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Integrating Stakeholder Values in System of Collective Management of Music Copyrights: A Value-Sensitive Design Approach

Research article

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Abstract: This study examined the integration of stakeholder values into the governance and technological system of collective management of music copyrights (SCMMC) in the Netherlands. Using a value-sensitive design approach, we identified and structured core values—justice, equity, fairness, transparency, ownership, accountability, and accuracy—into a framework of norms and technological and institutional system requirements. The qualitative semi-structured interview with thematic coding was applied as the method for qualitative data gathering and analysis: two rounds of a total of 24 interviews were utilised for this purpose. This framework serves as a conceptual tool for refining governance practices and technological implementations in SCMMC. Our findings highlight governance challenges and value tensions. Transparency, for instance, is critical for rights holders but often constrained by privacy and competitive pressures in licencing. Likewise, the pursuit of efficiency may compromise fairness and accountability, disproportionately affecting smaller rights holders. While Directives 2014/26/EU and 2019/790/EU aimed to enhance competition, they placed operational burdens on collective management organisations, affecting their ability to uphold fundamental values. This study is limited by its reliance on qualitative data from a select group of stakeholders, in the Netherlands, reducing generalisability. Future research should incorporate quantitative validation, broader stakeholder representation, and cross-regional comparisons. Further investigations should also focus on translating these insights into concrete institutional and technological requirements, ensuring that governance mechanisms remain adaptable to evolving music copyrights industry conditions.

Keywords: *Collective Management of Music Copyright • Value sensitive design • Right holders' values • Digital transformation*

1. Introduction

The global music industry has undergone a digital transformation over the past three decades, transitioning from physical formats, such as vinyl records and CDs, to digital streaming services and downloads (Dolata, 2020). This digital transition has altered music consumption patterns and disrupted established revenue models, power dynamics, and stakeholder relationships (Lyons et al., 2019; Guo, 2023). It has also impacted the SCMMC, which grants creators exclusive rights to control the use and exploitation of their works, encompassing both economic and moral rights. Historically, SCMMC has played a main role in ensuring equitable compensation for rights holders while supporting intellectual property's broader function in fostering innovation, creativity, economic growth, and fair competition (Gold et al., 2017; WIPO, 2022). The transition to digital formats has highlighted SCMMC's slow

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adaptation to industry changes, creating uncertainty about how to align the system with its original objectives (Hagen, 2022; Singer & Rosenblatt, 2023). As a result, the need for modernisation has become increasingly important. This shift raises concerns about fairness, particularly for smaller rights holders like independent composers and lyricists, who often lack the bargaining power to secure equitable remuneration.

In response, the European Union (EU) and national governments have introduced regulatory frameworks aimed at modernising copyright governance. The EU and the EU's national governments recognise the necessity of modernising SCMMC, reflected in policies such as Directive 2014/26/EU on collective rights management and multi-territorial licencing (European Parliament and Council of the European Union, 2014) and Directive 2019/790/EU on copyright in the Digital Single Market (European Parliament and Council of the European Union, 2019). These directives aim to balance the interests of stakeholders, yet they lack specificity in addressing fundamental concepts such as "human values". For example, transparency, a key element in both directives, is not clearly defined in terms of whether it is intrinsically valuable or primarily serves instrumental purposes, such as improving trust or fairness.

Human values play a role in shaping technological and institutional systems and must be embedded into policymaking to ensure alignment with ethical and societal principles (Umbrello & van de Poel, 2021). Value-sensitive governance integrates human values into technology and decision-making processes to improve inclusivity and legitimacy (Friedman & Hendry, 2019). However, existing policies often treat rights holders as a homogeneous group, particularly under EU and Dutch law (European Parliament and Council of the European Union, 2014; European Parliament and Council of the European Union, 2019). In reality, rights holders—lyricists, composers, and publishers—have diverse characteristics, interests, and priorities (Bulayenko et al., 2021; Hadziarapovic et al., 2022).

According to Rojo-Gimeno et al. (2019), policies should address the concerns of all parties involved, yet rights holders are not a single entity but consist of at least three distinct groups (Buma/Stemra, 2023). Even if publishers were considered homogeneous, equating a small independent publisher managing a niche catalogue with a major publisher representing millions of songs globally overlooks significant differences. These assumptions create a gap between policy expectations and real-world conditions.

Despite the rights holders' heterogeneity, Directives 2014/26/EU (European Parliament and Council of the European Union, 2014) and 2019/790/EU (European Parliament and Council of the European Union, 2019) refer to rights holders as a uniform group and require collective management organisations (CMOs) to apply equal treatment. The gradual and structurally constrained enforcement of these directives, as reported by the European Commission (2021), further highlights the need to identify, understand, and define the core values of diverse rights holders.

A considerable body of knowledge exists on equitable remuneration for music creators. However, to our knowledge, the economics of collective management (ECM) has primarily been focussing on legal and economic dimensions, often overlooking the role of human values (Nagel & Kranz, 2021). Bulayenko et al. (2021) conducted a legal and economic analysis of national collective licencing mechanisms within the EU, incorporating insights from national experts, CMOs, and competent authorities. Yakubova (2022) explored the historical evolution and global challenges of CMOs from their 18th-century origins to their role in the digital age. However, empirical, multi-stakeholder qualitative research capturing the perspectives and values of diverse rights holders within SCMMC remains scarce. This research gap limits the development of institutional and technological systems that effectively address rights holders' needs and priorities.

Therefore, this study has three objectives: to identify and analyse the core values prioritised by multiple rights holders within SCMMC (RQ1) and to examine where and why tensions arise between these values (RQ2). Based on the first two insights, to develop a conceptual framework that structures values, norms, and requirements hierarchically (RQ3), following Van de Poel's (2013) methodology, serving as a foundation for future technical investigations within the value sensitive design (VSD).
The study's first research question is:

(RQ1) What values do rights holders prioritise in collective music copyright management in the Netherlands?

The Netherlands provides a case study for these dynamics. The country has consistently ranked among the frontrunners in the European Digital Economy and Society Index (DESI) (European Commission, 2023), making the findings potentially applicable to other EU and international contexts. The Dutch SCMMC, represented by CMO Buma/Stemra, operates within a socio-technical system, where balancing efficiency and equity remains a

challenge. Its legal framework and history of innovation in collective management of music copyright offer insights that can inform broader discussions on SCMMC modernisation.

SCMMC is not only a technical or operational system but is shaped by human values, motivations, and relationships. This study examines these values, their interplay, and potential value tensions. For example, transparency, widely regarded as essential for governance, may conflict with ownership and property rights, particularly when proprietary information must be disclosed. Similarly, equity and equality, though complementary, may create tensions if historical disparities require differentiated treatment that some stakeholders perceive as unequal. These and other possible value tensions lead to our second research question:

(RQ2): What value tensions arise between the values of multiple rights holders in collective music copyright management in the Netherlands?

While SCMMC faces challenges in aligning with fundamental human values, various technological and institutional approaches may present opportunities for improvement. Possible approaches include digital fingerprinting, smart contracts, and metadata standardisation, which have been proposed to improve ownership attribution, automate royalty distribution, and enhance transparency, or an institutional advancement like the creation of a streamlined decision-making process for rights holders in EU copyright governance. Rather than endorsing specific technical or governance implementations, this study aims to develop a structured framework for integrating stakeholder values into SCMMC, which can guide future technical investigations within VSD.

The study employs the VSD approach for integrating human values into technology and governance (Friedman & Hendry, 2019). While traditionally applied to emerging technologies, VSD is adapted here to analyse existing socio-technical systems and to develop a framework for institutional and technological alignment in SCMMC. Given that understanding stakeholder values and tensions was essential to this research, qualitative semi-structured interviews were employed to capture stakeholders' nuanced perspectives. Thematic analysis was used to identify patterns, categorise core values, and uncover tensions that informed the third research question:

(RQ3): How can prioritised stakeholders' core values be operationalised into institutional and technological system requirements for collective music copyright management in the Netherlands?

This paper is structured as follows: Section 2 provides an overview of ECM and VSD approaches. Section 3 outlines the methodology, detailing the qualitative research approach. Section 4 presents the study's results and discusses the findings and the conceptual framework. Section 5 concludes with conclusions and future research recommendations.

2. Theoretical Background

2.1. ECM

The scholarly discourse on the collective management of music copyright, ECM, integrates various theoretical frameworks to unravel the economic intricacies and efficiency of copyright systems. The key constructs in ECM include licencing, royalty collection, equitable remuneration, and transaction costs related to economic exchanges in collective copyrights management (Watt, 2016; Hadziarapovic et al., 2023). These constructs, along with economies of scale, asymmetric information, bounded rationality, and governance within CMOs, are foundational in understanding the dynamics of SCMMC (Hadziarapovic et al., 2023).

In the SCMMC in the Netherlands, the "users of music" pay for the use of music by annual or monthly contribution to the CMOs. The Dutch CMO, Buma/Stemra, is appointed by the Dutch Government to collect money from users of music and distribute the collected money to the rights holders. Buma/Stemra is also responsible for negotiating, and given the mandate to negotiate, the tariffs for use of music with different parties. The rights holders in the Netherlands are the composers, lyricists, and the music publishers. The split of the copyright is divided equally by those three, each getting ownership of 33.33% of the music copyright. In case of a composition without lyrics, this split is equal to 50%. The publishers are, depending on the signed agreements with the creators of music, responsible for the exploitation and administration of created musical works. There are different kinds of agreements between publishers and creators, and the publishing share of 33.33% can (partly) flow back to the creators, depending on the

type of publishing agreements and contract. When a musical work is created, the role of the creators is to register their work with the CMO, in order to receive the revenue, they are entitled to, for the use of their work. Buma/Stemra is responsible for collection and distribution of performance rights and of mechanical reproduction rights. The latter is only relevant when a song or a composition is recorded by performers or artists, released (distributed) by, for example, a record label, and reproduced on content carriers or digitally through digital service providers (DSPs) on, for example Spotify or comparable online services. The mutual relationships and interactions amongst creators, creators and publishers, and rights holders and CMOs are complex and dynamic, resulting in different sorts of agreements between creators and publishers.

Copyright systems have spurred the growth of creative and cultural industries (Watt, 2016), with CMOs playing an essential role in streamlining transactions and providing risk management for members. While beneficial, CMOs introduce complexities such as the risk of uneven income distribution, underscoring the need for further research into their operational efficiency and impact (Kretschmer & Hardwick, 2007). The shift to an “access over ownership” model in the music industry, highlighted by the advent of Spotify in 2008, marked a critical change from traditional transaction cost economics to focussing on efficient governance, transparency, and information-sharing within ECM.

CMOs, recognised as crucial yet natural monopolies (Handke & Towse, 2007; Watt, 2016; Zhang, 2016), face new challenges and competition from technological advancements and legislative changes. The transition to digital platforms has drastically increased the volume of works under management of CMOs, straining administrative and technical capacities. Despite the potential benefits of collective management, criticisms include the risk of a one-size-fits-all approach and excessive power concentration (Handke, 2012). The sheer scale of new recordings, often with minimal economic value, further complicates royalty distribution and accuracy, leading to inefficiencies in, but also a less, equitable rights management.

Recent studies (Hesmondhalgh et al., 2021; UNESCO, 2022; Page, 2023) have explored streaming’s economic impact, noting a shift in revenue sources and calling for fairer royalty distribution mechanisms. Also, the potential of a Digital Copyright Exchange and blockchain for usage monitoring and distribution is explored (Towse, 2017; Beelen, 2019), while Gervais (2019) noted digitalisation’s impact on copyright administration, including partnerships between music publishers and CMOs for online rights licencing. Legislative reforms for digital transactions (Priest, 2021) and the application of Directive 2014/26/EU (European Parliament and Council of the European Union, 2014) highlight the ongoing evolution.

Directive 2014/26/EU was designed by the European Parliament and the Council of the European Union Directive to improve the online licencing of music by CMOs across the EU (European Parliament and Council of the European Union, 2014). Challenges like transparency and adapting to digital technologies persist (Yakubova, 2022), yet CMOs have opportunities to enhance copyright markets and align with World Intellectual Property Organisations standard for improved governance (Bakar et al., 2022).

Directive 2014/26/EU was also designed to address governance inefficiencies, transparency concerns, and the lack of uniform licencing standards across EU Member States. The directive’s implementation sought to enhance CMOs’ accountability and operational efficiency, particularly in cross-border licencing and revenue distribution (European Parliament and Council of the European Union, 2014). However, despite its regulatory objectives, challenges persist in ensuring that CMOs uphold the values of equity and efficiency, particularly in handling digital transactions and new licencing models (European Commission, 2021). The directive mandates clearer reporting obligations, competition rules, and standardised multi-territorial licencing procedures, yet the practical implementation of these measures remains inconsistent across CMOs (European Commission, 2021).

However, the directive 2014/26/EU also introduced competition-driven reforms that complicate these efforts. By mandating competitive licencing models, the European Commission (2021) has placed CMOs under pressure to streamline operations, often at the expense of thorough rights verification and equitable distribution models. CMOs such as Buma/Stemra (2024) assert that principles like transparency and accountability are already embedded in their systems, yet the exponential increase in digital works, combined with shrinking per-unit royalties, threatens their ability to uphold these values (Hadziarapovic et al., 2022). These market pressures, rather than improving efficiency, risk leading to a situation where automated, large-scale licencing systems prioritise cost-cutting over fairness, reinforcing structural imbalances in the distribution of royalties. Future governance strategies must acknowledge these limitations and explore new mechanisms that balance regulatory competition with equitable rights management.

Studies on streaming services have revealed mixed impacts on copyright revenue, sparking debates on equitable royalty distribution and necessitating CMOs to modernise and embrace new technologies (Hesmondhalgh

et al., 2021). CMOs confront numerous challenges, such as mismanagement, a lack of transparency, and adapting to digital technologies (Priest, 2021), and the task of equitably valuing works further intensifies these challenges (Yakubova, 2022). The role of CMOs in balancing the interests of rights holders remains a key point of contention. While creators emphasise fair recognition and equitable remuneration, publishers focus on commercial efficiency, market access, and optimising revenue streams (Kretschmer & Kawohl, 2004). The transfer of copyrights from individual creators to publishers or multinational firms often results in greater revenue potential but reduced autonomy for creators (Kretschmer et al., 1999). This power imbalance within CMOs raises concerns regarding equity, transparency, and accountability as publishers typically prioritise high-revenue works, potentially marginalising smaller rights holders.

2.2. Value-Driven Digitalisation

According to OECD (2024), human well-being and dignity should be at the core of any technological system. It's imperative that the design process considers the impact technology that can have on users' lives and rights. This calls for a deep sense of empathy and a commitment to engaging with users, understanding their unique needs, values, and cultural contexts. Such an approach ensures that technology serves as a positive force, enhancing rather than undermining human lives and enhancing human autonomy with the end goal of promoting human flourishing (Hayes et al., 2019). For this, we applied VSD in music copyright collective management domain.

VSD is a methodological framework that integrates human values into technology design by systematically considering ethical, social, and stakeholder concerns throughout the development process (Friedman et al., 2013). It combines conceptual, empirical, and technical investigations to ensure that technological systems align with fundamental human values such as fairness, transparency, and accountability. VSD does not adhere to specific ethical theories to differentiate between moral values and stakeholders' personal preferences (Manders-Huits, 2011). Therefore, Jacobs and Huldtgren (2021) suggested that VSD practitioners should adopt a complementary ethical theory to provide a basis for justification and principled judgements during the design process. Ethical frameworks, such as consequentialism, deontology, and Rawlsian Theory of Justice, offer distinct perspectives that can enhance VSD. Consequentialism in ECM, discussed by Watt (2016), focuses on outcomes and overall happiness. Deontology emphasises adherence to moral duties and universal laws, valuing moral intentions above consequences. In contrast, Rawlsian Theory of Justice prioritises fairness and equality, suggesting that societal justice should derive from universally agreeable rules (Rawls, 1999). Each framework brings a unique approach to addressing the ethical challenges in VSD, supporting the need for principled value trade-offs and grounded ethical evaluations in technology design.

Moral rights in EU are not harmonised (European Commission, 2024) and lack a context-related definition of stakeholder values within the EU copyright directives. In choosing Rawls' Theory of Justice as the most suitable ethical framework and lens for our study, several factors informed our decision (Rawls, 1999). Rawls' principles resonate with the ethos of normative guidelines and principles of the EU copyright legislation (European Commission, 2024), focussing on moral rights, key societal values, and distributive justice. Rawls' ideas focus on helping those who are least advantaged in society by ensuring fair distribution of resources and opportunities. He also supports removing obstacles to power and promoting equal chances for everyone, which aligns with broader efforts to create a fair and just society (Rawls, 1999). Rawls' principles provide a guide for making fair and just decisions, especially in areas like technology that affect people's lives.

Values pertain to what is considered beneficial or preferable (Friedman et al., 2013) and serve an evaluative function (van de Poel, 2013), helping to compare current situations with ideal ones. In this context, a human-centred approach becomes essential, ensuring that well-being, dignity, and fairness are not just considered but form the foundation of how music copyright management systems should be (re)developed to bridge the gap between existing practices and the envisioned equitable framework. Milton Rokeach, an American social psychologist, developed a theory distinguishing between the two types of values: instrumental and terminal values. His framework, outlined in "The Nature of Human Values" (1973), categorises values based on their end goals. Terminal values are desirable end-states of existence, such as happiness, inner harmony, or justice, representing ultimate life goals towards which individuals strive. Instrumental values, on the contrary, are the modes of behaviours or means used to achieve these end goals, such as transparency, accuracy, and ownership, which are considered practical or ethical tools to reach desired outcomes. Terminal values answer what ultimate goals we want to achieve, while instrumental values address how stakeholders want or need to behave on their way to achieving those goals. Therefore, this study distinguishes between the two sorts of values as outlined in the Results section.

2.3. VSD Approach

VSD is an approach that aims to embed values into technologies. VSD defines value as what matters to people in their lives, focussing on ethics and morality (Friedman & Hendry, 2019). the interaction between technology design and social-institutional context is essential to VSD. While technological design features can either bolster or impair specific human values, it is the combined interaction with users and the context in which the technology is used that ultimately shapes its societal impact (Davis & Nathan, 2015).

The goal of VSD is twofold:

(1) it supports critical analyses of existing technologies concerning values, according to Simon (2016),
(2) it provides a concrete methodology to embed these values into new technologies and technology implementations.

For the first goal, the critical analysis of existing technologies, VSD can be used to assess whether terminal values are achieved by the technology design and/or to identify the absence of values by dismantling biases within the technology (Friedman & Hendry, 2019). VSD serves as an analytical approach to unveil valuation processes within technology design and development, which are often "black-boxed" or neglected.

The second goal, the concrete "embedding" methodology, typically involves three main types of investigations: conceptual, empirical, and technical. These investigations interact with each other and iterate in a process that helps to identify stakeholders, values, and potential value tensions (Friedman et al., 2013; Friedman & Hendry, 2019).

The conceptual investigations include the identification of relevant values and direct and indirect stakeholders. Relevant questions in the conceptual investigation relate to the characteristics of various stakeholders like how they are affected by using technologies, the relative importance of different values, and the trade-offs between conflicting values (Friedman et al., 2013). In empirical investigations, social science methods are used to revise these findings with a focus on the opinions of stakeholders, as well as anticipated usage contexts (Simon, 2016). Within this type of investigation, a variety of quantitative and qualitative research methods can be employed to analyse how people create and prioritise different values and the role they play in behaviour. For example, qualitative interviews explore in-depth insights into stakeholders' values, experiences, and behaviours. According to Friedman et al. (2013), technical investigations have two parts: (1) examining how values are embedded in existing technologies and (2) designing new systems that support the values identified in earlier research (Friedman & Hendry, 2019). For example, in SCMMC, researchers might analyse current collective copyright management technologies to see how infringement detection algorithms affect fairness and ownership.

3. Methodology

Friedman and Hendry (2019) described methods in VSD as structured tools for studying and understanding stakeholder perspectives. These methods ensure that theoretical insights and practical design inform each other. To effectively integrate values into technology, VSD relies on research approaches like value-oriented interviews, selected for this study due to their ability to capture in-depth stakeholder perspectives.

3.1. Data Collection—Interviews

A conceptual investigation formed the basis of the tripartite iterative VSD approach in our previous study (Hadziarapovic, 2023). That phase involved document analyses, a literature review, and qualitative interviews to identify stakeholders and their roles and characteristics within SCMMC (Hadziarapovic et al., 2022). This study builds on that foundation by focussing on the empirical investigation of VSD, examining stakeholder perspectives and value tensions through empirical qualitative analysis. For this purpose, we employed semi-structured open-ended qualitative interviews with stakeholders as a method (Friedman et al., 2013).

For this study, we selected participants through purposive sampling as described by Merriam and Tisdell (2015). We leveraged two decades of industry experience as a starting point to identify suitable participants with relevant experience and knowledge. Some participants were contacted directly per email or phone and were approached through our own network, some through LinkedIn or their organisation email. The participants were selected based on the insights of the stakeholder analysis (Hadziarapovic et al., 2021). The purpose of the

interviews with these individuals was twofold: (1) to directly engage with them and understand their rationale and perception of the music copyright system and (2) to uncover and articulate the primary values that these stakeholders prioritise in relation to technology used in collective music copyright management. We restricted the scope to stakeholders that might be most significantly affected (Friedman et al., 2013). Eventually, we interviewed 20 individuals from 5 stakeholder groups. Four of these individuals were interviewed twice, and due to time restrictions during the first interview, we obtained a total of 24 interview transcripts with six composers (direct stakeholders), six publishers (direct stakeholders), three representatives of Dutch CMO Buma Stemra (direct stakeholders), two copyright lawyers (indirect stakeholders), one editor in chief of a major Dutch radio station (indirect stakeholder), one DSP representative (indirect stakeholder), and one book publisher (indirect stakeholder). The participants' age ranged from 20 years to 59 years, and mostly held Bachelor's or Master's degrees. Their working experience in the music industry varied from 10 years to 35 years. The interviews lasted from approximately 36 min to over 2 h and took place between November 2020 and December 2022. The format of these interviews varied, with some conducted face-to-face and others via video call on MS Teams or Zoom due to COVID-19 restrictions at that time. All interviews were audio-recorded and transcribed verbatim, with the full consent of the participants.

3.2. Data Analysis and Coding Process

The data analysis utilised a thematic approach to coding to identify main themes and subthemes (Merriam & Tisdell, 2015). To ensure reliability and validity, two coders were involved, acknowledging the challenges in using multiple coders such as increased time, resources, and coordination. To ensure intercoder reliability, we conducted a consistency check by having both coders independently code a subset of transcripts and then comparing and discussing discrepancies until consensus was reached.

After transcribing the interviews, we conducted a qualitative content analysis, identifying themes based on both existing literature (deductive) and interview transcripts (inductive). For the deductive coding process, we applied value-oriented coding, a structured system that categorises and defines value-related aspects based on the respondent input (Friedman & Hendry, 2019). This approach allowed us to systematically label core values and organise responses into coherent categories. Each category had a descriptive label and a description but is also exemplified by three quotes drawing from the interviews. The coding and analysis of interview transcripts was supported by ATLAS.ti 24 software (ATLAS.ti Scientific Software Development GmbH, 2024), facilitating data organisation and management. We began by coding the interview transcripts, which involved identifying and labelling key phrases, sentences, or paragraphs with relevant codes. For instance, discussing Buma/Stemra's statement on mechanical rights incomes by a participant could generate multiple codes such as "Buma Stemra", "Statements", "Recorded music", and "Mechanical Rights".

The second phase involved merging similar codes to streamline the dataset, combining labels such as "data precision", "precision of data", and "accurate data" into a single "accurate data" code. Subsequently, we grouped related codes into broader code groups that encapsulate related concepts, such as "accuracy", "lack of accuracy", "error", "precision", "reliability", and "repeatability". The final step was organising these code groups into themes. We then prioritised values based on their impact and relevance. An initial coding of 24 interview transcripts identified 187 unique codes. Through a process of merging and cleaning these codes, the final coding structure was refined to 145 codes representing 2,708 individual quotes. These codes were systematically categorised into 11 distinct groups, each corresponding to specific aspects of the theoretical constructs explored. The 11 groups represent 3 main themes. The first theme, representing research question 1, "Core Values of Rights Holders" emerged as a category with the highest number of grounded instances (2,069 quotes), emphasising the terminal values of justice, equity, fairness, and equality and the instrumental values of ownership, accountability, transparency, and accuracy within the stakeholder groups. Additionally, this study identified codes related to the "Value Tensions in Collective Management of Music Copyrights" (Research question 2) and "Preliminary Framework for Collective Management System" (Research question 3), with 614 and 81 quotes respectively.

3.3. Value Elaboration

The next step involved evaluating how each identified value aligned with Rawls' Difference Principle (Rawls, 1999). For that purpose, we analysed quotes, categories, and themes as described in paragraph 3.3. Stakeholder responses were coded and categorised based on explicit mentions in interview transcripts. First, participant responses were coded and categorised by value, grouping statements that referenced the same theme. Then, each value across

participants was coded, along with the context in which it was discussed—positively, negatively, or in tension with another value. For example, some participants argued that CMOs should make all data fully transparent, while others emphasised the need to protect proprietary information over transparency. Similarly, in discussions on royalty distribution, some supported equal shares for all, while others argued for a proportional system based on involvement or revenue generation. By comparing responses within the same category, we examined how often these conflicting views appeared and how they shaped value tensions in SCMMC governance. Once values and tensions were identified, the next step was to operationalise prioritised core values into prescriptive norms following two phases (Van de Poel, 2013):

(1) Values were first translated into general norms, marking the transition from an evaluative to a prescriptive framework. In the evaluative domain, values provide a basis for assessing desirability, while in the prescriptive domain, norms dictate actions required to uphold these values. For example, the value of transparency was translated into the norm that "All CMO financial processes should be accessible to stakeholders".
(2) These norms were further operationalised into specific system requirements, defining the scope, objectives, and implementation methods. For instance, the transparency norm informed the design requirement of a digital dashboard, where rights holders can track royalty distributions in real time. This ensures that revenue allocation processes remain visible and verifiable, aligning system operations with stakeholder expectations.

The described analysis process was peer reviewed by research' supervisors and peers within our research group, with expertise in VSD approach, value-driven digitalisation, ethics in technology, and process management and innovation.

4. Results

This study pursued three interrelated objectives: (1) identifying the core values of stakeholders in SCMMC, (2) examining potential tensions between these values, and (3) developing a preliminary framework for integrating these values into the design and governance of SCMMC technologies.

4.1. Core Values

To identify the core values of stakeholders in SCMMC, the first objective is that we categorised values into two main groups: (1) terminal values, which represent fundamental ethical principles shaping SCMMC governance, and (2) instrumental values, which serve as mechanisms to uphold those ethical principles in practice. Table 1 presents the identified core values along with their contextual meanings within SCMMC. This classification provides insight into how terminal values shape SCMMC governance and how instrumental values support their implementation. For example, justice and equity set the foundation for fair copyright distribution, while accountability and transparency serve as regulatory mechanisms that enforce fairness in SCMMC governance.

4.2. Value Interactions and Tensions

To explore potential tensions among these core values, the second objective of this study was to analyse their interactions and possible tensions. To identify these value interactions, we systematically coded and categorised stakeholder responses based on explicit mentions in the interview transcripts. We analysed how participants framed each value—whether positively, negatively, or in contrast with another value—allowing us to observe patterns of influence and dependence between values. This process provided insight into how values interact, sometimes reinforcing each other and at other times leading to conflicts. Table 2 presents these value interactions and tensions, supported by quotes from participant interviews. The numbers in brackets [ ] correspond to participant identification numbers. For clarity and conciseness, the quotes have been adjusted and shortened while preserving their essential meaning.

Table 2 illustrates the key interactions and tensions between values identified in this study. An example of a challenge within the presented value tensions is the implementation of transparency in the context of regulatory competition, which has led to unintended consequences affecting fairness and efficiency.

Value	Elaboration (of description)
Terminal values	
Justice	Justice entails fair treatment and equitable distribution of benefits and burdens, respecting individual rights and societal laws, as inspired by Rawls' concept of distributive justice (1999). This framework not only aims for fairness and equal liberties but also focusses on equity—adjusting benefits to address inequalities and historical injustices. Our empirical data supports that such a justice-based approach ensures all creators, especially the least advantaged, gain equitable access to protections and earnings, promoting a balanced system. This strategy helps uplift underrepresented artists, ensuring industry wealth benefits every member equitably.
Equity	Equity in music copyright management ensures that benefits match each member's input. Our study integrates this concept, emphasising equity beyond legal equality to address and correct disparities within the SCMMC, ensuring all creators' gain equitable opportunities from their work, regardless of popularity or location.
Fairness	Fairness emphasises equal access to fundamental rights and freedoms, promoting actions against discrimination to uphold justice in music copyright management. Rawls' Principles of Justice (1999) highlight the necessity of equal liberties, underscoring actions against discrimination that contradict fairness. Technologies in copyright management system must reflect this by avoiding biases that perpetuate injustice (Barocas & Selbst, 2016). For instance, issues like those faced by Blur's Dave Rowntree with PRS (Dredge, 2024), where royalties are misallocated due to flawed metadata, illustrate the urgent need for fairness in copyright distribution.
Equality	Equality is not about treating everyone identically, but rather about ensuring that everyone has genuine opportunities to achieve similar outcomes. Rawls (1999)'s emphasis on fair equality of opportunity and the use of the difference principle to address the disparities in social and economic starting points are central to creating a just society where equality is not just a formal declaration but a lived reality. According to Harris et al. (2009), this principle supports not only refraining from discriminatory practices but also proactively addressing systemic inequities. Engaging with diverse perspectives helps in creating systems that embody Rawlsian justice and effectively manage the complex balance between technological accuracy and justice for all involved in the music industry.
Instrumental values	
Ownership and property	Ownership and property involve possessing, using, managing, and profiting from information. Global copyright laws protect these rights, enabling creators to control and benefit financially from their works (Honoré, 1961). However, these rights also entail responsibilities, especially in technology design, to avoid misusing ownership and ensure respect for others' rights. Our participants support this, referring to the secrecy in CMO tariff negotiations with DSPs, such as Spotify, that often defended for competitive reasons, which poses ethical dilemmas by compromising transparency and accountability, potentially leading to technology misuse. The differing priorities of creators and publishers further complicate the governance of CMOs. While creators prioritise equitable compensation and recognition, publishers focus on optimising revenue streams and expanding market access (Kretschmer & Kawohl, 2004). This divergence creates tensions in royalty distribution, contractual agreements, and licencing models, with publishers often advocating for broader commercialisation, while creators emphasise the need for fairness and control over their works (Kretschmer et al., 1999; Hadziarapovic et al., 2021). This study confirms that current governance models within CMOs struggle to balance these competing priorities
Accountability	Accountability ensures that actions and decisions align with legal and ethical standards (van de Poel, 2013) and requires justification, particularly when impacting copyright holders (Floridi, 2013). Directive 2014/26/EU (European Parliament and Council of the European Union, 2014) aimed to enhance CMO governance and transparency, yet challenges remain in multi-territorial licencing and royalty distribution. Despite mandates for clearer reporting (Articles 7–10), rights holders cite ongoing opacity in royalty allocation and licencing agreements (European Parliament and Council of the European Union, 2014). Research confirms persistent transparency gaps, especially in algorithmic calculations (Yakubova, 2022). While the directive provides a governance framework, enforcement inconsistencies limit its impact. Accountability can be improved by identifying royalty distribution inefficiencies, promoting transparency, and ensuring equitable management (Ferguson, 2017).
Transparency	Transparency ensures that all decision-making processes are openly visible, promoting clarity and inclusivity that upholds ethical standards (Lepri et al., 2018). This openness challenges the usual opacity associated with proprietary algorithms, which can obscure essential processes and impact rights holders (Ferguson, 2017). Advocates like Van de Poel (2013) and Hayes et al. (2019) call for transparent technology development that includes diverse perspectives, particularly from underrepresented groups, to demystify algorithmic decisions and ensure fairness.
Accuracy	Accuracy in data, as emphasised by Fox et al. (1994) and Tayi & Ballou (1998), is fundamental for informed decision-making, ensuring data is complete, reliable, consistent, and timely. However, as McCue (2015) noted, challenges, such as poor data entry practices and design biases, complicate this accuracy, a statement supported by the findings in our empirical data.

CMO, collective management organisation; EU, European Union; SCMMC, system of collective management of music copyrights.

Table 1. Description of values

While transparency is a core value of CMO governance, its implementation is increasingly complicated by competition pressures introduced under Directive 2014/26/EU (European Parliament and Council of the European Union, 2014). The directive's emphasis on multi-territorial licencing and competitive market entry has forced CMOs to prioritise automation and efficiency, often at the cost of detailed rights verification. This creates a direct conflict between fairness and efficiency: smaller rights holders may struggle to claim their royalties due to procedural

Value interactions and possible tensions	Three supporting quotes from the interviews
Justice serves as a final aim to balance all values fairly and equitably, drawing support from **Fairness, Equality, and Equity**. However, its implementation might expose conflicts, particularly where compromises are necessary. For instance, "Striving for **justice** in copyright distribution often reveals the tensions between what's legal and what's fair".	*1. "Publishers often take one-third domestically, but this can increase to 50% for international plays, often undisclosed". [1]* *2. "Questioning the rightful ownership, publishers, representing composers, have conflicting interests compared to Buma Stemra". [9]* *3. "Artists without publishing rights often challenge labels for a share of the master, causing industry friction and calls for fairer splits". [21]*
Equity supports **Justice** and adjusts imbalances that **Equality** might overlook, but it can conflict with **Equality** when attempts to level the playing field seem unfair to those advantaged by the system as is.	*1. "Song revenue depends on location; international partners like … streamline collection via local rights organisations". [12]* *2. "Rights permissions are essential; even with millions of streams on Spotify, the payout to authors is minimal". [8]* *3. "Online data complexities overwhelm systems like Buma Stemra, leading to unprocessed royalties for smaller play counts". [16]*
Fairness is pivotal in promoting **Justice** and supporting **Equity**, but it might conflict with **Accuracy** when making the system fairer requires less precision.	*1. "Composers and songwriters unfairly receive a small percentage compared to owners of master copies on streaming platforms". [23]* *2. "Many publishers accumulate rights, but few create value; it's like throwing a sticky ball and hoping one sticks". [16]* *3. "Improving clarity and ease of use in copyright databases, could significantly increase efficiency". [24]*
Equality supports **Justice** and underlies **Fairness**, ensuring that all individuals are treated equally. Supported by **Transparency** and **Accountability**, it sometimes conflicts with **Equity** when equal treatment doesn't address different needs or starting points.	*1. "Songwriters, facing significant stakes, deserve better compensation". [22]* *2. "Organisations must pressure platforms like YouTube to pay fair copyright fees given their substantial ad revenue". [6]* *3. "Authors become dependent on sub-publishing networks where intercompany fees dilute earnings right from the source".[1]*
Ownership and Property bolster **Fairness** and **Equity** by ensuring that creators receive recognition and compensation. This value is supported by **Transparency** and **Accountability**, enhancing the enforcement of rights. Conflicts might arise with **Equity** when rigid ownership structures do not support fair distribution.	*1. "Legal and technological disparities complicate global intellectual property control, needing improved system execution". [18]* *2. "Creators retain ownership, but publishers control rights and royalties, often leading to opaque compensation". [3]* *3. "Publishers favor administrative deals over ownership, allowing authors to retain rights longer". [1]*
Transparency facilitates **Accountability** and supports **Fairness** and **Equality** by making processes clear. However, it may conflict with **Ownership** and **Property** if the need to protect proprietary information restricts openness.	*1. "Discovered errors in royalties allowed me to claim funds that would have otherwise benefited top earners due to redistribution". [10]* *2. "Revenue opacity and inefficiencies cause funds to disappear, exacerbated by internal politics and potentially unethical behavior". [4]* *3. "Despite appearances of transparency, verifying actual earnings within large sub-publishing networks remains challenging". [1]*
Accountability ensures that actions impacting others are responsible and traceable, supported by **Transparency** and **Accuracy**. Yet, it might conflict with **Ownership and Property** when proprietary rights restrict necessary disclosures.	*1. "Authors need to understand business aspects to avoid bad deals and protect their rights". [19]* *2. "Songwriters rely on proper registration by performers like AvB to ensure they receive due royalties from tours". [6]* *3. "Composers should be proactive with their finances, but labels and publishers also have a significant responsibility in management". [24]*
Accuracy supports **Transparency, Justice**, and **Equity**, ensuring that data not only reflects reality but also upholds **Fairness** and equitable compensation. However, it may conflict with **Fairness** and **Equity** when precision in data processing inadvertently reinforces existing disparities.	1. "Large-scale transactions in Buma Stemra often lead to errors; authors must stay vigilant for fair compensation". [11] 2. "Compensations are sometimes arbitrarily redistributed, highlighting systemic flaws and transparency issues in ownership". [19] 3. "Classical music elites may resist detailed usage tracking to benefit from simpler administrative processes". [4]

Table 2. Value interactions and possible tensions

streamlining, while large-scale publishers with more legal and administrative resources are better positioned to benefit from automated licencing systems. Additionally, as CMOs manage a rapidly expanding catalogue of new works, the pressure to process claims at scale often results in inaccuracies and undistributed "black box" revenues. These challenges highlight the unintended consequences of regulatory reforms that, while intended to promote fairness, may actually contribute to reinforcing disparities in digital music copyright governance.

Figure 1 is a visual presentation of stakeholders' core values, Values' interactions, and possible value tensions and shows how each identified value supports, is supported by, or has tensions with other values within the context of collective management of music copyrights. The figure is supported by the analysis of qualitative data as outlined in Table 2[1].

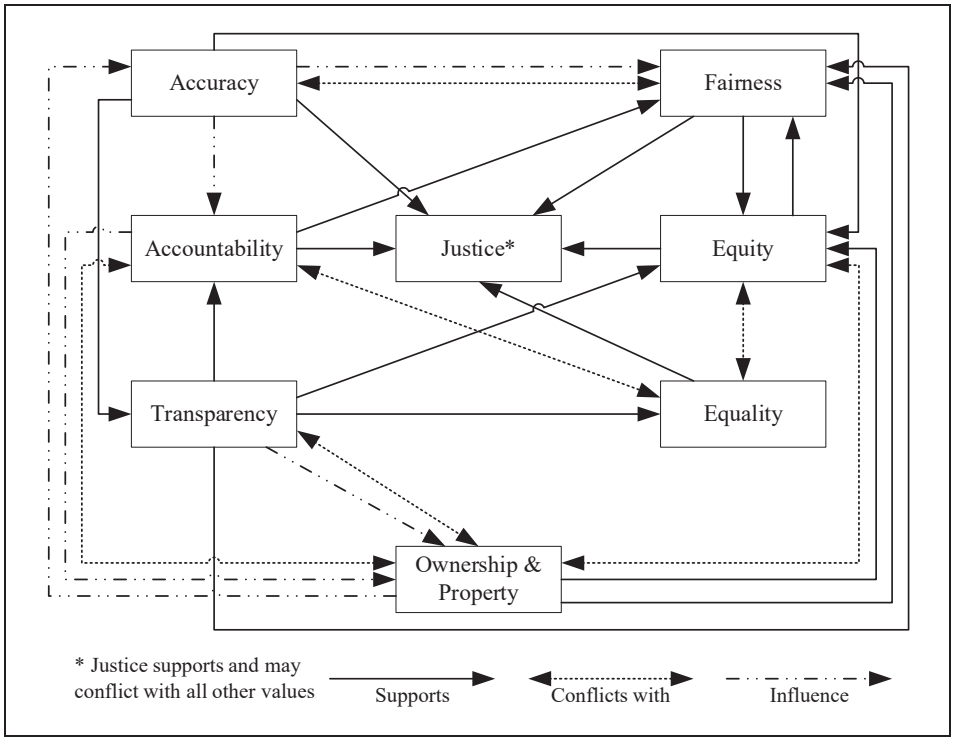


Figure 1. SCMMC values and their relations. SCMMC, system of collective management of music copyrights.

4.3. Norms and Requirements

In subsections 4.1 and 4.2, the first two objectives are examined. For the third objective and RQ3 (How can prioritised core values be operationalised into institutional and technological system requirements?), this study develops a structured framework based on Van de Poel's (2013) approach. The framework provides a systematic method for integrating stakeholder values into SCMMC governance and technological design. By structuring values into norms and system requirements, it offers a practical reference for decision-makers, regulators, and system designers, aiming to embed values in SCMMC yet its effectiveness ultimately relies on how institutions and industry stakeholders engage with it in practice.

Table 3 presents the conceptual synthesis of our empirical findings. It translates the identified values into norms and corresponding system requirements, providing a structured foundation for VSD's technical investigation and integrating values into SCMMC governance and design. To ensure consistency in formulating norms in Table 3, each norm was structured to be clearly actionable, specific in its application, aligned with the core value for clarity, and directly linked to the responsibilities or benefits of relevant stakeholders (Sadek et al., 2024).

1 The detailed process of defining value interactions and possible tensions, including Figures per Value can be requested per email to one of the authors.

Value	Norms	Possible institutional or technical requirements
Justice	- Ensure all rights holders have fair access to legal protection and dispute resolution mechanisms. - Implement progressive royalty distribution mechanisms to prevent over-concentration of revenues among a few major rights holders. -Establish non-discriminatory licencing policies that provide equal access to rights management services for all stakeholders.	- Use technology to detect and address copyright infringements; - Enforce ethical generative Artificial Intelligence use in music copyright management; - Implement an algorithm that prevents the over-concentration of royalties among a small number of major rights holders by ensuring a more balanced distribution structure; -Provide standardised contract terms and eliminate preferential deals that give large publishers' competitive advantages; - Establish a neutral dispute resolution body separate from CMOs to handle complaints and appeals fairly; - Implement an AI-driven claim verification tool that analyses conflicting claims based on transparent, predefined rules to prevent subjective decision-making;
Equity	- Guarantee that all rights holders have equitable opportunities to access, manage, and benefit from their rights, regardless of market position or influence. - Ensure that compensation and licencing mechanisms fairly reflect contributions and do not disproportionately favour dominant stakeholders.	- Design universally accessible interfaces for all creators; - Develop data analysis tools to analyse and correct compensation and representation imbalances; - Facilitate easier cross-border licencing management, so the least advantaged can also access data; - Facilitate mandatory legal or other sort of help for the least powerful rights holders.
Fairness	- Ensure copyright management processes are transparent, accessible, and easily understandable for all rights holders. - Guarantee that all creators receive fair compensation proportional to the use and value of their musical works. - Establish minimum royalty thresholds and mechanisms to support smaller rights holders, ensuring equitable earnings even for less commercially dominant works.	- Use available technology for educational purposes of rights holders; - Enable open access to collective music copyright management and decisions; - Provide online tools for creators to resolve copyright disputes and ensure fair agreements and automatic enforcement with smart contract technology; - Establish a minimum compensation threshold to ensure that smaller rights holders receive a baseline level of earnings, even in cases where low-volume plays or fragmented rights distribution would otherwise result in negligible payments;
Equality	- Ensure that copyright rules and regulations are applied consistently to all rights holders, without exceptions or preferential treatment. - Guarantee equal access to rights management data, ensuring that all creators—regardless of their market position—can access and verify relevant information.	- Develop accessible platforms using universal design for all; - Integrate bias audits in algorithms; - Develop a centralised digital rights database where all rights holders—regardless of size—can access real-time data on their works, usage, and revenues; - Implement content discovery tools, ensuring that lesser-known artists are not overshadowed by major publishers in metadata indexing and licencing opportunities;
Ownership and property	- Ensure that creators receive proper attribution for their work across all platforms and uses. - Guarantee that rights holders have full visibility into when, where, and how their works are used, including the purpose of their utilisation.	- Digital Fingerprinting/Content ID: automatically identifies and attributes creator music across platforms; - Digital rights management: prevent unauthorised alterations, respecting moral rights; - Issue standardised reports at fixed intervals (e.g., quarterly); - Provide rights holders with access to a database of active licences, showing which entities have obtained rights to their works;
Accountability	- Ensure clear role definitions within copyright management and establish mechanisms for promptly identifying and correcting errors in royalty distribution. - Implement continuous monitoring of compliance with copyright policies and actively integrate stakeholder feedback into governance and operational improvements.	- Restrict information access based on organisational roles; - Automatically track and manage data handling errors; - Provide real-time analytics on copyright practices to stakeholders; - Integrate feedback tools in platforms to enhance accountability and improvements;
Transparency	- Maintain comprehensive and accessible copyright records, enabling regular auditing and open communication about rights management processes. - Ensure that all public copyright-related documents and licencing agreements are easily accessible to all rights holders, fostering openness and informed decision-making.	- Develop clear, comprehensive copyright reporting accessible to all stakeholders; - Implement systems for stakeholder access to documents and records; - Integrate tools for independent audits; - Create a database of active licences, showing which entities have obtained rights to what works; - Require DSPs and streaming platforms to integrate with CMO databases ensuring automatic reporting of usage data to rights holders;

(*Continued*)

Table 3. Continued

Value	Norms	Possible institutional or technical requirements
Accuracy	- Ensure the integrity, reliability, and consistency of copyright-related data to support informed decision-making. - Establish mechanisms for promptly identifying and correcting data errors to maintain accuracy in royalty distribution and rights management.	- Deploy technology to automate and accurately attribute music copyrights; - Ensure data reliability, security, and error logging features and ensure current, accurate copyright data updates; - Automatically detect and correct copyright data errors;

CMOs, collective management organisations; DSPs, digital service providers.

Table 3. Framework of values, norms, and requirements

5. Discussion and Conclusion

5.1. Discussion

This study contributes to research on collective music copyright management by applying a VSD approach to governance and technological challenges. While previous work on equitable remuneration in SCMMC has primarily focussed on legal and economic dimensions (e.g., Kretschmer et al., 1999; Gervais, 2019; Watt, 2016), this study integrates stakeholder values into both institutional and technological frameworks. In doing so, it extends discussions on governance models by operationalising values, such as justice, equity, fairness, and transparency, into structured norms and system requirements.

A key contribution of this research is its empirical focus on stakeholder perspectives within SCMMC. Prior studies (Bulayenko et al., 2021; Nagel & Kranz, 2021) have examined collective licencing through economic and legal lenses but have rarely incorporated multi-stakeholder qualitative analysis. By conducting semi-structured interviews with composers, publishers, CMO representatives, and legal experts, this study captures values and value tensions that emerge in governance, including, but not limited to conflicts between transparency and ownership and between equity and efficiency.

Additionally, our study contributes to the applicability and validity of Van de Poel's values' hierarchy approach for VSD's technical investigation. It builds on Van de Poel's (2013) methodology by structuring values into prescriptive norms that guide governance decisions. Unlike previous studies that focus solely on policy recommendations, this framework provides actionable design principles that can be integrated into SCMMC institutions and operations. The findings highlight the need for context-aware technological solutions to balance efficiency with equitable rights distribution.

Furthermore, this study contributes to the ongoing debate surrounding Directive 2014/26/EU and Directive 2019/790/EU by illustrating how regulatory competition may undermine CMOs' ability to uphold fundamental values. While previous research (European Commission, 2021; Yakubova, 2022) has critiqued the uneven enforcement of these directives, this study provides empirical evidence from rights holders who experience governance inconsistencies firsthand.

These findings emphasise that regulatory frameworks must account for the real-world complexities of SCMMC rather than assume that competition alone enhances fairness and efficiency.

5.2. Conclusion, Limitations, and Future Research

This study examined the integration of stakeholder values into the governance and technological framework of collective music copyright management (SCMMC) in the Netherlands. Through qualitative analysis using a VSD approach, we identified and structured core values—justice, equity, fairness, transparency, ownership, accountability, and accuracy—into a framework of norms and system requirements. This framework serves as a conceptual tool for refining governance practices and technological implementations in digital rights management.

Our findings highlight persistent governance challenges in SCMMC, particularly concerning value tensions. For instance, while transparency is a key value for rights holders, its implementation is often constrained by proprietary rights and competitive pressures in licencing. Similarly, the push for efficiency in collective rights management may inadvertently compromise fairness and accountability, especially for smaller rights holders. This study also underscores the unintended consequences of regulatory reforms, such as Directive 2014/26/EU, which, while

aiming to enhance competition, has placed significant operational burdens on CMOs, affecting their ability to uphold fundamental values.

This study has several limitations that should be acknowledged. One key constraint is its reliance on qualitative data from a select group of participants, limiting the generalisability of findings to other contexts. Additionally, this study focussed primarily on publishers, CMO representatives, and rights holders, while independent artists, record labels, DSPs, and other indirect stakeholders were underrepresented. Future research should aim for a more balanced representation to develop a comprehensive understanding of SCMMC governance.

Another limitation concerns the ethical framework employed. While Rawls' Theory of Justice (1999) provided a strong foundation for assessing fairness and equity, it may overlook other critical values, such as trust, autonomy, privacy, and security. Future research should examine alternative ethical and governance models to assess how different theoretical frameworks influence the identification and prioritisation of values in SCMMC. To improve generalisability, future studies should incorporate quantitative validation methods alongside qualitative insights. Expanding the research scope to include diverse stakeholder groups and cross-regional comparisons would further enhance the applicability of findings in developing equitable and transparent digital copyright management systems.

Finally, while this study presents a structured foundation for understanding and operationalising stakeholder values in SCMMC governance, further research is required to refine its applicability. Future investigations should focus on translating these insights into concrete institutional and technological system requirements, ensuring that proposed governance mechanisms remain both practical and adaptable to evolving industry conditions. The next phase of research will centre on the technical investigations of VSD, testing and refining the frameworks alignment with real-world constraints. Additionally, as the digital music landscape continues to evolve, future research should assess how CMOs and policymakers can leverage this approach to evaluate regulatory and technological interventions.

Despite its limitations, by proposing a structured framework that operationalises stakeholder values into system design and governance, this study bridges the gap between policy aspirations and real-world challenges. Ensuring a just, transparent, and efficient SCMMC requires a balanced approach that aligns technological advancements with ethical considerations. Policymakers and industry stakeholders must work collaboratively to integrate these values into governance and technology, fostering a more equitable and sustainable digital copyright ecosystem. Additionally, actively involving rights holders in decision-making processes will be essential to ensure that their interests are represented in future regulatory and technological developments. The future of collective music rights management will not be shaped by technology alone, but by the values we embed within it. True progress lies not just in efficiency alone, but also in ensuring that every creator is seen, heard, and fairly compensated.

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