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In How Far Does the Digital Era of Media Convergence Impact the Digital Transformation of Public Media Organizations in Germany? A Multiple-Case Study.

Master's Thesis

at the Chair for Information Systems and Information Management

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Content

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Tables and Figures

1 Introduction

In 1789, US president Thomas Jefferson wrote that "[w]henever the people are well informed, they can be trusted with their own government" (Library Of Congress, n.d.). What Jefferson stated over 200 years ago is the belief that democratic societies and democratic governance only function well if citizens have access to enough information to hold their government accountable for their actions. Ever since then, democratic societies have relied on public spaces of informational exchange and the formulation of public opinion. For a long time, strong media institutions, like newspapers and public broadcast, guaranteed this public space. But these traditional public spaces are in turmoil. We witness the age of filter-bubbles, echo-chambers, deepfakes, fake news, and fragmented online realities (Thimm, 2017). The big newspapers and public broadcasters have been replaced by global conglomerates who own the media platforms that are the new public spaces of the present (Evens & Donders, 2018). Trust in news media in democracies is as low as ever, with only half of all Germans trusting the news reports, and just north of one quarter of all US citizens (Watson, 2022). Meanwhile, experts are unsure about whether artificial intelligence (AI) will be the salvation, or whether the development needs to be stopped all along (Marr, 2023).

It might not be as dystopian after all. With every wave of media convergence, people have feared the loss of free speech, because fewer people control the news (and algorithms) that societies are exposed to. Panic is not the best driver for improvement, but we should nonetheless consistently ask ourselves if our democratic institutions are capable enough to adapt to change and ultimately, to survive. Recently, media convergence scholars have rediscovered their interest in public broadcasters. These public institutions have been around for some time and – at least attempt to – assure some independent information supply to the public. Unfortunately, public broadcasters are not immune to crises. And just last year, in 2022, austerity measures have forced the UK government to drastically cut funding for the British Broadcast Corporation (BBC) (Reuters, 2022). The BBC is in the middle of a large-scale restructuring process, attempting to transform its business model towards a media ecosystem with extensive public-private partnerships (Mazzucato et al., 2020).

Obviously, with the big platforms controlling the algorithms and most of media users retrieving their information from these very platforms, things cannot remain unchanged for public broadcasters. The trend seems to point towards public service media (PSM). With PSM comes a renewed ethos for public media organizations, incentivising digital transformation efforts, channel diversification, and online content production (G. F. Lowe & Martin, 2014).

1.1 Research Gaps

German public broadcasters also have acknowledged that change is inevitable. In 2017, the largest German public broadcaster, ARD[1], published a report, stating that structural optimization is coming, but would require a new legal framework (ARD, 2017). In 2021, the requested bill was signed into law by the German regional governments (Medienstaatsvertrag (MStV), 2021). Since then, two serious incidents of high-level corruption have shaken up the German public media landscape (RND, 2022a, 2022b).

Six years have passed since the ARD published its plan to optimize its structure, yet scholars are paying very little attention to digital transformation of public broadcasters toward PSM. While media convergence studies continue to identify external pressures through technology, legitimacy, and media consumption behaviour, the discipline struggles to find sound frameworks for media organizations' transformation efforts (García Avilés et al., 2009; Murschetz, 2017; Murschetz & Friedrichsen, 2017a).

1.2 Research Questions

Because of the identified research gap, this thesis' main research question (RQ) goes as follows: **(1)** In how far does the digital era of media convergence impact the digital transformation of public broadcasters in Germany?

Additionally to the primary RQ, I strive to answer two additional secondary research questions (SRQs): **(2)** What are patterns of digital transformation that push public broadcasters towards becoming public service media organizations? **(3)** What are the main drivers and barriers for public broadcasters to fully embrace the new public service media paradigm?

As clear frameworks are missing, the goal of this research is to gather empirical data on digital transformation of public broadcasters towards PSM. The research questions are highly relevant, yet they are also relatively open, leaving room for qualitative explorative research. Henceforth, no hypothesis is drafted nor tested in this research.

1.3 Structure of the thesis

Following this introduction, I reviewed relevant literature for the thesis. The literature review consists of two main sections. First, I will clarify and define the most important terminology for the research question: Digital era media convergence, public broadcast

[1] The ‚Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland' (Working Group of Public Broadcasters of the Federal Republic of Germany) is a network consisting of nine regional public broadcasters.

organization, and public service media. As media convergence is a wide field, and PSM is a rather new topic, I want to make sure that these terms are thoroughly addressed. The second main part of the literature review will address the focus points of prior research. This section will provide a good idea of just how wide the field of media convergence is, and how many different phenomena are considered by researchers. The second part furthermore aims to clarify that there is a profound lack of frameworks in the field, and why a creative, explorative approach is needed to generate relevant findings.

The third chapter will present theoretical frameworks from a neighbouring academic discipline: e-government research. As the research design of this thesis is not aimed at theory building, some degree of theoretical guidance is needed. And in terms of applicable frameworks, e-government studies have the edge over media studies. In the chapter, I will present the E-Gov Work System framework by Lindgren et al. (2021) and a digital transformation taxonomy by Mergel et al. (2019). Both concepts will guide the data collection and data analysis in this thesis. Furthermore, I will elaborate why concepts originally developed for e-public services appear to be feasible to investigate PSM.

The fourth chapter will outline my methodology. Derived from the logic of my research questions, the fitting research design of this thesis is an explorative, qualitative multiple-case study. In the chapter, I will outline the most relevant techniques, procedures, and limitations of this research design method. I will also describe the data collection process and the data analysis procedures. The data collected for this research were **(1)** strategy reports/papers, and **(2)** semi-structured qualitative expert interviews. The data analysis follows the logic of the collected data and the research design and consists of different qualitative procedures.

In the fifth chapter, I will present the cases of this study. I decided to do a multiple-case study instead of a single-case study, because multiple-case studies can give more insights into a phenomenon, if little is known about said phenomenon (Gustafsson, 2017). The cases for this thesis are four German public media organizations: **(1)** ARD, where I will focus on one particular regional broadcaster called SWR, **(2)** ZDF, which is the second largest German public broadcaster, **(3)** Deutschlandradio, a historically radio-broadcast-only public media organization, and **(4)** funk, a collaborative PSM project by ARD and ZDF with a focus on online media contents.

With the context of the cases given, I will present the results of the data collection in chapter six. And, moving on to chapter seven, synthesise answers to the research questions by triangulating information about the cases, their environment, the strategy papers, and what has been said in the interviews. To conclude, I will give my thoughts on the thesis' goal attainment, achievements and limitations in chapter eight.

2 Literature Review

2.1 Definitions

2.1.1 Digital Era Media Convergence

Media convergence has been researched since the 1960s and 1970s and has hence been a controversial, vague, unclear, and multifaceted concept (Balbi, 2017). Because of its vagueness and wide range of associated developments in the media, convergence has opened up an entire scientific subfield within media studies. The scientific use of the word "convergence" originates from Biology. Google[2] refers to it as the simultaneous development of similar characteristics under similar conditions of two independent entities. Media studies started using the term when, through the emergence of new media technologies, existing media entities started converging their media production towards the new available technology, as portrayed by Balbi (2017). The author sees media convergence as an intangible, ongoing process through all eras of media development. Not media convergence itself, but processes and phenomena associated with it are observable, measurable, and have therefore been subject of studies over the past decades. Because technology evolves at different rates and because there are different trends dominating media convergence from time to time, Balbi (2017) also argues that the term has been conceptualized differently in different research eras. For instance, the author points out that from the 1980s onwards, media content files were digitized. The observable phenomena in that case was, that media organizations started using computer storage for media content, replacing the physical archives of tapes and folders. The same technological infrastructure for different media types (e.g. video, audio, and text) therefore enabled an increased convergent use of such. In the 1990s on the other hand, economic and political developments were the main drivers of media convergence. Nowadays, that era is often referred to as neo-liberalism[3], known for deregulation and market-liberalism policies, privatization, and reforms of public organizations in favour of monetary profitability (Connell, 2010). In the 2000s, cultural change is seen as the main driver of media convergence phenomena. Following this logic, media users' changed media usage behaviour is the main reason why media changes (Balbi, 2017). Of course, this does not exclude the other mentioned dimensions from the ongoing process of media

[2] And its cooperative partner for the embedded English dictionary, Oxford University Press (Oxford University, n.d.)

[3] Many trends, changes, and developments are associated with neo-liberalism. For the public sector, which is of interest for this thesis, neo-liberal reforms and developments were and are discussed under the term of New Public Management (NPM). NPM is widely recognized as attempts to restructure public organizations after the role model of profit-oriented businesses, with the believe that more budgetary constraints and competition among public organizations might improve their efficiency (Connell et al., 2009)

convergence. The author simply argues that, while media is under a confluence of economic, regulatory, and technological factors, the cultural change of how media is used and perceived is more important than in the previous decades. Other publications tend to acknowledge that while historically, Balbis' plausible categorization hints to research preferences, effects of media convergence are actually more difficult to distinct than by particular decades and single dimensions. Other scholars argue that phenomena occur simultaneously, or, as Evens and Donders (2018) put it: "Media, technology and society tend to evolve, co-exist and gradually adapt […]" (2018, p. 6).

Digitalization has brought new attention to media convergence. Even though observable phenomena in the digital era of media convergence might be difficult to distinct by the chronological dimensions proposed by Balbi, those dimensions are nonetheless a helpful tool to grasp the multidimensionality of the ongoing convergence, and to better understand the focus of previous studies in the academic field. Perhaps the most relevant pinpoint to this stage is that media convergence is a "continuous process" (Balbi, 2017, p. 46) and is henceforth impossible to define finally. This is a strong indicator for researchers to stay open to new developments and phenomena in the digital era of media convergence, and document empirical findings as precisely as possible within a given context. Vukanovic (2018) shares the understanding of media convergence as an "[…] ongoing process, occurring at various intersections between media technologies, industries, content, and audiences; it is not an end state. The effects of the process of convergence are visible, measurable and possible to detect, while the actual process might not be" (Vukanovic, 2018, p. 154). Vukanovic (2018) conducted a selective literature review to provide an overview of the most prominent frameworks and drivers of digital era media convergence. While he identifies a manifold of different understandings and operationalizations of media convergence, he also acknowledges that as of now, there are many different drivers to media convergence in the digital era. As the author lists factors that he sees as the "most dominant driving forces […]" (Vukanovic, 2018, p. 156), he includes eight overall, being:

a) Technological innovation, including the internet and the digital revolution
b) Exponential growth of internet data, computational power and data transfer
c) Deregulation, liberalization, and globalization
d) Changing consumer tastes [behaviour]
e) Technological standardization
f) The search for synergy
g) Increased global competition, leading to acquisitions, mergers, and big, globally operating telecommunication companies [platforms]
h) Repurposing of old media contents via new media channels

It seems easy to argue that Vukanovic's list of the most dominant driving forces of media convergence in the digital era is incomplete, and for some points, much more distinct, while for others, the wording seems loose and not precise. But as mentioned before, media convergence was, and is an organic and ever-changing field, where researchers can merely craft snapshots of a reality. That is why Evens and Donders (2018) go as far as calling media industry related studies "supra-disciplinary" (Evens & Donders, 2018, p. 7), meaning that researchers do not only have to take interdisciplinary context into account, but also time-related, culture-related, and research-level-related (micro, meso, macro) context. Concluding on the topic of digital era media convergence, a few things should be clarified for this piece of research. Firstly, media convergence has been a difficult research area in the past because of its multi-dimensionality. This seems to have gotten even more complex in times of the internet, big media platforms, and globalization. Secondly, dynamics of media convergence change over time, and researchers should realistically describe how their observations and findings withstand the test of time, and to what extent they may be taken as universal, or as context specific. And thirdly, media convergence as a whole is intangible. This means that researchers should focus on observable phenomena that are related to media convergence. To explain such phenomena, researchers also need to keep in mind that in there will be a manifold of possible variables and factors from related disciplines that might claim a certain extent of explanatory value. Therefore, preliminary to conducting a study, researchers should explore the field related to their targeted phenomenon (or phenomena) well and thoroughly, also keeping the mentioned implications in mind throughout the entire research process.

2.1.2 Public (Service) Broadcasting

Not one phenomenon in a single point time, but rather a set of media convergence phenomena over time is reflected within the evolution of public broadcasting. The origins of public broadcasting date back to the very emergence of radio broadcasting technology (UNC, 2013). Back in the early 20th century, radio stations were owned by either public authorities or private broadcasting companies, the incentive for broadcasting content being either selling radios to private households or controlling public information respectively. The degree of organizational coherence differed massively throughout countries who adopted radio broadcasting early, with the United States still being at the level of decentralized radio stations in the 1950s, while the BBC, the world's oldest still public broadcast organization, saw its formation already in the 1920s (BBC, n.d.). The first German radio broadcast is recorded to be a Christmas concert on the 22nd of December 1920, dating back to imperial times (Deutsches Rundfunkarchiv, n.d.). The first permanent radio stations in Germany were set up following 1923 (NDR, 2021).

The only records of a transition towards editorial independence of public broadcasters and therefore political neutrality in that time period are associated with the BBC's news reporting on national strikes in the United Kingdom (BBC, n.d.). Although these efforts mark the beginning of democratic public broadcasting as we know it today, broadcasted information remained under immense governmental control, even long until after the second wave of democratization[4] following World War two. Other media forms for publishing information, most dominantly the newspaper press, show editorial independence and political independence from governments much earlier in history (Britannica, n.d.). This is mostly due to the fact that the evolutionary cycle of printing, and therefore technology emergence, diffusion, and consolidation was far ahead of the corresponding stages of broadcasting.

Most kinds of public information channels are seen as an embedded part of media systems which are often looked at with a degree of country specificity. Most prominently, Reporters sans frontières (RSF), UNESCO and Freedom House draft annual reports on media freedom by country as well as global trends. Just like the media systems as a whole, the history of public broadcasting to the present day is closely linked to the political developments of the respective country (Raboy, 1998). A full historic background of public broadcasting in Germany is not within scope of this thesis. Still, to understand the status quo of public media organizations, one must understand the legacy systems and reform waves that affected the very organizations. I will provide this case-specific context in chapter five. From the first broadcast attempts by private and public entities to the point where a consolidated public service broadcasting (PSB) has been recognised in developed democracies[5], many decades have passed (Larsen, 2014).

While public broadcasting merely states that **(1)** the (radio) broadcasting technology is used **(2)** by a public entity, the term public service broadcasting (PSB) introduces the service aspect. Scannell (1989) attempts to consolidate an understanding of PSB. According to Scannell, PSB is the broadcasting activity by public broadcasting companies that qualify as a "service to the public" (Scannell, 1989, p. 135). To qualify as a service, the broadcasted content and broadcasting technology must account for certain PSB principles. These principles are listed as neutrality and reality, meaning that the broadcasted content should cover a wide range of topics, should not include bias nor

[4] I take note that the term "democratic waves" is by no means undisputed and undebated in political sciences (Gates, 2007). In this context, it refers to the phrase that is commonly used for a (historic) phase, where, in relatively short time, a number of former non-democratic countries established democratic institutions and are furthermore regarded as democracies.

[5] Developed democracies in this case are seen as countries with political systems, which are widely accepted as well-functioning democratic systems. One possible classification was made by Merkel (2004), who refers to such systems as "embedded democracies" in their work. Merkel particularly points out the significant influence of independent private and public media entities on public opinion.

agenda, and should create a media reality that is as close to societal reality as possible (Scannell, 1989, p. 136). Another important principle is the so-called "universal availability" (Scannell, 1989, p. 137). It refers to the technological and economic availability of the broadcasted content within a society. Hence, the public infrastructure for delivering content has to reach all parts of the country, urban and rural alike, and private infrastructure for receiving the content, meaning media devices, should be affordable to everyone. The availability of service is usually measured across society by percentage of households or individuals who use the services regularly.

The aforementioned transition from *any publicly broadcasted content* to PSB also incorporates a different understanding of the organizations producing the content. Other than broadcasting stations in the early days of the technology, in PSB paradigm, publicly funded media organizations were then referred to as public broadcasters (Donders, 2019). The internal organizational change of such companies was strongly influenced by the mentioned principle of neutrality and reality, meaning that public broadcasters are obliged to assure governance decoupled from partisanship and political affiliation[6]. In 1997, the European Union recognized PSB and public broadcasters as organizations in the Treaty of Amsterdam (Raboy, 1998). Even though a global consensus on a definition was never reached on UN-level, the EU recognizes public broadcasters as important parts of media systems, which paved the way for better comparisons in science, policymaking, strategy, and law and regulation.

2.1.3 Public Service Media

Since the late 1990s and early 2000s, the understanding of public broadcaster's output has changed yet again. Semantically, public service broadcasting (PSB) is being replaced by public service media (PSM) (Donders, 2019). The changed term is meant to represent that public broadcasters' content output is not only limited to broadcast, more precisely radio and television, but also covers a wide range of internet-based (online) media (Larsen, 2014). While there is an ongoing debate to what extend this paradigm shift changes the organizations who produce PSM, there is broad consensus that PSB is in fact the legacy public media output to PSM (G. Lowe & Bardoel, 2007; Van den Bulck et al., 2018; van Dijck & Poell, 2015). To demonstrate the controversy around the matter of the

[6] I recognize that in media sciences, there are different theories and models about why and to what extend media institutions practise with a higher or lower degree of partisanship and political affiliation. Hallin and Mancini (2004) are mostly concerned about the media systems and how they are related to the respective political system. *Journalistic professionalism* for them, is mostly a by-product of economic sophistication of media companies. McQuail (1987) on the other hand sees cultural and normative changes to the understanding of journalistic professionalism in society as the driving force why practices in media companies change. In this thesis, I do not want to elaborate on this debate too much. Here, it is rather important to note that accompanied by PSB trends, practices in media content production and media self-governance did in fact change, resulting in a greater degree of independence of public broadcasters.

organizations' terminology, I list a few selected examples from the literature as follows. Nissen (2006) calls organizations who produce PSM a "PSM corporation", Van den Bulck et al. (2018) refer to them as "public media institutions", Sørensen and Hutchinson (2018) understand them as "PSM organizations", and Lowe and Martin (2014) call them "PSM providers". In 2006, a report written for the Council of Europe acknowledged the new role of PSM for public media, stating the importance of PSM - as well as it's coexistence with PSB for the time being. (Nissen, 2006).

Donders (2019) provides a simple yet clear definition of PSM that allows to assess all dimensions necessary for this thesis: "Public service media (PSM) can be defined as the provision of services by public broadcasters that contribute to the democratic, cultural and social objectives of society, and this on multiple devices and across various technologies" (Donders, 2019, p. 1011-1012). The latter definition convinces with functional simplicity. The first part refers to the PSB principles, which are democratic, cultural, and social objectives here, while the second part hints to the changed media environment, mainly as a result of technological progress. The latter dynamic is referred to as "new PSM ethos" by Bardoel and Lowe (2007, p. 14). PSM ethos means that PSM providers have to ensure the previously mentioned principles, by efficiently[7] producing PSM in a changed media environment. Tensions to live up to this new PSM ethos, because the platform era has permanently changed the dynamic of media market, has been the topic of PSM research, and will be presented in the next chapter.

Perhaps the most useful differentiation of Donders definition for this thesis might be the distinction between PSM as the service and the public broadcaster as the entity issuing the service. For this work, a singular definition for the organization producing PSM is rather difficult. While it is safe to say that each of this studies' cases have public broadcasters at least as their legacy organizations, some of the samples' organizations are still best described as public broadcasters today, because analogue broadcasting is still their main activity and public service contribution (Van den Bulck et al 2018). However, throughout the research, this study might observe that organizations, or organizations' subdivisions investigated in this work do fit the PSM organization semantics better. For now, I have demonstrated that while the concept of PSM is clear, the definitions of organizations producing PSM diverge. Hence, I will use different terminology in this thesis: I will use the term "public media organization" for the totality of organizations, "public broadcaster" for organizations whose main activities are the production of public broadcast content, and "PSM organization (/-provider/-producer)" context specific to an

[7] Efficiency in PSM ethos should be understood as the balance of public funding (input) and public values (output).

environment in which a public media organization provides or produces PSM contents. Research Background

2.2 Research Presence of the Topic

A short set of ‘Web Of Science’ inquiries provides a sound understanding on how well PSM is researched within the media convergence field. As portrayed in *Figure 1*, media convergence has received increased attention over the past years. While PSM has also generated more research, especially in the past two years, as seem in *Figures 2 and 3*, its share is significantly lower than other media conversion topics.

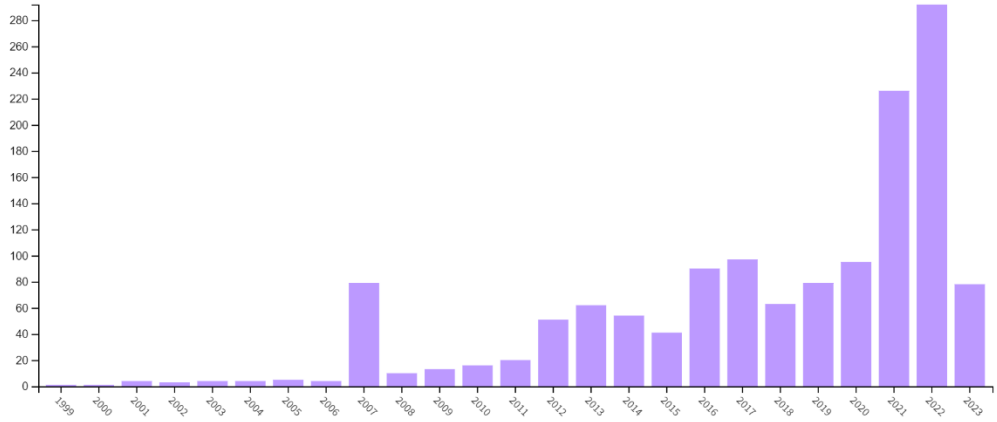

Figure 1 Web Of Science Publications ("media convergence") by year, n=1400

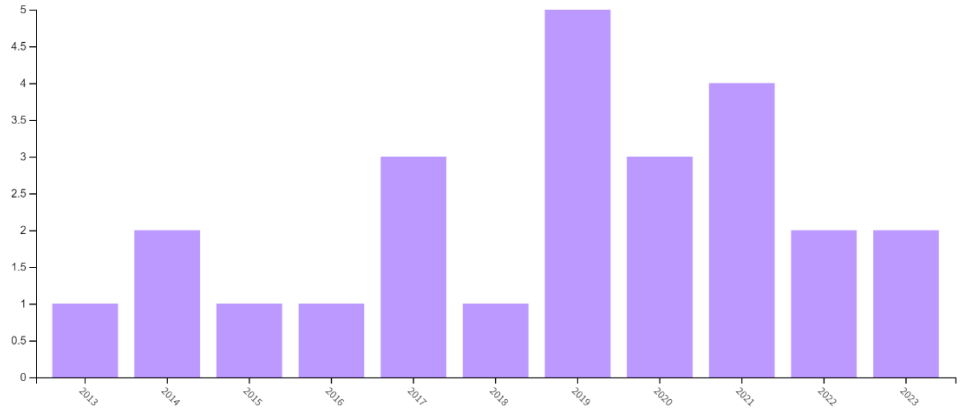

Figure 2 Web Of Science Publications ("PSM" AND "convergence") by year, n= 25

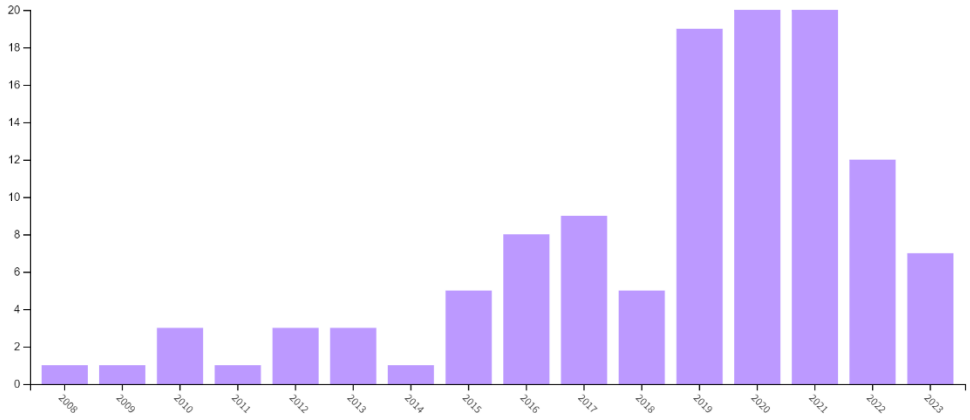

Figure 3 Web Of Science Publications ("PSM" AND "digital") by year, n=118

A total of 264 publications from the first inquiry (“media convergence”) within the field of media convergence are studies focus on electrical engineering and related topics. Such studies predominantly explore technical capabilities of technological infrastructure, like broadband internet, or smart TVs, to enable seamless use of convergent media contents.

2.3 Changed Media Environment and PSM

As I have outlined in the chapter on media convergence, the scientific field is broad and touches on many different topics. For this literature review, I have tried to narrow down the mentioned publications as close to public media organizations as possible. However, not all referenced publications focus exclusively on public media organizations.

In the body of reviewed literature, I have identified a certain pattern, of **(1)** influencing variables, **(2)** effects on public media organizations and society, and **(3)** possible solutions and implications. Depending on the research design of the publications, at least one, but not all of the elements are represented. *Table 1* visualizes the rough pattern of media convergence research on PSM. It appears that there is a broad consensus on some of the main drivers of digital era media convergence, being the diffusion of the digital infrastructure, internet and smartphones, a dominance of global platforms in the media market, and the algorithmic technology that the platforms operate with. While the digital infrastructure aspect seems to be the baseline for nearly all outcomes shown in *Table 1*, other outcomes are in interplay of the global platform media environment, and the algorithmic technology.

Table 1 Media Convergence Reserch Patterns

(1) influencing variables	(2) effects on public media organizations and society	(3) possible solutions and implications	Publication(s)
Diffusion of broadband internet and smartphones	Changed media consumption behaviour	Convergent interoperability for devices	(Falkowski-Gilski & Uhl, 2020; Murschetz, 2017; Van den Bulck & Moe, 2018)
Domination of global platforms in the media markets	Fragmented media reality, echo chambers, filter bubbles, political polarization Attention economy Digital social inequality Threat to PSM principles of reality and universal availability Reduced market share of PSM providers and threat to legitimacy Dependence on platforms	Changes to the business model of PSM	(Ahn, 2011; D'Arma et al., 2021; Donders, 2019; Franck, 2019; Harambam et al., 2018; Köchler, 2017; Sørensen & Hutchinson, 2018; Van den Bulck & Moe, 2018; Vitak et al., 2011; Wauters & Raats, 2018)
Algorithmic decision making for media consumption		Algorithmic recommenders systems	(Harambam et al., 2018; Van den Bulck & Moe, 2018)

Many of the social outcomes are due to the platforms and their algorithms. Franck (2019) refers to the business logic of platforms like Facebook, Instagram, YouTube, and TikTok as 'attention economy': platform owning companies profit from their users spending as much time on the platforms as possible, because the higher the level of attention, the

higher the revenue through advertising and in-app purchases. To keep users engaged, they are exposed to content based on previous usage behaviour (Van den Bulck et al., 2018; Van den Bulck & Moe, 2018). Platforms enforce this mechanism through algorithmic recommendation systems (ARS) (Harambam et al., 2018; Sørensen & Hutchinson, 2018). Algorithmic systems show users content that is predicted to be consistent with their preferences. The so called 'social bubbles' on platforms are groups with similar opinions, believes and preferences that are, because of ARSs, less likely to interact with or be exposed to content from other bubbles. People share a "collective mental reality" (Köchler, 2017, p. 11) online, which is not that much dependent on the real world, but rather on the digital realities in their bubbles. The interplay of platforms and algorithmic predictions and mechanisms trigger a whole set of social problems. Fragmented realities in a society can decrease social cohesion and increase social unrest. Also, pre-existing social inequalities tend to be reinforced by platforms. In the reviewed literature, this was addressed as digital divide (Ahn, 2011). Without going in too deep on the digital divide topic, the important takeaway here is that based on access, usage behaviour, and digital literacy, these algorithmic mechanisms will affect people differently, and are likely to deepen digital social inequality.

The changed media environment influences public media organizations in many ways. One can argue, that PSM principles and legitimacy are threatened by the digital platform environment. Compared to the mostly linear broadcast environment from 25 years ago, public media organizations have lost a substantial part of their market share, and of their ability to shape markets (Evens & Donders, 2018; Murschetz & Friedrichsen, 2017a). The latter is not only valid for public media organisations, but also private media companies (Murschetz & Friedrichsen, 2017b). Since the audience (media consumers) use the platform, public media organizations depend on participating on them as well, to be able to deliver PSM content. Online platforms tend to be participatory and interactive, meaning that users can generate their own content (UGC), and are able to like, share, and comment on content (Michalis, 2018; Vukanovic, 2018). All in all, ARSs, social fragmentation and interaction are all challenges for PSM principles. Especially the principle of universal availability seems to be challenged by ARSs and social fragmentation (Sørensen & Van den Bulck, 2020). But also, the interactive nature of platforms demands new resources from PSM providers, to engage with their users online.

Larsen (2014) reflects that "a publicly funded broadcasting institution can survive in a digital media environment provided it is capable of adapting both its practice and legitimizing rhetoric to a new environment" (Larsen, 2914, p. 73-74). As shown in *Table 1*, some scholars have focused their research on possible solutions and implications. Harambam et al. (2018) and Van den Bulck and Moe (2018) both argued for technological

innovation in the field of public media recommender systems. Harambam et al. (2018) propose a system as an on-top layer for users that recommends contents on certain algorithms. The algorithms would vary based on a guiding persona that the users can chose. These algorithmic guides could have different biases, like recommending hedonistic, informative, conforming, or contradicting contents. For PSM organizations, it is arguably much easier to implement such recommender systems on their own sites and platforms, since integration on third-party platforms would demand a willingness to cooperate from the platform owners. Van den Bulck and Moe (2018) see a necessity for a public service recommendation system to predict usage behaviours and therefore, improves service delivery. The authors argue that such a recommendation system could be developed and deployed on a European level. However, there are concerns that the algorithmic use of users' data might not be aligned with the public ethos of PSM (Sørensen & Hutchinson, 2018; Sørensen & Van den Bulck, 2020).

Other considered implications lie in organizational change and business model adaptation of PSM organizations. D'arma et al. (2021, p. 685-686) claim to have identified four stages that PSM providers go through when faced with private market competition in streaming services or VoD. The researchers argue that initially, PSM providers react with complacency. In that stage, organizations do not realize that the environmental changes will eventually also change the way they operate. The second stage is described as resistance. In that stage, PSM providers and policy makers try to regulate eroding new media to stabilize the status quo. In the third differentiation phase, PSM providers will try to pick up some aspects of the new forms of media consumption, while strongly sticking to their own understanding of media production. In the last stage that the authors call diversification/mimicry, PSM providers give in to the changed status quo, and will try to mimic new media forms, although not with all resources, and therefore diversify their own portfolio. Wauters and Raats (2018) have had their own approach on organizational change and compared PSM strategies from the UK with Flanders' PSM organizations. The authors identify that the UK's BBC already has incorporated the strategy of public-private partnership in media production, as well as outsourcing of certain operations. After assessing the Flemish media ecosystem, they argue that PSM should take on a similar role as a key enabler of a public-private local media ecosystem.

2.4 PSM Research in the German Context

As all four cases in this research are German public media organizations, I conducted a separate literature review to grasp the German PSM context in regard to digital transformation and also, to see how researchers approached German cases. On the German stage, the issue of PSM and digital media convergence also has seen an increase

in dynamic, even though it started a bit later than on the international stage. Perhaps the biggest indicator that public broadcasters themselves are concerned is a 170-page report conducted by the DIW (*Deutsches Institut für Wirtschaftsforschung, German Economic Policy Institute*), requested by the ARD in 2017 (Aigner et al., 2017). In that report, the authors are assessing the current developments in the media environment, the current as-is status of the German public media, and are looking at other international cases, how organizations deal with digital era media convergence. Most of the observations about the digital era of media convergence remain quite basic. For instance that internet-usage rates in Germany have increased and that people are consuming more online-media than a few years ago. The report also mentions that platform-based business models, user participation, user-generated content et cetera strongly influence PSM appearance on third-party platforms.

What is indeed relevant is the comparison to other media systems. German public broadcasters are among the most well-funded worldwide (Aigner et al., 2017, p. 100). Throughout the report, the authors conclude that there would be potential for structural reform, making bigger usage of free markets. One given example is New Zealand's public broadcast system, using tender procedures and public-private collaboration (Aigner et al., 2017, p. 146-148). Other reform ideas include pay-per-view or subscription models instead of the household fees. The reform ideas are mostly due to the fact that German public media organizations have struggled with using their financial resources efficiently and transparently (Aigner et al., 2017, p. 146). However, the authors do acknowledge that public broadcast and PSM organizations who strongly focus on public value contents[8] are not commercially competitive (Aigner et al., 2017, p. 138). When it comes to legitimacy, the authors take a strong stance in favour of public media organizations in Germany, based on three major arguments: first, public value creation, second, market-correction and media system resilience, and third, a strong legal embeddedness in the German constitutions by treaties and rulings of the constitutional court.

Dörr et al. (2016) have written a similar report, but on the ZDF's request. Even though this report clearly focusses on the legitimacy of public broadcasters' existence in the digital age, the narrative is roughly the same: Platforms dominate the markets, the audience is fragmented, the public broadcasters – with all their experience in media content production – can converge their content to online PSM and therefore, ensure a baseline for neutral and trustworthy content in the future. The proposed strategy appears

[8]What the authors refer to as public value content underlies the same understanding that I previously introduced as PSM ethos and PSM principles. The difference here is that the report's authors go further: because of public media ensuring the media production of high quality, neutral, and universally available content, the standards for media production in the entire media system is higher. Because PSM sets the bar high, also private media need to ensure quality standards to stay competitive. This external effect of PSM is described as public value (Aigner et al., 2017, p. 51).

to be: Continue the linear broadcast as is to serve the (older) majority of citizens, while also producing some online contents to appear to the younger audience (Dörr et al., 2016, p. 27-30). Furthermore, the authors repeatedly refer to the obligations of public broadcasters in regard to PSB and PSM principles (Dörr et al., 2016, p. 36, 38, 39, 41). Like the ARD counterpart, the report does point out the necessity for an adapted legal framework, which would follow in 2021 with the renewed media treaty (MStV).

Apart from reports supported by the very institutions they were investigating, there has been independent scientific interest lately. Herzog and Karpinnen (2014) have investigated the 2013 household fee reforms in Germany and Finland. Both countries' policymakers wanted to adapt the predecessor broadcast fee model, which was bound to TVs in households. With technology changing and TVs becoming potentially obsolete at one point, Germany and Finland changed to a household fee model, to ensure the broadcasters independence from possible future state subsidies. The authors conclude that the changed funding system is a double-edged sword for the public media organizations' legitimacy: While independence from the state would be ensured, more financial burden is put on the citizens, and might cause contestation.

Besides legitimacy, there appears to be a recent interest in *funk* by German scholars (Drössler, 2021; Feierabend et al., 2018; Granow, 2020; Stark & Steiner, 2018; Wolleschensky, 2022). Drössler (2021) has investigated funk's capacity to innovate journalistic formats and has asked creators what they think is innovative. However, the study is more focussed on journalistic decisions in audio-visual media pieces than on the organization itself. Granow (2020) has looked at the strategies that funk applies to better target its audience. She observes that funk is engaged in community management, actively interacting with their users. Furthermore, funk makes use of positive network scaling effects, by actively managing their portfolio. The organization helps their creators to scale and grow by incentivising other creators to recommend their channels, or to collaborate in certain projects. Stark and Steiner (2018) have conducted a similar study and identified positive network effects. Feierabend et al. (2018) also investigated qualitative and quantitative metrics of how well funk reaches their target groups. They observed that already in the early stages of funk, the organization managed to establish itself well. Wolleschensky (2022) looked at the distribution strategy of funk, and identified three layers: The channel layer, the third-platform layer, and the owned platform layer. The strategy of funk remains consistent on all levels for the channels in their network. While the channels are run by creators and differ in topics, the delivery is always aligned with the properties of the third-party platform that the channel runs on. The funk branding is supported by uploading contents from third-party platforms to the own platform, funk.net, which serves as the overall on-demand streaming page. This

structure creates incentives for users to consume funk PSM pieces on all three levels, since each has unique selling points, while being consistent in its branding.

2.5 Summary and Take Away

Donders observes that "public broadcasters view the changed nature of their surrounding environment as a justification for their continued existence" (Donders, 2019, p. 1024). Given the context of the digital media environment, this attitude seems to be a rather dangerous self-fulfilling prophecy. The BBC case shows that public media organizations can become subject to austerity measures. However, the German case is somewhat different, as the funding mechanism, self-governance, and legal framework are highly institutionalized. Nonetheless, the reports on the two largest German public broadcasters indicate that there is a concern for legitimacy, PSM ethos, and public value.

For both public and private media organizations, media studies fail to provide tested frameworks for digital transformation (Murschetz & Friedrichsen, 2017a). So far, case studies about business models, organizational change, or technology applications, like the persona-based ARS, remain descriptive empirical studies. Further research in the field needs to take the lack of frameworks into account and needs to find creative solutions to approach case-studies.

3 Theoretical Framework

3.1 PSM as Public-E-Services

As I have elaborated in the previous chapter, attempts to validate theory frameworks for research on digital transformation of PSM organizations virtually do not exist, at least to my knowledge. In order to generate new knowledge in this research, I will consult a neighbouring academic discipline for a framework: e-government studies. E-government studies are concerned with how public services, issued by public sector organizations, are digitally transformed into public e-services (Lindgren & Jansson, 2013). First of all, a disclaimer: government organizations and public media organizations are not the same and should not be confused as such. The clear separation of government and the media is one of the most important baselines for the well-functioning of democracies. However, for this particular research, the organizational properties of public sector organizations and public media organizations are similar enough to use a framework from the neighbouring discipline. In the following section I will work through the most relevant differences and similarities between public e-services and public service media.

The definition of a public e-service consists of three main parts: service characteristics, technology, and availability. Service characteristics are important to the "service" part in public e-services. Lindgren and Jansson (2013) argue that services are intangible, inseparable, perishable, and show heterogeneity or variability. The intangibility refers to the fact that services are "[…] performances rather than objects" (Lindgren & Jansson 2013, p. 165). Perishability means that services cannot be pre-produced, stored, or used multiple times. Services need to be produced for a specific case and consumed on the same. The latter interaction describes the inseparability of consumption and production. That being said, the authors clarify that "[…] consumption and production is not necessarily simultaneous" (Lindgren & Jansson 2013, p. 167). The authors acknowledge that heterogeneity and variability are used to address the same service property: services differ, based on the producer's and the consumer's behaviour. The technology part of the definition addresses the "e" (for electronic) in public e-services. To be considered a public e-service, the service delivery between producer and consumer has to include some form of digital artifact enabling the electronic service delivery. Realistically, in 2023, this implies some form of information-communication-technology (ICT), as ICT enables interaction between a service producer and a service consumer, despite not being in the same physical location and nonetheless exchanging information electronically. Lastly, availability, or ownership, of services refers to the "public" part in public e-services. To clarify ownership and accessibility, the authors compare e-services produced by public and private organizations. Services produced, or owned, by public organizations cannot

have any monetary access barriers. To access a service, consumers do not have to pay – as they might have to for accessing private services – but are entitled to by a legal status.

To apply this e-government lens on PSM, one has to add some context to the given PSM definitions. Some service characteristics are easier to grasp in a PSM context than others, so examples will be given. Take, for instance, a public media YouTube channel, posting videos, community-feed posts, et cetera, and engaging with their audience in the comments. Intangibility and inseparability would imply that a video published (produced) on the channel is not as much of an object, but rather an information exchange (performance), once a user decides to watch (consume) it, and possibly further like, comment, or share (interact with) the content. The interaction aspect, as well as the heterogeneity of media devices being used to access PSM contents, aligns well with the heterogeneity and variability service characteristics. The arguably most difficult service characteristic to contextualize for PSM is the perishability aspect. Since a video has to be uploaded to a PSM channel only once, but can be accessed multiple times by multiple users, it seems that perishability for PSM as a public e-service is not given. Only for the interactive aspect of PSM, like a channel reacting to questions in the comment section, perishability seems plausible. To argue for perishability in a non-interactive scenario, one must change the view on PSM content production as a continuous output, which only works by making a cultural argument: Technically, a single user can consume the same news report on YouTube repeatedly. But given that news-worthy events are happen constantly, and "Yesterday's papers telling yesterday's news" (Ralph McTell, 1969, 'Streets Of London'), the process of information exchange between producer and consumer drastically changes its nature after the first consumption of the content. However, I do acknowledge that the perishability service characteristic of public e-services is only partly applicable to PSM and comes with small limitations.

The other two parts of public e-services are much more straightforward when applied in a PSM context. The erosion of new technologies has driven digital media convergence and the transition from PSB to PSM in the first place. Undoubtably, multiple technological artifacts are involved during PSM production and consumption. Also, since public media organizations are publicly funded and their contents are accessible through owning a device, the accessibility and ownership properties seem plausible for PSM.

Public e-services do exist in a complex public system that also needs to be defined. While the dynamics for private services are quite simple – producer offers service and consumer buys service in a value-exchange money-for-service-use – the public system is not. For public sector organizations, the profitability ethos is replaced by a public ethos (Lindgren & Jansson, 2013). Public ethos means that public organizations should serve the public

by creating public value in an efficient way. The efficiency puts the input (budget) and output (services) of a public value into relation. Public value means the outcome of consumers (citizens) consuming the services on a societal scale (Lindgren & Jansson, 2013). For public administration, public value would therefore mean good governance of society by democratic standards through the deployment of (efficient) public e-services by public sector organizations. Public ethos, or PSM ethos respectively, is a term used in e-government and PSM studies alike (Lowe & Martin, 2014). In PSM context, the public value does change to a certain degree, leaning towards democratic standards of representation and accessibility of information for all citizens (output) and a well-informed society (outcome). As for the consumers of public e-services, Distel and Lindgren (2019) have identified a heterogeneity of citizens as service consumers. Not all citizens wish to use, participate in, or contribute to public e-services to the same degree. Since motivations and expected personal outcomes differ, the roles of citizens differ in the process of public e-service consumption. According to the authors, public sector organizations must take these different roles into account, when addressing citizens. As I have demonstrated before, addressing different target groups has seen a lot of attention in PSM studies. I do acknowledge that the definition of citizens' roles in e-government and PSM studies diverge to some degree. That being said, the core challenge of addressing citizens in different ways is valid for both public sector organizations and public media organizations.

3.2 eGov WSF

With the previous alignment of terminology in mind, I will now present the framework used for this research. The framework of choosing is the *eGov Work System Framework* (eGov WSF) introduced by Lindgren et al. (2021). It is a practical approach to understand and describe practices by public organizations producing public e-services.

Some concepts used for the model originate from the *Work System Framework* (WSF) by Alter (2013). Before explaining the eGgov WSF, I will provide some background on the underlying theory. Alter's initial framework puts the organization producing the service, the service, its consumers, and the environment into relationship, as shown in *Figure 4*.

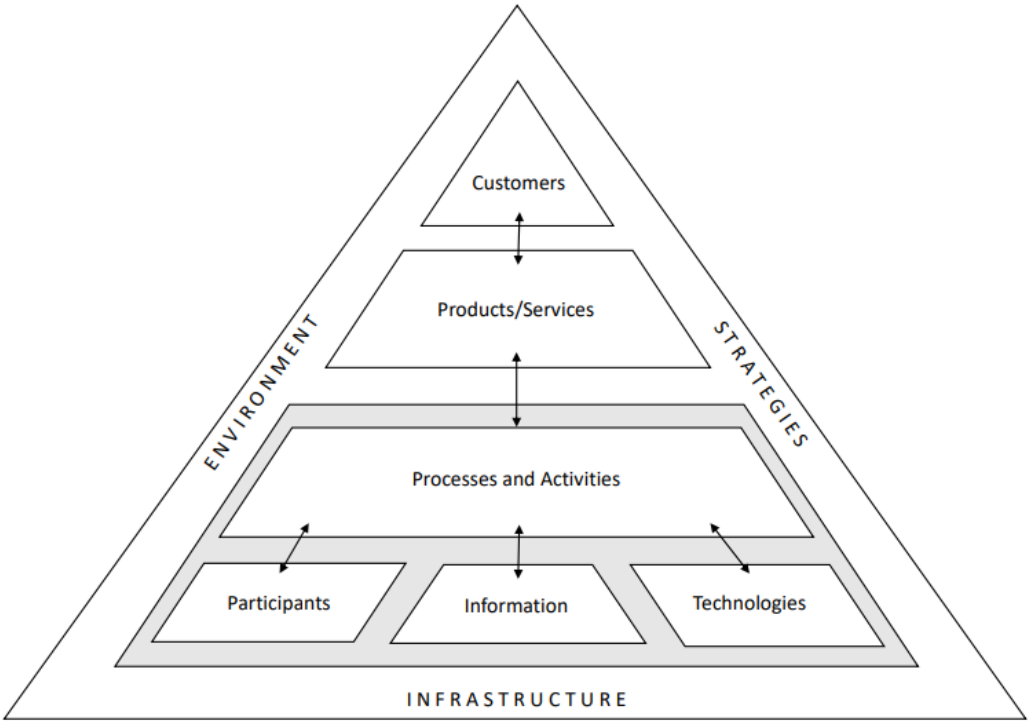

Figure 4 Work System Framework by Alter (2013), in: Lindgren et al. (2021, p. 506)

Alter's conceptualization originates from a socio-technical understanding of a system. Alter (2013) argues that a system used to produce services (or products) is not a sheer technological artifact. Rather, a system consists of technologies, information, participants (people operating the system), and processes and activities, as seen in *Figure 4*. The output of the system is a product or service, which is furthermore consumed by users (customers). The entire lifecycle of service production and consumption is embedded in the external dimensions: environment, strategies, and infrastructure. Alter's framework does not differentiate between private profitability motivation and public ethos. Therefore, the framework is not applicable for public e-services.

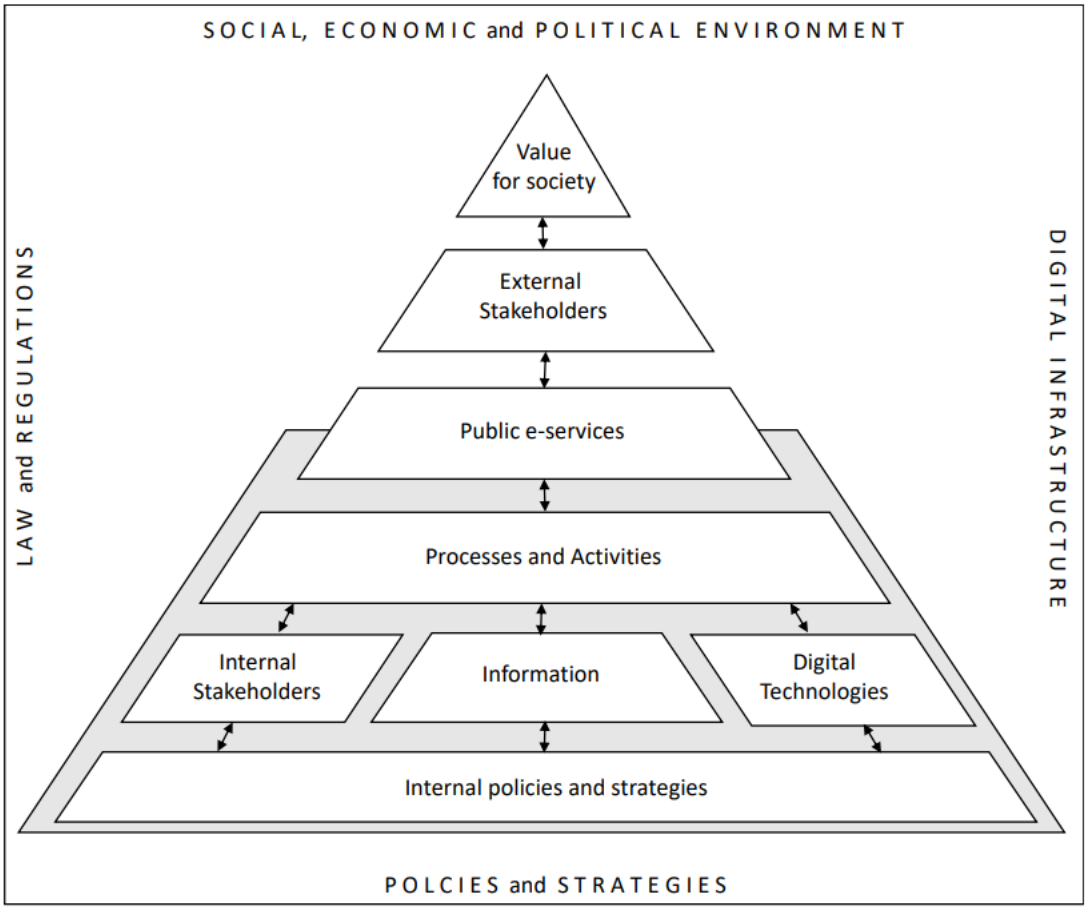

Figure 5 eGov Work System Framework (Lindgren et al., 2021, p. 510)

Lindgren et al. (2021) expanded and adjusted Alter's framework to align it with public e-services. The eGov WSF has made substantial alternations to the WSF, as shown in *Figure 5*. The baseline of a work system as means to produce public e-services is relatively similar. An important change however is that the public e-services are neither fully inside nor outside the system. The public e-services are rather the touchpoint of the work system and external stakeholders, which fill the role of public e-service consumers. The elements inside the work system are 'Processes and Activities', 'Internal Stakeholders', 'Information', 'Digital Technologies', and 'Internal policies and strategies'. The two elements external to the system, although interacting with the system, are 'External Stakeholders' and 'Value for society'. Completely outside the work system are four distinct external elements: 'Social, Economic, and Political Environment', 'Laws and Regulations', 'Digital Infrastructure' and 'Policies and Strategies'. The authors describe the eGov WSF as dynamic, which allows researchers to see the work system as subject to change and to digital transformation.

3.2.1 External Elements of a Work System

Elements that are distinctly external of the system can be understood as macro-scale variables. They not only affect the system at hand, but also similar systems and their internal elements. The social, economic and political environment refer to cultural or financial properties of a systems' environment, as well as demographics, public values, and the political system (Lindgren et al., 2021). Policies and strategies are visions or directions that decision-makers want to shape the work system towards. Such variables are believed to "[…] influence an e-government work system's output and performance" (Lindgren et al., 2021, p. 511). The authors state that often, external policies and strategies are formulated in policy drafts and strategy papers. Laws and regulations usually define the services provided to the citizens. Also, privacy, data protection, and other legal aspects are properties of this element. Digital infrastructure is the fourth element distinctly outside of the system. It is presented as a vertical element, influencing all other elements in the system to some degree (Lindgren et al., 2021, p. 512). Digital infrastructure refers to technological properties of an environment that all work systems within it share. This could, for instance, be the condition of glass fibre infrastructure, the availability of databases, or the interoperability capacity of systems.

3.2.2 Partially External and Internal Elements of a Work System

The partially internal/external interactive elements in the framework are 'public e-services', 'external stakeholders', and 'value for society'. Public e-services are the work systems output, and what is visible for the external stakeholders from the outside. Therefore, the public e-services are modelled to be partially on the inside, partially on the outside of the system (*Figure 5*). It is the point in which the work systems output interacts with the external dimension. External stakeholders are the intended users (consumers) of the work system's output (public e-services) (Lindgren et al., 2021). The relationship between the output and external stakeholders is a two-way relationship, reflecting the service characteristics that was defined earlier. The value for society is the macro perspective of (intended) outcomes from users consuming the services produced in the work system.

3.2.3 Internal Elements of a Work System

There are five elements that are completely inside the work system. 'Internal stakeholders' are people who contribute work to the work system. The definition is not limited to caseworkers, but may include all levels of the organization, as long as they are involved in the service production process. The 'Processes and activities' are defined and standardized steps and workflows, internal stakeholders (Lindgren et al., 2021, p. 515).

‘Information’ is considered to be data used, edited, consulted, or changed during the process of public e-service production. ‘Digital technologies’ are artifacts that are used inside the system. Most prominently, this can be hardware or software. Important to note is that digital technologies are not an isolated element in the work system, just as the other elements are connected as indicated by the arrows in figure X. For instance, software is used *by* internal stakeholders *to* retrieve information, or *to* perform activities. Lastly, internal policies and strategies influence the work system’s performance, related elements, and the output of the system (Lindgren et al., 2021). Internal policies and strategies are formulated by internal stakeholders. This means that there is no external interference with these strategies, although internal strategies can be influenced by all external elements.

On a final note, it is important to mention that the elements of the eGov WSF are dynamic and related. The authors themselves state that the framework helps to “[…] better understand the potential conflicts and challenges between various elements […]” (Lindgren et al., 2021, p. 515). Furthermore, the framework is labelled as a “descriptive tool” (p. 515), that helps researchers to structure and understand real world work systems. Therefore, the framework should not be used for predictive research designs, or to test hypotheses, since it does not provide any assumptions about causalities.

3.3 Digital transformation

The transformation from PSB to PSM and from public services to public e-services might differ in terms of academic fields, but the underlying logic is arguably the same. Public organizations change in the age of digital transformation. And both in PSM research (D’Arma et al., 2019) and e-government research (Lindgren and Jansson 2013), scholars identify the presence of initial uncertainty and irrational behaviour of public organizations, before actively engaging in digital transformation. Digital transformation is a difficult term to use in studies, because of its known history as a buzzword (Mergel et al., 2019). What is relatively safe to say is that during digital transformation, one or more aspects of environment, production, output, or impact of a work system change. To get a better understanding of the different faces of digital transformation, Mergel et al. (2019) conducted an international survey with public administration experts. Preliminary to the survey, the authors assume that drivers are, broadly speaking, an interplay of external and internal confluences (Mergel et al., 2019, p. 2-4). Motivations of public organizations to digitally transform might therefore be external pressure, like citizen demands, or policy change. Other drivers might be reactive, like gaining a market share, or aligning technology with partners, to not fall behind. And then, according to the authors, other transformation attempts might be outcome-oriented, meaning that a

different service or a different public value is pursued, and demands changes to internal processes.

The authors interviewed 40 experts from government- and other public organizations. Based on their interviews, Mergel et al. (2019) coded four major categories that experts refer to when they explain digital transformation[9]. Each of these categories has more specific, granular sub-codes. The first category, 'Digital transformation reasons', includes external reasons, such as pressures from the environment, or technological change, as well as internal reasons. 'Digital transformation objects' are the coded objects that the interviewed experts saw as subject to digital transformation. Such are processes, services, products, relationships, technology, and the business model. Closely related to the objects are the 'digital transformation processes'. Those are included in the taxonomy as the digitization of processes, physical documents, relationships, services, the use of new technology, and the development of new competences. The fourth category, 'results of digital transformation', is divided by three subcategories: output, outcome, and impact. Output refers to the intended transformation efforts of a work system, like new services, products, processes, and skills. Outcome however describes the bigger picture, and the effects of digital transformation within a work system on the environment outside the system, like improved services, better relationships, policies, or an improved digital environment. For this research, perhaps the most relevant subcategory is 'impact'. The impact category from Mergel et al. (2019) incorporates the understanding of interviewed experts of digital transformation efforts, and how the results of which impact the organization and its environment as a whole. The codes subordinate to impact include value creation, organizational change, digital society, and democratic principles.

As the authors analyse the conducted interviews, they observe that some subcategories got more attention from the experts, and therefore seem more dominant in digital transformation efforts than others. For instance, processes, relationships, and services appear to be the most frequent objects of digital transformation (Mergel et al., 2019, p. 8). The business model or technology are not frequent objects of digital transformation. The most conducted processes of digital transformation are the use of new technology, and the digitization of processes. The most frequent result of digital transformation is organizational change, followed by improved services. Interestingly enough, the actual output only reflects a small minority of transformation results among the interviewees' responses.

[9] I am referring to the coding taxonomy presented in Figure 1 in Mergel et al. 2019, p. 7.

4 Methodology

4.1 Qualitative Multi-Case Design

To address the research questions and pursue the research goals, I chose an explorative multi-case study research design, using qualitative methods. Multi-case studies exhibit specific strengths and weaknesses that demand methodological preciseness and transparency (G. Bowen, 2015). In this section, I will provide background to why I chose this study design and document the procedure of this study.

Explorative designs are usually used when pre-assumptions and hypotheses are difficult to formulate (Meinefeld, 2004). However, researchers should still collect as much information about previous research and possible concepts to explain the findings of an investigation. To close the gap between existing research and the research questions of a study, "exploratory research seeks to provide new explanations that have been previously overlooked and it can do so through the active involvement of the researcher in the process of amplifying his or her conceptual tools to allow him or her to raised new questions and provide new explanations of a given reality, from a new angle" (Reiter, 2017, p. 144). While my research does explore an under researched topic, I am still using theoretical frameworks to some degree, as I have laid out in Chapter 3 of the thesis. Therefore, my research thesis is not theory-generating. As Lindgren et al. (2021) pointed out, the eGoV WSF can describe and structure evidences, but only explain so much as researchers observe. I would therefore argue that while my thesis' research design is explorative, qualitative, and open to evidences, the theory framework used is providing guidelines for the data collection and data analysis process.

Case studies are a popular research design in both theory testing and evidence generating research designs. Gustafsson (2017) argues that for unstructured phenomena, multiple-case studies can have the edge over single case studies. Single case studies can also provide clear empirical evidence but are limited in finding comparable results between units of investigation, because findings might be highly case-specific. However, when comparing results between cases, researchers need to pay attention to the cases' contexts. Otherwise, a lack of background search can lead to false interpretation, when analyzing research results (Gustafsson, 2017). However, researchers are challenged when it comes to prior personal knowledge about phenomena, to not covertly include this into the research process, but lay out all the relevant background information transparently (Meinefeld, 2004).

When choosing a comparative multi-case study approach, researchers must also ensure to use similar data. This means that a data collection method should be pre-defined and

kept throughout the process (Flick, 2004a). Flick (2004) suggests the use of multiple methods in qualitative case-studies. This can improve generalizability. Bowen (2015) refers to it as “thick descriptions of the phenomena” (p. 216). Multiple sources of data also align well with what Reiter (2017) meant by “new angles”: if a pattern shows in a specific phenomenon through the statements on an expert, but there is no other data to support this description, then the researcher is faced with a high degree of methodological dependency. Flick (Flick, 2004b) describes the triangulation of data process as a useful tool for qualitative research. Triangulation means that for answering a research question, the researcher consults and cross-validates data from different data collection methods.

4.2 Methods

4.2.1 Preliminary Case Context Exploration

As both Gustafsson (2017) and Meinefeld (2004) argue, case context is an integral part of a multi-case research process. Therefore, I will provide information about the case sample in Chapter 5 of this thesis. I want to stress that case context exploration is a preliminary method, rather than actual data collection. It is targeted to improve the quality and comparability of the other data collection processes and ultimately, to improve the results synthesis.

4.2.1.1 Goals

The goals of providing case context are:

- Share information about the cases and enhance transparency and intersubjectivity of the study method. Reduce the knowledge gap between the author and future research.
- Understand the shared context of the cases.
- Understand the individual specific context of each case.
- Identify structural similarities and differences in the case contexts.

4.2.1.2 Objectives

Since the eGov WSF focusses on clear elements, there are objectives as to what the case context should cover. However, the eGov WSF is not a closed framework, as there are not exclusively defined dimensional properties. To a certain degree, I do expect some

properties that are relevant to the eGov WSF elements, which are henceforth objectives of the case context exploration:

- History and legacy systems of the cases.
- Political environment.
- Physical infrastructure.
- Legal and regulatory environment.
- Governance structure.
- Financing systems and budgetary means.
- Proportional parts of online and linear service output.

4.2.1.3 Sources

To gather the information, I accessed available public sources and reference them accordingly, so that future research can reiterate, or possibly, update the context. Possible starting points are:

- Websites of organizations represented in the case sample. Often, organizations have an ‘about’ or ‘transparency’ section with information.
- Online archive sections of the organizations.
- Business reports of the organizations.
- Press-releases of the organizations.

4.2.1.4 Visualization

To conclude the section on the case-context, I visualize the findings on the shared context, individual case context, as well as differences and similarities between the cases in a structural pattern table. As mentioned before, I do not expect this table to represent objectives of section 4.2.1.2 exclusively. Open qualitative research allows me to expand my understanding of specific contexts as I go, so the vitalization will represent the findings as precisely as possible, without any limitations due to pre-assumptions.

4.2.2 Expert Interviews

Expert interviews are an often-used scientific method in qualitative research (Bowen, 2015). There are a number of different qualitative interview procedures to chose from. For my thesis, I consider semi-standardized interviews. Semi-standardized expert interviews are a prominent data collection tool for theory-guided research, that still aims to leave room for situational evidence that the researcher did not expect beforehand (Hopf, 2004). The logic behind semi-structured interviews is to let interviewees respond openly, while directing the topics through questions, that incorporate some degree of conceptual guidance. In terms of time spent on preparation and execution, but also in terms of amount of data and insights, the expert interviews are the primary research method of this thesis, and the primary factor in the results synthesis.

4.2.2.1 Target Group and Recruiting

The target group for the semi-structured interviews is thought-out to reflect the "internal stakeholders" element of the eGov WSF. This definition excludes all possible candidates that do not contribute to the work system's output (public e-services), such as academic experts or high-level managers. The relevant internal stakeholders in the research cases therefore have to:

1. Contribute to the creation of PSM contents, and
2. Work for one of the organizations in the case sample, or
3. Work for a subunit/suborganization of the case sample, as long as the subunit/suborganization is producing PSM contents for at least one of the organizations in the case sample.

I do acknowledge however that there are different positions within public media organizations. I assume that while some positions, like an editorial professional, are more involved with the day-to-day content creation, other positions are supporting or coordinating. Possible other activities could include strategic coordination, IT support, or information management.

The recruiting process for the semi-structured expert interviews was conducted in two phases. In the first phase, the public relations departments of the respective public media organizations were contacted, stating the research request and sharing some information about the research goals, as well as personal and contact information. The second phase consists of individual targeted recruiting via accessible contact information. I will provide details on the recruitment and response behaviour in the results section of the thesis.

4.2.2.2 Questionnaire

Questionnaires and interview guides for semi-structured interviews should be feasible and include a realistic number of questions (Hopf, 2004). In a first draft, I formulated questions that were supposed to reflect the elements of the eGov WSF as well as possible. Then, I engaged in two separate discussions with colleagues, informing them about my research, showing and explaining the eGov WSF, and presenting the questions. Based on their suggestions and critiques, I drafted a second, set of questions that was smaller and more consolidated than the first. Also, the questions then represented ´not only the elements of the eGov WSF, but also, to some extent, the relationships between the elements.

Based on the responses to the research inquiries in the recruitment phase, I identified two roles among the experts in the work system, who I would engage with in interviews:

1. The editorial professional, who works with PSM content production on a day-to-day basis. I assumed that the editorial professional makes many smaller decisions every day while having a significant part in the activities and process execution. I also expected the editorial professional to have an on-the-ground, unfiltered understanding of what information and technology can contribute to the processes and activities.

2. The strategy coordinator, who has a more managerial role in the work system. I assumed that the strategy coordinator has a bigger say in strategic matters and has a clearer view on goal attainment of the work system. I also expected the strategy coordinator to have a birds-eye perspective on the elements in the work system, understanding underlying purposes and reasons for their relationships.

After correspondence with my supervisor, I did alter the set of questions for the respective roles. However, I was made aware that for the sake of comparability, the differences between the questionnaires should be kept to a minimum. After I came up with the third, role-specific draft of the questionnaires, I once more requested feedback from two colleagues.

The final versions of the two questionnaires (Appendix A; Appendix B) consist of nine questions (Editorial professional, Appendix A) and ten questions (Strategy coordinator, Appendix B) respectively. In comparison to the editorial professional questionnaire, the strategy coordinator questionnaire consists of one unique question (Q8, Appendix B), three slightly altered questions (questions marked with a [*], Q1*, Q6*, Q7*, Appendix B), and six questions exactly the same as in the editorial professional questionnaire.

4.2.2.3 Interview Process

Besides the recruited interviewees and the questionnaires, the actual interview situation has a considerable impact on the quality of the research method. Hopf (2004) identifies common mistakes in the interview process. Semi-structured interviews can profit from flexibility in the interview situation: If the interviewee is not responsive when asked a pre-formulated question, the interviewer can re-word the question or ask a new question, referring to the same concept. However, with research goals and research questions in mind, interviewers might tend to ask suggestive questions. This problem is also known as researcher bias. Other mistakes can happen, because the interviewer does not ask enough follow-up questions or feels insecure about controlling the interview, by endorsing briefer or more extensive responses. Hence, the flexibility of a semi-structured interview situation can be a double-edged sword if the interviews are not executed according to general guidelines and suggestions.

To assure a smooth interview process, I also drafted guidelines that I used during the interviews:

- Pre-Interview conversation. Scientific interviews are not a common form of communication for most people in my target group. Therefore, before every interview, I talked about my thesis and the topic, without referring to the concepts or questions, to avoid biases. I also asked "easy questions" in these preliminary conversations, like: "how long have you been working for organization/in department XYZ?". I also informed the interviewees about the documentation of the interview transcripts.

- Incentivise honesty. During the pre-interview conversation, I did mention that "I don't know" or "I can't answer the question the way you asked" are valid answers. This gives the interviewer the change to rephrase the question or give an example to clarify. Moreso, the incentive avoids guilt-driven answers that might diverge from reality and distort the results.

- Flexible order of questions. The content of the responses in the interview situation is more important than keeping the order of the questions from the questionnaire. I, being the interviewer, rearranged the order of the questions to uphold a good flow of the interviews. This could go as far as formulating a question originally from the questionnaire, as a follow-up question at an earlier point in the interview.

- Use of follow-up questions. Some respondents answer questions more broadly than others. Follow-up questions can specify topics and should be used to achieve a similar level of details between the interviewees.

- Prepare examples and explanations. Scientific language can be complex to understand ad-hoc. For instance, if asking how technology and processes are "aligned", the question can be too abstract for interviewees to come up with an answer immediately. Secondary explanations and examples can help to clarify the questions.

4.2.2.4 Data analysis

The *data* of qualitative interviews is the content of the interviewee's responses. To extract and analyse that data, interviews are first transcribed into text. A common form for analysing interview transcripts is content analysis. While there are multiple methodological guidelines to content analysis, I will rely on the 'directed content analysis' approach by Hsieh and Shannon (2005), and occasionally refer to Mayring (2015) for comparison. Generally speaking, content analysis is a scientific method to analyse the "content or contextual meaning of texts" (Hsieh & Shannon, 2005, p. 1278). A common strategy to structure and document findings in the content is the process of coding segments of the text into a taxonomy, or category scheme. Depending on the type of qualitative content analysis, the coding and category-building process differs.

Directed content analysis is used when "[…] existing theory or prior research exists about a phenomenon that is incomplete or would benefit from further description" (Hsieh & Shannon, 2005, p. 1281). In such research cases, directed content analysis can contribute to validate or extend theoretical concepts or frameworks. Hsieh and Shannon (2005) further elaborate that existing theory can guide a directed content analysis process, by indicating important variables or relationships of interests. The theoretical guidance allows researchers to identify some coding categories preliminary, but also, to draft questions that target the theoretical categories during the interviews. Given the overall research design of this thesis: **(1)** the lack of predictive frameworks, **(2)** the theoretical guidance of the eGov WSF and the **(3)** questionnaires mildly based on the framework; the directed content analysis is an excellent fit for the data analysis.

The coding process for the directed content analysis includes both deductive and inductive coding (Hsieh & Shannon, 2005, p. 1281-1282). This means that while working with the text, researchers will code segments with pre-defined codes (deductive, from theory) and code segments with new (sub-)codes (inductive, previously unknown). New codes can be used for segments that cannot be coded with pre-defined codes, or for

subcodes so specific to segments that they are only broadly covered by pre-defined codes. Hsieh and Shannon (2005) recommend two different starting-techniques for the coding process: if

a) the content relies on non-verbal expressions and emotions, start by marking these expressions in a first run-through, to avoid emotional biases during the coding process.

or, if

b) the content is clearly semantic and the researcher feels confident about their knowledge about the pre-defined categories, start the coding process right away.

Mayring (2015) clearly differentiates between deductive and inductive coding. However, there is an iteration mechanism in the author´s deductive category application, where categories can be redefined after revision of 10-50% of the content, and then repeatedly after revision of the entire content, until no more alterations to the codes are done (Mayring, 2015, p. 378). Given the partly inductive nature of the directed content analysis, iteration can help to consolidate categories. Therefore, Mayring's suggestion of reiteration until the coding scheme is final, will be incorporated in the coding process.

Based on the eGov WSF, the predefined categories for the content analysis are:

- Social, Economic and Political Environment,
- Law and Regulations,
- Digital Infrastructure,
- Policies and Strategies,
- Value for Society,
- External Stakeholders,
- Public e-services,
- Processes and Activities,
- Internal Stakeholders,
- Information,
- Digital Technologies, and

- Internal Policies and Strategies.

While the case context exploration is the primary method to understand the elements outside of the work system, the questionnaires target the elements inside and partially inside the work system. Therefore, I do not expect many codified segments for the elements outside the work system in the content analysis results. However, explorative research demands to not preliminary exclude results, because it could artificially create biases. Furthermore, I will use the first layer of the digital transformation taxonomy by Mergel et al. (2019) as categories:

- Digital transformation reasons,
- Digital transformation objects,
- Digital transformation processes, and
- Results of digital transformation.

These categories however are complementary to the codes implied by the eGov WSF. Content that allows a triangulation of two theoretical frameworks would increase the explanatory value of the findings. However, I do not want to over-use codes, only in order to generate more results (and biases on the way).

4.2.3 Document Analysis

As a complementary method, I use document analysis, a "[…] systematic procedure for reviewing or evaluating documents[…]" (Bowen, 2009, p. 27). Bowen (2009) states: "Document analysis is often used in combination with other qualitative research methods as a means of triangulation[…]" (Bowen, 2009, p. 28). As I have outlined above, the main method for this thesis are semi-structured expert interviews. However, since Lindgren et al. (2021) explicitly mention internal documents and strategy papers as useful sources for the eGov WSF 'Strategies and Policies' element, document analysis appears to be the right methodological fit to complement the main method.

4.2.3.1 Strengths and Limitations

According to Bowen (200), document analysis methodology profits from a sound resource efficiency and low dependency on external data. Researchers basically can collect documents of interest and start the analysis right away. However, solemnly depending on documents can internalize biases to the study results, as strategy papers or policy documents are not necessarily objective. Also, document analysis faces the

limitation of selectivity biases and errors. For instance, documents could be falsely included or excluded, because the titles diverge from the actual content. Also, documents might have varying levels of details and coverage, making results less comparable.

4.2.3.2 Sources and Scope

As for the sources and scope of the document analysis, all publications of the researched organizations concerning digital and PSM policies and strategies qualify for the analysis. However, extensive business reports covering a broad range of topics will not be included. If there are no strategy papers/reports available, but they are included in an extensive report, then only the relevant segments are analysed.

4.2.3.3 Procedure and Documentation

The procedure proposed by Bowen (2009) "combines elements of content analysis and thematic analysis. The author suggests an iterative process, in which content of the documents are read codified into categories. However, the thematic analysis element demands a closer, careful look at the data since documents can have different degrees of neutrality and serve certain purposes. Especially when it comes to policies, some information might only be included covertly and can be identified by questioning the text's intentions. In that sense, the researcher is expected to put the contents into an objective and case-sensitive light. Naturally, the more iterations are performed, the more likely it is for the researcher to achieve objectivity and sensitivity.

As document analysis is only a secondary and complementary method, the procedure will be performed minimalistically, in order to keep the effort for all data collection and analysis methods feasible. For this thesis, the resource focus of the document analysis is on the iterative process. I use the same pre-defined categories from the directed content analysis and waive the inductive codification. Instead, the thematic analysis aspect will be the focus. The results of the document analysis will be documented as short summaries, structured by the aforementioned categories.

5 Case Study Sample

In the following section, I will outline the case selection for my research and give insight into the shared, and each specific case context. Since public broadcast and public media organizations generally exist in many countries, a wide range of organizations could be investigated in this thesis. I however opt for a case selection on multiple organizations from a single country. When doing so, measures for ensuring transparency and intersubjectivity should be made by the researcher. Therefore, I will give a brief introduction about media systems and what to consider when researching on a single media system. Afterwards, I will present the landscape of German public broadcasting and the organizations providing PSM that will be investigated in this research. The sample of cases will incorporate four public media organizations: The SWR, as a representative organization for the ARD network, the ZDF, Deutschlandradio, and funk. Some aspects, like legal background and funding are based on the very same institutions for all cases. To avoid redundancies, I will not explain the same laws, regulations et cetera by detail for every case.

5.1 Media System Context

As briefly mentioned in chapter 2.1.2, public broadcasters have different roles and a varying significance for society based on the media system. Without going in too much depth on the topic, I will provide a short background section on media systems based on Hallin and Mancini's (2004) *Comparing Media Systems: Three Models of Media and Politics*. Their work is by no means undebated and has been amended on multiple occasions, but their categorization of three general kinds of media systems gives a good baseline understanding on how to differentiate between media organizations in different countries. Hallin and Mancini (2004) use a framework that defines a media system based on economic factors, like the media market, political factors, like political parallelism[10] and state intervention, and cultural factors, like the journalistic self-understanding and journalistic professionalism. Through applying such categories, they categorize 18 European and North American countries into three different media systems: The Mediterranean Pluralist Polarized Model, The North/Central Europe Democratic Corporatist Model, and the North Atlantic Liberal Model.

The authors then list characteristics for each of the three media systems, which they observed in the sets of the categorized countries. The Democratic Corporatist Model includes Austria, Belgium, Denmark, Finland, Germany, Netherlands, Norway, Sweden, and Switzerland. According to Hallin und Mancini (2004), these countries have a diverse

[10] Political parallelism in this context means the degree to how the political spectrum is mirrored by the partisanship of media organizations.

media market with self-regulating media companies and a dual broadcasting system, consisting of public broadcasters and profit-oriented broadcasting companies. Public broadcasting companies tend to play a key role in these media systems and receive substantial public budget that allows them to compete with private companies, without relying on the main income streams coming from advertisement. In systems labelled as Democratic Corporatist media Model, states also tend to take more agency in protecting media freedoms through policies and subsidies. In return, public broadcasters are expected to closely follow the principles of neutrality, reality, and universal availability. In the Liberal Model, which includes the United Kingdom, Ireland, the United States, and Canada, public broadcasters are of less weight than in the Corporatist Model. The media markets in liberal media systems appear to be highly profit-driven, and public broadcasters are expected to adapt and restructure in a profitable way, with only limited state subsidies. In return, public broadcasters have more liberties and a less institutionalized self-governance structure. In the Pluralist Polarized Model that includes France, Greece, Italy, Portugal, and Spain, both the commercial media market and public broadcasters are highly politicized. This means that private media outlets tend to have strong partisanship, and in public broadcasting content, political commentaries dominate over neutral reporting.

In the final chapter of their book, Hallin and Mancini (2004) come up with a hypothesis, expecting that media systems will be subject to media convergence effects over time. Hence, they expect differences in media systems to fade over time. In a 2017 reflection paper on critics and follow-up research on their work, the authors point out that while media convergence remains a difficult field to study, they do in fact see tendencies of media systems converging towards the Liberal Model (Hallin & Mancini, 2017).

In this study, I will only be looking at public broadcasters and PSM organizations within the German media system. However, the preliminary note that not all media systems are the same and have their unique similarities and differences is important for two reasons. Firstly, it helps to put the researched cases into context and perspective. Knowing that the institutionalized self-governance is relatively strong in the German media system is key to understand why organizations change at a certain pace. Secondly, as I will provide some research background on media convergence and public media organizations, the comparability between cases will differ based on their respective media system background. For instance, findings about media convergence effects on PSM organizations in countries from Germany's Corporatist Model might be more relevant for this study than for other PSM organizations from other countries. Although, given the trend of convergence toward the Liberal Model, developments in that group might also

be small indicators about what is yet to come for the Corporatist Model countries' organizations.

5.2 Research Cases

5.2.1 ARD/SWR

The post World War Two public broadcast history in Germany dates back to 1946, when the Allied governance sectors started licensing regional German broadcast stations. After formal unification of the Allied governance sectors to the (west-) German Federal Republic in 1949, the sectors were followed up by a federal government structure. This federal structure is also reflected in the emergence of public broadcasters in the west. Due to large differences in coverage perimeter, number of users, and finances, the regional broadcasters formally founded the overarching *Working Group of Public Broadcasters of the Federal Republic of Germany* (*'Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland'*, ARD) in June 1950, in order to coordinate, allocate resources, and create a state-wide unified programme additional to the regional programmes (bpb, 2020). The regional broadcasters have undergone a number of restructuring processes, as also the territory of the German state changed with the Saar-Region joining the Federal Republic in 1957, and with the German unification in 1990. Today, there are nine regional public broadcasters within the ARD: NDR (*North German Broadcast, Norddeutscher Rundfunk*), RB (*Radio Bremen*), RBB (*Berlin Brandenburg Broadcasting, Rundfunk Berlin Brandenburg*), MDR (*Middle German Broadcast, Mitteldeutscher Rundfunk*), WDR (*West German Broadcast, Westdeutscher Rundfunk*), HR (*Hessian Broadcast, Hessischer Rundfunk*), SWR (*South West Broadcast, Südwestrundfunk*), SR (*Saar Broadcast, Saarländischer Rundfunk*), and BR (*Bavarian Broadcast, Bayerischer Rundfunk)* (ARD, n.d.a).

All regional broadcasters under the ARD roof are producing linear TV content, linear radio broadcasts, and PSM. There is also a shared TV programme and several PSM channels that originate from ARD programmes. The ARD also shares its 'Mediathek', which functions as their video on-demand (VoD) service platform. All public broadcasters in Germany are bound to one legal framework, called 'Medienstaatsvertrag' (MStV), which serves as the *Media Treaty of Germany* (Medienstaatsvertrag (MStV), 2021). The treaty was passed by the regional governments of the Bundesländer in late 2021, replacing the previous 'Rundfunkstaatsvertrag' (RStV) that has been its predecessor since 1991 (Staatsvertrag Für Rundfunk Und Telemedien (Rundfunkstaatsvertrag - RStV) - Zweiundzwanzigster Rundfunkänderungsstaatsvertrag, 2019). As policy makers were faced with the problem that the old treaty did not address

the universal accessibility principle accordingly and had to be changed too many times, the new bill was passed. The latter is significantly highlighted in the fact that the EU directive 2019/882 for digital accessibility is listed as a main motivation for the new legal framework. The MStV that is in force since June 30th of 2022, picks up pre-existing and previously mentioned principles and ethics, manifests the financing of public broadcasters, and puts a new emphasis on digital media.

The governance and oversight of each regional broadcaster is assured by two bodies for each organization: the ‘Rundfunkrat’ (*Broadcasting Council*), and the 'Verwaltungsrat’ (*Administrative Council*) (NDR, n.d.; SWR, n.d.a). The latter is running the operative, structural, and financial day to day business, while the Broadcast Council is overseeing political neutrality, representation of societal groups in the content, and also votes on the Administrative Councils’ members. Besides each regional broadcasters’ governance architecture, there are also the joint board conferences (ARD, n.d.b). The joint board conferences are chaired by the representatives of one of the regional broadcasters who rotate this position over time. In these conferences, cooperation, integration, and shared policies are discussed. Just like governance and oversight, the financing of public broadcasters is regulated by the MStV. The shared commission for financial planning KEF is evaluating the budgetary means of all public broadcasting organizations in Germany every four years (KEF, n.d.). Based on the financial need of the public broadcasters, the KEF calculates a household fee (‘Rundfunkbeitrag’) that each German household with the capability of receiving any PSM has to pay. Households without the necessary devices to receive PSM, which is most often referred to as radios, TVs, computers, and smartphones, can opt to be excluded from the mandatory fee. As of right now, May 2023, a household fee of 18.36€ is collected from every household every month (SWR, n.d.b). In 2021, the ARD derived 85% of its budget from the household fees, while the other 15% were allocated through sponsorship, advertisement, and ‘other’ (ARD, n.d.c). Per se, public broadcasters are not using ads in their general programme. Only at large scale media events that also demanded a previous investment of funds to acquire broadcasting rights, like big sports events, public broadcasters use ads to balance out the sum they had to pay in the first place. Out of the 18,36€, the ARD, including the regional broadcasters receive 12.78€, while 8.75€ are distributed directly to the regional broadcasters (ARD, n.d.d). By this distribution, the ARD receives the majority of all public funding (69.6%). The regional broadcasters of the ARD outlets alone receive nearly half (47.7%) of all public funding out of all the money available to public broadcasters in Germany. An important note is to make about how much money is spent on digital and multi-media, as well as IT, hardware and administration. In all of ARD,

regional broadcasters included, only 4.3%[11] of the public ARD funds is spent on digital and multi-media, and only 11.5%[12] for IT, hardware, and administration respectively[13]. The majority of the ARDs budget is therefore still spent on linear public broadcast contents.

To make the case selection for this thesis feasible, I will only look into one of the mentioned regional broadcasters as a representative of the entire ARD, the SWR. The SWR is covering the southwestern areas of Germany. SWR in its current form was created in 1998, by merging two smaller regional broadcasters (SWR, n.d.c). Its headquarters are therefore located in Mainz and Stuttgart, due to the legacy of its previous organizational structure. Also, the SWR currently chairs the joint commissions of the ARD, which makes it the most representative case as of right now (ARD, 2023). The SWR is managed in the same dual governance system as laid out before. Its finances are also widely similar as portrayed for the ARDs distribution. The only key difference appears in a lower percentage for IT and hardware spendings (SWR n.d.b). The financial priorities lie with the linear production of TV and radio contents. The latter is also reflected in the organizations' about section, incorporated in their website, as the SWR highlights its content diversity, strong regional focus, and political independence. 35, and 43 words respectively in German and English are dedicated to the digital transformation of PSM: "The digitalisation of the media and the changed media usage pattern leave their mark on us as well. We are venturing on new paths in programming and program distribution, conduct a dialogue with our users and design new offers specifically for web-based use" (SWR, n.d.d).

Nonetheless, the organization has a number of social media and third-party platform channels that constantly publish PSM content. Unfortunately, the exact number of channels is not accessible. By cross-referencing PSM output on the largest third-party platforms[14], the Mediathek-content and the presented channels in the about section of the SWR, one can observe that a) not all editorials who produce linear content are present on the same platforms, and b) not all online PSM formats are represented in the linear format.

[11] For this calculation, I used the officially declared distribution of the household fee (ARD n.d.d). In the table of ARD spendings, 4.2.2 "Digitale Programme", 4.2.3 "funk", and 5.2. "Multimedia" can be directly associated with the budget for digital media and multi-media content production.
[12] Here also, I consult the officially reported budgetary numbers of ARD. Sections 4.2.5 "Beitragsservice", 5.7 "Technik", and 5.8 "Verwaltung" can be associated precisely with IT, hardware, and administration.
[13] I do want to note that I chose these categories deliberatively to make a comparison between linear spendings, digital spendings, and administrative spendings. Neither the chosen categories nor the associated budgets follow a standardized framework. Therefore, I do not recommend to re-use these budget proportions for future references. They are aimed as a temporary reference to one years' specific budget report, to create an understanding of budget priorities in German public media.
[14] The Meta-platforms, namely Facebook and Instagram, YouTube, Twitter, and TikTok.

Therefore, editorials seem to have a different focus on platforms, and there seems to be online-only PSM formats.

One final sidenote to make about the SWR is its entrepreneurial market activities. The organization owns an enterprise, ‘SWR Sender Services GmbH’, through which it holds and operates other sub firms (SWR, n.d.e). For instance, together with the BR, the SWR owns a company called ‘Public Value Technologies GmbH’ that specializes on building and operating VoD streaming services.

5.2.2 ZDF

The ZDF (*Zweites Deutsches Fernsehen, Second German Television*) was founded in 1961, through a treaty between the regional governments of (West) Germany to establish a secondary, centralized, and alternative public media programme to the ARD (ZDF, 2023a). In 1964, the organization moved to its permanent location in Mainz. Today, the ZDF is legally grounded in the same treaty as its ARD counterpart, the MStV. Same is to be said about the dual governance structure, consisting of a broadcast council and the administrative council. Perhaps the only major difference in terms of governance is the country-wide representation opposed to the regional representation in the ARD organizations. As the broadcast councils within the ARD are meant to represent the civic interests of the respective regions, the members of the ZDF council are supposed to represent all of the German society (ZDF, 2023b). The institutional objectives of the ZDF are also similar to the ARD. Whereas, the regional priority on universal accessibility, representation, and reality of the regional broadcasters is replaced with a holistic priority within the ZDF (ZDF, 2017). The missing regional component reduces pressure on the content-creation for ZDF editorials.

The funding system based on the KEF budget evaluation is the same as for the ARD. Out of the 18.36€ household fee, the ZDF receives 4.69€, which translates to 25.5% of the public funding (ZDF, 2023c). A straightforward balance of the proportions going to digital PSM is not given in the case of the ZDF. Rather, the organization states on its website that while its digital PSM products are creating value for a wide range of target groups, the costs are incorporated in the overall production efforts (ZDF, 2020). Probably the best indicator for the financial priorities is found in the details of the enterprise closing report of 2021 (ZDF, 2023d). In 2021, the ZDF spent an overall budget of 2.548 billion euros. Roughly two billion euros were allocated via the household fee, while about 375 million euros were allocated through advertising and entrepreneurial activities. The gap between income and spending, 152 million euros, was covered by loans. The majority of the budget, 1.358 billion euros, was spent on content production, including both linear and online, followed by roughly 600 million euros on personnel expenditures, and 230

million euros on operative expenditures, including administration. This results in slightly lower budget-administrative expenditure ratio as the ARD counterparts, of about 9% (ARD: 11.5%). Although, the organization expects this ratio to increase to 10.6% for 2023 (ZDF, 2023e). The production budget for 'new media' shares a ratio of 3.1% of all content production expenditure in 2021, but saw an increase north of 60% compared to the prior year. The ZDFs contribution to 'funk'[15] in production expenditure was 9.7 million euros in 2021, a share of 0.7% of the overall production budget (ZDF, 2023d). An important note is that the administrative costs in the 'new media' segment account just 100,000€, and therefore 0.04% of the administrative expenditures, showing the previously mentioned approach of the integrated cost approach. For the ZDFs funk contribution however, 3.7 million euros are spent on administrative costs, which translates to a ratio of 1.6% of all administrative expenses.

Like the SWR, the ZDF is holding several market-oriented companies through its 'ZDF Enterprise' company (ZDF, 2021). One of the subcompanies is ('ZDF Digital Medienproduktion GmbH'/'ZDF Digital') is specialized on social media company production, and delivers services to private media outlets, companies' PR departments, and also, to the ZDF (ZDF Digital, n.d.).

A similar tendency is to be said about the ZDFs' online PSM landscape. While a lot of linear programmes are visible on various third-party platforms and the Mediathek, not all channels are reflected in the linear broadcast. Hence, similar trends to the SWR about the online and online-only presence of the ZDF seem to be in place.

5.2.3 Deutschlandradio

Deutschlandradio is a public broadcaster that was founded in 1994, and consolidated two former west German and two former east German radio broadcasters (Deutschlandradio, n.d.a). Since then, the organization has been restructured in three branches that run their own linear radio broadcast programme, and manage their own online PSM portfolio (Deutschlandradio, n.d.b). The branches are named Deutschlandfunk (DLF), DLF Kultur, and DLF Nova. While DLF covers the hard topics, as in information about society, news, and politics, DLF Kultur covers cultural topics and entertainment, and DLF Nova specifically targets the youth as their main audience. The branches are located in different locations and, in terms of content production, operate independent from one another. However, the governance structure of Deutschlandradio is unitary and just like the dual governance structure of the ZDF, is supposed to represent all of Germany. The legal framework is also the same, being the MStV. Deutschlandradio is also holding the

[15] Funk is a shared content-network of ARD and ZDF and a PSM organization of its own. It will receive its own section in this chapter.

majority of shares in two secondary enterprises that, according to the 2021 business report, are supposed to ensure IT, facility management, maintenance, and other services (Deutschlandradio, 2022).

Deutschlandradio receives 0.54€ of the 18.36€ of the household fee, and therefore 2.94% of the public funding (ARD, n.d.d). In the latest published financial plan for 2022, the entirety of expanses for all Deutschlandradio branches is roughly 297 million euros (Deutschlandradio, 2021). 64.9 million euros (21.9%) of the overall budget is spent on content-production. Unfortunately, the report is unspecific about expenditure on digital PSM production. Also, the proportion of administrative costs is not identifiable for the case of Deutschlandradio. Technical expenditures make the fourth-largest department of expenses with roughly 12% (35.5 million euros). Surprisingly, the largest budget is dedicated to 'Other Expenditures' (31.8%; 94.44 million euros). Maintenance (included in 'Other') activities alone (cost titles 475 and 476) cost Deutschlandradio 19.66 million euros, which is north of 6.6% of the annual budget. The largest expenditure however in the 'Other Expenditures' is yet another 'Other Expenditures' subsection (cost title 481) with 22.18 million euros, which accounts for 7.47% of the overall budget. Also, this specific 'Other' subsection of 'Other Expenditures' has seen a 44.77% increase over the past two years, and is responsible for 30.75% of Deutschlandradios overall budget increase in the same period of time. In comparison, the expanses for content production have increased by 5.35% since 2020, being responsible for 14.78% of the overall budget increase, despite being a) the core responsibility of the organization and b) being the bigger numerical budget.

When it comes to social media and third-party platforms, each branch of Deutschlandradio is running their own channels. On the respective websites, one can tune into the live-broadcast and access single programme contents and podcasts. All DLF, DLF Kultur, and DLF Nova have a strong presence on Spotify, with many episodes of various podcasts. The organization reported roughly 38 million streams on Spotify in both 2020 and 2021 (Deutschlandradio, 2022). While the linear programme, Web-based presence, and the Spotify presence seem aligned, the social media appearance of each branch is producing different PSM content. Also, the branches are represented on different third-party platforms. For instance, DLF Nova is the only branch that has decided to expand to TikTok, while the others focus on Facebook, Instagram, and Twitter.

5.2.4 Funk

Funk was created in 2016 by a joint commission of ARD and ZDF, with all regional governments of Germany signing it into the legal framework in 2014, which was then replaced by the MStV (ARD Media Gmbh, 2018). Its official name is 'funk – das Content-Netzwerk von ARD und ZDF', referring to its network- and decentralized characteristics. Funk is located in Mainz and Berlin. Unlike the other cases in this sample, funk does not have a governance structure on its own, but is overseen by the organization chairing the ARD boards and therefore, currently by the SWR (funk, n.d.a). Also, the organization does not have a budget on its own, but receives cofounding by ARD and ZDF. The published budgetary numbers have been assessed in the ARD and ZDF section of this chapter, but due to the proportional (ARD) and numerical (ZDF) budget reports, funks specific budgets are difficult to grasp. However, the organization does give a general insight into its financial sources. The overall budget is 45 million euros, with one third coming from ZDF, and two thirds coming from ARD (funk, n.d.b). Another difficulty is that the business report, including financial planning, is only available to registered journalists, and not to the public. When contacted by E-mail, funk would also refer to that policy. Funk is the only organization in the sample that does not own any market-oriented enterprises, at least as far as it is observable through publicly available information.

Funk is targeted to produce contents for an audience between 14- and 29-year-olds (funk, n.d.b). The organization is not producing any linear PSM, but entirely online content. Hence, no comparison is to be made about the alignment of linear and online content. Funk is present on all previously mentioned third-party platforms (Facebook, Instagram, YouTube, Twitter, TikTok) and, being the only organization of the sample, on Snapchat as well. Furthermore, funk is operation its own streaming platform (funk.net), where thematic content, different formats, podcasts and video formats are presented in a similar way like the big streaming platforms: YouTube, Netflix, Prime Video, et cetera. The core organization of funk is not structured in editorial departments, but is rather coordinating the collaboration with established creators or newcomers on the mentioned platforms (funk, n.d.b). The variety of all creators in the funk network is supposed to cover the topics that are covered in the legal framework (MStV): a) information, news and political content, b) entertainment, c) reflection of the reality of the target group(s), who are, in the case of funk, young people. However, the coverage of contents is pursued through a holistic portfolio – not every creator in the network must cover all the topics. In that sense, one could say there is a slight analogy to the editorial structure of funks linear counterparts.

5.3 Structural Patterns

Germany has a strong public broadcasting and PSM tradition. Within the media system, public broadcasters play a significant role. That alone makes German public media organizations an interesting research case. However, as I have demonstrated in the previous section, even for organizations within the same media system that fall under the same legal framework, important differences are to be acknowledged and patterns to be observed.

As presented in *Table 2*, the cases show a number of similarities and differences in their properties. The legal framework dimension was deliberately excluded from the table, as I have already stressed multiple times that all public media organizations in Germany are bound to the same treaty. The properties shown in the table are not based on an explicit framework. The table is simply meant to provide a better overview of the cases. A dimension where all cases have the same property hence does not provide any extra value. The first three dimensions – Governance, Budget, and Outsourced Enterprises – are purely properties of the organization providing PSM contents. The other dimensions – Linear Content Legacy, Online PSM Output, Content Creation, Online-Linear PSM relationship, and On-Demand Platform – are dimensions that are, so I argue, strongly related to processes of how (online) PSM contents are produced and provided to the public. Still, these properties are observable and can be associated with the organizational structure of the PSM provider.

For now, the exact interplay of the structural dimensions and the processes that lead to PSM output are still unclear and will be further investigated through data-collection throughout the study. Therefore, no assumptions are made at this point, to what extent certain properties influence PSM production. I also want to stress that some information used in this segment is highly unstandardized. Especially the financial reports use different vocabulary and different methodologies to express the expenditures of the respective organizations. The financial arguments should therefore be treated with caution. All information used is publicly available and can therefore be double-checked. Some of the issues raised about the financial reporting might be due to transparency efforts: Organizations might have different standards for transparency, either being as detailed as possible, or making numbers as comprehensible as possible. However, I do want to note that such, potentially confusing, reporting methods could be avoided by a granular versioning of reports.

Table 2 Structural properties of public broadcasters within the research cases.

Case/Structural Dimension	ARD/SWR	ZDF	Deutschlandradio	Funk
Governance	Decentralized, Cooperation among ARD members	Centralized	Centralized	No own governance, currently at SWR
Budget	Household fee and entrepreneurial activities Main expanses: Content creation	Household fee and entrepreneurial activities Main expanses: Content creation	Household fee and entrepreneurial activities Main expanses: Other/Administration	Co-funded by ARD (2/3) and ZDF (1/3)
Outsourced Enterprises	Maintenance, tourism, Tech development, media production	Maintenance, tourism, Tech development, media production	Maintenance, tourism, Tech development, media production	No outsourced enterprises
Linear Content Legacy	Television and radio broadcast	Television broadcast	Radio broadcast	No linear legacy
Online PSM Output	Videos, Pictures, Graphics, Texts	Videos, Pictures, Graphics, Texts	Videos, Pictures, Graphics, Texts, Podcasts	Videos, Pictures, Graphics, Texts, Podcasts
Content Creation (online and linear)	Decentralized, by regional organization and by editorials	Decentralized by editorials, partly outsourced	Decentralized by branch	Decentralized by creator
Online-Linear PSM Relationship	Partly aligned and overlapped, some formats disjunct, varying platforms	Partly aligned and overlapped, some formats disjunct, varying platforms	Fully aligned on Spotify, fully disjunct on other platforms	No linear content, platform(s) varying for each creator
(Own) On-Demand Platform	ARD Mediathek	ZDF Mediathek	Some Web-Based contents, Spotify	Funk.net

6 Results

In the following chapter, I will combine the results from my qualitative data-collection and data-analysis methods. To share as much insight into the research process as possible, I start with the two data-collection methods, qualitative semi-structured expert interviews, and qualitative document analysis. Intersubjectivity and transparency play a key role in qualitative research. This implies that beyond data sources and data processing, researchers should also be transparent about the small steps, leading up to the results. Throughout this chapter, it should be clear how I approached the data-collection and data-analysis. I will provide information about the quantitative and qualitative metrics of the data I analysed. While this is usually done by validity and reliability testing instruments in quantitative research, qualitative research has to defend its procedures and data discoursively.

6.1 By Research Method

6.1.1 Expert Interviews

6.1.1.1 Data Collection Process

I started the inquiry phase for recruitment in March 2023, by contacting the public relation departments of SWR, ZDF, Deutschlandradio, and funk. Unfortunately, this approach was not successful. The closest I got to an interview partner through this channel was a reply by funk, stating that they would come back to me in the future, if there were any capacities. ARD and ZDF each informed me that they have received my e-mails and would internally process my inquiry. For Deutschlandradio, I still don't know to this day if anyone there has opened my e-mails. From April 2023 onwards I changed my approach to contacting people directly via LinkedIn. Just like in the e-mails, I would offer some information about the research and request an interview. After correspondence with several, five people agreed to schedule an interview, given that the transcripts would be fully anonymous.

As portrayed in *Table 3*, interview respondents 1 and 2 are editorial professionals, while interview respondents 3,4, and 5 have the role of strategy coordinator. The respondents' respective public media organizations are **(1)** ZDF, **(2)** ZDF Digital, **(3)** SWR, **(4)** DLF Nova, and **(5)** funk. The respective transcripts are in Appendices C, D, E, F, and G.

The semi-structured expert interviews were conducted in May 2023. Because of the different locations all over Germany, the interviews were held on Zoom (1,2,4,5) and Microsoft Teams (3) and recorded accordingly. Since all respondents' main language is

German, the interviews were conducted in German. The audios were transcribed using the f4x transcription software, although extensive adjustments had to be made by hand. I also excluded non relevant parts like ‘confirmatory sounds’, cancelled and restarted questions, and other random words, like a ‘yes’ in the middle of the sentence. After the clean-up, DeepL was used to translate the transcripts into English. Again, adjustments hade to be made, but much less than before.

The transcripts, as they are included in the Appendix, include the mark-ups “Q” (Pre-defined question), “Q*” (Follow-up question), “Q**” (Clarification), and “R” (Response). The metrics on the distribution is also included in *Table 3.* In interview 2, I had to use both the most follow-up questions (4), and clarifications (3), while in interview 1, only one follow-up question was needed. The interviews were between 15 and 29 minutes long, while the average length per interview was 19.8 minutes.

Table 3 Expert Interview Respondents

Interview ID	Institution	Role	Pre-formulated questions	Follow-up questions	Clarifications	Length (in minutes)
1	ZDF	Editorial Professional	9	1	0	15
2	ZDF Digital	Editorial Professional	9	4	3	17
3	SWR	Strategy Coordinator	9	2	3	29
4	DLF Nova	Strategy Coordinator	10	1	1	17
5	funk	Strategy Coordinator	10	1	1	21

6.1.1.2 Data Analysis

As outlined in Chapter 4.2.2 of this thesis, the transcripts of the semi-structured expert interviews were codified according to the directed content analysis procedure by Hsieh and Shannon (2005). To technically support the coding process, I used MAXQDA 2022 software, as it is a seamless, reliable, and intuitive tool. I followed Mayring's (2015) guideline of reiterating the coding process. After the first run through the content, I consolidated and renamed some codes, and continued coding. I ended up going through the data twice. I started with the **16 pre-defined categories** as portrayed in chapter 4.2.2, and added **71 sub-codes**. An overall of **173 segments** were **coded.** The entire code system is included in Appendix L of this thesis.

Just looking at the parental codes in the coding system (*Table 4*) it becomes quite obvious that the distribution between the elements is uneven. The small amount of overall **19** (11%) Digital Transformation segments seems plausible, since I explained earlier that this taxonomy would only be applied complementarily. Also, as I have established a case context, and also used a complementary method for environmental variables (document analysis) the thin representation of external elements of the eGov WSF (**18**, 10.4%) seems plausible, given the research design. However, the dominance of internal elements of the eGov WSF (**117**), making up more than 67.6% of the number of coded segments, has to raise some attention.

Table 4 Code System, reduced to parental codes n=179

Parental code	**Coded segments n**
Social, Economic, and Political Environment	5
Law and Regulations	1
Digital Infrastructure	10
Policies and Strategies	2
Value for Society	2
External Stakeholders	10
Public e-services	7
Processes and Activities	20
Internal Stakeholders	22
Information	13
Digital Technologies	23
Internal Policies and Strategies	39
Digital Transformation Reasons	13
Digital Transformation Objects	2
Digital Transformation Processes	2
Digital Transformation Results	2
Overall	**173**

A reasonable way to assess this accumulation of codes is by differentiating the codes by interviews. Tables 5, 6, 7, 8, and 9 represent the ratio of parental categories among the respondents. All respondents except respondent 2 talked most about internal policies and strategies, which is also by far (16 more coded segments than digital technologies, which ranks second in number of coded segments) the most codified parental code (39). Respondents 3,4, and 5 (all share the same role of strategy coordinator) have **10** coded segments **on average** for internal policies and strategies, while their editorial professional counterparts have 4.5 coded segments **on average** for the same parental code.

Table 5 Coded segments by parental codes, Interview 1, n=29

Parental Codes	**Coded segments**	**% Coded segments**
Internal Policies and Strategies	6	20,69
Information	5	17,24
Internal Stakeholders	5	17,24
Processes and Activities	4	13,79
Digital Infrastructure	3	10,34
Digital Technologies	2	6,90
Digital Transformation Reasons	2	6,90
Public e-services	1	3,45
Value for Society	1	3,45
Overall	**29**	**100%**

Table 6 Coded segments by parental codes, Interview 2, n=22

Parental Codes	**Coded segments**	**% Coded segments**
Digital Technologies	8	36,36
Internal Policies and Strategies	3	13,64
Internal Stakeholders	3	13,64
Information	2	9,09
Public e-services	2	9,09
Processes and Activities	1	4,55
External Stakeholders	1	4,55
Digital Transformation Objects	1	4,55
Digital Transformation Reasons	1	4,55
Overall	**22**	**100%**

Table 7 Coded segments by parental codes, Interview 3, n=44

Parental Codes	Coded segments	% Coded segments
Internal Policies and Strategies	11	25,00
Processes and Activities	6	13,64
Digital Technologies	6	13,64
Internal Stakeholders	4	9,09
Digital Infrastructure	4	9,09
External Stakeholders	3	6,82
Social, Economic and Political Environment	3	6,82
Digital Transformation Reasons	2	4,55
Information	2	4,55
Public e-services	1	2,27
Digital Transformation Processes	1	2,27
Policies and Strategies	1	2,27
Overall	44	**100%**

Table 8 Coded segments by parental codes, Interview 4, n=40

Parental Codes	Coded segments	% Coded segments
Internal Policies and Strategies	8	20,00
Processes and Activities	8	20,00
Internal Stakeholders	5	12,50
External Stakeholders	4	10,00
Digital Transformation Reasons	4	10,00
Digital Technologies	3	7,50
Information	2	5,00
Public e-services	2	5,00
Social, Economic and Political Environment	2	5,00
Digital Infrastructure	1	2,50
Value for Society	1	2,50
Overall	**40**	**100%**

Table 9 Coded segments by parental codes, Interview 5, n=38

Parental Codes	Coded segments	% Coded segments
Internal Policies and Strategies	11	28,95
Internal Stakeholders	5	13,16
Digital Technologies	4	10,53
Digital Transformation Reasons	4	10,53
Digital Transformation Results	2	5,26
Information	2	5,26
Digital Infrastructure	2	5,26
External Stakeholders	2	5,26
Processes and Activities	1	2,63
Public e-services	1	2,63
Digital Transformation Objects	1	2,63
Law and Regulations	1	2,63
Digital Transformation Processes	1	2,63
Policies and Strategies	1	2,63
Overall	**38**	**100%**

While it would make sense to argue that differences in respondents' behaviour originate from a professional bias on first sight, the sample size is actually too small to allow any assumptions about significant differences. Also, respondents 1 and 2 have far less overall coded segments. Adjusted for proportion of coded segments, the professional differences appear marginal. For now, one must assume that internal strategy plays a key role in the work systems producing PSM contents. Further, more detailed elaboration on the interview data will follow in section 6.2.

What does in fact appear to be unsatisfying about the data is the scarce representation of public e-service in the subcodes, with **only 7 of 173** (a ratio of 1:25) subcodes referring to the centre piece of the eGov WSF. While this limited appearance of public e-service related codes might turn out to be a limitation throughout the results section of my thesis, the elements in their relationship in the dataset have yet to be looked at. Afterall, the sheer metrics of appearances might not reflect limitations to the study results after all.

6.1.2 Document Analysis

For the process of the document analysis, I thoroughly searched the websites of the four case-organizations for strategic reports. The procedure turned out to be a time-consuming endeavour, since standardised reports are difficult to find. Most of the transparency and about sections of the investigated public media organizations are over stacked with information or not updated well. As I wanted a comparative sample in terms of size,

details, topics, I opted to chose one report per organization that would cover the topic of policies and strategies in at least one main section. Unfortunately, this did lead to me not choosing the most recent publication by Deutschlandradio, which would have been from 2019 (Deutschlandradio, 2019). This report is only seven pages long and merely qualifies as a PR stunt. Instead, I chose the following four reports:

1. "Telemedien Änderungskonzept" (‚Tele Media Change Concept') (SWR, 2022),
2. "Medienentwicklungen 2019" ('Media Developments 2019') (ZDF Medienforschung, 2019),
3. „Auftrag und Strukturoptimierung des öffentlich-rechtlichen Rundfunks" (‚Mandate For Structural Optimization Of The Public Boradcast') (Deutschlandradio, 2017), and
4. „Funk Bericht 2022" (‚Funk Report 2022') (Funk, 2022).

Despite the consideration to chose reports with a certain degree of comparability, the documents' size, structure, and levels of detail diverge. In addition to that, the time variation between Deutschlandradio's report on the one side, and SWR's and funk's reports on the other side could issue difficulties, since five years is a long time in media and technology developments. While SWR's, ZDF's, and Deutschlandradio's reports come as downloadable pdf-documents, funk provides free access only to a web-page version of their yearly report. There is a downloadable version of the report on the website, however one can only access the document if they have a journalistic accreditation with funk. Therefore, I cannot guarantee that I have analysed the most comprehensive version of the report. Besides the topics and focusses, differences also show in the formal criteria of the reports. SWR's report is 80 pages long, the ZDF's report is 58 pages long, Deutschlandradio's report is only 22 pages thick, and the funk web-version report consists of roughly 9000 words.

I approached each of the documents in the same procedure. While reading through the reports, I had the list of pre-defined categories (Chapter 4.2.2.4) at hand. First, I skimmed through each section one by one, making a decision on whether to read it more thoroughly, or leaving it out of scope. Then, for the sections that I identified as relevant, I read through the documents and took small notes (in form of bullet-points) for every relevant piece of content regarding the aforementioned categories. After I had taken notes on the relevant section of each report, I started over and mixed the order of the documents, to avoid recency biases. Thus concluded the second read- and note-through of the reports. To consolidate the retrieved data, I summarized the bullet-points for each report. The

document summaries are in the Appendix sections H, I, J, and K of this thesis. Even though my approach is a strongly simplified version of Bowen's (2009) document analysis procedure, I do see value in the retrieved data. While this document analysis would hardly qualify as a primary data collection method, I do see it fit as a secondary and complementary method that is used to triangulate results of the primary research method.

6.2 eGov WSF Elements

In the following section, I will examine the subcodes that were coded for each element of the eGov WSF. As I stated before, the codified segments from the content analysis are far from an even distribution among the elements. For those elements where evidences from the primary research method are scarce, triangulation with the supportive and complementary methods is even more important.

6.2.1 External Elements

6.2.1.1 Social, Economic and Political Environment

Table 10 Subcodes of Social, Economic and Political Environment, n=5

Social, Economic and Political Environment	Segments	Percentage
Audience fragmentation on platforms	1	20,00
High competition on platforms	1	20,00
Consulting Partner Management	3	60,00
TOTAL	**5**	**100,00**

By definition, the social, economic, and political environment is objectively the same for all cases at hand. However, perceptions of taking the right actions in order to react to the environment might differ. This is not exclusive for the social, economic, and political environment, but is arguably valid for all external variables. In *Table 10*, there are all available codes for the element. One phenomena of media convergence is an overall fragmentation of markets. PSM producers are therefore faced with new competition in new media markets: "It is also quite a competition on Spotify. So many people started their podcasts there and users are very selective what they want to listen to. So we have to be on top of these developments" (Interview 4, Appendix F). This is not entirely new knowledge though, as it is a well-researched phenomenon. Also, SWR and ZDF refer to this competition in their respective strategy papers (Appendix H, I).

‘Consulting Partner Management’ has been codified in three segments. It refers to a shared consulting body, shared by public media organizations. This body can either give advice on platform policy or address third-party platforms owners with questions: “As far as cooperation in general is concerned, it's not actually regulated individually by the LRAs, but that's what the ARD partner management is for. This was created for this purpose and also makes absolute sense, which bundles the questions of the LRAs. Regular meetings and consultations also take place within this framework” (Interview 3, Appendix E)

6.2.1.2 Law and Regulations

Table 11 Subcodes of Law and Regulations, n=1

Law and Regulations	Segments	Percentage
PSM content obliged to law	1	100,00
TOTAL	**1**	**100,00**

While other external elements might be perceived differently by public media organization, there is a broad consensus about the legal framework among German public media organizations. The media state treaty (MStV) and also its predecessor have immensely institutionalized public media. That institutionalism works both ways: it provides public broadcasters with a secure funding system, independent from state intervention (household fee), and a high legitimacy and societal status (Deutschlandradio strategy paper, Appendix J). On the other hand, that institutionalism regulates expectations towards and duties of public media institutions: “We have some formal guidelines for our creators, some are less comfortable with this than others. Since we are still public broadcast, we are of course obliged to follow the [Rundfunk]Staatsvertrag. This means that we have to cover politics and news, and have to create a certain value for our viewership” (Interview 5, Appendix G).

6.2.1.3 Digital Infrastructure

Table 12 Subcodes of Digital Infrastructure, n=10

Digital Infrastructure	Segments	Percentage
Dependency on platforms	3	30,00
Smartphone and computer diffusion	1	10,00
Coordination with the platforms	3	30,00
Platforms own the technology	3	30,00
TOTAL	**10**	**100,00**

The formation of the codes listed in *Table 12* can almost be read like a narrative: PSM producers must be present on platforms to reach their audience and therefore, need to coordinate with the platforms. But since the platforms own the technology on their systems, PSM producers are dependent on platforms. In fact, some of the respondents were very clear in that regard: “Of course, Meta is very big. We are heavily dependent on it, Facebook has now also changed everything, so to speak. Now it's Meta Business Studio” (Interview 1, Appendix C). Another respondent reflects: “But to be honest, we also have to say that we don't have a special position with the third-party platforms and wouldn't adapt any functions especially for us. After all, they don't earn any money with us” (Interview 3, Appendix E). For the element of digital infrastructure, it appears logical that, both from the case-contexts’ findings and from the interviews, global platforms are de-facto owners of large parts of the internet and consumers’ attention. Therefore, it is unsurprising that public media organizations concert with that.

6.2.1.4 Policies and Strategies

Table 13 Subcodes of Policies and Strategies, n=2

Policies and Strategies	Segments	Percentage
Strategic coordination	1	50,00
Agility due to policy	1	50,00
TOTAL	**2**	**100,00**

The respondents gave very few insights into external policies and strategies (*Table 13*). In the fifth interview however, the expert shared that “This is I think the unique point that funk can be very fast with these things, because it was founded to deliver content for these platforms” (Interview 5, Appendix G). The organization has a legacy advantage, due to the fact that it does not have any legacy system. The organization is transparent about its unique role in the German public media environment. In their report, funk shares that the organization sees itself as a kind of innovation lab for the big broadcasters who cannot perform in the same way, due to strong legacy systems. Deepened institutions can slow change down. That is why public broadcasters have been concerned with cross-organizational outsourcing and consolidation (SWR report, Appendix H; Deutschlandradio report, Appendix J).

6.2.2 Partially External and Internal Elements

6.2.2.1 Value for Society

Table 14 Subcodes of Value for Society, n=2

Value for Society	Segments	Percentage
Obligation to produce public value	2	100,00
TOTAL	**2**	**100,00**

The obligation to public value is closely related to the public mandate, which derives from the legal framework. The differentiation however between law compliance and public value obligations has to do with external stakeholders. Public value has a direct outcome on societal individuals. Respondent 2 states the interplay of law and public value precisely: "That means that we have a clear obligation, coming from the [Rundfunkstaatsvertrag], as you might know, to offer contents that inform, entertain, cover societal groups, and so on" (Interview 2, Appendix D).

6.2.2.2 External Stakeholders

Table 15 Subcodes of External Stakeholders, n=10

External Stakeholders	Segments	Percentage
Changed media consumption behaviour	2	20,00
Users choose Platforms	5	50,00
Pre-defined target group	3	30,00
TOTAL	**10**	**100,00**

Out of all partially internal, partially external elements of the eGov WSF, most subcodes are associated with external stakeholders. At the same time, the segments are quite similar, as the codes are condensed to three (*Table 15*). It appears that PSM producers are concerned about external stakeholders. Firstly, changing user behaviour is a driver for organizations. Ultimately, it is not the platforms, but the users choosing the platforms, that forces public media organizations to change the way they operate. Experts 2, 4, and 5 have also shared that their PSM work is assigned to very specific target groups. This can be an advantage, because PSM producers can focus on fewer peoples' needs and interests. On the other hand, a closer defined target group also increases the pressure to always stay connected to that target group.

6.2.2.3 Public e-services

Table 16 Subcodes of Public e-services, n=7

Public e-services	Segments	Percentage
Personas for service optimization	1	14,29
Diversification increases number of processes	1	14,29
Importance of PSM ethos	2	28,57
Diversification of PSM services	2	28,57
Deactivation of monetarization	1	14,29
TOTAL	**7**	**100,00**

In the eGov WSF, the public e-services element reflects the PSM output of a work system. Naturally, the element plays a key role for the understanding of the dynamics in the public media organizations. Unfortunately, as *Table 16* shows, respondents' statements surrounding PSM output were not condensed, but rather dispersed. Nonetheless, the research background of this thesis has equipped my argument with plenty of background knowledge, to still make a case for some interpretations. The fact that one code refers to the ZDF using personas does not surprise, since the organization has declared the technique as a strategy goad in its 2019 strategy paper (ZDF report, Appendix I). PSM output is held accountable to PSM standards and the PSM ethos. This puts a double pressure on the system: Firstly, PSM contents should have an impact. To have an impact, the content must address a broad audience. In the age of fragmentation, an organization can only address a broad audience, if it has a diverse set of PSM output to offer. Secondly, PSM ethos demands to do so in an efficient way. However, there is some evidence pointing at the correlation that a move diverse PSM output also creates more processes.

6.2.3 Internal Elements

6.2.3.1 Processes and Activities

Table 17 Subcodes of Processes and Activities, n=20

Processes and Activities	Segments	Percentage
Constant adaptation	1	5,00
Process change takes time	1	5,00
Format development analogue	1	5,00
Diverge from linear content	2	10,00
Alignment with linear content	1	5,00
Platform specific processes	5	25,00
Remote work influences processes	3	15,00
Information consultation	2	10,00
PSM specific processes	3	15,00
Experimental processes	1	5,00
TOTAL	**20**	**100,00**

A total of 20 segments have been codified as processes and activities (*Table 17).* In the conceptual framework, the element is connected to public e-services, as well as to internal stakeholders, information and digital technologies. The most frequent code related to the element is ‘platform specific processes’. The coded segments indicate, that PSM producers have to establish unique workflows and production means, in order to address different platforms, simply because the content logic is different. Interviewee 3 illustrates: “And then there's another crucial thing: When new formats are created for the media library and are also to have their own social media channel, i.e. also in the long term, we look at which platform the production conditions are suitable for” (Interview 3, Appendix E). Codified segments as ‘PSM specific processes’ go in a similar direction.

Among the processes and activities for PSM production, experts have stated that production logic both assimilates and dissimilate from the linear content production logic. Interviewee from DLF Nova stated that podcast production is actually similar to linear radio broadcast production. At the same time, the expert shared that social media PSM content production is very different from traditional production processes and is therefore almost disconnected in the work system.

Statements about new processes from SWR employee respondent 3 and funk employee respondent 5 seem to be very far from one another’s reality. While, at funk, “when new forms of content display are added to the platforms, we usually try around a bit and get a

feel about what works well soon after" (Interview 5, Appendix G), the SWR work system struggles: "How quickly we can adapt our processes to this is more of a problem. So from the point in time when we recognize: We need to change, to: we have changed. That takes time" (Interview 3, Appendix E).

Two other sub-codes under the parental code of processes and activities, that are related to the neighbouring elements information and digital technologies are 'Information consultation' and 'Remote work influences processes'. Information consultation means that people working on PSM production will likely consult the organizations informational resources, to make better decisions during the content production process. Remote work, especially in the case of ZDF Digital (Interview 2) describes processes, that are adjusted to enable mobile work. This could be communication, coordination, or collaboration processes.

6.2.3.2 Internal Stakeholders

Table 18 Subcodes of Internal Stakeholders, n=22

Internal Stakeholders	Segments	Percentage
Different PSM skills	1	4,55
Strategic dependency	1	4,55
Information dependency	2	9,09
Strategic autonomy	3	13,64
PSM specialists	2	9,09
Involve content creators in strategy	6	27,27
Decentralized Structure	7	31,82
TOTAL	**22**	**100,00**

The element of internal stakeholders mainly describes the different positions, responsibilities and relationships among individuals and subdepartments within a work system. During the content analysis process, I codified 22 segments with sub-codes to internal stakeholders. 13 out of the 22 segments are condensed to 'involve content creators in strategy' and 'decentralized structure'. Both evidences are quite straightforward. All three strategy coordinators (Interviews 3,4, and 5) mentioned during the interview, that PSM production is to some degree decentralized, meaning that there is not a single unit handling all social media channels et cetera. Instead, editorials are incentivised to pick up PSM production complementary to linear production. However, respondent 3 mentions, that the levels of PSM maturity between editorial units are quite heterogenous. So there is a slight gap between skills and organizational structure. Some

involvement of content creators or editorial professionals in PSM strategy formulation has been mentioned in every interview.

The internal stakeholder sub-codes furthermore show a heterogeneity in the case-sample regarding autonomy and dependency of departments or subunits. At both ZDF and DLF Nova, PSM departments enjoy strategic autonomy. They can revise their own PSM output and make changes. ZDF Digital however has an opposing tendency, since both strategic decision-making and informational insights lie with their contractor, the ZDF: “But even then, the team management is consulted, but in the end it's ZDF that decides what should be done”; and: “[…]we don't have direct access to the evaluation tools. But I don't know if that's because of data protection or because maybe they don't want us to have access” (Interview 2, Appendix D).

6.2.3.3 Information

Information	Segments	Percentage
Performance logic differs	1	7,69
Community Management	2	15,38
Seperate information department	4	30,77
Performance Analytics	6	46,15
TOTAL	**13**	**100,00**

Information is the parental category with the least associated sub-codes among the internal elements of the eGov WSF. In all interviews where information was referred to, it dealt with the evaluation of PSM production output. Since in the digital environment, be it on websites, social media, or streaming sites, user interaction rates and other data can be retrieved and analysed. Most of the responses sub-coded for information therefore mentioned performance analytics. Respondent 3 points out, that analytics can differ between platforms: “It's different with TikTok, because follower numbers are not as crucial as video watch time. We get the data for this via the respective analytics tools of the respective platform. This is also an important topic because we want to have key figures that are objectively verifiable. That sounds very regulated, but we've only had it in place for two years.” (Interview 3, Appendix E). The editorial professionals at ZDF and ZDF Digital also refer to direct community management as a source of information for process improvement: “But of course we also look at how our community reacts. That means our community management gives us feedback every day on how various posts have been received, where there has been discussion, or where there are questions from users, which we then take up and create new content based on them” (Interview 1, Appendix C); “Sure, what we see are comments, likes and so on. We take a look at them.

What do people write, what do they wish for, what do they criticize. What we also discuss again and again is, how is this played out? For this, we are always dependent on information from ZDF" (Interview 2, Appendix D). In four out of the five cases (ZDF, ZDF Digital, DLF, funk), respondents have pointed out that there are separate information departments who will provide guidance on format development or demand adjustments to the PSM strategy.

6.2.3.4 Digital Technologies

Table 19 Subcodes of Digital Technologies, n=23

Digital Technologies	Segments	Percentage
No IT center	1	4,35
Data protection compliance	1	4,35
Shared online Workspaces	5	21,74
Acquisition of new tools	2	8,70
Free to chose technology	3	13,04
Use of platform technology	3	13,04
No AI	5	21,74
Meeting software	3	13,04
TOTAL	**23**	**100,00**

The interviewees references to digital technologies seem quite diffuse, as 23 coded segments are divided into 8 sub-codes (*Table 19)*. Only a few aspects are straightforward: the deployment of meeting software to digitalize communication processes, and shared online workspaces, as a means to digitalize other collaborative processes and activities. ZDF Digital is the only case connected to both digital technologies, which makes sense given the fact that ZDF Digital also was the remote work case. Nonetheless, respondents 4 and 5 also mentioned meeting software, and respondent 3 also referred to shared online workspaces. In three cases (ZDF, SWR, funk), the respondents referred to platform-embedded technologies. From the codes, no coherent IT strategy is observable. SWR strategy coordinator respondent 3 said something rather shocking about the state of technology management: But we also have to be honest about this: There is no IT center. Neither in ARD nor in SWR. Accordingly, there is no office that knows which licenses we all have. For our social area, I know that so far, I could find out. But to what extent there are tools across the board, I don't know at all" (Interview 3, Appendix E).

Perhaps the biggest wildcard in the technology section is artificial intelligence (AI). As there was an explicit AI-related question in both questionnaires, all interviewees responded to the topic, with everyone stating that AI is not currently at use in their

respective organization. The reason why this is odd is because in both strategic documents published by ZDF (Appendix I) and funk (Appendix K), AI is disclaimed to take a key role in audience engagement (funk), and in recommenders´ systems (ZDF).

6.2.3.5 Internal Policies and Strategies

Table 20 Subcodes of Internal Policies and Strategies

Internal Policies and Strategies	Segments	Percentage
Quality control	2	5,13
Scale Reach	1	2,56
Resources scarce	3	7,69
Push for Innovation	2	5,13
Portfolio management	3	7,69
Own platform provides autonomy	1	2,56
Strategy follows legal framework	2	5,13
Networking strategy	1	2,56
Standardized strategic processes	5	12,82
Seperate strategic department	6	15,38
Target Group Orientation	13	33,33
TOTAL	**39**	**100,00**

As touched upon in the opening section of the results chapter, internal policies and strategies contains the most sub-codes of the sample. Among the element's sub-codes there is yet again another gravitational code: Target group orientation. Codified in 13 different segments, the code has by far the biggest share within the study sample (*Table 20*). The fact that target group orientation outweighs most other strategic considerations is best demonstrated by quotes from the interviewed experts:

- "Target group orientation: We pay close attention to what content is suitable for our target group, what their needs are and how they can be met. That is a huge factor" (Interview 1, Appendix C).
- "With all other content that is freely available, we make sure that it is simply suitable for the target group" (Interview 1, Appendix C).
- "We are oriented towards the community" (Interview 2, Appendix D).
- "So for the platforms, we have determined which target groups we want to primarily address there" (Interview 3, Appendix E).

- “Basically, I can say that for all branches of DLF, we are audience oriented” (Interview 4, Appendix F).
- “For us it is the highest priority to address our audience” (Interview 4, Appendix F).
- “We always try to stay as close to what our target group wants to see and hear” (Interview 5, Appendix G)
- “I think for funk that has always been the question of what platforms are being used by our user-specific target group” (Interview 5, Appendix G).

Both the quantitative significance as well as the quotes from the interview show how transcendent target group orientation is for the PSM production process. Given the conceptualization of the eGov WSF, with the internal policies and strategies element at the foundation of the internal work system, it does take the place of a business-model like driver. This is strongly supported by the fact that the code, and even the wording of the experts, is so consistent throughout the process. Logically, target group orientation does also align well with other previously discussed elements: PSM ethos, PSM diversification, the demands and driving force of the external stakeholders.

There are some other sub-codes to internal policies and strategies that should not be disregarded. Those are: portfolio management, separate strategic department, and standardized strategic processes. These codes give an insight into the organizational structure supporting the target group orientation paradigm. It appears that target group orientation is not only present as an intangible, mental guideline, but rather, that public media organizations standardize their control mechanisms and professionalize strategic departments in order to guarantee target group orientation.

6.3 Digital Transformation

As part of the triangulation methods used in this thesis, I also attempted to triangulate the digital transformation taxonomy by Mergel et al. (2019). However, I do acknowledge that the questionnaires were drafted with the guidance of the eGov WSF, and not conceptualizing the taxonomy. This has visibly led to a lob-sided outcome for the digital transformation related sub-codes. In the following chapter, I will nonetheless present the results of the content analysis. For each of the digital transformation categories, I strive to make an argument how to contextualize the value of the taxonomy regardless.

6.3.1 Reasons

Table 21 Subcodes of Digital Transformation Reasons, n=13

Digital Transformation Reasons	Segments	Percentage
Increase market share	1	7,69
Competition	1	7,69
New media devices	1	7,69
Audience demands	5	38,46
New tools available	2	15,38
Platforms introduce new technology	3	23,08
TOTAL	**13**	**100,00**

For ‘digital transformation reasons’, as displayed in *Table 21*, **13** segments were codified. Each of the segments overlaps with sub-codes from the eGov WSF. For instance, ‘audience demands’ overlaps with ‘internal policies and strategies < target group orientation’, and also with ‘external stakeholders < changed media consumption behaviour’. Market share and competition are valid digital transformation reasons. However, these codes are already captured by environmental subcodes. I assume that mentally, it is easier to think about reasons to do something and that this explains the coding behaviour to some extent. There still is a takeaway from the digital transformation reasons codes: besides ‘increase market share’, all other reasons for digital transformation are external. This might hint towards a less active role of public media organizations in digital transformation.

6.3.2 Objects

Table 22 Subcodes of Digital Transformation Objects, n=2

Digital Transformation Objects	Segments	Percentage
Process	2	100,00
TOTAL	**2**	**100,00**

The two identified processes, that are the object of digital transformation, are communication and collaboration processes, that are performed remotely, after ZDF Digital introduced the respective software. I was hesitant to use the code for other objects, like the information about performances. Technically, one could argue that during the era of public broadcasting, user feedback has been gathered differently, like by phone or postal survey. But that does not really have anything to do with the scope of the study, so I used the code carefully.

6.3.3 Processes

Table 23 Subcodes of Digital Transformation Processes

Digital Transformation Processes	Segments	Percentage
Using new technology	2	100,00
TOTAL	**2**	**100,00**

Something similar to digital transformation objects can be said about the processes. When I felt uncertain about whether I fully understand how a process changes, I opted to not code the segment of question. The two ‘using new technology’ codes refer to the introduction of MS Teams for cross-editorial communication at SWR and to the use of new technology in the KPI evaluation process at funk. Generally, the process of using new technology could apply to multiple activities of PSM producers.

6.3.4 Results

Table 24 Subcodes of Digital Transformation Results, n=2

Digital Transformation Results	Segments	Percentage
Organizational change	1	50,00
New services	1	50,00
TOTAL	**2**	**100,00**

For funk, it is difficult to talk about organizational change, since it is basically a new organization. However, during the interview, respondent 5 said, that there is a unit at funk specifically tailored to coordinate feature integration with third-party platforms. Without digital transformation, this result would not have occurred. The new service coded in the results of digital transformation section represents funk’s own platform, funk.net.

7 Discussion

In the following chapter, I will discuss and critically reflect my findings. I will do so in four steps. First, I will answer the research questions that started this research project initially. In the second part, I will present some of the main findings of this research outside of the research questions. After that, I will reflect the limitations that I have faced on the way. To close the discussion I will then, with all the insights gathered from an extensive research project, give some reflections on reform ideas that I read through throughout my research process.

7.1 Answering the Research Questions

In the opening chapter of this thesis, I asked the following research questions:

(1) In how far does the digital era of media convergence impact the digital transformation of public broadcasters in Germany?

(2) What are patterns of digital transformation that push public broadcasters towards becoming public service media organizations?

(3) What are the main drivers and barriers for public broadcasters to fully embrace the new public service media paradigm?

To close this thesis, I attempt to answer them.

(1) The digital era of media convergence impacts not only public broadcasters, but public media organizations in Germany in general, in many ways. Public media organizations that are **only** engaged in broadcasting activities are affected even more, as they will more and more struggle to engage with the audience. As the research question is targeted at the digital transformation of public broadcasters in Germany, I do have to make some concessions. To answer the question with full confidence, I would have to be able to list evidence about how exactly digital transformation, not just any other aspect of the organization, is impacted.

I would, however, make a case that PSM ethos is as close as it gets to **a)** a new business model paradigm for public media organizations which is **b)** subject to digital transformation in **c)** the context of digital era media convergence. I have gained significant insights into how public media pursue their service mandate which can arguably be defined as PSM ethos in present day. In my opinion, **(1)** social erosion in digitally fragmented spaces puts even more pressure on public media organizations to embrace PSM ethos, and so does **(2)** the fact that German public media is especially well-

funded while showing arguably mediocre efforts of innovation. The recent cases of corruption on the highest level of German public broadcasters are just another, rather moral than scientific, argument that change is inevitable.

However, the data of my research thesis is not sufficient to confidently say that public broadcasters have a new business model that pushes internal digital transformation. Both my theoretical constructs and methodological execution do not provide enough explanatory significance. What is safe to say from my point of view, is that at the very least nuances of a digitally transformed business model are already there.

(2) First of all, one of the researched cases, funk, should already be regarded as a PSM organization. Studies repeatedly identify funk as successful at engaging with their target group. Furthermore, the organization has incorporated mechanisms that further strengthen its claim on public value and efficiency. The successful operation of a well-accepted and seamless independent platform makes funk more independent from third-party platforms. Also, the organization takes advantage of positive network effects. A pattern that shows also in other cases of this thesis would be a relatively new approach to active PSM portfolio management. The SWR for instance is increasing the online-only proportion of its portfolio, while also incentivising broadcast-only formats to change to a dual distribution strategy. Same can be said about the ZDF. As I was able to observe, the organization found a way of outsourcing online-only formats to its own subcompany, ZDF Digital.

(3) One significant barrier for public media organizations to embracing the PSM ethos are legacy systems. In my sample, I have observed that the largest German radio broadcaster have started uploading single shows of its linear radio programme to Spotify, and consider it sufficient. Deutschlandfunk does run Social Media accounts. However, they appear shut off from the organization’s core content production efforts.

Decentralizing has helped some public media organizations to form agile teams that help other editorials to improve their PSM production. At Deutschlandradio, however, the PSM department seems to be isolated and shut off from the rest of the organization. Also in terms of budget, as there are no expenditures planned for PSM efforts.

Another barrier that I have identified are especially low bars, or over the top innovation plans in technology improvement that German public broadcasters give themselves in their reports. It is either a) an overly ambitious predictive AI recommending system that is supposed revolutionize the public on-demand landscape, which execution seems unrealistic, or b) the presentation of an innovative technology project in customizability: a pause button for a live-stream.

7.2 Main Findings

The German public media system is a gigantic complex. Numerically speaking, public media organizations in Germany are among the best funded in the world. On a rather controversial note, the legal embeddedness of German media organizations is a double edged sword, to the point that the long traditions of democratic broadcast has become a self-fulfilling prophecy for some organizations' legitimacy. With the media state treaty, the public mandate, regional and federal dual governance systems, and an independent commission to allocate resources, the institutions surrounding public broadcasting are incredibly thick. The issue is: thick institutions are built to outlast, not to innovate. With so many institutional layers, it seems almost too easy to refer to that as the reason why innovation lags behind.

However, the cases investigated in this thesis are on a spectrum. Funk is a great example of how innovative public organizations can be if some institutionalism is removed. The absence of legacy system is perhaps the strongest driver in the German PSM context right now.

7.3 Limitations

7.3.1 Scientific Limitations, Errors, and Biases

Throughout the qualitative research progress, I have experienced a number of difficulties and limitations. Some were due to the used methodology, some were caused by shortage of resources or access to disclosed information.

First of all, qualitative research always underlies a possible bias by the researcher. For instance, while drafting the questionnaire for the interviews, I started by writing down questions that I thought were important to assess the eGov WSF. Even though I did peer-review the question draft with colleagues, there is no way to assess whether the questions are actually a neutral representation of the framework.

During the recruiting phase for the expert-interviews, I ended up contacting people personally via LinkedIn. This does infer a selection bias, both from my side, but also from a respondent's side. The so-called self-selection bias means that people who are generally more open to the topic of inquiry are more likely to agree to an interview, rather than someone who might view some developments more critically.

Speaking of the interviews, five is hardly enough for a large-scale research. For three out of the four cases, I only talked to one person per organization. In future studies, more interviewees should assure a better comparability. Also, to provide an even distribution,

including different roles in the interviews would be needed. By that I mean that researchers should have one editorial professional and one strategy coordinator for every organization in the future. Also, a pre-test could have helped to improve the quality of the questionnaire, and the expert interview methodology overall.

As for the content analysis and the coding process, multiple coders can reduce personal biases. Also, multiple coders allow testing inter-coder reliability. There were minor problems with the document analysis. Besides the usual methodological limitations, being a lack of access to documents, or the wrong selection of documents, the execution of the method was minimalistic.

Lastly, the use of two different theoretical concepts for the data analysis turned out to be scientifically not ideal. Clearly, there are difficulties in triangulating two theories. The mental alignment of one theory is plenty. Since I wanted to also include the Digital Transformation taxonomy, the data analysis was over-stacked with constructs. The quality of the results could have profited from a more cohesive approach.

7.3.2 Other Limitations

Researching multi-billion euro organizations alone is difficult. Even though scoping was made, the research sample, in terms of the organizations' sizes, was still enormous. Feasibility turned out to be a general issue. The time dependency on the interviews, and the integration of multiple research methods posed more problems.

Lastly, I wish to mention that the investigated institutions all demonstrated a lack of transparency. That was both in their online sections and in reporting procedures. Also, the personal experience of contacting the public relations departments demonstrated low efforts to transparency and openness to research. I do understand that a Master's thesis is a low-prestige scientific inquiry, but since the organizations are publicly funded, I would have expected an offer to answer some questions via e-mail. Often, the experts I contacted did not even respond with a rejection.

7.4 Thoughts on reform initiatives

In my literature review I came across a report by Aigner et al. (2017), giving their thoughts on possible reforms for German public broadcasters and public media organizations. The authors did mention pay-per-view models, and public-private partnerships. Wauters and Raats (2018) have advocated for reform initiatives for the Flemish public media system, modelled after the British broadcasting system.

First of all, I want to acknowledge that reform initiatives are always valuable, since they keep the conversation going. However, I do see some difficulties for attempts that would require the remodelling of an entire public media system. In a preliminary stage, reform advocates should address the media system of one or many organizations and address the system- and case-specific content. Pay-per-view or subscription-based models would clash with some PSM principles, like universal availability, since it would exclude people from the system, who don't pay. It is hard to argue that public value would be in any way increased by limiting access to media sources.

I do see the point though, that public media organizations should work more cost efficient. In my opinion, the potential for reforms lies in structural re-organization of public broadcaster. This involves physical infrastructure, but also services. Technically, the German public broadcasters already started outsourcing sub-companies. As of now, public broadcasters' profit from their market-activities, even though the institution public media was never supposed to be profitable. But given that these developments are unlikely to vanish, public media organizations could potentially save costs from shared utilities, maintenance and other services. This could also include moving to the same locations, as a remote work environment will reduce the need for large office spaces sooner or later. In the digital age, devices are constantly getting smaller and more efficient. Since a lot of hardware is mobile already, the public media institutions could share their knowledge and equipment. The SWRs lates idea to engage in creative commons initiatives is a positive sign in the right direction.

Sciolism in administrative activities for each individual broadcaster is a waste of money. By digital means, the public media organizations could establish a shared administration unit.

Eventually, German public media organizations will need to rethink the dual governance structure in 12 different versions. Some competences at a higher level for shared innovation projects, for instance a shared IT-centre, would be a suitable starting point.

8 Conclusion

As I have spent the past three months studying public media organizations, I will conclude my thoughts on the research process and outcome of this thesis.

Media studies, in Germany and internationally, often focus on vivid topics. Since there are new stimuli, a new generative AI, or new media trends frequently, scholars often turn to stimulus-response, or media receptance studies. I argue that media spaces are public spaces, and we should treat them carefully as such. Free, independent media guarantee freedom and oppose autocratic or technocratic trends.

Organizational study about large, public institutions might seem dull at first, but ultimately, new knowledge can help to improve these public systems. As I have engaged in this thesis, I was first confronted with a lack of tools and frameworks for the research question at hand. With a rather exotic approach of using a framework from another discipline, this thesis investigated digital work systems of four public media organizations in Germany. While not all research goals could be attained and concessions had to be made for the primary research question, this thesis has nonetheless generated a respectable amount of evidence about PSM ethos in Germany. This thesis has identified **(1)** properties of work systems that enhance PSM production, **(2)** drivers and barriers to the adoption of PSM ethos, and **(3)** structural patterns on the German public media landscape regarding PSM strategy.

Hopefully, future research will further investigate the topic and learn from the limitations to this thesis. Especially for topics with little previous evidence and insufficient framework, some scholars will always have to make a step and try something completely new.

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Appendix

A Questionnaire 1: Editorial Professional

Q1: What are the most important parameters for content creation for social media?

Q2: How is information collected and analyzed that is used to optimize content?

Q3: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

Q4: Are you already using AI as a tool for content creation or for performance analysis?

Q5: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

Q6: Are you free to choose which apps you use for content creation?

Q7: Who develops and changes the workflow? Who develops the general social media strategy?

Q8: When you add, change, or drop formats for social media, at what level does that take place? Individually, editorially, or in consultation with other entities? Do major content changes need to be "signed off"?

Q9: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

B Questionnaire 2: Strategy Coordinator

Q1*: What are the parameters that guide content creation for social media and platforms as a whole?

Q2: How is information collected and analyzed that is used to optimize content?

Q3: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

Q4: Are you already using AI as a tool for content creation or for performance analysis?

Q5: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

Q6*: Are editorials free to choose which apps to use for content creation?

Q7*: Who develops the general social media strategy and additions of platforms?

Q8 (unique): How does the coordination and cooperation with the major platforms take place?

Q9: When you add, change, or drop formats for social media, at what level does that take place? Individually, editorially, or in consultation with other entities? Do major content changes need to be "signed off"?

Q10: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

C Interview Transcript 1

Interview log: 1

Interviewee: XXXX XXXXX

Institution: ZDF

Role: Editorial professional

Q: What are the most important parameters for content creation for social media?

R: Target group orientation: We pay close attention to what content is suitable for our target group, what their needs are and how they can be met. That is a huge factor. Of course, we also use figures to measure whether content is suitable for us or not. That means we regularly check the number of views, interaction rates, and look at topics: Is it worth continuing to address these topics, or are they not suitable for the target group? Then, of course, we have to do justice to our public service mission. That means there's content that's set one way or the other, simply because it's important news, or because it's house politics. With all other content that is freely available, we make sure that it is simply suitable for the target group. To explain, we have several personas that we use to determine who our target audience is. These personas are completely defined with character traits that can then be used for orientation.

Q: How is information collected and analyzed that is used to optimize content?

R: We already have product owners, or audience development, who regularly record, document and monitor figures. This is all done on the sidelines, but we use these measurements to adjust our strategy, so to speak. So that's also what the editors are told, so to speak. This means that we regularly have certain figures for a quarter or so, which we use as a guide and adjust our strategy. Then we look at whether we are achieving our new goals. And of course there are various tools that I personally don't work with, but there are also tools where you can see okay, this and that post has so many clicks. Or there are programs that create a report that is accessible to all of us. That means I can see every morning from the past day, how was the interaction rate for a video, a headline post, a gallery, and then have benchmarks for it based on which I can say: how was the interaction rate, was it above average, below average or average.

Q: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

R: We talk a lot in meetings. So we have a social meeting every two weeks, in which a presentation is actually created with positive and negative examples. But we also have a daily exchange in the editorial office. That means there's a critique session every day on a large scale, so to speak, where everyone from the editorial team can get involved. But then again, among our social people, we look at our feed every day and analyze it: Why did this post work or not work? It's a very open and regular exchange. That's as far as it goes internally. But of course we also look at how our community reacts. That means our community management gives us feedback every day on how various posts have been received, where there has been discussion, or where there are questions from users, which we then take up and create new content based on them.

Q: Are you already using AI as a tool for content creation or for performance analysis?

R: Not to my knowledge.

Q: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

R: I have to say that I can almost only speak for social media and therefore I can only say that about these workflows. Starting from web app, actually nothing is done through web app itself, everything is done through a program. For social, we have different tools that offer different possibilities and everything is created on the computer, including posts. Unless a specific step requires something to be published via the editorial cell phone.

Q*: Are the tools then also integrated with the corresponding platforms? There are programs that read or import content from social media directly. Or is it more the case that files are stored on your hard drive in an intermediate step?

R: Yes, almost everything is done manually. It goes from Word document to editing, to approval, is uploaded, is published.

Q: Are you free to choose which apps you use for content creation?

R: Not in that respect. There are fixed programs, so to speak, with which we work. I can't say now: I've heard about this tool, let's work with it. Of course, Meta is very big. We are heavily dependent on it, Facebook has now also changed everything, so to speak. Now it's Meta Business Studio. They want to generate revenue with it, it runs a lot on advertising funding. At the moment, as far as I know, there is no other way to publish Facebook content than via Meta.

Q: Who develops and changes the workflow? Who develops the general social media strategy?

R: First and foremost, one person who is the product owner and then an additional person now who does audience development. The person [product owner*], who is involved in the day-to-day business and also manages our social media department, so to speak, does the evaluation and creates the strategy, and then, of course, there is still consultation with the editorial management.

Q: When you add, change, or drop formats for social media, at what level does that take place? Individually, editorially, or in consultation with other entities? Do major content changes need to be "signed off"?

R: As editors, we can't have a say in this because we are guided by studies that have been prepared for us. These are studies that HR Digitale Medien prepares behind the scenes. These are surveys, quantitative and qualitative, in order to work out: Who is our target group, who do we want to reach? We don't have anything to do with that at first.

Q: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

R: Yes, of course it's an interplay of everything. You have to react to the technical changes, of course. Classic example for Instagram: There are reels, there was IG-TV back then that doesn't exist anymore. That means they are changing the formats from 1:1 to 4:5. The algorithm is changing, the playout paths are changing, you have to adapt to all

of that: Which content is played better, which is played worse. In the past, it was the long galleries that were played out better, but today it's the individual image posts that are played out better. That means that this is a huge influence that you have to observe and regularly adapt to. Reels also have a different impact than normal posts, which means that you reach people who potentially don't follow you. That's an important factor. Of course, we are clearly also dependent on the community. If we don't upload the content that the community prefers, then we get worse numbers and are displayed less. So it's an interplay of both.

Q = 9

Q* = 1

Length: 15 min

D Interview Transcript 2

Interview log: 2

Interviewee: XXXXXX XXXXXX

Institution: ZDF Digital

Role: Editorial Professional

Q: What are the most important parameters for content creation for social media?

R: What do you mean? So what is important with us?

Q**: Parameters in the sense of objective, for whom do you create the content, what are the quality criteria?

R: Well, two of the channels we manage have target groups that are between 15 and 30 years old. With the third, the age of the target group is somewhat higher because of the topics. What's important there is to make more difficult topics easy. Some topics have to be presented differently for social media: Well accessible, understandable, short and concise, maybe even funny sometimes, instead of just throwing out information. Of course, fact-checking and source-checking are very important for posts, everything has to be right.

Q: How is information collected and analyzed that is used to optimize content?

R: We actually only have limited access to it. ZDF only shares it with us somewhat sporadically. Sure, what we see are comments, likes and so on. We take a look at them. What do people write, what do they wish for, what do they criticize. What we also discuss again and again is, how is this played out? For this, we are always dependent on information from ZDF. For example, we were recently told that Sharepics had performed very well. They are cheaper to produce, so we were asked to focus a bit more on that. But also in the direction of the content, we are told what performs particularly well. We are oriented towards the community.

Q*: Okay, so already various factors that play a role, but those are not directly evaluated by you, right?

R: Yes, because we don't have direct access to the evaluation tools. But I don't know if that's because of data protection or because maybe they don't want us to have access.

Q: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

R: Do you mean internally with us only or also with ZDF?

Q**: Both.

R: That all takes place per teams. Both for our team and with ZDF. Of course we also have brainstorming sessions where we talk on the phone, but usually it takes place in the chat. So questions, documents are sent back and forth, organizational questions. We also have individual apps for the content itself. Face-to-face meetings hardly ever take place. So let it be once in the last half year. That's because we all work remotely a lot.

Q*: Teams is the communication tool for you then, or are files shared there that are important for content creation?

R: We only do that if there's no other way. Otherwise, we do it in Jira or in Frame. With Jira, we do the text stories internally. Frame is the app where we really upload the files with moving images and also exchange them with ZDF. You can also communicate there. That's helpful for CvD approval, for example. But special individual questions are clarified via teams.

Q: Are you already using AI as a tool for content creation or for performance analysis?

R: Not as far as I know, no.

Q: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

R: Can you explain to me how you mean that?

Q**: [Adobe Creative Cloud example].

R: I find that difficult to answer, because I really only do text. I write or copy it into Jira, and then the design team pulls it out of there. That's all the work steps that take place in that regard.

Q*: I see. But is Jira then in that sense also your database that is accessed when something needs to be reworked again?

R: Yes, exactly, everything is stored there. There are individual projects, or tickets as we call them, and then everything is worked in topic by topic, so to speak.

Q: Are you free to choose which apps you use for content creation?

R: Yes, I can actually choose freely. I just have to put the finished text in Jira and Frame. What I do before that, I have free choice.

Q*: Is there a pool of apps that you are licensed to choose from?

R: We have all the office programs, Word Excel and so on. Word, of course, is more for text, and spreadsheets sometimes for brainstorming, collecting topics, and so on.

Q: Who develops and changes the workflow? Who develops the general social media strategy?

R: We can give impulses as [ZDF] Digital, and that is also accepted. But in the end, it's ZDF that decides what is implemented. For example, an agency has now been added for the design, and everything like that is decided by ZDF. We were able to give feedback, but in the end they did it very much along their lines. We can't really do more than address that.

Q: When you add, change, or drop formats for social media, at what level does that take place? Individually, editorially, or in consultation with other entities? Do major content changes need to be "signed off"?

R: For us that always goes through the team leader or the CvD. As an editor, I can bring it up, but I can't really decide. But even then, the team management is consulted, but in the end it's ZDF that decides what should be done. So, if, for example, the corporate design for a channel is to be updated, then we can make suggestions, but the decision is not ours.

Q: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

R: Well, from what I've heard, the channels are still relatively young and in the discovery phase. The primary question is really: What do people click on? The goal is clearly to increase the reach. It's important how the content is prepared, what appeals to people.

Q = 9

Q* = 4

Q** = 3

Length: 17 min

E Interview Transcript 3

Interview log: 3

Interviewee: XXXXX XXXXX

Institution: SWR

Level: Strategy coordinator

Q: What are the parameters that guide content creation for social media and platforms as a whole?

R: So for the platforms, we have determined which target groups we want to primarily address there. It has to be said, therefore not representative for ARD, SWR always works with the study results of media research, which identifies four primary target groups. From there, we look at which platforms the target groups primarily use, and the formats are then aligned accordingly. This is primarily staggered according to age groups, and of course that can always change somewhat, we also know that. We don't have to bring a 60+ format from linear television 1 to 1 to TikTok, but rather concentrate on it. And then

there's another crucial thing: When new formats are created for the media library and are also to have their own social media channel, i.e. also in the long term, we look at which platform the production conditions are suitable for. A very banal example is whether something is produced vertically or horizontally, so are there suitable content pieces or not? And in product development purely for social media, we then also see that it is produced social-first and no longer based on the media library. But there it's more realistic that the entire format is tailored specifically to a target group and not this dual use, where content is played out both in the media library and on social.

Q*: Does your department then take over the tasks for social first production, or do the editorial teams do that themselves?

R: We definitely recommend it to the editors and also advise them on which channels it would make sense and also look for it within the entire ARD or within funk. But we are not involved in the creation of the content. That means that the challenge we really have is that we only get involved when formats have actually already been created. So if we don't explicitly say before a shooting day that social should also be considered, then it's sometimes already too late. But it also has to be said that the editorial teams work very differently and use different capacities for social media. The coordination effort also depends very much on which editorial teams contact us and how much they have already considered in each case.

Q: How is information collected and analyzed that is used to optimize content?

R: There is basically a standardized process. That means the formats are looked at once every six months. We have set ourselves certain goals and success criteria and agreed on KPIs together with media research. For example, with a new Instagram channel, it's all about follower numbers and interaction. It's different with TikTok, because follower numbers are not as crucial as video watch time. We get the data for this via the respective analytics tools of the respective platform. This is also an important topic because we want to have key figures that are objectively verifiable. That sounds very regulated, but we've only had it in place for two years. However, we are also working on raising awareness of the need to work in a data-based manner, irrespective of the standardized processes. In other words, if something doesn't work, it's only noticed after six months, but they also look at their own figures in the meantime. Because then it's always a question of continued financing.

Q: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via

email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

R: It always depends a bit on which process you are looking at. When it comes to new accounts now, it's always a mixture of face-to-face meetings, also to get to know the format better and so on, and standardized documents, you really have to say. Before a new account is even created, a framework of ideas must first be filled out. There must be something like potential analysis, benchmarking, which target group should be addressed. Once the idea framework is in place, the process is usually to meet and talk about it. For the meetings, this is then mainly [Microsoft] Teams. And you can also work on the documents together in [Microsoft] Sharepoint. But as a rule, we don't get to that until a little later, when we look at which platforms the content should be offered on.

Q*: But the strategic aspect, which formats are developed, is then left to the editorial teams for the time being, or is there a separate area for that again?

R: Different, actually. The editorial teams can always contribute their own ideas within their directorates. But in some cases there is also cross-directorate social media coordination, which ensures that work is not duplicated and that there is no internal competition. And a social media portfolio board has recently been set up to take a holistic look at and shape which formats are to be continued and developed. If good ideas are collected there, but there is not enough funding in individual directorates, there is an opportunity to pitch an idea for additional funding. We are then also involved because we provide an assessment. These pitches also always have a clear goal: We see for a certain topic with a target group there is no product yet. And then we put a pitch out to tender.

Q: Are you already using AI as a tool for content creation or for performance analysis?

R: That depends on who you ask. I would say no, because "AI" is also used in a very inflationary way. What we have are automations, such as automatic text recognition, for example for SEO or community management. But I personally wouldn't call that artificial intelligence.

Q: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

R: It has to be said that the platforms are already very advanced. We work with the [Meta] Business Manager, the editorial teams work with it. That helps, for example, when publishing content that it can be done decentrally. Do you also mean in terms of production?

Q**: Actually also, yeah, like [Adobe Creative Cloud example].

R: The people who work operationally with the content could probably answer that better. Your example, i.e. Adobe, is on everyone's computer, but I can't tell you to what extent that is used in a network.

Q: Are editors free to choose which apps to use for content creation?

R: It's predetermined in that we don't use any tools that haven't been checked for data protection beforehand. That is quite an extensive process. Our department is also responsible for keeping an eye on the market and seeing what else is out there. But if we want to buy a new license, we have to justify why a new tool now has a significant added value over one that we already have. But we also have to be honest about this: There is no IT center. Neither in ARD nor in SWR. Accordingly, there is no office that knows which licenses we all have. For our social area, I know that so far, I could find out. But to what extent there are tools across the board, I don't know at all.

Q: How does the coordination and cooperation with the major platforms take place?

R: As far as cooperation in general is concerned, it's not actually regulated individually by the LRAs, but that's what the ARD partner management is for. This was created for this purpose and also makes absolute sense, which bundles the questions of the LRAs. Regular meetings and consultations also take place within this framework. The companies have a certain interest in us staying on the platforms and then inform us about which functions they are planning and what should happen that could be relevant for us. So the exchange is already wanted there. But to be honest, we also have to say that we don't have a special position with the third-party platforms and wouldn't adapt any functions especially for us. After all, they don't earn any money with us. We have noticed, however that we are often not completely alone with our wishes. YouTube, for example, has now also changed that you can automate a dwell time. So they're already keeping up with developments, but whether they've introduced that now because ARD can work better with the function, of course, can't be assigned that way.

Q: When major strategic changes are made for social media, for example when a new platform is to be added, does that take place at the editorial level or is there also a central office for that?

R: That's exactly what this ARD partner management is for. You have to know one thing about that: They make recommendations, but it is up to each LRA to adhere to these recommendations or not. I can only speak for SWR now: We adhere to the recommendations. If there are discrepancies, there is also a contact point at SWR that

clarifies such matters. But of course we are interested in having a common stance on the platforms as ARD.

Q: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

R: So the driving factor is definitely how user behavior is changing. So when we notice on the platforms that the target groups are changing, for example Facebook: The users there are getting older and older. It's still an exciting platform for us because it reaches an age group that we want to serve. There are also always new platforms that emerge, Clubhouse for example. We then observe them and see what the dynamics are. But at some point, the usage behavior has run its course there. So user behavior is the central point when we change. How quickly we can adapt our processes to this is more of a problem. So from the point in time when we recognize: We need to change, to: we have changed. That takes time.

Q: 9

Q*: 2

Q**:3

29 minutes

F Interview Transcript 4

Interview log: 5

Interviewee: XXXXXXX XXXXXX

Institution: DLF

Level: Strategy coordination

Q: What are the parameters that guide content creation for social media and platforms as a whole?

R: That actually depends on the branch that you are looking at. Basically, I can say that for all branches of DLF, we are audience oriented. That means that we have a clear obligation, coming from the [Rundfunkstaatsvertrag], as you might know, to offer contents that inform, entertain, cover societal groups, and so on. Then, and now I can only speak specifically about [DLF] Nova, we have are clearly oriented toward a younger target group. That is also why our contents might be less, like, directly related to the linear

programme, but we always check what topics our target group is interested in and how we can develop that further. And that might be, yes, like you say, through Social Media, we are doing a lot on Instagram and also TikTok recently, but also on Spotify as the major platform for a lot of our podcasts.

Q: How is information collected and analyzed that is used to optimize content?

R: We look at all kinds of information on Social Media and Spotify. There is however a difference in the metrics there. Because, first of all, views and follower numbers are the big indicators on Instagram and TikTok, this is not necessarily the same on Spotify. There, we are much more interested in: For how long are listeners tuned in for an episode. This is like the primary metric that gives the producers a good idea which topics worked well and which did not work well. That is important to know for the producers, but also for us, so that we know how to plan the programme in the future. The issue there most of the time is funding, so not like in the linear problem, where you mostly have problems with time, so to say: How do you fit all the topics into a broadcast, if you only have limited time per day.

Q*: Is there a procedure how you deal with these information?

R: Well, so of course, the producers should always develop their contents and be on top of their communities' needs and desires. But since there is a lot of things to be considered with new platforms like TikTok et cetera, the big picture comes from the big media research studies. We do have a programme development team that evaluates the findings and will always be part of new formats being developed. This usually takes place in meetings, so a few times a year we have this large scale evaluation of our portfolio and how this is addressing our target groups. The results, what is going well and where we see empty spaces to be filled is shared with our sub-departments.

Q: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

R: That depends a lot on the degree of remote work. With people in-house, I have the feeling that there is a lot of face-to-face conversation. But in our line of work, much is actually done remotely, so for that we use E-mails and MS Teams. For our Social Media team, I would say a lot is done in office, but also on Teams, because the producers are often working remotely. The most important issues, like what we were just talking about, the programme development, is done in meetings. We like to keep them face-to-face,

because it is just easier to ask questions right on the spot. But not all people can come in for every meeting, so they will also join online.

Q: Are you already using AI as a tool for content creation or for performance analysis?

R: No, not that I know of.

Q: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

R: What do you exactly mean by that?

Q**: [Explanation]

R: Well, first of all, for the different third party platforms, so the video-based Social Media and Spotify, we are dealing with different types of content. So, there is quite little overlap, because the content on these platforms is just so different. It is two different types of processes that lead to the content creation. What we try to align is the content from a thematic perspective, so that when we have a podcast on data protection, then we also do a piece on that on our Social [Media] accounts.

Q: Are editorials free to choose which apps to use for content creation?

R: I don’t know if apps are the important feature here. For our audio-products, we have the necessary hardware equipment and computers with editing programmes. Many of the pieces that are pre-produced are then also played in the live-programme. That does not really change that much from the linear production. For the Social Media videos and posts we have a set of programmes, Adobe, but then also for the vertical videos. We do check the market there about what is available and useful to us. The whole vertical trend was rather new, so there was new software that we used then which makes the videos easier to produce.

Q: Who develops the general social media strategy and additions of platforms?

R: We can do a lot of that on our own, but we also talk to the other branches of DLF. I would say since we are the branch for the younger target group, we are usually the first ones to try new platforms. But the Social Media team is quite autonomous in that regard.

Q: How does the coordination and cooperation with the major platforms take place?

R: So for new platforms, I mean there were some concerns about TikTok and data security, there is the Partner Management who gives suggestions. We as DLF Nova do not talk to, say Instagram or so. But the public media do, and we can consult them.

Q: When you add, change, or drop formats for social media, at what level does that take place? Individually, editorially, or in consultation with other entities? Do major content changes need to be "signed off"?

R: Again, I would differentiate between Social Media and the production of audio contents. There is a very formal way of programme development, while on Instagram and TikTok, we try to represent the DLF Nova brand to our target group. So there, the [Social Media] team decides what they want to prioritize. That is a different process with the audio programme.

Q: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

R: I would argue that the fact that people want to put their own programme together on their phones and computers these days. And that our contents are mostly accessed via streaming, and not live. That trend has been an ongoing process. For us it is the highest priority to address our audience and therefore adjust to the platforms that they are using. And just like lately, there are also new additions to that, like with TikTok. It is also quite a competition on Spotify. So many people started their podcasts there and users are very selective what they want to listen to. So we have to be on top of these developments.

17 Minutes

Q= 10

Q*=1

Q**=1

G Interview Transcript 5

Interview log: 4

Interviewee: XXXXX XXXXXX

Institution: funk

Level: Strategy coordinator

Q: What are the parameters that guide content creation for social media and platforms as a whole?

R: Do you mean for us specifically or for the content creators?

Q**: If you can answer that, I'd be interested in both.

R: Well, we of course try to be present as a brand. So, on our funk-channels we try to balance the different content areas that our target groups prefer. And we also look out for content pieces that the community liked, so that have performed good. And of course we have a mix of content forms to deepen our branding, like for [Instagram] reels, we also like to use memes to reach out to potentially new users. But this is how you have to look at it with the funk-channels, where we focus on brand building. The content-network with the creators is something different if you want to put it like that, because we onboard them after we elaborate that they are producing content that will add well to our portfolio based on the target group.

Q*: How do you onboard new creators to your portfolio?

R: Our partner management is constantly scouting the market on various platforms. Of course, we always want new talents to work with us. But we also help funk-creators to branch out to new platforms and provide them with the resources they need to grow. We have a predefined set of our target group, as we only address teenagers and young adults. Within our target group are, of course, specific interests and preferred topics. We have the knowledge-seekers and entertainment seekers, and we have particular interests, as science or female topics that has grown a lot over the past years. When we see that some topics are perceived very well by our community, then we take this into consideration as where we want to expand our content options.

Q: How is information collected and analyzed that is used to optimize content?

R: We re-evaluate the portfolio every quarter. For that we also reach out to the creators and ask them about their plans and what they have lined up. So there is that, where we check in with the artists what they want to do. But of course, we also have some metrics and analytics that we use to grasp how the channels are performing. There is a set of KPIs

that we want to achieve for sure. We want the funk channels to grow generally. Based on that, we also encourage our creators to refer to other funk creators in their content.

Q: Is communication with colleagues standardized? If on a spectrum from "we talk in the office or on the phone about processes needed to create content" to: "we work it out via email" to: "communication and collaboration on content takes place in the same app" - which is most likely to be true?

R: We have some formal guidelines for our creators, some are less comfortable with this then others. Since we are still public broadcast, we are of course obliged to follow the [Rundfunk]Staatsvertrag. This means that we have to cover politics and news, and have to create a certain value for our viewership. This does set quite concrete guidelines for the creators in terms of content output. So, of course we talk to creators about this regularly and try to get a shared understanding of what content suits the target group best. Some of this is also formalized in documents. For doing so, we use one of the available meeting apps.

Q: Are you already using AI as a tool for content creation or for performance analysis?

R: Not really, no.

Q: How well is the workflow embedded in the corresponding platforms? How often is content performed in integrated apps relative to manual steps?

R: That mostly depends on the platforms I have to say. We use the usual tools that are either token-based or directly accessed in the interface. Same goes for the analytics tools. A special role recently has had our own content platform, funk net, where we offer video and podcast content under the same roof.

Q*: Are you also referring to your own platform from the third party platform contents?

R: No, we are not allowed to do so. In that sense, it is a bit of a lone wolf, but of course we are trying to promote it as much as possible, because it gives us a higher degree of independence from the third party platforms.

Q: Are editorials free to choose which apps to use for content creation?

R: We do not have editorials in the classical sense, but the creators have their teams of course. And yes, they are relatively free to chose what hardware and software they use. Of course they can always ask us if they need help, and we will try to provide licenses as good as possible.

Q: Who develops the general social media strategy and additions of platforms?

R: We have our own development teams, but overall we are bound to what Medienforschung provides in their market research, since strategy is a audience-first thing. We always try to stay as close to what our target group wants to see and hear.

Q: How does the coordination and cooperation with the major platforms take place?

R: There is actually one central unit for the coordination with the platforms. Most of the work on that had to be done, or needs to be done, when new channels enter the funk network. Which means that monetarization of the channel halts and also no ads are played before or during the videos, take YouTube for instance, but also there is a disclaimer on some platforms. But that is something not exclusive about funk, because that is the case for many public broadcasters. Apart from that, it is mostly us receiving information on the latest changes on the third party platforms.

Q: When you add, change, or drop formats for social media, at what level does that take place? Individually, editorially, or in consultation with other entities? Do major content changes need to be "signed off"?

R: In varies, when we talk about formats. We like to keep an overview of the different formats happening on the channels, but in terms of topics, the creators are free to chose what they are doing. Of course, sometimes we do encourage to do something, or give recommendations if we identify a blind spot. We also encourage, for example, collaborations between channels to give multiple perspectives on the same topic. This can also help some creators to benefit from other funk creators.

Q: What is the strategy most likely to be aligned with: Information and performance, technology, or news value?

R: I think for funk that has always been the question of what platforms are being used by our user-specific target group. So we stay highly aware of that. We tried to get onto TikTok very early, much earlier that the other public broadcasters in Germany. We as the organization wanted that, but also the creators. I mean of course, the creators also want to stay as close as possible to their communities, and want to stay relevant with them. This is I think the unique point that funk can be very fast with these things, because it was founded to deliver content for these platforms. Of course new features are also important to us, but our creators are really affine to Social Media and adapt to these pretty quickly. Same goes for us, when new forms of content display are added to the platforms, we usually try around a bit and get a feel about what works well soon after.

21 Minutes

Q*=1

Q**=1

H Document Analysis SWR

Report: “Telemedien Änderungskonzept” (‚Tele Media Change Concept‘)

Institution: SWR

Length: 80 pages

Summary

The SWR proclaims to take the ongoing media developments seriously. The organization recognizes the changed reality, of global media brands controlling the market. Apparently, the business model of the SWR is challenged in two ways: Because generally, people spend more time on mobile devices and hence, on platforms like Instagram and TikTok, where the organization is faced a broad competition. Secondly, since the big VoD companies have entered the market, streaming competition is significantly higher.

The SWR believes that the new legal framework ‘Medienstaatsvertrag’ is an opportunity for public broadcasting, and its transition towards PSM. The SWR furthermore highlights the relevance of the EC regulation for digital accessibility and pledges to reduce digital barriers online. The third highlighted legal framework is the General Data Protection Directive (GDPR).

The organization highlights the importance of public value creation of public media organizations. As a means to generate new public values, the organization want to engage in creative commons initiatives and promote free access to knowledge.

As part of the initiative, the SWR wants to cooperate with schools and enable students with free license models. Other statements about external stakeholders referred to the strong position of the ARD Mediathek, the commonly shared on-demand platform. According to the SWR, the platform has been growing steadily.

The SWR strives to make PSM services customizable. The principle of customizability is included in the new legal framework. However, the organization does not have a

concrete framework or strategy to pursue this goal. Instead, the SWR refers to the Mediathek's ability to pause a live-stream, and resume at a later point in time.

As for internal structure, the SWR commits to the principle of editorial autonomy, and wants to stick to the relative strongly institutionalized self-governance of the editorials. Furthermore, the organization wants to continue to strengthen the role of the own streaming platform, by adding new formats to it. Also, the third-party platform presence is to be increased, as the organization wants to engage with its community on social media services. To diversify its portfolio there, the SWR will invest more money in multi-media contents in the future.

I Document Analysis ZDF

Report: Medienentwicklungen 2019 ('Media Developments 2019')

Institution: ZDF

Length: 58 pages

Summary

The ZDF report identifies an ongoing shift in the global media markets. For the global platform companies, the report identifies that Facebook is losing some of its market share, while other platforms, like Instagram, YouTube, and Snapchat are able to increase their users. This also has important implications for a more diverse approach to PSM content delivery on various platforms. The ZDF does not see its position threatened by streaming trends. The report refers to one of the ZDFs most successful shows of the last year, and how it is now also available on Netflix and Amazon Prime Video. Furthermore, the ZDF sees YouTube as a part of the global streaming market. Because of the TV-like format, YouTube is supposed to play an increased role in the ZDFs online media strategy.

In terms of users, the ZDF recognizes users' preference of the smartphone as the "universal device" for media consumption. The report exhibits users' preferences on contents and identifies a lower interest in news media and political reporting. Instead, media consumers spend more time on entertainment and social media. As a countermeasure, the report suggests to cover a wider range of opinions in debates and political coverage.

The ZDF wants to improve its PSM content delivery. As-is, the organization is diversifying its PSM portfolio, and implemented a persona-system to better target audience. In the future, the organization wants to deploy recommenders systems based

on predictive analytics. The report states that “AI is more than nice to have” (p. 43) and should be fully incorporated into the owned platforms.

J Document Analysis Deutschlandradio

Report: „Auftrag und Strukturoptimierung des öffentlich-rechtlichen Rundfunks“ (‚Mandate For Structural Optimization Of The Public Boradcast‘)

Institution: Deutschlandradio

Length: 22 pages

Summary

Deutschlandfunk sees the digital change of the media landscape as a chance to reach new audiences. Since the organization is the only legacy radio-only broadcaster among public media organization, the report is not shy of referring to this special position.

The report also outlines that the legitimacy of Deutschlandradio is safe within the public media landscape. This is because of the legal framework, and because the organization (self-proclaimed) successfully performs its mandate for public information.

With the (at the time of the report) upcoming structural reforms, the organization finds itself in a position where it has to consolidate budget. Deutschlandfunk argues that it is working with “largest efficiency possible” (p. 4). To do so, the organization does not spend any separate budget on online activities. It has a policy of budgetary preferences, meaning that all the money that Deutschlandradio wants to spend on PSM, it has to cut costs elsewhere.

Upcoming financial strategies are described as continuous investment in digital infrastructure, partnerships with the private sector, and participation in public media partnerships with ARD and ZDF. This so called shared service structure is supposed to make administrative activities leaner, since structures are consolidated between the three organisations.

K Document Analysis funk

Report: „Funk Bericht 2022“ (‚Funk Report 2022‘)

Institution: funk

Length: webpage, 9000 words

Summary

In the funk report, the organization lies out its business strategy. The PSM content production is closely aligned to the specifically defined target group of 14-29-year olds. The organization argues that its contents are effectively addressing this young audience through a multi-layered strategy approach. The first layer being diversity of content. Funk argues that there are some well identified fields that young people are interested in. The organization also proclaims to take account that its partner creators (protagonists) are representing people of colour, people of all genders, religions and sexual preferences. The second layer is distribution. This means that funk aligns the content with the matching platforms, to address the audience in the most efficient way. The report explicitly mentions (five times throughout the report) funk.net as its own on-demand platform. Lastly, the organization wants to enable communication and participation of its community, by actively managing PSM accounts.

Funk refers to its technological innovations, one of which being the "Sentiment Analysis" tool, an AI application that scrolls comment sections and provides feedback to the creators, how the PSM pieces make the audience feel.

Funk also refers to the legal framework in its report, and to its public mandate accordingly. Funk has a special role in this context, since – by definition – the targeted audience is only a fraction of the overall population in Germany.

In the report, funk recognizes difficulties with "platform logic" when it comes to third-party platforms. However, the organization claims to understand the underlying mechanisms and uses them to its own advantage.

The organization has developed a self-understanding as the innovation lab for the large public broadcasters ARD and ZDF. Funk refers to the fact that many of the young talents who start their media careers at funk, later work for ARD and ZDF in bigger projects.

The organization is optimistic about the outlook on budget and assumes that it can conclude its growth-path over the next years. The main objective for doing so is to keep a high-quality PSM portfolio, and to keep adapting to your media recipients.

L Code System

Code System	Memo	Frequency
Code System		173
Digital Transformation Results		0
Organizational change	Expert says there is a new organizational structure that would not have existed without PSM.	1
New services	Expert says that the organization uses technology to provide a new service.	1
Digital Transformation Processes		0
Using new technology	Expert says that new technology is used in a process.	2
Digital Transformation Objects		0
Process	Expert says that the introduction of new technology digitalized a process.	2
Digital Transformation Reasons		0
Increase market share	Expert says that an innovation driver is the organizations objective to increase market share.	1
Competition	Expert says high competition urges organization to innovate.	1
New media devices	Expert says that the fact that people have diverse media devices changes the organizations output.	1
Audience demands	Expert says that the organization adapts based on the audience's demands.	5
New tools available	Expert says that organization uses integrated tools that enter the market.	2
Platforms introduce new technology	Expert says that the organization uses new technology, because a platform integrated it in their system.	3
Internal Policies and Strategies		0
Quality control	Expert says that the strategic coordination wants to control quality standards throughout the PSM portfolio.	2

Scale Reach	Expert says that a goal of the organization is to scale the reach of the channels.	1
Resources scarce	Expert says that resources for new PSM format is scarce.	3
Push for Innovation	Expert says that the organization is eger to drive innovation forward.	2
Portfolio management	Expert says that internal managers are actively managing the PSM portfolio.	3
Own platform provides autonomy	Expert says that the owned on-demand platform provides the organization with some strategic autonomy.	1
Strategy follows legal framework	Expert says that internal rules are modeled to align with laws.	2
Networking strategy	Expert says that the organization uses network effects to scale.	1
Standardized strategic processes	Expert says that there are regular appointments and standardized evaluation processes for strategic decisions.	5
Seperate strategic department	Expert says that there is a seperate strategic department, performing strategic tasks.	6
Target Group Orientation	Expert says that strategic objective is to statisfy users, reach out to new users, and align presence with the target group.	13
Digital Technologies		0
No IT center	Expert says that there is no IT center.	1
Data protection compliance	Expert says that digital technologies undergo a data protection compliance test before they can be deployed.	1
Shared online Workspaces	Expert says that people collaborate in shared online workspaces.	5
Acquisition of new tools	Expert says that the organization acquires new technology to improve output.	2
Free to chose technology	Expert says that internal stakeholders are free to chose technology.	3
Use of platform technology	Expert says that organization uses the platfrom integrated tools.	3
No AI	Expert says that AI is not being used.	5
Meeting software	Expert says that organization uses meeting software to communicate.	3

Information		0
Performance logic differs	Expert says that performance evaluation has different logics for different platforms.	1
Community Management	Expert says that information is collected throug active community management, like checking likes, shares, and comments.	2
Seperate information department	Expert says that there is a seperate information department, gathering information for the organization.	4
Performance Analytics	Expert says that analytics and KPIs are used to evaluate output.	6
Internal Stakeholders		0
Different PSM skills	Expert says that editorial units widely differ in PSM skills	1
Strategic dependency	Expert says that for some processes, they can not act autonomous, but have to ask permission.	1
Information dependency	Expert says that stakeholders only have limited access to information.	2
Strategic autonomy	Expert says that a PSM producing department has strategic autonomy within the organization.	3
PSM specialists	Expert says that the organization has people who are skilled with online media and learn new processes quickly.	2
Involve content creators in strategy	Expert says that content creators or editorial professionals are involved in strategic decision-making	6
Decentralized Structure	Expert says that the structure of the organization is decentralized by an editorial, team, or content creator.	7
Processes and Activities		0
Constant adaptation	Expert says due to changed technology, processes constantly change.	1
Process change takes time	Expert says that process change takes time.	1
Format development analogue	Expert says that a new format development is analogue and still follows traditional procedure.	1
Diverge from linear content	Expert says that processes of PSM production diverge from linear production logic.	2

Alignment with linear content	Expert says that content production activities are quite similar to the legacy content creation.	1
Platform specific processes	Expert says that there are different workflows for different platforms.	5
Remote work influences processes	Expert says that the degree of remote work influences processes.	3
Information consultation	Expert says that information is consulted for PSM production processes.	2
PSM specific processes	Expert says that the organization has developed processes specificly for PSM content production.	3
Experimental processes	Expert says that sometimes, processes will be experimental at first in order to adapt.	1
Public e-services		0
Personas for service optimization	Expert says that the organization uses defined personas to which the PSM production is adjusted.	1
Diversification increases number of processes	Expert says that diversification of PSM formats increases the number of processes.	1
Importance of PSM ethos	Expert says that PSM principles, but also efficiency drive service output.	2
Diversification of PSM services	Expert says that the organization produces a variety of services.	2
Deactivation of monetarization	Expert says that because of PSM principles, monetarization is deactivated.	1
External Stakeholders		0
Changed media consumption behaviour	Expert says that changed media consumption challenges the organization's output.	2
Users choose Platforms	Expert says that user orientation towards platforms determines whether organizations also join platforms.	5
Pre-defined target group	Expert says that the target group is pre-defined by age, interests, or persona.	3
Value for Society		0
Obligation to produce public value	Expert says that laws and regulations demand the organization to produce public value.	2
Policies and Strategies		0

Strategic coordination	Expert says that the organization coordinates strategically with at least one other public media organizaton.	1
Agility due to policy	Expert says that the organizations agile capability is due to external policy or strategy.	1
Digital Infrastructure		0
Dependency on platforms	Expert says that the organization's output depends on participation on the platforms.	3
Smartphone and computer diffusion	Expert says that the diffusion of new media devices changes the organizations output.	1
Coordination with the platforms	Expert says that for some processes, public media organizations have to coordinate with the platforms	3
Platforms own the technology	Expert says that the organization is dependend on the technology one or multiple platforms.	3
Law and Regulations		0
PSM content obliged to law	Expert says that the PSM content output is bound to rules and laws.	1
Social, Economic and Political Environment		0
Audience fragmentation on platforms	Expert says that platform communities are fragmented by age groups.	1
High competition on platforms	Expert says that due to high competition, the organization is under pressure to lose market share.	1
Consulting Partner Management	Expert says that there is a shared partner management body, who consults organization about what platforms to use.	3

Declaration of Authorship

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Münster, 06 June 2023

Moritz Philipp Herrmann

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