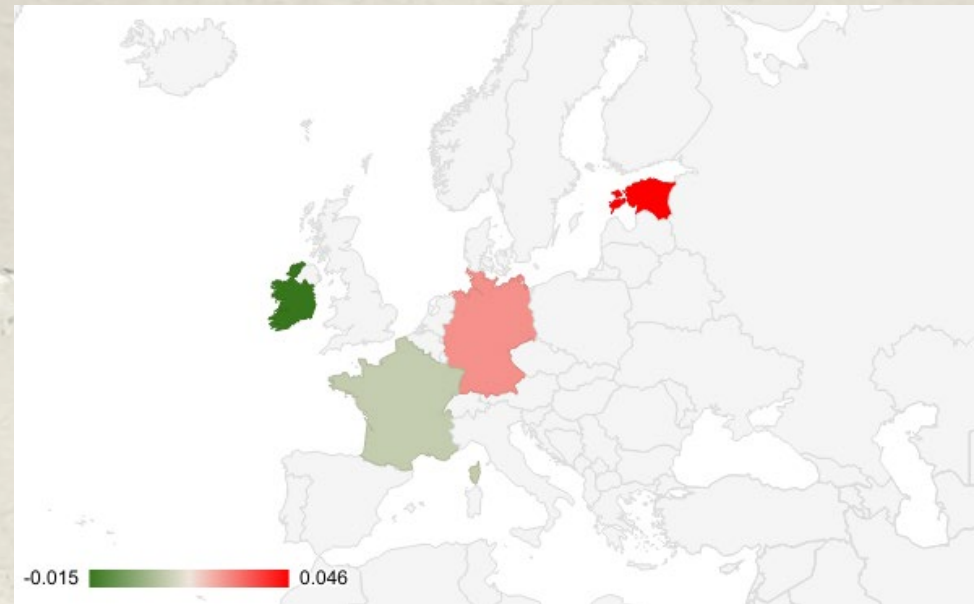
Availability of Content and Cultural Diversity

T6.4B1 Measuring Cultural Diversity: Results

We calculated the diversity index of cultural supply (Stirling Model of Diversity) of 4 countries: Estonia, Germany, France, Ireland

Diversity decreased in each country except for Ireland.

- 1) Estonia – decreased
- 2) Germany - decreased
- 3) France - decreased
- 4) Ireland – slightly increased



Measuring Impact on Access and Diversity

T6.4B Measuring Cultural Diversity: Conclusions

- **high share of blocked and deleted content** in our sample. While previous research has identified a share of roughly 1%, our sample identified a share of 3.8%. Due to restricted access to data, though, it is hard to really pin down and isolated the exact reasons for content deletion and take-down. These 3.8% might include other types of content deletion and blocking
- general **decrease of diversity** with regard to available content. Within the four countries under study, three countries display a noticeable decrease in the diversity index, with Ireland representing a contrary development with a light increase. The country differences do not correlate, though, with national differences in copyright regulation and specifically with the variation in substance and timing of the national implementation of the CDSM.
- **limitations of research in this space due to lack of data access**. In the current landscape, it results close to impossible to systematically study the questions posed in this project. What is the impact of copyright regulation and content moderation on content diversity? In fact, this research is not only highly limited, but also dependent on internal decisions of platforms on giving access to (different types of) data.



Aggregated Data

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Creators' perspective and experiences

T6.4C Creators' perspective on copyright regulation and platforms

- 14 visual artists and musicians from the EU
- Semi- structured interviews on platforms and copyright moderation (30-90mins)
- Sample drawn from those artists who participated in the survey on digitization and digital access to cultural content, done by (Poort & Pervaist, 2022) in the context of the ReCreating Europe Project.
- The artists interviewed used a wide range of social media platforms: Instagram, Facebook, TikTok, YouTube, Behance, Etsy, LinkedIn, Vimeo, Pinterest and Dailymotion.



Creators' perspective and experiences

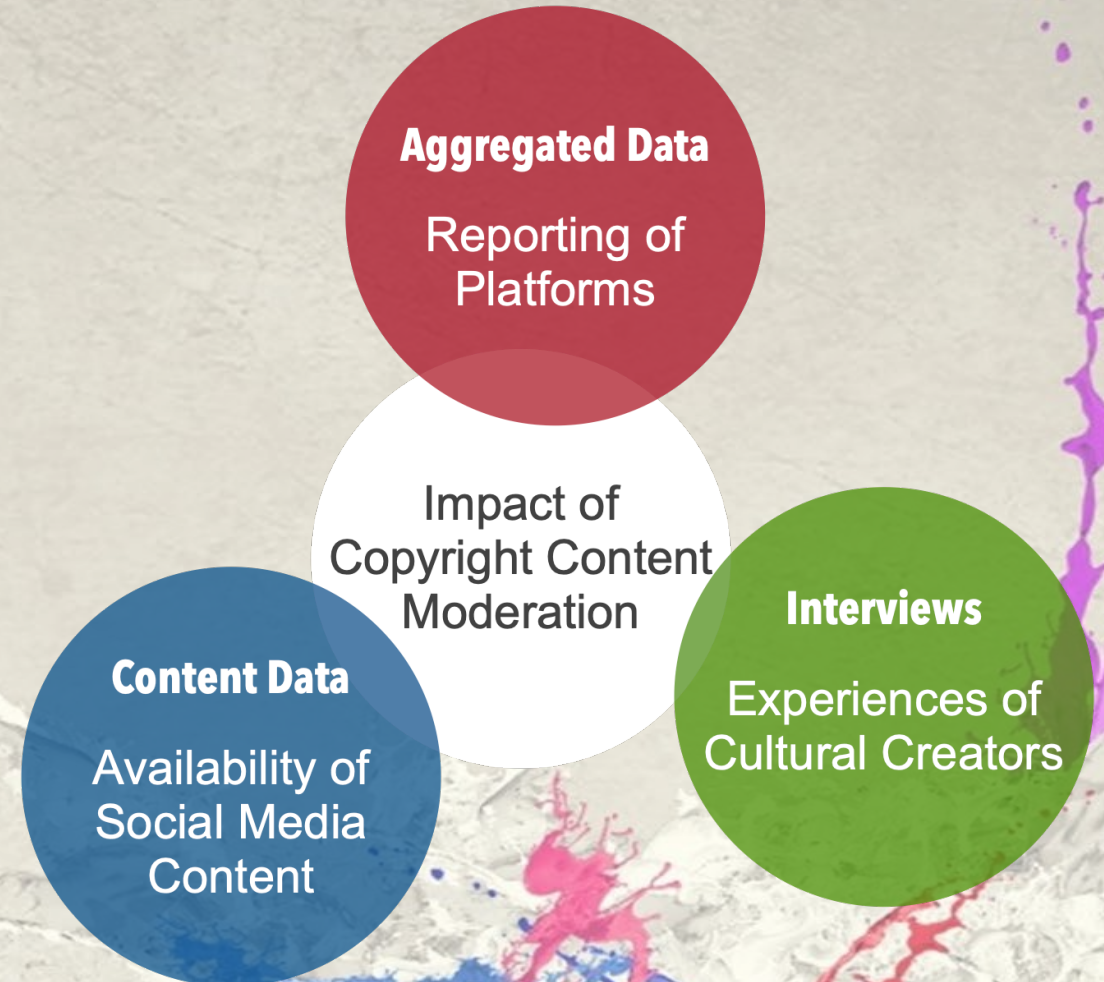
T6.4C Creators' perspective on copyright regulation and platforms: results & conclusions

- anticipation of platform punishments directly influenced the cultural products
- creators engage in self-censorship, avoiding posting certain content or adjusting it
- because the regulative dimension of algorithmic copyright moderation is opaque, creators engaged in algorithmic gossip (Bishop, 2019) and use user folk theories (De Vito et. Al, 2019) trying to guess which practices are accepted and which are not
- ***more transparency in platform governance is needed***, both from policy makers and platforms themselves, so that the automated content moderation does not add to the uncertainty and insecurity of the creators' media production work on platforms



Trying to Measure Impact of Content Moderation – and Failing?

- Empirical research with **strong indication of substantial impact** of copyright content moderation on diversity and access
- Yet, interpretation and evaluation is hard, if not impossible – given the **lack of data**
- Research strongly **dependent on platforms granting access**





POLICY RECOMMENDATIONS #3

- ***Robust Access to Content and Moderation Data for Research Purposes***

Existing Initiatives

Art. 35 of the DSA, Art. 40 of the GDPR, national implementations of CDSMD and other national initiatives (NetzDG in DE)

Impact Avant-La-Lettre

Beyond mandatory obligations, these set agendas and push platforms to act proactively

Remaining obstacles

Very high level of infrastructure provision and expertise needed on part of researchers
→ Support and funding for research infrastructures and joint initiatives



ReCreating Europe



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