

Algorithmic content recommendation: Insights from Nordic-Baltic media policy and regulatory stakeholders

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Report

ALGORITHMIC CONTENT RECOMMENDATION: INSIGHTS FROM NORDIC–BALTIC MEDIA POLICY AND REGULATORY STAKEHOLDERS

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About DDC

The Digital Democracy Centre (DDC) is a research center at the University of Southern Denmark that studies how digitalisation, algorithms, and AI affect key actors in the democratic process. The Center is interdisciplinary and combines research areas such as computer science, law, political science, economics, and journalism.

About the DDCxTrygFonden Fellowship Program

The fellowship program aims to foster collaboration between researchers, journalists, and policymakers in exploring the impact of digital technology and AI on media, politics, and democracy. Through the fellowship program, selected fellows will have the opportunity to generate new knowledge, contribute to the public debate, develop new networks, collaborate with a mentor at DDC, the larger DDC environment, and its partners, and produce tangible outreach outputs such as policy briefs, educational packages, and talks.

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Executive summary

The research presented in this report examined how experts with experience in media policy and regulation across the Nordic–Baltic region perceived algorithmic content recommendation (ACR), what benefits, risks and societal implications they associated with it, and what types of solutions they considered necessary. The study employed a qualitative research design based on in-depth, semi-structured interviews with 14 participants from eight countries (Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden), conducted in April 2025 to June 2025.

Most experts characterised ACR as a core component of global platforms’ (e.g. Facebook, Instagram, YouTube, TikTok, X and Google Search) business models. It was described as an instrument designed and deployed by platform companies to maximise user engagement, prolong user activities on platforms and convert interactions into revenue. While the interviewees acknowledged that ACR can help users navigate information abundance by filtering and prioritising content, these advantages were considered outweighed by the risks inherent in engagement-optimised curation and by the growing concentration of economic, informational, and political power in the hands of a few dominant platform companies and their owners.

The experts highlighted the complex and widespread societal implications of ACR, affecting democracy and the integrity of the information ecosystem. Concerns were raised that algorithmic content recommendation systems, as used by platforms, fuel polarisation in society, reduce information diversity, shape public discourse through opaque content amplification and risk undermining democratic participation in elections. This is especially true in smaller states that are more vulnerable to targeted messaging from both internal and foreign malign actors.

From the perspective of individual users, ACR was seen by experts as undermining individuals’ agency and limiting their access to information, with some experts framing opaque algorithmic curation as a threat to human rights. Other risks highlighted by experts included distorted perceptions of reality, impaired decision making, biased formation of opinions and reduced cognitive autonomy, with younger users viewed as particularly vulnerable. The interviewed media policy and regulation experts also emphasised that the lack of transparency regarding data collection, profiling and content filtering reinforces the power imbalance between platforms and individuals.

Experts agreed that addressing individual and societal problems related to the use of ACR by platform companies requires a coordinated response led by the EU-level regulators and supported by effective national oversight. At the same time, they argued that the efforts of both national and European authorities are constrained by several obstacles. These include the extraterritorial location of major platform companies, the opacity and complexity of recommendation systems, as well as knowledge gaps in regulatory expertise that make it more difficult to develop and enforce effective regulatory frameworks.

The study indicated that complementary efforts—awareness building about ACR through research and education, development of innovative technological and design alternatives for content management and strengthening journalism that provides high-quality, trustworthy content—are necessary to counterbalance the structural power of global platforms. These measures require the active involvement of both EU-level and national regulators and policymakers and are necessary to strengthen citizens’ agency in the AI-powered digital media landscape, to safeguard human rights and reinforce democratic resilience. Achieving this also requires constructive cooperation with other stakeholders, such as researchers, educators, industry actors, nongovernmental and civil society organisations.

1. Introduction

Digitalisation and rapid advancements in information and communication technology have significantly transformed the media landscape, giving users unprecedented access to a wealth of potentially valuable content. However, this abundance has also resulted in information overload, making it increasingly difficult for individuals to choose, prioritise and critically evaluate the content they encounter. The digital media industry has responded to these challenges by implementing algorithmic content recommendation (ACR) systems that are designed to select, filter and personalise information for their users (Stray et al., 2024). While legacy media organisations are still in the process of developing and adopting ACR-supporting technologies (European Commission, 2025), for very large global online platforms, such as Facebook, Instagram, YouTube, TikTok and X, as well as search engines, such as Google (hereafter collectively referred to as platforms), AI-driven content recommendation has become a core part of their business logic and is deeply integrated into their daily operations. ACR undoubtedly has the potential to help users manage an abundance of information, but the way platforms currently use it also poses a number of challenges for individuals and society at large. These include not only risks to individuals' privacy and their data management but also broader societal concerns, such as polarisation, reduced content diversity, threats to information accuracy and the spread of disinformation (Just & Saurwein, 2024; Stray et al., 2024). Concerns have also been raised that platforms and their owners control access to content worldwide through nontransparent automated content curation, invisibly shaping information choices, influencing individuals' perceptions of reality and wielding unparalleled power over public opinion (Helberger, 2020; Kaluža, 2021). They undermine fundamental human rights to access information and hold opinion without interference, restrict civic agency and affect societal and political decision making, thereby posing significant challenges to democratic integrity (Helberger, 2019; van Dijck et al., 2019).

Acknowledging the vital role of policymaking and effective regulation in safeguarding democracy and citizens' rights in a rapidly evolving digital media environment (Helberger, 2020; Just & Saurwein, 2024; Nieminen et al., 2023; Trappel et al., 2023), this study examines how media policy and regulation experts across the Nordic (Denmark, Finland, Iceland, Norway and Sweden) and Baltic (Estonia, Latvia and Lithuania) countries perceive ACR. Despite their historical, political and economic differences, these neighbouring countries share core democratic values and rely on evolving EU frameworks for digital governance and media policy, such as the Digital Services Act (DSA) and the European Media Freedom Act. Furthermore, these countries face common pressures—global digital transformations and emerging geopolitical tensions—that influence the information environment, shape public discourse, and affect broader democratic processes. Their relatively small populations further exacerbate their vulnerability to external interference in these domains. Taken together, these factors underscore the importance of a shared Nordic–Baltic approach to understanding and addressing the implications of ACR, one that not only identifies common concerns but also seeks coordinated solutions to foster a resilient, democratic digital media environment and information ecosystem. Therefore, this research explores how media policy and regulation experts from the Nordic and Baltic countries perceive ACR, including its benefits and risks, their perspectives on regulatory responses and other future directions for addressing the challenges of algorithmically curated media environments. Accordingly, the following research questions are addressed:

RQ1: How do media policy and regulation experts in the Nordic and Baltic countries perceive ACR?

RQ2: What are the benefits of ACR for citizens and society according to these experts?

RQ3: What challenges do citizens and society face in relation to ACR according to these experts?

RQ4: What solutions do media policy and regulation experts in the Nordic and Baltic countries propose to address the challenges associated with ACR?

The aim of this report is to provide answers to these research questions based on data gathered via interviews with media policy and regulation experts. The report begins by describing the data collection method and the study sample. It then presents the interview findings on the participants' perceptions of ACR, the benefits and risks associated with it and its broader societal implications, followed by a description of potential solutions. Finally, the report concludes with a summary that synthesises the key insights in relation to each research question.

2. Research method and sample

This study employed a qualitative research design based on in-depth, semi-structured interviews with media policy and regulation experts from five Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) and three Baltic countries (Estonia, Latvia and Lithuania), conducted from April 2025 to June 2025. Participants were selected through purposive sampling to ensure representation from all countries and a balance of participants between regulatory authorities and ministries responsible for media policy. The initial aim was to interview at least one participant from a media regulatory body and one from a ministry responsible for media policy in each country. To be included in the sample, individuals had to be professionally affiliated with a media regulatory authority or a relevant government ministry in one of the target countries and hold expertise or decision-making responsibilities in the field of media policy or regulation. Participants were identified and recruited through publicly accessible institutional sources and websites of the European Platform of Regulatory Authorities, the European Audiovisual Observatory, the European Regulators Group for Audiovisual Media Services, national regulators and governments, as well as through academic publications and expert recommendations.

Potential participants were initially contacted via email, which provided an overview of the research project, its objectives, an explanation of their role in the study and information about data usage, including the possibility of non-anonymised citation of interview material. For potential participants who did not respond to the first email, follow-up emails were sent, in some cases more than once. Some of those who responded to the emails expressed concerns about whether their expertise related to ACR was sufficient for participation in the study; these concerns were addressed by clarifying that the study did not require specialised knowledge or an in-depth understanding of ACR systems. Those who agreed to take part in the research received the interview guidelines (see Appendix 1) via email, allowing them to familiarise themselves with the interview questions in advance. This email also included an information sheet and an informed consent form. Signed consent forms were obtained from all participants who agreed to take a part in interview.

In total, 20 individuals were invited to participate in the interview. Two declined participation due to time constraints and personal reasons, three did not respond to the initial contacts, and one did not respond after reviewing the interview guide and consent documentation. As a result, 11 interviews were conducted with 14 participants representing all above-mentioned countries. Seven respondents were representatives of media regulatory bodies, and five represented media policy authorities. Two of the respondents had long-term, extensive experience working within or consulting for regulatory bodies or on media policy; however, they were not currently affiliated with relevant regulatory or policy institutions. In one country, three participants took part in a joint interview; in another, two participants were interviewed together. All other interviews were conducted with one respondent, as initially planned. In cases in which more than one participant joined the conversation, this was done on their own initiative and was agreed upon prior to the interview.

The interviews were conducted via Microsoft Teams and lasted between 55 and 110 minutes. With the participants' prior agreement, all interviews were recorded and transcribed on the platform. The automatic transcripts generated were manually reviewed and corrected by the interviewer to ensure accuracy. Those participants who wished to review the transcripts for accuracy were given the opportunity to do so, and the versions they edited were used in the further analysis.

The data were analysed using a thematic analysis approach, and this report, as presented in the subsequent chapters, is structured according to the predefined research questions (see Introduction) as well as the themes that emerged from the analysis. For clarity, the following phrases were used in the reporting of the findings: the term 'majority of respondents' or 'most respondents' referred to eight or more participants;

'half of the respondents' indicated seven; 'several' referred to four to six; and 'a few' or 'some' referred to two or three. These descriptors were used to indicate the prevalence of particular views while respecting the qualitative nature of the study.

Prior to data collection, the study received ethical approval from the Research Ethics Committee of the University of Southern Denmark. A key ethical consideration concerned the potential use of non-anonymised material in publications or presentations of the findings. This was based on the assumption that the participants could be identifiable through their professional roles, institutional affiliations or specific perspectives expressed during the interviews. As some respondents wished to remain anonymous and requested that their views not be cited in non-anonymised form, this report does not provide information about individual participants, such as a participant list, individual names, or institutional affiliations and quotations are presented without linking them to specific participants or countries.

3. Results

3.1. Perceptions of algorithmic content recommendation

Recognising that the meaning of the concept *algorithmic content recommendation* may vary depending on the context in which it is used, the first research question of this study explored how media policy and regulation experts perceive it. For this reason, the respondents were asked at the beginning of each interview, ‘How would you define or describe algorithmic content recommendation from your own perspective?’, which was followed by the question, ‘What role does algorithmic content recommendation play in today’s digital media landscape?’ The following description of the results presents the answers to these questions, along with relevant insights expressed in other parts of the interviews.

As the data analysis indicated, a dominant view expressed throughout the interviews by the majority of participants was that ACR is an essential component of the commercial logic underpinning digital media platforms, such as social media and search engines, and needs to be addressed as an integral part of their business models. The responses emphasised that ACR systems are designed and employed by platforms to promote content that captures user attention, maximises their engagement, prolongs the time spent on platforms, and increases levels of user interaction, thereby boosting advertising revenue for platform companies. As noted by several research participants, algorithms are programmed to prioritise information that is more likely to be clicked, shared or reacted to. Some raised the concern that, aligned with platform business priorities, recommendation systems push user attention towards emotionally charged content as a strategy to maintain engagement. As a few of them observed, this includes the amplification of conflict-driven topics, or what one respondent described as ‘pushing content to the extremes’. This can be illustrated by the following quote from one of the interviewees: ‘They (platforms) want us to interact as much as possible because that’s how they learn our preferences. So, the algorithm must be built in a way that we stay as much as possible. Which means that they have to attract our attention constantly. We know that one of the strategies they use is to drag us into conflict areas and conflict topics because it’s more likely that we’ll stay to actually explore them. So, I think, the algorithm, the reasons and the use and design of algorithms must be seen in light of the business model of the companies, the big tech companies’. Another interviewee characterised ACR as a mechanism designed ‘to keep people hanging on to their services’. This participant expressed concern that, although effective for digital media advertising and marketing purposes, such systems have the potential to contribute to user addiction by creating a need to constantly return to check information posted on online platforms.

Most respondents noted that ACR relies on each user’s prior experiences (usage of platforms, behaviour, interactions and preferences) to determine which content is more likely to attract their attention. Concerns have been raised that this potentially limits the choice of information and narrows the scope of content presented to them. One of the interviewed participants characterised ACR applied by platforms as a ‘new gatekeeper’, stressing its role in today’s content consumption and dissemination. Another interviewee elaborated that ACR systems have dramatically changed news production processes, ‘becoming a factor that determines how newsrooms function and work and who makes the major decisions’. Another respondent questioned whether the term ‘recommendation’ is appropriate at all and argued that these algorithmic systems make definitive selections rather than offer optional guidance and that users have no real opportunity to influence either the content presented to them or the functioning of the algorithms behind it. This interviewee also noted that significant problem with these operations is their lack of transparency. Similarly, a few other participants pointed out that ACR is opaque to users, who are often unaware of the ways in which their behaviour and preferences are tracked and incorporated into future recommendations. One respondent explained that numerous criteria are used to match the data from a

particular user profile with specific content, but it remains unclear ‘how the cocktail is looking at the moment’.

In their response to the question of what ACR means to them, two participants mentioned the role of AI in its operation. One of them stressed the significance of understanding that AI encompasses more than just generative technologies, which are currently in the spotlight. As described by this respondent, algorithmic recommender systems themselves constitute a form of AI that relies on the collection of user data, which in turn feeds into interest profiling used to direct content toward users to maximise engagement and time spent on the platform, thereby supporting the platforms’ advertising-driven business models. Another participant stated that the term ‘algorithm’ originates from mathematics and computer science, defined in such fields as an ‘exact list of instructions’. As explained by this respondent, in the context of content recommendation, these instructions specify what criteria will be used to match the data from a certain user profile with a certain piece of content. Because AI-supported algorithms learn from user data, they are constantly evolving, and the performance of a particular piece of content and how users respond to it can subsequently shape how the algorithm functions in the future. The link between the notion of an ‘algorithm’ and mathematics was mentioned in a few other responses.

To sum up, the participants’ perceptions of ACR encompass economic, operational and technological aspects. A predominant perspective that emerged was its central role in platform business logic, aligned with the principles of the attention economy: it supports the maximisation of user engagement and, subsequently, advertising revenue. For some respondents, their initial descriptions of ACR provided at the beginning of the interview already included concerns about potential challenges and implications for individuals, such as a lack of transparency, limitations on the diversity of information provided and a narrowed range of information choices. The implications of ACR for society and individuals are discussed in more depth in Chapter 3.3, after the presentation of the perceived benefits of ACR in the following chapter.

3.2. Benefits of algorithmic content recommendation

The second research question examined the benefits of ACR as perceived by the experts in media policy and regulation. Although most respondents recognised that it is important to consider both the benefits and challenges of ACR technologies, some expressed rather cautious responses to the direct question regarding possible advantages. A few indicated that they could not identify any clear benefits, whereas one noted that the advantages tend to manifest primarily on the platform side, since ACR contributes to the growth of a platform’s user base. Several participants emphasised that, although ACR as a technology can be used for beneficial purposes, the risks associated with how it is currently employed by platforms are more prominent than its advantages. Some suggested that it should be approached neutrally as a tool serving different aims, depending on who employs it and for what purpose. The following quote from one of the interviewees summarises this point: ‘It is a bit like having a knife: you can have it to cut your vegetables for your meal, but you can also use it to harm someone. And that’s what we see here; it’s a tool’.

Despite their reservations, the majority of the participants identified one common theme related to potential advantages: ACR systems help users manage information overload. ACR has been described as a mechanism that assists users in dealing with an abundance of information by filtering and prioritising content based on their individual interests. As the participants described, the digital information environment has become overwhelmingly saturated, making it difficult for individuals to navigate the information landscape effectively and select appropriate content. Some respondents characterised ACR as ‘helpful’ or ‘necessary’ to prevent users from becoming lost in the flood of online content and to provide people with information they might be interested in. As one respondent put it: ‘The idea is to help people navigate in the jungle of information, where you need to get access to the most relevant information first’.

Another participant pointed out that ACR can potentially increase the efficiency of news consumption by delivering relevant news to users without requiring an extensive search. Furthermore, some respondents noted that people appreciate services based on ACR, and, as one interviewee mentioned, users 'expect something to help them make sense of all [information] that's out there'.

Some participants noted that ACR have a potential to enhance information diversity. For example, one interviewee pointed out that algorithmic systems can help users learn about previously unknown niche topics. This view was supported by an example from the participants' personal professional experience, in which a recommendation algorithm led to the discovery of professionally useful information not known before. It was similarly raised in one more interview that, through ACR, people can discover new sources of information they would not otherwise be aware of. Another participant referred to previous research indicating that we potentially have greater access to a wider range of perspectives nowadays: 'These studies indicate that there's more pluralism or diversity in our media consumption today than it was in the days when we were subscribing to one newspaper'. However, this participant also emphasised that, although ACR may have positive outcomes, its effects depend on the purpose of the recommendation engine and called for tools that would provide users with greater agency in content choices and could serve as alternatives to contemporary commercialised recommenders.

In addition to the role of ACR in helping users navigate information overload, a few participants mentioned other potential benefits, although these views were expressed individually and were not reflected in other interviews. For example, it was mentioned that ACR can empower individuals who are isolated by connecting them with others in similar situations, thereby assisting in forming supportive communities. One participant discussed the possible use of ACR by public institutions, suggesting that recommendation technologies might serve useful public communication functions, such as directing individuals towards services or information relevant to their needs. Another respondent raised a different benefit: the role of ACR in content moderation, particularly copyright protection. This participant noted that algorithmic systems today are so advanced that they can detect copyright violations, allowing platforms to remove them.

In summary, the participants most commonly recognised ACR's value in helping users manage information overload. Additional benefits, although less widely shared, indicate that ACR's impact depends heavily on its design and purpose. Most respondents admitted that it is important to consider both the pros and cons of ACR.

3.3. Societal implications and challenges for individuals

Following an examination of how media policy and regulation experts perceive ACR and their assessment of its potential benefits, this chapter focuses on the challenges and risks identified by the research participants. These include the threats that ACR poses to individuals and society at large, thereby addressing the third research question. As part of this enquiry, the following questions were asked during the interview: 'How would you describe the risks of ACR for digital media users and society in general?' and 'What role does ACR play in today's digital media landscape?' Responses to these questions formed the basis for the analysis of ACR challenges; however, relevant information from other parts of the interview was also considered. As the data analysis revealed, the participants identified a wide range of problems, grouped here into three interrelated themes: (1) challenges to democracy, (2) risks to the integrity of the information ecosystem and (3) challenges and potential harms for individual users. These challenges are outlined in the subsequent three subchapters.

3.3.1. Negative impact on democracy

The interview data showed that one of the main concerns among the participants was related to the negative impact of ACR on democracy. The majority of the media policy and regulation experts interviewed expressed the opinion that ACR, in its current commercialised and nontransparent form, is a significant threat to democracy. Across the interviews, various participants described the impact of ACR on democracy with phrases such as ‘a stress test to democracy’, ‘bad news for democracy’, ‘has a negative impact on democratic societies’, ‘a threat against the democratic processes we have in society and democracy as a whole’ and ‘obviously a huge risk for this society and for democracy’.

Risks of polarisation and division within society

Among the various threats to democracy identified by participants, social division and polarisation driven by ACR emerged as one of the most frequently mentioned. Two participants framed ACR as a major threat to societal cohesion, emphasising its negative impact on the shared public sphere. One of them explained that recommendation systems deepen social division and polarisation by providing individuals with pre-selected content based on their previous online behaviour and personal interests, and that this process then shapes how they perceive the world. The result is that people ‘who are living side by side’ develop profoundly different understandings of the world. Likewise, another participant emphasised the seriousness of the issue, expressing concern about the effects of highly individualised and targeted algorithmic content on both individual users and, more broadly, on state and society as a whole. As highlighted by this expert: ‘We are concerned about whether there is a common discussion platform or if everybody is on their own platform, which is shaped by algorithmic content. Because if we do not have a common platform, then there is a very big challenge for societal cohesion. And without societal cohesion, the state faces serious challenges in functioning effectively’.

In another interview, a participant used the metaphor of ‘silo towers’ to describe how users become confined within narrow ideological environments that reinforce existing views and limit exposure to alternative perspectives. This participant also framed the situation as a ‘polarisation question’, noting that the people in these ‘silo towers’ increasingly struggle to understand one another: ‘they are so polarised that they can’t understand the other person’s opinions and their viewpoints on a certain matter’.

The participants also warned that ACR systems can negatively impact marginalised or vulnerable groups. One participant noted that individuals who are already marginalised may be highly vulnerable to the isolating effects of algorithmically curated content. ACR can reinforce existing divisions by presenting content that resonates with users’ perceived frustrations, thereby increasing the risk of social alienation. As another respondent put it, people who feel disconnected from broader societal structures may be drawn into ideologically narrow or radicalised online environments that further reinforce their sense of exclusion.

Polarisation was described by several respondents as the result of the engagement-driven logic underlying recommendation systems, which is tied to platforms’ commercial objectives. For example, one participant pointed out that social media platforms actively promote extreme content that can contribute to polarisation, as their primary aim is not to foster social cohesion but to advance business interests. Similarly, another participant described that social media platforms give precedence to content based on its potential to generate the highest number of clicks, likes and shares. According to this interviewee, polarised news headlines are more likely to be amplified by recommendation systems than more neutral ones, which tend to attract less user engagement.

Impact on public discourse and opinion formation

Concerns were also raised regarding the influence that platforms and their owners, through nontransparent algorithmic recommendations, exert over public discourse and opinion formation. Several participants pointed to the opaque nature of content selection and amplification on these platforms, which contradicts one of the most essential principles of democracy—transparency. According to one expert, the

process of ACR is governed by an extremely powerful ‘invisible hand’ that amplifies certain types of content while making other types less visible. This participant emphasised that platforms hold immense power in shaping public discourse by determining not only what individual users see there but also which topics come to define public debate within each country. It was also noted by this expert that there is a risk that the power held by platforms can be misused through recommendation algorithms that ‘push one message through the platform’. As this participant added, such a dynamic is not only driven by commercial motives but also shaped by political ambitions. Another participant similarly drew attention to the interconnection between media control, political power and technology, posing the following question: ‘When media power, political power and technology work together, who’s on the user’s side and who’s on the democracy and citizen side?’.

Some other participants likewise warned about the growing influence of ACR systems on the formation of opinions. For example, one expert underscored that it is important for regulators to recognise that the lack of transparency increases the risk that public opinion, individual choices and collective actions may be shaped in ways that are neither visible nor accountable. The participant warned that these mechanisms risk producing negative outcomes for both individuals and society as a whole. Another interviewee, when asked about the role of social media and search platforms in posing risks to democracy, responded that these platforms now play a much bigger role than could have been imagined a few years ago. This respondent further expressed concerns regarding recent changes in content moderation approaches by platforms based in the US, adding that ‘they’re promoting ideas that are clearly against democratic principles, human rights and the values that we’re still building our society on. So, I think that’s really the biggest risk at the moment’.

Potential impact on elections and the risk of foreign interference

Several respondents expressed concern regarding the influence that platforms, through the use of ACR, have on citizens’ opinions and decisions regarding political issues, thereby posing broader risks to democratic participation in elections and referendums. Their responses highlighted both: the unintended influence of so-called information bubbles on voting choices and the deliberate manipulation of opinions through algorithmic recommendations. As one of the participants noted, the current information environment lacks sufficient safeguards and it allows actors with political or commercial interests to leverage ACR before elections to influence public opinion and amplify targeted political messages with the help of algorithm-driven technologies. This was seen as particularly problematic in smaller countries, where information ecosystems are more easily saturated. Another participant warned that these practices erode electoral integrity and even national sovereignty, as both platform owners and external actors gain increased influence over democratic decision-making processes through ACR. Another participant was concerned that emotionally provocative content, often prioritised by algorithms, can distort voter perceptions and attention, potentially affecting electoral outcomes and that ‘actors with malicious aims might end up using or employing these trends of algorithmic recommendation systems’.

Several participants expressed concern about the potential impact of foreign interference during pre-election periods, when algorithmically prioritised content can substantially shape public opinion and sway electoral outcomes. As mentioned in one interview, this is especially true if platforms align with or are susceptible to cooperation with actors holding specific geopolitical interests. Similarly, another participant referred to “foreign malign states tampering with the information space in Western open democracies” and warned that such actors exploit the protections of freedom of expression that democratic systems uphold. In another interview, the respondent underlined the difficulty of explaining to the broader public why information provided by external actors can be harmful and why it should not be given algorithmic visibility or reach, pointing to the challenge of balancing the protection of free expression with the prevention of harm to democratic society. One interviewee characterised these phenomena as a form of contemporary information warfare. In this context, algorithmic systems facilitate covert forms of influence that are difficult to detect and counter yet can have potentially severe consequences for national security. These

potential security risks were described by several participants as particularly critical in the Baltic states. They raised concerns about Russian-origin information campaigns aimed at disrupting democratic dialogue and polarising public opinion.

3.3.2. Risks to the integrity of the information ecosystem

Nearly all of the interviewees highlighted concerns about how ACR poses risks to the integrity of the information ecosystem. While some of these issues overlap with the challenges discussed in the previous chapter, the participants also pointed to other problems, such as reduced information diversity, declining content quality and the amplification of extreme or hateful content, which are described in more detail below.

Over half of the interviewees indicated that platforms' use of ACR had resulted in reduced diversity in content exposure. They described that platforms deliver content based on sophisticated analyses of users' interactions with both the platforms and with other users. This process reinforces their existing preferences, beliefs and behaviours rather than facilitating exposure to a diverse range of content alternatives. In some responses, this was directly linked to the platforms' revenue-driven business logic. Several participants used the metaphor of *filter bubbles* or *echo chambers* where individuals are repeatedly exposed to similar content while being disconnected from contradictory viewpoints or alternative perspectives. For example, one respondent warned that such narrowed exposure to one-sided information significantly increases the risk of becoming susceptible to mis- or disinformation. This risk is particularly high when individuals are not reached by contrasting perspectives that would allow them to critically evaluate the content in their feed. Similarly, another participant stated: 'It creates a kind of possible growing ground for all this disinformation. And you can start believing in what you want if you just stay in your own bubble. And it's so easy and possible nowadays, thanks to this recommendation'.

Problems related to information quality and the spread of misinformation or disinformation by ACR were recurring themes also across many other interviews. Besides the threats posed by ACR regarding misinformation and disinformation, several participants referred also to the tendency of platform algorithms to amplify extreme and hateful content. These issues were frequently linked to the engagement-driven logic of platforms, which prioritises maximising user interaction over ensuring content quality. Some participants noted that the recent decline in cooperation between platforms and fact-checking organisations in the US has contributed to the declining quality of publicly available information and the spread of mis- and disinformation as well as hateful content. A few interviewed experts pointed to the challenges of addressing these problems at the state level. They noted the persistent tension in democratic societies between protecting freedom of expression and safeguarding information quality, emphasising the need to strike a balance.

Amid reduced information diversity and declining content quality, several participants emphasised the important role of legacy media, both public service and private outlets, in providing access to reliable, verified and diverse information. As one expert highlighted, professional journalism has become more important than ever, as journalists are trained to gather and verify information, see the broader context and assess whether sources are trustworthy. The respondent noted that this is something that ordinary users on social media often cannot perform due to a lack of time or capacity. Some participants also expressed concerns about the viability of the traditional media industry, citing the disruptive economic impact of ACR-powered platforms. Both private legacy media and public service broadcasters were viewed as increasingly disadvantaged in the competition for audience attention. As one respondent noted, advertising revenue 'is draining into the new algorithmic content', further undermining the sustainability of established media outlets.

3.3.3. Challenges and potential harms for individual users

Several respondents raised concerns about the limited user agency in an algorithmically curated information landscape and the resulting threats to individual rights. They emphasised how ACR restricts people's access to information and, in doing so, limits their ability to make genuine, autonomous content choices. Some respondents framed the issue as a fundamental question of the human right to access information, as illustrated by one interviewee's reflections: 'In Article 10, in the Charter of Human Rights, we are talking about freedom of expression and freedom of information, but I think that the biggest question is: do we actually have freedom of information? That is the core of the whole thing with algorithms. We might think that we have, but actually, the freedom of information is just the freedom that big tech has pushed towards us and that they think we are interested in.' Another participant reflected on how content filtering can affect individuals' rights to be heard, noting that 'just putting it out there has little meaning when the filtering power is with someone else who doesn't want you to be heard'. This expert also called for more discussion on how platform interfaces and interaction design are used in sophisticated ways to limit individual choices and noted that these mechanisms are often effectively weaponised against users while simultaneously creating the illusion of a smooth user online experience.

Another expert warned that the collection of personal data combined with user interest profiling creates 'a very huge issue regarding freedom of speech' and further limits freedom of free thinking. As this interviewee described, such freedom is being challenged because algorithmic filtering limits exposure to diverse views and weakens people's ability to form their own opinions. The most of other participants were likewise concerned about the influence that platforms using ACR systems and their owners have on individual opinions, worldviews and perceptions of reality. Some of them emphasised the potential impact of ACR on younger users, whose worldviews have not yet been fully developed or stabilised. As described by one respondent, the way algorithms are applied in content selection may affect young people's ability to form their own views and make informed decisions.

Furthermore, the majority of the respondents expressed concern about the lack of transparency in how ACR operates on platforms and its effects on individuals. Several interviewees highlighted that users are unaware of how these invisible content recommendation mechanisms shape their information choices and, consequently, their perceptions. This lack of awareness makes it difficult for them to evaluate the impact of ACR critically. As described by one participant, 'it's not easy to make people understand how they're manipulated unless they're really critical and aware and able to understand how their lives are all the time actually manipulated thanks to this recommendation'. Two other experts pointed to the imbalance between the extensive knowledge that platforms hold about users and the limited understanding that users have of how the algorithmic systems employed by platforms operate and affect them. As one of the participants described, platforms can scrutinise and obtain knowledge about individuals and their children—information that people themselves may not even be aware of; however, users lack comparable abilities to scrutinise platforms in return. Some participants were particularly concerned about the opacity surrounding the extensive collection and monetisation of people's data. What was considered particularly problematic was that data collection and usage in platforms' business routines occur without users' clear understanding. Furthermore, a couple of participants pointed out that some users, especially young people, tend to be indifferent and lack the motivation to critically evaluate the operation of algorithmic platforms and the use of their personal data. These individuals often prioritise the convenience provided by ACR systems rather than considering possible risks. As one participant described: 'The users, some of them are not aware about it and others just don't care'.

Another theme that emerged in several interviews was the exposure of individuals, particularly young people, to offensive or emotionally and psychologically destabilising content promoted by ACR. One interviewee, for example, noted that algorithms promote content that evokes strong emotional responses, citing prior research by platform companies: 'We know that research within these companies has shown

them that content that creates a lot of emotions in people, especially anger or fear or something like that, is the kind of content that people engage with more.’

Among the harmful materials promoted by ACR systems, the study participants mentioned suicide-related information, content promoting anorexia and content aimed at influencing vulnerable individuals, particularly young, isolated men, to adopt violent behaviour. As one respondent pointed out, the dynamics of promoting such content are extremely complex, involving multiple actors, and therefore require broader societal efforts to analyse and mitigate. Some respondents warned that the addictive design of ACR may lead to mental health problems, resulting in an increased risk of depression and addiction for young people.

In sum, the participants viewed ACR, in its opaque and commercially driven form, as a phenomenon with far-reaching negative implications for democracy, polarising society, shaping public discourse, and influencing citizens’ decision-making on political issues. Such systems were also seen as disrupting the flow of information and the established media landscape. This disruption reduces the diversity and quality of content while amplifying disinformation, misleading information and extreme or hateful content. On a personal level, experts warned not only of the harmful effects of increased exposure to offensive and emotionally destabilising content on mental health but also of broader concerns. These included human rights, the limited agency of users to choose information and the impact of ACR systems’ opaque operations on individuals’ perceptions of reality, opinion formation and decision making.

3.4. Potential solutions and future directions

The following chapter examines the participants’ perspectives on potential solutions and future response directions. Drawing on the interview data, it focuses on four areas: (1) the importance of EU-level regulation and the role of national regulators and policymakers; (2) awareness building and the advancement of media education to better equip citizens in navigating an algorithmically curated information environment; (3) alternative platforms and technological solutions; and (4) ensuring access to reliable information through legacy media.

3.4.1. Regulation

The importance and challenges of EU-level regulation

There was consensus among the study participants that regulatory intervention is essential to manage the challenges that citizens and society face due to platforms’ use of ACR systems. At the same time, their responses suggested that national media regulators, that often still operate within frameworks designed for supervising legacy media, are not well positioned to fully oversee the complex processes driven by rapid technological advancements, including the development of ACR systems. Most respondents agreed that it is challenging for individual countries to regulate these dynamic processes effectively, emphasising the need for unified regulation across Europe. As reflected in one interview: ‘No EU country on its own is probably strong enough to make decisions that would have a lot of influence against these big global tech companies. So, I think that if it’s a whole EU decision, it already has much more power, and, in that sense, I see the role of the EU as very, very strong’.

Several other participants further highlighted the imbalance of power between small states and large platform companies that have ACR as a crucial part of their business models. They stressed the need to counteract the power held by ‘big tech giants’ and the importance of developing common European regulatory solutions and shared legal frameworks. As one participant stated, it is important to place content recommendation at the core of platform regulation, as it is one of the most powerful tools that platforms possess.

Nevertheless, most participants were optimistic about the potential of existing and emerging EU legal frameworks to regulate platforms and their algorithm-driven operations. The frameworks mentioned include the DSA, the Digital Markets Act and the European Media Freedom Act. This can be illustrated by a quote from one of the interviewees: ‘At the EU level, we’ve established many frameworks regarding online content, and they also address algorithmic content. Regarding social media platforms or big digital platforms, we have the DSA and the Digital Markets Act. We now also have a very important covering media content, the European Media Freedom Act, which addresses pluralism and how journalistic content should be available and should stay untouched on the platforms by the platforms. So, I think we have quite a good framework’. The DSA, the regulatory framework most frequently mentioned by the study participants, was viewed by almost all respondents as a positive development and was characterised as ‘a step in the right direction’ to address the issues related to ACR. At the same time, many experts emphasised that its effectiveness depends on proper implementation, which several participants described as a serious challenge for both the European Commission and national regulators.

The analysis of the interview data highlighted several obstacles that the participants considered critical to the successful development and effective implementation of regulatory frameworks. One concern is that the legal jurisdictions of platform companies are located outside Europe, with most of these companies based primarily in the US. In this context, some participants noted that the effective implementation of the DSA is further complicated by ongoing tensions over platform regulation between US authorities and the European Commission, and that these tensions are exacerbated by the current US leadership’s resistance to EU regulatory approaches.

Several participants highlighted the limited expertise and knowledge of both national and European regulators regarding ACR systems and their operations as a challenge to developing effective regulatory solutions. They emphasised the need to strengthen the capacity of regulators and legislators by deepening their understanding of the technologies and practices underlying platform-based content recommendation. As one interviewee reflected: ‘... and then there’s the technological layer that you have to understand, both the hardware and the software. And this demands a much broader competence than traditionally regulators have had’. This expert also highlighted another contributing factor—the highly individualised nature of user experiences with ACR creating significant methodological and technical challenges for regulators. This concern complicates the identification of common issues that uniform regulatory measures could address effectively. According to this participant, a significant problem for regulators arises from the fact that platforms have not provided access to ‘the actual thing that’s supposed to be regulated’.

The need for transparency and access to information, which would help regulators better understand and scrutinise algorithm-driven platform operations, was also acknowledged by almost all other research participants. There was a consensus that platforms should be more open about their algorithms and provide access to information about ACR processes. This would enable regulators to monitor them more effectively and assess their impact on users and society as a whole. Such access was described as necessary for both regulators and researchers, whose role is to help make sense of the complex processes underlying ACR and their implications. Most of participants agreed that, without more in-depth insight, regulating ACR effectively and holding platforms accountable are highly complicated. Meanwhile, one respondent who was also concerned about transparency challenges referred to a recent development in the field—the establishment of the European Centre for Algorithmic Transparency, based in Seville (Spain) and reporting to the European Commission, which now has access to platform algorithms. This participant characterised this development as a very positive step towards opening the *black box* of platform design, which could help mitigate the risks it poses.

Several participants criticised current EU-level regulation, contending that it has not adequately addressed the implications of platform business models and the mechanisms through which ‘the information space is captured by big businesses’. Some of them were critical of the slow pace of developments in EU regulation and attributed this to an initially overly optimistic attitude towards the internet and social media. They also

highlighted the consequences of this delayed regulatory response. As mentioned by one interviewee: ‘Now, when we have seen the various negative phenomena in different platforms, there are more and more demands for tighter regulation, but in many cases, it’s very difficult now because originally quite a lot of freedom was given to these different global companies’.

Throughout the interviews, the participants identified several critical areas of platform operations that should be addressed by EU regulation more effectively. Among the most frequently mentioned were the lack of transparency and explainability in how algorithms operate and the extensive use of user data in these processes. Some participants expressed concern about the complexity with which platforms present their algorithmic selections to users, calling for enhanced regulation in this area. As described by one interviewee, although the information is often technically available, it is presented in an overly complex manner, making it inaccessible to people without prior knowledge of algorithms, legal expertise or relevant technical background. As a result, ordinary users are unlikely to fully understand how algorithms function or how they influence the content appearing in their news feeds, which was seen as a significant challenge to transparency. Similarly, another participant noted that many users agree to platform terms without fully understanding them, thereby continuing to share their personal information. As highlighted by this participant, although regulators and lawmakers are aware of this issue and have produced relevant policy documents, platforms continue to operate on business models that are fundamentally reliant on user data, often without user awareness. This concern was echoed by another participant, who argued that the collection, analysis and commercialisation of personal data are ethically problematic and should be illegal, yet current legislation permits such practices. The same issue was mentioned by another expert who was also concerned about the commodification of user data by tech companies and who criticised the lack of regulatory response to it: ‘I think it’s a basic problem that big tech companies are able just to use our data as commodities in their business models ... I think that regulation and regulators have been sleeping, letting this happen and that they could actually now approach it with the law ... They kind of let the people down in a way letting this to happen’. The same participant also raised concerns that systemic issues with substantial societal impact remain subject to the discretion of platform companies and are not adequately regulated. According to this expert, platforms, through the design of their algorithms, have effectively become critical infrastructure for freedom of speech, communication and interaction, with a significant societal impact that demands accountability. Therefore, they should not be treated as ‘free businesses’ but should be regulated accordingly. When asked about European-level regulation and the role of regulators in relation to ACR, the same respondent stated that these actors currently play ‘a very reluctant, very leaned-back role,’ despite having the potential to accomplish so much more.

The role of national regulators and policymakers

Although the majority of participants pointed to the limited ability of local regulators to influence ACR processes on global platforms, several interviewees highlighted that national regulatory authorities play an important role as experts on the local context and in monitoring compliance with the requirements set out in EU regulatory frameworks. The ability to carry out such monitoring was seen as essential for ensuring that the intentions of EU legislation, expressed in the Digital Services Act, the Digital Markets Act, and the European Media Freedom Act, are realised in practice. As described by one participant, the goal of these measures is ‘... to monitor the algorithmic impact on media consumption, media pluralism and democratic discourse in general ...we can monitor the situation and inform the European Commission, which is tasked with developing procedures regarding very large social media platforms’. Another participant discussed the possible practical steps that national regulators can take to ensure supervision and enforcement. These include identifying risks in algorithmic systems, potential infringements of the DSA and reporting suspected violations to the European Commission.

Several participants emphasised that the extraterritorial legal jurisdictions of platforms operating in their countries pose substantial challenges for national regulators and makes it difficult to hold platform companies accountable. As one respondent representing a regulatory authority pointed out, global

platforms should comply with national laws and cooperate with regulators in the countries in which they operate so that national regulatory authorities can effectively protect the interests of their societies. At the same time, the participant emphasised the need for more active engagement from national policymakers and underlined the importance of maintaining the freedom to determine, within each country's legal framework, what regulatory measures are feasible at the national level. Another participant similarly stated that applying national legislation where possible may be useful. However, this participant also acknowledged that national governments are not strong enough to address the problems posed by global platforms on their own and added that the most crucial approach is collaboration with other countries within European-level regulatory frameworks to hold platforms accountable.

Several participants emphasised that, alongside regulation, national media regulators also play an important role in building public awareness and helping citizens understand and navigate the algorithmically shaped information environment. This role was considered particularly important given local regulators' limited ability to hold platform companies located outside their jurisdictions accountable, as well as their constrained influence over decision-making and regulatory processes, which are largely centralised at the European level.

3.4.2. Awareness building

As outlined in the previous chapters, the capacity of national regulators to influence the governance of ACR and to hold global platforms accountable remains limited, given that these platforms are headquartered outside their jurisdictions and regulatory authority is largely centralised at the EU level. In this context, participants widely emphasised the importance of complementary measures that can be implemented locally, with awareness raising and media education often emphasised as important strategies. According to most interview participants, to help citizens critically navigate the algorithmically shaped information environment, local regulation and policy initiatives should aim to increase the public's understanding of how ACR systems operate and build awareness of their implications.

When asked about the role of media education in addressing the challenges posed by ACR, the majority of respondents acknowledged its importance in awareness-raising. In this regard, they called for broader, more inclusive media education strategies that would integrate knowledge about ACR into educational programmes at different levels. This included updating school curricula to promote understanding of both the individual and societal impacts of algorithmic systems. Some participants described ongoing efforts and initiatives in schools in their countries aimed at raising students' understanding of algorithmic recommendations. At the same time, several interviewees underscored that, beyond formal education, emphasis should be placed on adult education and lifelong learning to ensure that all citizens, regardless of age, develop the competencies required to critically engage with ACR. As described by one participant: 'We have a good system, I think, regarding schools, elementary schools and secondary schools, but I think we have room for improvement with people who are not in school anymore, the grown-ups. To reach out to them, help them understand how algorithms work'. In this regard, some participants underlined the importance of cross-sector collaboration among schools, libraries, NGOs and media organisations to provide accessible learning opportunities for all generations.

Some of the interviewees called for innovative media education approaches to address ACR and its implications. For example, one participant noted that traditional media literacy initiatives have largely focused on the ability to distinguish between reliable and unreliable information. However, in the context of algorithmically curated content, this task has become increasingly difficult. As suggested by this participant, media education must be expanded to enable citizens to develop an understanding of how algorithmic / AI-based systems function to support platform business interests. It is important that people understand that the information they see is not neutral but reflects the platforms' commercial intentions and depends on their underlying business logic. Another expert similarly questioned traditional media

literacy approaches and argued that from a user's perspective, not only is critical thinking required but also constant attentiveness to how algorithmic systems shape both the content presented and the impulses driving user reactions. This participant described such vigilance as going beyond the traditional focus on fact checking and content verification. Instead, it requires fostering a broader metacognitive awareness that can help users regulate their own responses, resist impulsive emotional reactions and exercise agency in navigating algorithmic recommendation systems as much as possible.

Considering the adverse impact of ACR on democracy, some respondents stressed that awareness-building efforts should also address the relationship between the media and democracy. They highlighted the need to strengthen the public's understanding of the fundamental principles of a democratic society and the media's role in safeguarding it. It was emphasised that educating citizens about both their rights and responsibilities in the digital realm is important. Some of the respondents particularly pointed to the need to foster user responsibility in relation to content creation and dissemination.

Although the data analysis highlighted the importance of media education, it also underscored the need for a balanced approach that combined both regulatory and educational solutions. Several participants stressed that media education and efforts to raise individual awareness should complement, rather than replace, regulation. They noted that the structural challenges of profit-driven algorithmic platforms require systemic regulatory solutions and political action and cannot be addressed through individual responsibility alone. The following quote from one interviewee illustrates this perspective: '... we need more and more to continue to work to promote basic understanding of media literacy and how do you choose (information), how can you choose, what can you do as an individual. But again, the responsibility should not be put only on individuals... individuals should not be the only ones having the responsibility. I think that's really important as well. So, it's a fine balance between these two. We need both (regulation and media education)'.

The participants also acknowledged several obstacles to raising public awareness about ACR through media education. Some interviewees noted that users, particularly younger generations, are often uncritical of how algorithmic platforms operate. They tend to prioritise convenience over concerns about data use or content manipulation and personalised recommendations are frequently perceived as a beneficial aspect of everyday digital life. This tendency to favour comfort over critical reflection was regarded by some participants as a barrier to fostering more critical engagement with algorithmic systems.

3.4.3. Alternative platforms, technological and design solutions

In addition to regulatory and educational measures, the interview data analysis also highlighted the importance of developing alternative digital platforms and technological solutions that operate beyond the dominant profit-driven logic of global technology companies. Such alternatives were regarded in several interviews as essential for counteracting the tendency of ACR systems to amplify polarisation and erode democratic cohesion. The idea of noncommercial platforms was linked to the need for digital spaces that foster constructive rather than divisive public debate. As mentioned by one interviewee: 'And then we need to emphasise also where we're going to have our open, informed public debates. I mean, we're certainly not going to do that within these platforms. That's not the way forward for our democracies. And I think we all understand that in the Nordic countries and in the Baltics. This is something that that we need to have a serious discussion about. Where is our Agora, which is not being tampered with disinformation and algorithms that are pushing us apart but towards each other.'

In several interviews, the need for European alternatives was characterised as a strategically important response to the dominance and power of global platforms. Some respondents warned of the risks associated with the current dependency on US- and Chinese-owned infrastructures. They emphasised that such dependencies create vulnerabilities not only for data privacy but also electoral integrity and even

democratic sovereignty. One participant, for example, noted: 'It will be of great value to have some kind of European platforms because today, we basically have US and Chinese platforms, which is challenging when it comes to personal data, GDPR and loss of power. Because we know that the owners of these platforms can use and misuse their power politically as well'.

It was suggested by some participants that alternative platforms might be developed as publicly funded social media platforms or search engines that are designed to serve the public interest rather than specific commercial interests. Such spaces were envisaged as 'safe places' where citizens could turn for trustworthy information and guidance, especially in moments of uncertainty. At the same time, some interviewees acknowledged that privately owned companies could also be considered providers of these alternative online services, as long as they are based on democratic values and the 'fundamental principles of good journalism'.

Alongside proposals for alternative platforms, several participants discussed the potential for developing algorithms and other technological or design solutions that align more closely with democratic values and promote information diversity. Some experts underlined the importance of information diversity by design. They emphasised that recommender systems should not simply reinforce users' existing preferences but should ensure exposure to a wide range of viewpoints, including opposing opinions. In this regard, one respondent remarked: 'I think it would be nice to see algorithmic recommendation systems that don't just give users everything 100% aligned with their interests but also provide opposing opinions and diverse ideas. So, I think that might be a good way to go, but I don't know if that's feasible or even possible'. Another respondent reflected on the idea of designing recommendation systems that expose users to counterarguments and alternative perspectives, for example, by including notifications such as 'On this question, there are also posts like this and this', or by providing links to opposing viewpoints. One participant proposed idea about user-friendly mechanisms that would allow users to 'unsubscribe' from filter bubbles, thereby helping them access a wider range of information. Another participant expanded the idea of information diversity by pointing to the development of AI-based tools, such as news aggregators, that can highlight underrepresented stories and draw attention to perspectives that users would not normally encounter.

A recurring theme in the interviews was the need to give users greater influence over how algorithmic systems are designed and operated, thereby shifting power away from commercial platforms and AI back to individuals. This would enhance users' agency over content selection and strengthen their control of digital experiences. Fostering such agency was seen to require not only transparency about how algorithms function but also the provision of practical tools for content choice and customisation. In this context, one respondent mentioned Bluesky as an example: 'I think it's quite interesting to have a look at platforms like Bluesky and how they're giving power back to users. You can actually—almost like in a cookbook—just decide what kind of content you'd like to be exposed to, more based on your own defined interests rather than on your personal data collected and processed by the platforms'. Another interviewee stressed the importance of providing platform users with options to opt out of certain practices without having to leave the service altogether—for example, by allowing them greater influence over how their data are shared. The participant added that it would also be important to provide users with tools that can help them better understand their digital behaviour, such as dashboards that visualise patterns of their online activity and information that is well known to service providers but largely unknown to users themselves.

3.4.4. Ensuring access to reliable information through legacy media

The research participants considered safeguarding reliable journalism and ensuring access to trustworthy information essential for addressing the challenges that ACR, in its current commercialised form, poses to information integrity. In the interviews, journalists were described as uniquely equipped to assess the reliability of sources, analyse the broader context, and provide coverage that presents diverse perspectives,

draws on multiple sources, and is grounded in journalistic ethics. Access to such editorial content was considered a key precondition for enabling citizens to make informed choices, as demonstrated by the following quote: ‘...access to editorial content, which is very important to form informed decision because a precondition for an informed decision is that you're able to get access to reliable information. Editorial content, discussing pros and cons, using different sources, but still having a press ethics as a foundation for this journalistic content production is very important’.

As pointed out by another participant, counterbalancing the algorithmic content provided by platforms with trustworthy media content is becoming increasingly difficult due to economic pressures: ‘The algorithmic content is just one part of the problem. There wouldn't be a problem of having that, if there would be real alternatives. So, if there would be well curated media content, which is trustable and which counterbalances the algorithmic content, the issue would be less severe. That is why it is a really a twofold problem: as society increasingly shifts towards digital space, revenue from high-quality media outlets continues to draining out, following instead to large platforms which do not reinvest in maintaining a balanced information environment. So that is actually the other big part of the problem’. According to this interviewee, an important task for media policy is to support local media companies that are losing revenue to platforms based outside national borders and even outside Europe, while avoiding making a harm to a healthy market economy in the media sector. This participant also stressed the importance of supporting regional news production, seen as vital for sustaining democratic debate and safeguarding cultural and linguistic diversity in Europe's digital space.

In some interviews, participants emphasised that legacy media are trusted within their societies as sources of reliable information and that citizens often seek trustworthy legacy media content on social media platforms. However, it was also noted that certain groups within the population—especially young people—do not regularly consume traditional media content and are therefore widely exposed to misinformation and disinformation amplified on social media. As some interviewees emphasised, it is crucial to ensure that these media users have easy access to reliable content. As pointed out by one expert: ‘we should give people different possibilities and to make them aware that this is a threat and provide them with the content that is trustworthy, reliable content and make it so much available, like what (our country) has managed, that young people still consider it interesting and they want to check it’.

Another participant acknowledged that it is important to ensure that legacy media are trusted by society, meanwhile pointing out several risks in this regard. According to this expert, the rise of social media, combined with personalised content, has undermined traditional media across Europe by circulating narratives that portray legacy media as irrelevant, dying or propagandistic. This respondent stressed that legacy media organisations need to take this situation seriously and address it by reassessing their guidelines, reviewing their practices and improving communication with the public to regain and strengthen trust.

To sum up, the interview data shows that participants view responses to the challenges created by ACR as requiring a comprehensive and multi-layered approach. The analysis indicates that robust regulation—particularly at the EU level—combined with effective national oversight, and addressing ACR as a core element of platform business logic, can be considered a key solution. At the same time, the analysis suggests that legal frameworks alone cannot remedy the structural problems embedded in platform business models and created by algorithmic recommendation systems designed for commercial purposes. The interviews highlighted the importance of complementary measures, including awareness-raising and media education to strengthen citizens' ability to critically navigate algorithmically curated environments; the development of alternative platforms and technological solutions that prioritise democratic values and user agency; and sustained access to reliable and diverse information through editorial media. Taken together, these strategies were seen as necessary to counterbalance platform power, protect democratic processes, and safeguard fundamental rights in an increasingly algorithm-driven media landscape.

4. Summary and conclusions

The study discussed in this report investigated how media regulation and policy experts in the Nordic–Baltic region perceive algorithmic content recommendation, the benefits and risks they associate with it and the solutions they consider appropriate. The main results in relation to the research questions of this study are presented below.

RQ1: How do media policy and regulation experts in the Nordic and Baltic countries perceive ACR?

According to the interview data, the dominant view of ACR is that it is an essential element of platform business models, embedded in the attention economy and designed to maximise engagement, prolong user activity and increase advertising revenue. It was emphasised that such systems rely on users' prior behaviour and preferences in ways that narrow information choices and reduce diversity. They also often prioritise polarising and emotionally charged content to sustain attention. ACR was described as a 'new gatekeeper' of information flows, giving users little influence over the content to which they are exposed and raising concerns about transparency, agency, and the growing role of algorithms in shaping both content consumption and news production practices.

RQ2: What are the benefits of ACR for citizens and society according to these experts?

The most widely acknowledged benefit was ACR's capacity to help individuals cope with information overload by filtering, prioritising, and sequencing content in ways that make digital environments easier to navigate. Some respondents also noted its potential to support the discovery of niche topics or unfamiliar sources. The findings indicate that the development of technological solutions for content management is necessary for advancing public-interest aims, but also demonstrate that the effects of ACR are highly dependent on the intentionality, design logic, and operational practices through which these systems are developed and deployed.

RQ3: What challenges do citizens and society face in relation to ACR according to these experts?

A central concern identified in the interview data relates to ACR's impact on democracy. The respondents argued that in its commercialised and nontransparent form, ACR intensifies polarisation and division within society by repeatedly exposing users to content aligned with prior behaviour and inferred interests. They stressed the impact of ACR on public discourse and opinion formation, noting that platforms and their owners exercise power through opaque processes of content selection and amplification by shaping which topics gain visibility and how issues are framed. Several interviewees warned about the potential impact on elections and the risk of foreign interference, particularly in smaller states where information environments are more easily influenced by targeted messaging and algorithmic amplification during pre-election periods.

The interview analysis highlighted several risks to the integrity of the information ecosystem. The respondents noted reduced information diversity and a lack of pluralism in content exposure, the spread of misinformation and disinformation and the amplification of extreme or hateful content. These dynamics were often linked to engagement-driven platform business logic and were also seen as undermining legacy media's economic sustainability.

At the individual level, the participants highlighted limitations on users' agency and their freedom to access information. They framed ACR as a challenge to human rights when invisible curation constrains genuine choice. They emphasised that the lack of transparency about algorithmic operations, particularly related to data collection, user profiling and monetisation, creates a power imbalance between platforms and their users. Particularly, the respondents were concerned about effects such as distorted perceptions of reality, impaired decision making, biased opinion formation and cognitive dependence, especially among younger

users whose worldviews are still developing. They noted increased exposure to offensive or emotionally destabilising content, including materials related to self-harm, anorexia or violent ideologies, which is driven by the prioritisation of content that elicits strong emotions and sustains attention.

RQ4: What solutions do media policy and regulation experts in the Nordic and Baltic countries propose to address the challenges associated with ACR?

The data analysis highlighted the need for a comprehensive and multilayered approach to address the challenges created by the current use of ACR by platforms, combining regulatory action, awareness building and media education, technological and design innovations, as well as measures to ensure access to reliable information through legacy media. EU-level regulation was considered essential for addressing these challenges, and recent regulatory frameworks—especially the DSA—were viewed as important steps that recognise the societal risks created by algorithmic curation and place obligations on platforms. At the same time, the respondents stressed that the effectiveness of DSA depends on implementation and enforcement. They pointed to obstacles, including the location of platform companies outside of Europe, the technological complexity of ACR and limited platform transparency. The interviewees underlined the need for greater access to information about algorithms for regulators and researchers, as well as competence building for regulators at both the EU and national levels. Although most participants acknowledged that national authorities have limited ability to influence the complex processes related to ACR use by global platforms, they were considered crucial for providing local expertise. They also play an important role in monitoring compliance with the requirements set out in EU regulatory frameworks and in cooperating with European institutions on supervision and potential infringements.

Alongside regulation, the participants highlighted the importance of awareness-building through media education. In this regard, they called for innovative educational approaches that would help people understand how AI-based content recommendation systems operate to support platform business interests, how they shape information exposure, and what this means for individuals and for democratic societies more broadly. The interviewees supported integrating these issues into school curricula and lifelong learning. Meanwhile, some participants noted an obstacle: users often prioritise convenience and view personalised recommendations as beneficial, which can hinder more critical engagement with algorithmic systems.

The participants further pointed to the need to develop alternative platforms and technological or design solutions that prioritise democratic values and provide users with greater agency. The suggestions included innovative recommender systems and news aggregators that ensure information diversity by design rather than reinforcing existing preferences. They also proposed practical user controls, such as clear options for influencing recommendation settings, the ability to opt out of certain practices without leaving a service and dashboards to visualise one's own digital behaviour.

Finally, the respondents stressed the importance of ensuring access to reliable information through legacy media. They called for policy approaches that support local and regional journalism, safeguard cultural and linguistic diversity and improve the visibility and accessibility of trustworthy editorial content in digital environments. At the same time, the interviewees encouraged legacy media to address challenges to public trust by reviewing their practices and improving communication with audiences.

To conclude, even though media policy and regulation representatives acknowledged that ACR can help users navigate vast amounts of online information, their responses indicated that these benefits are outweighed by significant risks. Vulnerabilities stem from the business-driven and engagement-oriented design of recommender systems, as well as from the consolidation of economic, informational, and political power within a few dominant global platform companies. The findings suggest that policy, governance, and educational responses have so far failed to address the structural role of ACR as a core mechanism in platform business models that sustain profit-driven user engagement while simultaneously shaping information diversity and integrity, public discourse, opinion formation, decision-making, and citizens'

agency. Together, these have profound implications for democracy. In this context, the analysis of interview data points to the need for responses that combine robust EU regulation with effective national oversight. The Digital Services Act, regarded by participants as a step in the right direction, offers cautious optimism for addressing ACR-related challenges, although its effectiveness depends on successful implementation. In addition, complementary efforts—such as awareness-raising through media education and the development of innovative technological and design alternatives for content management, pursued through Nordic–Baltic collaboration—can help strengthen citizens’ agency in the AI-powered digital media landscape, reinforce democratic resilience, counterbalance the structural power of global platforms, and contribute to regional stability amid geopolitical uncertainty.

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Appendix 1

INTERVIEW GUIDE

1. INTRODUCTION

- Brief introduction to the research and its purpose, explanation of the interview structure and confidentiality aspects, and confirmation for recording and non-anonymised attribution.

2. PROFESSIONAL BACKGROUND

- Could you please briefly describe your current role and responsibilities within your regulatory body/ministry?
- How long have you been working in the field of media regulation / media policy?
- Have you had prior experience working with issues related to use of AI / algorithmic technologies in media content production and or distribution? If yes, what was the experience?

3. PERCEPTIONS OF ALGORITHMIC CONTENT RECOMMENDATION

- Algorithmic content recommendation has been a topic of public discussions in recent years, with varying interpretations across different contexts. How would you **define or describe** algorithmic content recommendation from your perspective?
- In your view, what role does algorithmic content recommendation play in today's digital media landscape?
- How would you describe the benefits of algorithmic content recommendation for digital media users and society in general?
- How would you describe the risks of algorithmic content recommendation for digital media users and society in general?
- Have you encountered any concerns (problems or issues) from the public or other stakeholders in your country regarding algorithmic content recommendation? If so, what are the key concerns?
- From your perspective, how does algorithmic content recommendation impact an individual's ability to access diverse and reliable information?
- From your perspective, how does algorithmic content recommendation impact an individual's ability to choose information necessary for making informed decisions?
- While the previous questions addressed the impact on individuals, the next question focuses on the implications for society in general. From your perspective, what are the broader democratic implications of algorithmic content recommendation in today's digital society.

4. REGULATION AND POLICY RELATED TO ALGORITHMIC CONTENT RECOMMENDATION

- How do you see the role of EU media regulators and policymakers in addressing the challenges posed by algorithmic content recommendation?
- How do you see the role of local (country-level) media regulators and policymakers in addressing the challenges posed by algorithmic content recommendation?
- Does your country currently have any regulatory frameworks, policies, or guidelines relating to algorithmic content recommendation?
- What are the main challenges in regulating or overseeing the use of algorithmic content recommendation on digital media platforms?

- Do you think current regulations and media policies adequately address issues related to access to diverse and reliable information through algorithmic content recommendation? Why or why not?
- Do you think current regulations and media policies adequately address issues related to the transparency of algorithmic content recommendation? Why or why not?
- Do you think current regulations and policies adequately address issues related to the use of people's data in algorithmic content recommendation? Why or why not?
- How should the responsibility for regulating algorithmic content recommendation be shared between digital platforms and government authorities? What challenges do you see in this regard?
- To what extent do you think the responsibility for navigating algorithmic content recommendation and addressing its challenges should lie with individual users, as opposed to being regulated by media authorities or digital platforms?

5. SOLUTIONS AND FUTURE POLICY DIRECTIONS

- What measures or regulatory approaches do you think should be developed related to use of algorithmic content recommendation in digital media?
- Do you see a need for increased collaboration between civic society, regulators, policymakers, and digital platforms on algorithmic content recommendation governance? If so, what collaboration it should be?
- Are there any examples of good practices in regulating algorithmic content recommendation in other countries that your country could learn from?
- What role do you think media education should play in addressing the challenges posed by algorithmic content recommendation systems?
- What would an ideal algorithmic content recommendation system look like in your opinion?
- How do you envision technological and societal solutions to managing information overload in future?

6. FINAL REFLECTIONS

- Is there anything else you would like to add regarding algorithmic content recommendation and its regulation?
- Would you be interested in participating in further discussions or research on this topic?



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