Audience Metrics in local Journalism: A qualitative research on appropriating audience metrics in the news production process of local news media in South Holland
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Citation
Koning, A. de. (2023). *Audience Metrics in local Journalism: A qualitative research on appropriating audience metrics in the news production process of local news media in South Holland*.

AUDIENCE METRICS IN LOCAL JOURNALISM

A qualitative research on appropriating audience metrics in the news production process of local news media in South Holland

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Date:	June 9, 2023
Word count:	17.869

Preface

I hereby present my thesis, 'Audience Metrics in Local Journalism: A qualitative research on appropriating audience metrics in the news production process of local news media in South Holland.' To complete the master's degree in Journalism and New Media at Leiden University. The period of writing was between December 2022 and June 2023.

Last year (2021-2022) I also wrote a thesis during the pre-master's program in Journalism and New Media. That thesis was about the role of the editors in local news media in South Holland. The research revealed that the editors of local news media are responsible for the production of one or sometimes even several newspapers and are involved in the entire news production process. The research I present here further explores this idea by focusing on how editors deal with innovation, specifically audience metrics.

In 2021, I also wrote a thesis to complete my degree in Communication at Hogeschool Leiden. In this study, I focused on digital marketing techniques around the paywall on the website of the national newspaper AD.nl. This year, I was doing research for the third time. Fortunately, the saying 'practice makes perfect' is true. I started this process with more confidence than in previous years. I would like to thank my fellow students Alexander, Mitchell, Suzanne, Nina, Maartje, Iris, Chiara, Eva, and Martijn for the past academic year. Furthermore, I would like to especially thank my supervisor Tomás Dodds. He has given me a lot of positive energy and support over the past period. His reassuring words and pep talks helped me get through this process well.

Finally, I would also like to thank my respondents from local news media *West Media, Telstar Mediacentrum, Het Kontakt,* and *Verhagen*, they enthusiastically participated in the interviews: René Hoog, Helga Boudestein, Debbie van Eijk, Hélène Ouwekerk, Dick Janssen, Martijn Mastenbroek, Rick den Besten, Bert Bons, Geurt Mouthaan, Hester Hage, Dirk Bouman, Carin van der Spijk-Kralt, and Marc Wonnink. Their flexible attitude and quick response made it possible to schedule the interviews on time, and the research went as planned.

I hope you enjoy reading it.

Alissa de Koning
Leiden, June 2023

Summary

Introduction:

Audience metrics [AM] defined as data, analytics, and statistics about visitors to news websites, including the number of pages viewed, clicks, how they arrive at the website (traffic), or time, readers spend on articles (Hendrickx et al., 2021, p. 433), have radically increased the knowledge that editors have about their public's online behavior (Kormelink & Meijer, 2018) and preferences (Christin, 2020, p. 76). In the Netherlands, research about AM has covered mostly national and regional newspapers (Hendrickx et al., 2021; Welbers et al., 2016). Therefore, information about how local newspapers are appropriating these technologies is scarce. To fill this gap, this research aims to understand how local newspapers use new technologies in the news production process. Thus, the central research question is: *How do editors of local newspapers appropriate technologies for audience metrics?*

Literature review:

The literature review describes studies about local newsrooms, AM, implementing AM, and news values. Previous studies about AM pointed out how the adaptation of AM has developed over the past years. Local newsrooms are aware of the fact that they need to take some steps to innovate, in order to sustain a healthy revenue model (Keij & Van Kranenburg, 2022). And AM could be a useful tool realising this, since AM has been implemented worldwide in the daily activities of editors in order to increase readership, quality, and engagement (Hendrickx et al., 2021). A risk of using AM is that editors only write about news that complies with the audience's preferences, which might eliminate more important news. In addition, journalists relinquishing their professional judgment by focusing on AM in news selection might decrease their journalistic added value (Welbers et al., 2016).

Methodology:

The chosen methodology for this research is qualitative research, consisting of semi-structured in-depth interviews with ten editors and three managers of four different conglomerates [umbrella companies] of local news media in South Holland. An important requirement of the selected local media was that they must have a website on which they post news, to use AM. After data collection, thematic content analysis was used, using the online coding tool *Atlas.ti*.

Findings:

Analyzing the interview reveals that AM is used daily in local journalism; it is an integral part of the news production process. The most used tools include Pubble, the website, and Google Analytics. Editors and managers mainly look at AM, such as clicks, views, and best-read stories. Insights drive different choices in agenda-setting. For example, editors now write news stories about small businesses and human interest stories more often. Online, 112 news is more prevalent (e.g., a fire, traffic jam, or car accident). The news value 'politics' is still more important but is described more succinctly because it is not well read. Furthermore, it appears that the attitude of editors and managers toward innovation is generally positive. Editors take an open attitude toward using AM but are aware of the risk of focusing too much on 'scoring' instead of 'informing.' Finally, interviews reveal that change is easier for young editors than for older ones.

Discussion and conclusion:

This study of how editors appropriate AM in local newsrooms has painted a clear picture of where local news media are in the innovation process. This research shows that editors of local news media primarily look at AM, such as clicks, views, and best-read stories through tools such as Pubble, their website, and Google Analytics. They usually do this cursory because analyzing AM is an additional task on top of the already long to-do list. How often editors engage in AM depends on their age and interest. Editors use AM primarily to learn from past mistakes or successes. Furthermore, they are aware of the dangers of AM, such as focusing too much on scoring than informing. Finally, editors are encouraged by their managers to use AM because it is advantageous for generating ad revenue, according to managers. Editors are aware of this, and they understand the need to pay attention to AM for the sustainability of the local newspaper.

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Chapter 1: Introduction

Since the worldwide digitization of news platforms over the past two decades, newsrooms have had the opportunity to gather more data about their readers (Christin, 2020). In particular, audience metrics technologies have increased journalists' knowledge about their public's online behavior (Kormelink & Meijer, 2018) and topical preferences (Christin, 2020, p. 76).

Audience metrics [from now on AM], defined as data, analytics, and statistics about visitors to news websites, including the number of pages viewed, clicks, how they arrive on the website (traffic) or time readers spend on articles (Hendrickx et al., 2021, p. 433), offer many opportunities in journalism. For example, metrics are a useful tool in personalizing news stories and assisting news platforms in reaching a wider audience (Petre, 2021). Moreover, AM helps journalists select news or position articles on their websites and social media platforms. Also, the geographical location of readers is an often used metric to match readers to produce specific hyper-local content (Møller, 2022, p. 1795).

Traditionally, journalists are gatekeepers in the mass communication process. Which means they filter, transform, and explain events to the public (Welbers et al., 2016). Journalists thus decide which issues are relevant for public debate and consideration, a process known as agenda-setting (Welbers et al., 2018, p. 321). Typical values represent legitimacy and trustworthiness in journalism: "public service, objectivity, autonomy, immediacy, and ethics" (Møller, 2022, p. 1797).

However, the arrival of AM in newsrooms has transformed traditional editorial activities and the gatekeeping process. For example, the audience now plays a bigger role in the news selection process because of the availability of two-way communication flows via the news website, social media channels, and the availability of AM (Welbers et al., 2016). Because of the increasingly important opinion of the public in this process, many journalists see AM as conflicting with their professional norms, in particular, norms such as 'autonomy' and 'ethics' (Welbers et al., 2016). Professional norms are how journalism is defined, such as democracy's watchdog, meaning that journalists are responsible for informing citizens and being critical of political decision-making (Møller, 2022, p. 1796). Some journalists feel that AM takes away some part of the editorial freedom, independence, and watchdog role in what journalists decide to write about (Møller, 2022, p. 1797).

Therefore, AM are affecting work processes in the newsroom, as well as the relationship with the audience (Christin, 2020). Local news media, in particular, have a close relationship with their audience, as journalists often live in the same community as their readers and regularly receive tips about events or issues of concern in their community (De Jong & Koetsenruijter,

2019; Tessem et al., 2022, p. 214). Particularly in the Netherlands, their mode of operation is significantly different from that of national and regional news media, in which journalists rely primarily on news agencies, such as the Algemeen Nederlands Persbureau (ANP) (Welbers et al., 2018, p. 316). Digitization and innovation in newsrooms impact media organizations differently (Christin, 2017). Therefore, in this thesis, I distinguish three types of news media: national, regional, and local. National and regional news media are subscription-based newspapers (Swart et al., 2017, p. 269). They serve both regional and national audiences, often combined in one newspaper but with separate newsrooms. Local news media refer to hyperlocal, free newspapers serving a local community.

When studying the impact of metrics in journalistic work, it is important to remember the distinction between local, regional, and national newsrooms. Previous research shows that hierarchical top-down communication about adopting AM in newsrooms of national newspapers causes conflicting attitudes from journalists (Hendrickx et al., 2021, p. 439; Keij & Van Kranenburg, 2022, p. 13). However, journalists working at regional newspapers experience less top-down communication because they work in smaller newsrooms (Hendrickx et al., 2021). This creates less resistance and more understanding of changes, such as innovation. In addition, journalists of regional newspapers experience a sense of urgency for implementing AM in the newsroom because of lacking financial resources in the forms of advertisement incomes and subscriptions (Hendrickx et al., 2021, p. 435). This statement is supported by Keij and Van Kranenburg (2022), who also describe that managers of local news media in the Netherlands understand the need for transformation but do not always manage to make the transformation properly (p. 13).

Furthermore, most research on audience metrics and news media has been conducted in the United States, creating a bias in how we understand these technologies' impact in news production (Welbers et al., 2016, p. 1038). In the Netherlands, research about AM has covered mostly national and regional newspapers (Hendrickx et al., 2021; Welbers et al., 2016). Therefore, information about how local newspapers are appropriating these technologies is missing.

Furthermore, local journalism is becoming increasingly important because they fulfill the task of information flows, monitoring the local government, and connecting citizens (De Jong & Koetsenruijter, 2019). Besides, local journalism plays a crucial role in citizen engagement, which means the extent to which citizens are involved in local news media and politics (Tessem et al., 2022). This emphasizes the importance of this case study in finding out how AM might impact the news production process in local newsrooms.

South Holland is an interesting area to focus on. This province has the highest population density in the Netherlands (Allecijfers.nl, 2023; Centraal Bureau voor de Statistiek (CBS), 2023). In addition, the province has a high number of local media (Redactie SVDJ, 2021). As De Jong and Koetsenruijter (2019) have recently investigated the state of the media landscape in the province of South Holland and how to monitor its quality. The outcome of this research was that there is room for improvement in the quality of local journalism and that this specific news provider is highly dependent on funding from the government to improve their quality and to make the next step in the digital media landscape (De Jong & Koetsenruijter, 2019).

Last year (2022), a group of pre-master students at Leiden University researched the changing role and activities of local and regional news editors in South Holland. This qualitative study consisted of in-depth interviews and ethnographic fieldwork, resulting in the following conclusion: Most editors of local newspapers take part in every step of the news production process[1]. They produce the newspaper as a 'one man's band.' The increasing importance of their website and social media platforms enlarges their workload. Moreover, the unpredictable behavior of their readers makes it hard for them to create an online strategy. Still, most editors know that this next step is necessary for a sustainable future for their local newspaper.

There was a significant difference in the online strategy between regional and local newspapers. However, regional newspapers already implement a 'digital first' approach, which means editors prioritize online news over print news in the news production process. Indeed, they are leading examples in using AM. This thesis adds to previous research by zooming in on local newspapers in particular and approaching this with a different angle, namely by focusing on AM and how this affects activities in the newsroom. This research aims to understand how local newspapers use new technologies in the news production. This leads to the following research question:

> *How do editors of local newspapers appropriate technologies for audience metrics?*

Three subquestions help answer the main research question:

1. *What tools do editors use to analyze audience metrics?*
2. *Are audience metrics changing notions of agenda-setting in the local newsroom?*
3. *How do managers and editors compare in attitude regarding the use of audience metrics?*

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[1] In this thesis, journalists of local newspapers are referred to by the term 'editor.'

Data was collected through thirteen in-depth interviews with editors from local newspapers and managers from the publishing companies of these local newspapers in South Holland, the Netherlands. The four publishing companies[2], or conglomerates, are *West Media, Het Kontakt, Telstar Mediacentrum,* and *Verhagen*.

The expected outcome of this research is that managers prioritize audience preference over professional judgment in using AM in the local newsroom (Kristensen, 2021, p. 10). And that local editors are eager to use AM but do not have enough resources [time and money] to use it (Borchardt, 2022; Hendrickx et al., 2021).

This thesis is structured as follows: I present a literature review in Chapter 2 stressing existing and essential research in AM and local journalism. Then the methodology in Chapter 3 shows how in-depth interviews and qualitative research practices are most suitable for answering the main research question. This will lead to Chapter 4, Results, where I present the primary outcome of the literature review and qualitative research. Chapter 5 describes the discussion and conclusion of this research. This chapter reflects upon insights from this research. In addition, this study's limitations, strengths, and weaknesses are listed in the final chapter.

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[2] In this thesis publishing companies are referred to as 'conglomerates.'

Chapter 2: Literature review

This chapter provides an overview of the main literature concerning the main topic of AM in local newsrooms. Most of the studies cited are qualitative in nature. Commonly used research methods are in-depth interviews and ethnography. This chapter first describes the importance of local newsrooms in Paragraph 2.1, including a description of current business models [2.1.1], local journalism in South Holland [2.1.2], and the importance of engagement in local journalism [2.1.3]. Paragraph 2.2 contains a description of AM in newsrooms [2.2.1], the advantages [2.2.2], and the downsides [2.2.3] of using AM in the newsroom. Paragraph 2.3 describes the challenges of implementing AM in newsrooms [2.3.1] and managerial approaches to doing so [2.3.2]. Paragraph 2.4 explains journalistic (news) values, first by describing gatekeeping [2.4.1], research on news values [2.4.2], and finally, news topics in local news [2.4.3].

2.1 Local newsrooms

2.1.1 Business models in the Netherlands

The traditional business model of local news media in the Netherlands focuses on print, advertising, and arrangements other than selling subscriptions. For example, announcements and news for a municipality (De Jong & Koetsenruijter, 2019, p. 5; Keij & Van Kranenburg, 2022, p. 15). Since the digitization of news, this is no longer sufficient to generate enough income for local journalism (Keij & Van Kranenburg, 2022, p. 13). Despite this, research shows that many local journalists still believe that newspapers should focus primarily on traditional print media. On the contrary, others think local media will only survive if they focus on online activities (Keij & Van Kranenburg, 2022, p. 9).

Compared to regional newspapers, local newspapers are even more dependent on low budgets and volunteers for producing news (De Jong & Koetsenruijter, 2019). Over the past years, degraded performance and lower quality of news have resulted in reorganizations, layoffs, and even newsroom closures, reduced media coverage, and circulation (Keij & Van Kranenburg, 2022, p. 13). As a solution, many small newspapers have been taken over by one publisher. Often they keep their unique names but are printed by the same publisher (van Kranenburg, 2001, p. 67).

This was also the case for regional newspapers (Hendrickx & Van Remoortere, 2023). Last decade, two media firms, DPG Media and Mediahuis, took over nearly all regional newspapers in the Netherlands, and they stopped publishing local newspapers (Hendrickx & Van Remoortere, 2023, p. 6). This caused a change in business models for regional newspapers, as they become part of national newspaper brands (Swart et al., 2017, p. 270), and changing business models for local news media, as many have become independent, or

part of a conglomerate specifically for local, free daily newspapers (Keij & Van Kranenburg, 2022). Relative to local newspapers, regional newspapers generally operate in bigger newsrooms, cover larger geographical areas, and own a higher degree of professionalism, which directly relates to a higher quality of news (De Jong & Koetsenruijter, 2019; Keij & Van Kranenburg, 2022, p. 13).

2.1.2 South Holland

De Jong and Koetsenruijter (2019) studied the changing media landscape and the quality of news in South Holland. Results of in-depth interviews with key players in the media landscape show that local journalism is becoming increasingly important because it fulfills information flow tasks, monitors the local government, and connects citizens (De Jong & Koetsenruijter, 2019). In South Holland, there are over 400 news media in 52 municipalities. According to De Jong and Koetsenruijter (2019), the most significant changes affecting local news media are the increase in digital news, less print news, and fewer journalists (p. 81). Problematic findings include a decrease in the quality and quantity of local news. Local newspapers appear to fall short of their watchdog role (De Jong & Koetsenruijter, 2019, p. 81).

Because of their hyper-local character, these newsrooms depend on small budgets and large groups of volunteers, making it hard for local newspapers to ensure sufficient quality (De Jong & Koetsenruijter, 2019). In South Holland, there is a parallel increase in available online news and readers. At the same time, research shows rigid organizational structures and editorial routines (De Jong & Koetsenruijter, 2019, p. 11). Research on organizational transformation in local news media shows that willingness to learn, flexibility, and adaptability are crucial for implementing innovation in newsrooms (Keij & Van Kranenburg, 2022, p. 4). This contradiction potentially creates problems for local news media.

2.1.3 Local engagement

Local news plays an important role in daily news consumption for citizens (Powers, 2018, p. 454). Research shows that Dutch citizens find that local and regional news has a high value and great impact on their daily lives because news from the neighborhood more often concerns people or places they know (Swart et al., 2017, p. 273). Compared to national and regional newspapers, local newspapers depend heavily on citizens' input for news production since journalists often live in the same community and receive tips and comments about problems in their society (Tessem et al., 2022, p. 214). Research points out that citizen contributions are mainly used to fill empty spaces or they add missing information about community-related issues (Paulussen & D'heer, 2013, p. 595).

Over the past years, local news media have experimented with user-generated content (UGC) (Paulussen & D'heer, 2013, p. 588). An example of this, is a Belgian local newspaper that experimented with UGC in 2011. They posted citizen contributions on their website alongside news stories from their own journalists (Paulussen & D'heer, 2013, p. 589). Input from citizens mainly concerns small news, personal stories, or pictures from local events (Paulussen & D'heer, 2013, p. 591). Three advantages of using UGC are the opportunity for transitioning to online news production, reduced costs through contributions from volunteer citizens, and the attraction of potential new readers through the focus on hyper-local areas (Paulussen & D'heer, 2013, p. 591). Still, UGC is not the perfect solution. A major drawback of UGC is the low level of professionalism, poor language quality, inaccurate information, no pictures, or the lack of a news angle (Tessem et al., 2022).

Tessem et al. (2022) do see some advantages of UGC in local journalism. The authors state that when citizens play a more prominent role in the news production process, local news media can expect greater support from the public. The more support local news media receive from the public, the more influence they have on the political system, which is beneficial for the gatekeeping role of journalism (p. 214). However, not all scholars agree with this assumption. For example, Paulussen and D'heer (2013, p. 591) do not think participatory news production automatically leads to more political participation. Evidently, previous research shows that most submitted news items consist of reports about local events and community activities. Citizens thus do not focus on political news. According to the researchers, this highlights the apolitical nature of UGC (Paulussen & D'heer, 2013, p. 591).

2.2 AM

2.2.1 AM tools

In recent years, newsrooms worldwide have implemented AM in their daily activities (Dodds et al., 2023). AM offers newsrooms the possibility "to monitor, observe, quantify, and predict the performance of stories" (Moyo et al., 2019, p. 491). As Christin (2017) states, journalists acquire a datafied version of their public through data visualizations. They are typically displayed on dashboards or big TV screens in the newsroom (Dodds et al., 2023, p. 2). Other forms are rankings of 'best-read stories' or lists, graphs, and maps (Christin, 2017, p. 3). Often used tools for audience metrics are *Facebook (Meta), Chartbeat,* and *Google Analytics* (Borchardt, 2022, p. 1921; Dodds et al., 2023, p. 13). These tools provide a clear overview of the behavior of website visitors. Other systems for AM are *Omniture* and *Facebook Audience Insights* (Kristensen, 2021, p. 3). In addition, some news media design their own metrics

systems (Kristensen, 2021, p. 3). It remains to be seen from upcoming research what type of AM local news editors use.

2.2.2 Pros of AM

Research shows that AM influences journalistic decision-making, such as news values, news recommendations, design, and presentation on social media (Welbers et al., 2016, p. 427). Described benefits of AM are increased readership, engagement, revenues, and a more personalized news experience (Dodds et al., 2023, p. 3; Hendrickx et al., 2021; Møller, 2022, p. 1795; Reuters Institute for the Study of Journalism, 2023; Tessem et al., 2022). Scholars describe AM as helpful, efficient, objective, and professional assistance in the news-making process (Christin, 2017, p. 3; Ferrer-Conill & Tandoc, 2018, p. 436; Vandendaele et al., 2021, p. 38).

A common practice based on AM in large newsrooms nowadays is headline testing (Vandendaele et al., 2021; Welbers et al., 2016). AM provides insight into which articles need an extra push online to be read by a larger audience. This is beneficial, for instance, when according to a journalist, a story does not get the attention it deserves (Vandendaele et al., 2021, p. 37). Additionally, AM makes it possible to investigate if news stories align with specific journalistic values. For example, to scan equality in the news coverage in diverse communities or to lift stories of important matters that play a role in that specific community (Borchardt, 2022, p. 1920). Other benefits are the opportunity to compare their statistics to that of competition news media, appeal to advertisers, and bring areas of newsroom performance to the surface where is room for improvement (Moyo et al., 2019, p. 491). In the context of local newsrooms, metrics have also been used to produce hyper-local content (Neheli, 2019), with some studies showing that this type of coverage effectively drives subscriber retention (Kim et al., 2021), providing a new business model for small-scale, community-orientated media outlets. It is still unclear how journalists from local newspapers in the Netherlands view this development due to a research gap.

2.2.3 Cons of AM

Scholars have also identified the downsides of using AM in the newsroom. Some argue that AM intensifies social and racial inequalities because of how algorithms are built (Christin, 2017, p. 4). Gillespie (2014) argues that the objectivity of journalists and algorithms is not commensurate. Journalistic practices rely on an institutional promise with a specific set of norms and values. Algorithms focus more on the technological promise of mechanical neutrality (Gillespie et al., 2014, p. 181). The use of algorithms and data is often compared to 'black boxes,' which means that it is unclear how algorithms work because of a lack of transparency and who decides how they work (Christin, 2017, p. 4; Dodds et al., 2023, p. 5;

Gillespie et al., 2014, p. 178). Moreover, algorithms are not entirely objective, which raises questions about their social and political impact (Christin, 2017, p. 4). Besides, Dodds et al. (2023) argue that algorithmic construction does not represent the actual audience since it displays the interests or preferences of a fraction of the whole audience (p. 4).

Welbers et al. (2016) also describe the riskiness of using AM in the news production process: News that complies with the audience's preferences might eliminate more important news (p. 1050). In addition, journalists relinquishing their professional judgment by focusing on AM in news selection might decrease their journalistic added value (Welbers et al., 2016). Some journalists even quit their jobs because of the rise of AM, according to their values (Belair-Gagnon & Holton, 2018). Research points out that AM affects feelings of professional anxiety among journalists since AM shows which articles are read better than others (Dodds et al., 2023, p. 13). The question is to what extent this also plays out in local newsrooms.

Møller (2022) adds to this research by describing two types of pressures that have originated because of AM: it increases the impact of commercial pressure on editorial integrity, and the recommender system stimulates the creation of filter bubbles which is a democratic risk (p. 1795). In local media, commercial pressure also plays a role in the news production process. For example, through financial support from the municipality or advertisers (De Jong & Koetsenruijter, 2019, p. 5). It is interesting to find out to what extent other platforms, such as AM tools, Google, and social media, influence the news production process. Another research indicates that journalists' fear of AM increases clickbait sensed stories, with clicks as the most important indicator (Hendrickx et al., 2021, p. 436). Because of the research gap, it is still unclear what negative impacts journalists cite from local media when it comes to AM, and which indicators, derived from AM, local journalists see as most important.

2.3 Implementing AM

2.3.1 Challenges

This section describes notable studies on implementing AM in newsrooms. Over the past years, more research has been done about the transformation process into digital first-based newsrooms, which means journalists prioritize online news over print news in the news production process (Hendrickx et al., 2021). The managers of local newsrooms realize the need to transform, but they do not always succeed in doing so (Keij & Van Kranenburg, 2022, p. 13). A common reason for failing to implement AM is different or conflicting institutional logic, which hinders transformation (Keij & Van Kranenburg, 2022, p. 13). Examples of failed transformation include research about hiring online media consultants who teach journalists how to work with AM (Hendrickx et al., 2021, p. 435; Keij & Van Kranenburg, 2022, p. 14). In addition, research shows that upper management cares more

about audience preferences than professional news values (Kristensen, 2021, p. 10). This explains the emergence of conflict between management and editors in newsrooms.

2.3.2 Top-down communication

Many scholars refer to Scandinavian countries as leading examples of implementing AM in (local) newsrooms (Borchardt, 2022; Hendrickx et al., 2021; Tessem et al., 2022). This is because of the wider availability and accessibility of data in these countries (Borchardt, 2022, p. 1920). Research on digital newsrooms of a Danish regional newspaper brand shows top-down management decisions concerning news values and AM (Kristensen, 2021). The goals of upper management are to range AM with the original core values of the brand. For local media, these often consist of 'democracy' and 'cohesion' (Kristensen, 2021, p. 11). This research points out that data coming from AM can serve as support for the vision and mission of the newspaper and to check quantitatively if the news is also relevant in the eyes of the audience.

Thus, designing and implementing an AM strategy in newsrooms face many challenges, such as combining news values, journalistic values, and audience preferences (Kristensen, 2021, p. 14). Although, as a result, news media have to explain themselves in terms of their editorial values and aims, choices about newsworthiness cannot be a 'gut feeling' anymore (Kristensen, 2021, p. 14).

2.4 (News) values

2.4.1 Gatekeeping

Gatekeeping concerns the way journalists filter certain events and decide to write about them (Welbers et al., 2016, p. 1038). Research shows that many journalists resent using AM to support them in the news selection process (Hendrickx et al., 2021). The main reason journalists might refuse to use AM arises from the nature of journalism as a profession and as a part of an institution (Welbers et al., 2016, p. 1041). In journalism, there are no formal regulations to become a journalist. As part of an institution, journalism consists of shared norms that define the profession (Mellado, 2015). The aftereffect of these shared norms is that journalism is not fast enough to adapt to innovation, for example, using AM in the news production process (Welbers et al., 2016, p. 1041).

Because of AM, readers are not passive anymore, and they play an increasing role in the news selection process (Christin, 2018, p. 1383). As a result, it has been a challenge to combine AM with traditional values of newsworthiness (Kristensen, 2021, p. 1). Thereby the gatekeeping role of journalists has changed (Dodds et al., 2023, p. 6). Research shows that because of AM, more journalists of regional and national newspapers tend to change their

decision-making by prioritizing serving the customer what it wants to read instead of what they think is important to read (Møller, 2022, p. 1799; Welbers et al., 2016, p. 1038). It remains to be seen what influence AM has in journalists' decision-making at local newspapers.

2.4.2 News values

News values support journalists in decision-making. For this thesis, it is important to understand how news values were created and whether they have changed with the advent of AM.

One of the first important studies on news values comes from Galtung and Ruge (1965). They have researched topics in international stories journalists often write about. Harcup and O'Neill (2001) built forth on this research by zooming in on local journalism as well. A list of news values represents the type of events journalists consider relevant and which they select and translate to the public (Welbers et al., 2016). They changed this list of news values again after the digitization of news media (Harcup & O'Neill, 2017). Later, other scholars once more added news values to this list, according to digital journalism (Kristensen, 2021, p. 5).

A recent study on news values by Mast and Temmerman (2021) brings together the above studies. In this article, they use a multidisciplinary approach to the concepts of news and newsworthiness. In doing so, they include new developments in technology, such as AM, in the news production process and news dissemination (p. 691). According to the authors, it is essential for journalists to understand how social media, search engines, algorithms, and additional web analytics affect their work. They discuss other approaches on news values that are better suited to today's digital media landscape (Mast & Temmerman, 2021, p. 691). Examples of added news values by them include proximity, slow journalism, personalization, prominence, and joy. This all has to do with today's interactive, fast-paced, and vast media landscape.

An overview of news values through the years, in Table 1, demonstrates this new set of [digital] news values.

Table 1. Overview of news values (Galtung & Ruge, 1965; Harcup & O'Neill, 2001, 2017; Kristensen, 2021; Mast & Temmerman, 2021)

Galtung and Ruge (1965)	Harcup and O'Neill (2001)	Harcup and O'Neill (2017)	Kristensen (2021)	Mast and Temmerman (2021)
Reference to something negative	Negative news	Negative news	Negativity	Negativity
Harmony	Positive news	Positive news		Harmony/ constructiveness/ solutions-oriented
Reference to elite countries	The power elite	The power elite		Power elite/ political power
Unexpected	Surprise	Surprise	Sensationalism/ surprise	
Reference to elite persons	Celebrity	Celebrity	Elite/eliteness	Eliteness/ privileged
Continuity	Follow-up story	Follow-up story		Familiarity
Boundaries	News Agenda	News organization agenda	Exclusivity/ positioning/ newspaper agenda	
Meaningful	Power	Power		
	Relevance	Relevance	Relevance	
	Entertainment	Entertainment		
Clarity		Shareability	Shareability/ share worthiness	
Composition		Audio-visual		
Frequency				
Reference to persons				
		Exclusiveness		
		Conflict	Conflict	Conflict
		Drama		
			Identification	
			Proximity/ nearness	Proximity
			Timeless/ immediacy	Slow journalism
				Personalization
				Prominence
				Joy

2.4.3 News topics

Research points out that local journalists seem to focus most on news values 'unexpectedness,' 'public relevance,' and 'negativity' (Paulussen & D'heer, 2013, p. 596). News topics arise from news values. Topics journalists write about range from minor issues, like the results of a sports game, traffic, and local stores, to major news events like national elections and earthquake damage (Borchardt, 2022, p. 1920; Swart et al., 2017, p. 273). The most common news topics that local media cover include crime, social club activities, local or cultural events, health and sports, education, and fire or traffic accidents (Paulussen & D'heer, 2013, p. 595).

The literature described concerns mainly with international studies or is focused on national or regional newsrooms in the Netherlands. This thesis, therefore, aims to provide insight into the dealings of editors at local newsrooms regarding AM. Thus, this study fills the research gap concerning AM in local newsrooms in the Netherlands. Next is the Methodology chapter, which describes the research methods used.

Chapter 3: Methodology

This chapter describes the methods that are used to collect the necessary data through semi-structured in-depth interviews. Paragraph 3.1 explains the reasons for using qualitative research. Including an explanation of why this research design is most suitable for answering the central research question: How are editors of local newspapers appropriating technologies for audience metrics? [3.1.1], and a description of in-depth interviews [3.1.2]. Next, paragraph 3.2 dives deeper into data collection. This contains a description of the population [3.2.1], the sample [3.2.2], operationalization of the in-depth interviews [3.2.3], the use of thematic analysis [3.2.4], and analyzing methods based on open coding [3.2.5].

3.1 Qualitative research

3.1.1 Understanding editors

The most appropriate method for this research is qualitative research because the researcher uses language to understand concepts based on people's experiences (Brennen, 2021). Qualitative research has a set of the following characteristics: it is interdisciplinary, interpretative, political, and theoretical (Brennen, 2021). When using this method, the stress is on comprehension of a phenomenon in the social world. This is achieved by testing the interpretation of that world by its participants (Bryman, 2012, p. 380). The main goal was to discover something, according to the central research question: 'How are editors of local newspapers appropriating technologies for audience metrics?'

As Bryman (2012) states that qualitative research allows for rich, detailed answers and new ideas. It provides insight into what respondents consider relevant and important, and respondents are more likely to give their perspective on a topic (p. 470). The consequence of this flexible form of interviewing, is that the research focus can shift toward issues that respondents raise during the interviews (p. 470).

3.1.2 In-depth interviews

The interviewing technique used for this qualitative research is called in-depth interviewing, which goes along with a semi-structured interview (Bryman, 2012, p. 213). Semi-structured interviews are preferred for studies where the research has a clear focus. In this way, specific issues can be questioned (p. 472). This is the case in this study, because the focus is on how editors deal with the specific topic of AM.

In-depth interviewing is a suitable research method for journalists since journalists are a specific type of respondents. According to Reich (2006, p. 501), they are professional interviewers, which means they know what the researcher wants to hear. This type of social desirability was avoided by asking for examples and by using control questions.

The literature review supported the creation of the interview questionnaire, which means questions arise from the gap found in the literature. Using sensitizing concepts, the researcher compiled a topic list with interview questions. Sensitizing concepts consist of several directional and leading concepts (Koetsenruijter & Van Hout, 2018, p. 92). For this study, these sensitizing concepts for interviews with editors were news values, the news production process, and attitudes toward AM. Sensitizing concepts for interviews with managers consisted of news values, attitudes toward AM, and strategy.

3.1.3 Topic list

Foregoing sensitizing concepts formed a basis for the topic lists for interviews with editors and managers (see Appendix 1). Another word for the topic list is the interview guide. Here, the research objectives and questions are described as a script (Koetsenruijter & Van Hout, 2018, p. 33). The topic list served as a guide during the interview. The interview's purpose, setup, and direction are described here every step of the way (Koetsenruijter & Van Hout, 2018). However, this does not mean it was a closed-ended questionnaire. On the contrary, the topic list is sufficiently flexible and semi-structured so that the researcher could deviate from this and was able to ask any follow-up questions when necessary (Bryman, 2012, p. 471; Koetsenruijter & Van Hout, 2018, p. 33).

According to Bryman (2012), another important part of conducting in-depth interviews, is checking how the respondents interpret certain concepts (p.471). Examples include what they mean by AM and news values. This was included in the topic list (see Appendix 1). In addition, it is important to ask what respondents think are important issues (p. 471). For example, regarding journalistic values, news values, news topics in relation to AM. Perhaps it will provide different insights than previous studies described.

The questions on the topic list were worded in a certain way so that it helps to get an answer to the central research question. As Bryman (2012, p. 473) describes, the questions were worded in a way that is understandable and relevant to the respondents. In addition, the researcher avoided asking leading questions and asked mostly open-ended questions (see Appendix 1).

3.2 Data collection

Next is a description of the population, sample, and operationalization of the in-depth interviews.

3.2.1 Population

The research population of this study consisted of editors of local news media and managers of conglomerates of local news media in the South Holland region. For this study, an existing

dataset derived from the study of pre-masters from last year is used. This dataset includes a description of four local news media in South Holland that operate as a conglomerate and their contact information (see Appendix 2). This dataset was established from previous research from De Jong and Koetsenruijter (2019), which included an overview of 403 existing news media in South Holland (see Appendix 3).

3.2.2 Sample

An important requirement of the selected local media was to have a website on which they post news. Local media without a news site were excluded from the research units because there is no point in questioning them about their use of AM if they do not have a website. Furthermore, this study involved purposive sampling. This is a non-probabilistic form of sampling (Bryman, 2012, p. 418). The primary purpose of this method of sampling was to select respondents strategically. This way, the researcher was sure that the respondents were relevant to answer the research questions (Bryman, 2012). In addition, the researcher could ensure that respondents are sufficiently different from each other regarding important characteristics relevant to the research question (Bryman, 2012). Second, this study involved the snowball method, as some of the respondents approached were asked to refer to other suitable interview candidates, namely other editors or managers that were also employee of the conglomerate (Koetsenruijter & Van Hout, 2018, p. 59).

A representative sample of respondents was found by selecting editors based on several criteria. The first requirement was that the respondent must be a paid employee of a local newspaper in South Holland. The editor must be involved in writing for the local newspaper's website. This local newspaper had to be part of a conglomerate, whereby managers are concerned with making strategic decisions, particularly in using AM. Finally, there had to be an equal division in gender by selecting both male and female respondents.

For qualitative research, it is difficult to estimate how many respondents are needed to achieve theoretical saturation (Bryman, 2012, p. 425). The sample size also depends on the situation in purposive sampling. In this case, the researcher had experience with involved respondents and newspapers. Making it possible to estimate the number of respondents needed. Earlier research about interviewed-based qualitative research shows that sample sizes differ from 1 to 95 (Bryman, 2012, p. 426). Furthermore, a sample size that is smaller than twenty increases the chance of engagement with respondents and obtaining detailed data on the topic (Bryman, 2012, p. 426). Therefore, as a starting point, this research focused on thirteen respondents: ten editors and three managers. This number was sufficient, and the interviewing stopped at that point because theoretical saturation was reached.

From the dataset of the pre-master students, the researcher chose four conglomerates, West Media, Verhagen, Het Kontakt, and Telstar Mediacentrum. For each conglomerate, at least two editors were asked to participate in the interview. Additionally, the managers of conglomerates were asked to participate in the interviews, making three managers respondents. This makes a total of thirteen respondents: ten editors and three managers (see Table 2).

Table 2. Respondents for in-depth interviews

West Media (Naaldwijk)	Telstar Mediacentrum (Pijnacker)	Het Kontakt (Goudriaan)	Verhagen (Katwijk)
René de Hoog (manager)	x	Rick den Besten (manager)	Dirk Bouman (manager)
Helga Boudestein (editor)	Hélène Ouwekerk (editor)	Bert Bons (editor)	Carin van der Spijk-Kralt (editor)
Debbie van Eijk (Editor)	Dick Janssen (editor)	Geurt Mouthaan (editor)	Marc Wonnink (editor)
	Martijn Mastenbroek (editor)	Hester Hage (editor)	

The existing data file of the pre-masters students shows descriptions of phone numbers or e-mail addresses of editors who participated in last year's research. This is how respondents were approached first. Also, the websites of the newspapers were used to find contact information for the foreseen respondents.

3.2.3 Operationalization of interviews

Data collection took place from April 1st to May 1st, 2023. The interviews were collected in person at the local newsrooms. Face-to-face conversation allows the researcher to observe nonverbal communication as well. This prevents miscommunication during the interview (Bryman, 2012, p. 678). The interviews took place in a quiet setting, without noise, and in a private room, so the respondent did not have to worry about colleagues hearing him or her talking. This could otherwise have negative consequences for social desirability (Bryman, 2012, p. 473). The interviews lasted approximately 45 minutes each.

The interviews always started with a brief introduction of the study and by asking permission to use the respondent's name in the study results. In addition, the researcher asked for

permission to record the interview with a recording device. Taking extensive notes can be distracting. Therefore, it was advantageous to record the conversation so that the researcher could fully focus on the conversation during the interview and spot any contradictions in statements made by the respondent (Bryman, 2012, p. 482).

During the interview, the researcher made small notes. These notes provided support while transcribing the interviews. This way, spoken data was converted to written data (Koetsenruijter & Van Hout, 2018, p. 42). For transcribing the interviews, the researcher used the tool 'My good tape.' Unnecessary repetitions, language errors, and expressions were omitted from the verbatims. In addition, long answers were divided into paragraphs, sorted by topic.

In addition, recording the interviews increased the validity and reliability of the research, because it allows the research to be checked by other researchers, it helps to supplement one's memory of the interview, contributes to the thorough study of the interview, and finally, it helps the researcher defend one's own beliefs or biases in the research (Bryman, 2012, p. 482).

3.2.4 Thematic analysis

For this study, thematic content analysis was used. This means that the analysis of the interviews began after collecting the thirteen transcripts. For this study, only certain components of Grounded Theory were reflected in the methods. Grounded Theory means that throughout the study, from beginning to end, there is a constant comparison as an analytical method (Watling et al., 2017). This is not the case in this study, which is why this study uses thematic content analysis.

Two key features of Grounded Theory are iteration and theoretical sampling (Watling et al., 2017). Iteration means that throughout the research process, data collection and analysis are intertwined. This was not the case in this study because the analysis did not occur until after data collection. Theoretical sampling involves the researcher adjustmenting categories or components of previously described theory based on data obtained (Watling et al., 2017). This did occur in this study, because after the data collection, the subquestions were adjusted.

3.2.5 Analysing by coding

The collected data consists of transcripts. For analysing the data, the researcher reviewed the transcripts labeled relevant parts that help answer the central and sub-research questions (Bryman, 2012, p. 568). The analysis involved open coding. Open coding means that the researcher studied the transcript with a broad view and tried to discover patterns in

the data and connected keywords to them (Scheepers et al., 2016, p. 265). The researcher divided the data obtained by comparing, conceptualizing, and categorizing it (Bryman, 2012, p. 569). It is a process that first produces concepts, which were later grouped into categories.

The next step after transcribing the interviews was to analyze the data. This was done with the help of the digital tool *Atlas.ti*. This tool is mainly suitable for coding unstructured, qualitative data (DANS, 2023). The program can attach codes to certain keywords from the data automatically. The program automatically gives each type of code a certain color in the transcription, for recognition. Then the recognized codes were collected in coding schemes. The coding schemes provided a clear overview of all useful quotes. The data is described in a codebook (see Appendix 4). After making a codebook, the researcher organized the codes into code groups, sorted by subquestion (see Appendix 5). The findings based on the codebook and code groups are discussed in Chapter 4, Findings.

Chapter 4: Findings

This chapter describes the results found for each subquestion based on the coding of the semi-structured interviews[3]. The codebook can be found in Appendix 4. First, the characteristics of the respondents are discussed in section 4.1. Then the description of AM tools is covered in section 4.2, which includes what tools editors at local news media use for analyzing AM [4.2.1], what types of AM editors and managers pay the most attention to [4.2.2], and the main result of this subtopic [4.2.3]. Next, Section 4.3 describes the influence of AM on agenda-setting. It includes the outcomes of the interviews about the identity of local newspapers [4.3.1], reader engagement [4.3.2], important news values, and changed news values with the advent of AM [4.3.3], and the main result of the second subtopic [4.3.4]. The final section 4.4 deals with the difference in the attitudes of managers and editors toward the use of AM. Including the description of the attitude of editors towards using AM [4.4.1], the attitude of managers towards using AM [4.4.2], and other aspects that influence this attitude, such as the influence of age [4.4.3], the revenue model of local newspapers [4.4.4], implementing innovation in the local newsrooms [4.4.5], and finally the main result of subtopic 3 'attitude' [4.4.6].

4.1 First impression

Table 3 below describes the relevant characteristics of the respondents. These consist of name, age, years of experience in local journalism, gender, name of the conglomerate, and occupation.

Table 3. Relevant details of the respondents

Participant code	Name	Age (years)	Experience (years)	Gender	Conglomerate name	Occupation
DE (1)	Debbie van Eijk	34	3	Female	West Media	Editor
HB (2)	Helga Boudestein	60	38	Female	West Media	Editor
RH (3)	René Hoog	40	18	Male	West Media	Manager
BB (4)	Bert Bons	53	28	Male	Het Kontakt	Editor
GM (5)	Geurt Mouthaan	46	24	Male	Het Kontakt	Editor
HH (6)	Hester Hage	34	1	Female	Het Kontakt	Editor
RB (7)	Rick den Besten	58	40	Male	Het Kontakt	Manager

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[3] The interviews were conducted in Dutch. Therefore, the quotes have been translated from Dutch to English.

DJ (8)	Dick Janssen	56	34	Male	Telstar Mediacentrum	Editor
HO (9)	Hélène Ouwekerk	58	32	Female	Telstar Mediacentrum	Editor
MM (10)	Martijn Mastenbroek	44	16	Male	Telstar Mediacentrum	Editor
DB (11)	Dirk Bouman	54	28	Male	Verhagen	Manager
CS (12)	Carin van der Spijk-Kralt	59	17	Female	Verhagen	Editor
MW (13)	Marc Wonnink	29	4	Male	Verhagen	Editor

As visible in Table 3, the age of the respondents is on the high side. The youngest respondent, MW (editor Verhagen), is 29 years old. The oldest respondent, HB (editor West Media), is 60 years old. The average age of the respondents is 48 years. The gender of the respondents consists of eight men and five women. Of these, three are managers, and they are all male. This is notable. One explanation may be male dominance in managerial positions, such as at local news media conglomerates. The respondents work for one of the four publishing companies, consisting of West Media, Het Kontakt, Telstar Mediacentrum, and Verhagen.

4.2 AM is frequently used in local journalism

The first subquestion of this study is 'What tools do editors use to analyze audience metrics?' This section describes what tools editors at local news media use for analyzing AM [4.2.1], what types of AM editors and managers pay most attention to [4.2.2], and finally this paragraph describes the main result of this subtopic [4.2.3].

4.2.1 Focus on quick reviews in AM tools

All editors indicated that they have been working with the digital editing system 'Pubble' for almost a decade. Pubble allows editors to build editorial pages for the newspaper and website independently. It is a system for editing, sales, layout, and administration all in one. The tool provides a fixed framework within which editors can get creative with the layout of the newspaper themselves. In addition, the tool provides insights into AM, such as the number of real-time website visitors and the number of views per article. The system provides an easy link between the newspaper, website, and social media channels. A multitool system like Pubble is useful for local newsrooms because all editors indicated that they are involved in the entire news production process. This includes finding stories, writing, editing, designing, and layout of the newspaper and website, as well as sharing stories on

social media. Thus, rather than using specialized tools for each function, they content with one all-in-one tool suite.

Editors indicated that almost all the stories that go into the newspaper are also on the website and vice versa. For quick news, such as 112 news (e.g., a fire, traffic jam or car accidents), they do not always appear in the newspaper, because the newspaper is published once a week, and by then, some news is out of date. Most conglomerates are therefore working with a digital-first approach. GM, editor at Het Kontakt, said the following about this digital-first approach:

> "In fact, almost 100 percent of the articles I write do end up on the website. We had quite a discussion about that several years ago. Website first or print first. It really is website first."

Verhagen is the only conglomerate that stays behind in the digital-first approach, because the two editors (MW and CS) and manager (DM) said that they still see the newspaper as top priority. On the contrary, Het Kontakt is the only conglomerate who have had a news app for ten years, besides the website and social media channels. Respondents of the two other conglomerates indicated that they are working on developing an app soon. Editors and managers of these conglomerates indicated that they see app development as an important and necessary next step to continue to exist as a local news provider. MM (Telstar Mediacentrum) explained why they still do not have a news app for the newspapers of Telstar Mediacentrum:

> "Digitalization is very important. If in ten years we haven't taken a step with an app, we can stop. We are working on it now. Much to the annoyance of our management, it has taken a very long time. But we just wanted to develop it really well. Also, partly because we obviously have a large organization, so not one app for one newspaper. It must be applicable everywhere. It is especially very difficult for us to also make it commercially attractive. That's why the development took a long time. We are a commercial company; we must realize a good revenue model. For example, with this upcoming app, advertisements from the newspaper must be continued within that app."

Editors said they use different tools and have different preferences when viewing AM. Editors explained that it is often due to lack of time that they do not delve very deeply into AM and AM tools. Pubble and the website itself both offer an instant overview of the number of website visitors without having to look for it specifically. That way, some editors see AM 'by accident.' Most editors said they receive a monthly summary in their mailbox from Google Analytics. This provides a quick overview of the best-read stories and clicks per article, so they do not have to actively look for this information themselves. They said they liked this,

given the high workload. A few editors said they only view AM through the website itself, such as 'the top five or ten best-read stories.' They said they had no further interest in seeing other AM. Further, editors cited social media channels Twitter and Facebook as useful tools for AM. For example, they weigh in especially heavily on responses to Facebook posts or how often a post has been shared. They said readers' reactions are most important to them in reflecting on their work.

4.2.2 Clicks and views as most important indicators of success

Next is a description of the type of AM that editors and managers look at, sorted by tool. First up is Pubble. All editors said that they use this tool to view AM, since it is also their digital editing system. As previously mentioned, Pubble offers the quick ability to see some AM directly on the system home page, such as real-time website visitors, views, and reach. For example, this is what editor DB (West Media) said about Pubble:

> "*On Pubble, you have an overview. And then you can just very quickly see how many people are currently looking at your website.*"

Editors explained that they receive a monthly review of AM by Google Analytics in their mailboxes, sent out by management. Views, clicks or best-read articles, website visitors, time spent, click-through rates, and traffic are most important (in this specific order). Most editors said they are new to working with AM and therefore rely on orders from management about which tools they use and how they utilize them. Most editors said they are left free in how much they look at AM and what they do with it; it is optional to use it and not mandatory. As a result, editors vary widely in how often they look at AM. This is mainly due to personal interest.

For social media platforms like Facebook and Twitter, editors and managers primarily said they look at readers' comments on news stories. According to them, this often says something about how a news item is received by their readers. In addition, for these social media channels, editors and managers look at likes, shares, and views. Facebook also allows for insights into the age, gender, and location of readers. Most editors said that it is mainly the marketing department staff that looks at these kinds of insights. This does not really interest them. In general, the most frequently mentioned type of AM are clicks and views. Editors and managers explained that these are the best indicators of success for them.

4.2.3 Main result subquestion 1: Tools

The main result for the subquestion 1 is that all editors work with the layout system Pubble. For analyzing AM, most editors and managers referred to the monthly overview of Google

Analytics and a list of best-read stories on the website of their newspaper. The most mentioned type of AM editors and managers said they pay attention to are clicks and views.

4.3 Biggest change in reporting of political news

The second subquestion of this study is 'Are audience metrics changing notions of agenda-setting in the local newsroom?' With insights gained through tools such as Google Analytics, the website, and Pubble, editors are increasingly aware of their audience's profile and preferences. In the in-depth interview, respondents were asked to describe the newspaper's identity. This shows what editors and managers think are important values for local news. This section describes the identity of local newspapers [4.3.1], reader engagement [4.3.2], important news values and changed news values with the advent of AM [4.3.3], and finally, this paragraph describes the main result of this subtopic [4.3.4].

4.3.1 Engaged, reliable and local newspapers

The description of the identity of local newspapers is largely consistent according to the editors and managers interviewed. Frequently mentioned keywords describing the identity are engaged, reliable, and local. The concepts 'local' and 'engaged' are described in a similar way. According to the respondents, this means that the newspaper is focused on events in the nearby area of the newspaper and that it is connected and focused on the people living in the geographical area of the newspaper. Another example of engagement is that most editors and managers indicate that they live in the newspaper's distribution area. Reliable is described by editors and managers as honest and transparent in communicating about, for example, the local government.

Many also mentioned connecting the community by telling stories of different types of people: from 'normal' people to local celebrities. Mirroring the local government is also part of their identity. Manager DB said the following about the identity of Verhagen:

> *"We connect citizens, and we do sometimes mirror the government like a lazy fur. We ask them why you are buying new planters when you bought them three years ago for 130,000 euros?"*

4.3.2 Political news as most important news value

As DB explains in the above quote, local news media consider controlling local government as their responsibility. Interviews with editors and managers revealed what news values they believe play an important role in local journalism. What is immediately noticeable, is that the news values of local news media are very broad. From local sports competitions, construction projects, and theatre performances to residents' crafts or funny stories. Anything can be in the newspaper, according to editors and managers, if it relates to the local

character of the newspaper. For example, GM (Het Kontakt) said the following about news values in local news:

> *"You can think of a marriage proposal where someone puts 'I love you' in a meadow with hay bales. And that they see that from a plane or from a drone. Those kinds of jokes. Those do well. Business messages, small businesses stories [Midden-Klein-Bedrijf (MKB)]. So the opening of a new store. Those kinds of things. That does it well. And famous people."*

Editors and managers all cited political news as the most important news value. They said its their responsibility to be critical to the local government. RH (West Media) explained that if they do not do it, no one else will do it:

> *"Politics we do too. We think it's important. But that is mainly something we have imposed on ourselves. We control local politics. If we don't do it, nobody else does it in some areas. It is important, of course."*

After listing the most important news values, the respondents were asked to indicate if AM has changed the priority of certain news values. Nearly all editors stated that AM has given them surprising insight into the extent to which political news stories are read by their audiences. It is disappointing to them how well this type of news story is read. Most editors and managers stressed that they would continue to cover political news, since it is their responsibility to report about it, but they now do it in a different, more concise way. Editor BB (Het Kontakt) said the following about the influence of AM:

> *"What readers think is not always professional, of course. That's the tricky thing. They have an opinion on something, and you do something with it. But you always make your own assessment. Because even if politics is not very well read, we have agreed with each other, we will continue to follow it actively and we will remain alert. And we will definitely continue to write about it."*

But there are also editors who take a more rigorous approach to this, such as DJ (Telstar Mediacentrum):

> *"We almost stopped doing political coverage of council meetings because you know it's not read as much. In fact, it doesn't get read. You can put a council meeting report in the paper, but if no one is watching it, then it's a waste of effort."*

On the contrary, news values they are paying more attention to now because of insights from AM is 112 news and small businesses (MKB) news. Since they see, via AM, that this news is

remarkably well-read, according to editors and managers. HB (West Media) said the following about this:

> *"For example, an entrepreneur. Earlier you could think, well there are so many entrepreneurs closing their doors, you know. And now you rather think of, so people apparently really like to read that. Because they might have been going to get a head of lettuce from that farmer for twenty years. So yeah, why deprive them of that? So you take a different view on that."*

Editor MM (Telstar Mediacentrum) also confirmed these insights:

> *"You can very well see what types of articles are well-read. For example, the sobering realization that stupid small businesses (MKB) stories about the baker and the butcher are great. And three lines about the store going out of business, that go all the way. That's interesting."*

4.3.4 AM helps make print choices

AM gives editors and managers insights into which news stories are read better than others. What follows next is a description of how AM insights affect the agenda-setting process, according to editors and managers. First, respondents indicated that it is important to distinguish between news that appears on the website and news that appears in the newspaper. The website is more likely to publish faster and more shareable news, such as 112 reports, sports results, small businesses (MKB) stories, and entertainment news items. The newspaper appears once a week. Editors said they use AM, specifically the list of best-read stories, to choose which stories they want to publish in the newspaper. In doing so, editors told us that they think an older audience (60+ years old) reads the print newspaper and that both an older and younger audience (25+ years old) reads the website. DJ (Telstar Mediacentrum) explains how this is the case for the newspaper that he produces:

> *"Leidschendam-Voorburg is the most aging municipality in the Netherlands. So these old people still read the newspaper. And they are even more attached to paper newspapers. They just want to read those newspapers on the couch, on the bus, or on the toilet."*

In the newspaper, there is more room for in-depth stories, and editors write larger stories of hard news, such as political news. Editors expect that the older audience that still reads the newspaper prefers larger stories. Moreover, reading larger stories in the newspaper is easier than reading online. Editors said they think that this has to do with a shorter concentration span when reading online news compared to a physical newspaper. Manager DB (Verhagen) explained the difference between stories for the website and the newspaper:

> *"The newspaper will become much more focused on in-depth news stories. And online, you get the fleeting and flashy."*

Respondents indicated that insights from AM have caused them to make other choices for headlines, photos, the layout of the front page of the newspaper, or the placement of certain news items on the website. For example, human interest and small businesses (MKB) news stories are given a more prominent place in the newspaper as well as on the website. Another example is that editors can see what type of photo works better on the website, based on clicks. Editors MM (Telstar Mediacentrum) and DE (West Media) explain that because of insights of AM, they know they should prioritize photographs that focus on people.

Moreover, editors write stories differently because of insights from AM. For example, DB (West Media) said that she learned from AM that it is important to have a personal angle for every story:

> *"So it does encourage to put such a personal story right on the front page with recognizable residents. To prioritize something like that over an official report about an opening of something, for example, which otherwise has no real human interest attached to it."*

All editors said they do allow themselves to be influenced to some degree by insights gained through AM. Editors indicated that they experience it as something positive to know what the interests of their readers are. According to editors and managers, AM serves to inspire news stories and ensure that editors are not only focused on their own interests, like sports for example, but consider the interests of their readers. An example of this is the more prominent focus on small businesses stories (MKB) and 112 news. Editors also factor AM into how they deliver the news next time. For example, if something is read well, with a particular headline or angle of a story, they take that into account for the next time. This is explained by editor MW (Verhagen):

> *"You weigh it to a limited extent in how you deliver the news down the road. So it's kind of a continuous search for a balance between good headlines, and good pictures. And that at least it still remains quality, but that you also hit the visitors."*

Editors certainly take AM into account in the choices they make. Editor DJ (Telstar Mediacentrum), for example, indicated that AM is leading for him in choosing topics to write about:

> *"As a result, though, I'm going to write more about topics that get the most interest, like small businesses (MKB) news."*

Editor HO explained why she thinks AM offers opportunities in local journalism:

> *"I do like it. It's kind of nice to know what people find interesting. I don't want to say that if something doesn't get clicked on a lot, we won't write about it anymore."*

In contrast, many editors indicated that insights from AM serve mainly to confirm that certain news values score better than others, which they had already expected. And that AM does not influence them as such in the agenda-setting process. For example, DE (Westmedia) said the following about this:

> *"So especially really those human interest stories. Because of those insights, I know that does confirm what you already knew. So the way of working hasn't really changed because of that."*

Editor HB (West Media) also sees AM as confirming for news stories that score well and stories that score not so well:

> *"It gives confirmation in the numbers. And that's often the case, if you think this is going to score well, it does. And sometimes not at all. But this is something, it always turns out that stories about, for example, middle-class people in a neighborhood, that actually always does well."*

Despite the opportunities AM has to offer, editors also recognize the dangers. The most frequently mentioned fear is that the focus will be too much on scoring rather than informing. Of course, scoring provides increased sales through advertising revenue, but it is not the editors top priority. Since they feel the responsibility to inform the citizens of the area. Editor HB (West Media) addressed this:

> *"Yes, I can also see a downside. There's a risk of focusing only on that, on what the reader finds interesting or likes to read."*

Editor MW (Verhagen) also described this dilemma:

> *"So do you focus on what people want to read, or on what you want people to read?"*

Editor MM (Telstar Mediacentrum) fears that if local news media start focusing too much on writing posts that score, the news quality will go down:

> *"I'm not Dumpert [an entertainment social media channel]. I'm just the local door-to-door newspaper."*

4.3.5 Main result subquestion 2: Agenda-setting

The main result for the subtopic 'agenda-setting' is that a few news values have become more important due to insights of AM. Editors and managers write more about small

businesses (MKB) and human interest stories. They write political news stories more succinctly than before because it is so poorly read. Online they write more on 112 news.

4.4 Mainly positive attitudes towards innovation

This study's third and final subquestion of this study is 'How do managers and editors compare in attitude regarding the use of audience metrics?' Editors and managers at local news media are gaining insights into their readers' reading habits thanks to AM. They adjust their work based on those insights. The managers' role is to keep an eye on the newspaper's financial picture. Editors focus more on creating the content of the newspaper. Therefore, this section describes the similarities and differences between editors and managers regarding attitudes toward the use of AM. This section describes the attitude of editors towards using AM [4.4.1], the attitude of managers towards using AM [4.4.2], and other aspects that influence this attitude, such as the influence of age [4.4.3], the revenue model of local newspapers [4.4.4], implementing innovation in the local newsrooms [4.4.5], and finally the main result of subtopic 3: 'attitude' [4.4.6].

4.4.1 Editors opinion on AM

All editors said they find AM useful and informative. Benefits they cited include that it helps them gauge reader interest because AM shows which stories are best read. It helps to see who their readers are, so editors can adapt their writing style to their readers. It helps them write more purposefully because they know what their readers want to read. It helps present news better, so it is read more. Moreover, it boosts ad revenue, because the more stories are read, the more ads they can sell. DJ (Telstar Mediacentrum) described these benefits:

> *"That [AM] is good, of course, because then you can kind of focus attention on things that are well read. Ultimately, it's all about that newspaper being well read, because then those people also see the ads. And that's what the newspaper is paid from. The same goes for the internet. The more people watch it, the more pennies come in. Because again, that's all related to every click, every view, every visitor."*

Editors cited as the main drawback of AM, the danger of focusing too much on what readers want to read, rather than what is important for them to read. Informing remains the main goal here, according to editors. Another disadvantage of the advent of AM, is that it adds to the already extensive tasks list of editors. Checking the numbers is considered as extra effort by editors. They do not prioritize this. BB (Het Kontakt) said the following about this:

> *"I had to get used to it at first. It was another task. That's often the case with such things, including social media. It used to be a lot easier. You had to make the*

newspaper, you filled it. Then you had one deadline a week. And now you feel like you have hundreds."

4.4.2 Attitude managers

Like the editors, all three managers are positive about the availability of AM. They are all open for general innovation in the newsroom and they said AM contributes to this. In fact, DB (Verhagen) and RB (Het Kontakt) said that they see no drawbacks to using AM. For example, RB said:

"And what I see from the data, measuring is knowing, that's for sure."

DB said innovating is important, and necessary to maintain a healthy business:

"Entrepreneurship is about taking risks, so that includes innovation."

Notably, of the four conglomerates, only Het Kontakt has had an app for multiple years. The other three publishing houses lag in this regard. This may be due to the age of employees and the managers themselves, but also to the newspaper's revenue model.

Returning to the most innovative conglomerate of the four, Het Kontakt, RB reported that since last year they had been a participant in the Innovation Program of the Stimulation Fund for Journalism (SVDJ). This is a grant program that seeks to promote the quality, diversity, and independence of journalism in the Netherlands. Participating in this program shows that they are very open to innovation. Optimizing the website and app through AM, improving social media, producing videos, and using new technologies such as ChatGPT in the news production process play a role in this. RB explained that in doing so, he also wants to focus on improving the quality of news at his publisher. Innovation can help them do this he believes:

"[...] The second thing is that we want to get started with is ChatGPT. We see opportunities there in particular for event messages and the short news messages that mostly come in through the mailbox. We think we can really save time there. And that is certainly not meant as a vulgar cutback because of course that is immediately what people think: We are going to automate a bit, what does that mean for us? No, I would very much like to free up people for things we don't always get around to now. For example, making videos or creating in-depth pieces or a nicely developed interview. So using smart technology saves time and we can use that to do other fun journalistic things. That's the setup."

RH (West Media) sees benefits from AM. He said he thinks it is a useful tool to know what readers' interests are. However, he cited the need to also keep editorial independence and journalistic responsibility in mind:

> *"You have to be very aware that as a newspaper and as a news website, you are more than just a platform to garner as many page views as possible. You also just must inform people. So, you also must post the political stories that may not be as well-read but are important. You shouldn't be blinded by it, and you shouldn't get too caught up in it."*

4.4.3 Age gap plays a role in innovation

One aspect that plays a major role in editors' attitudes toward innovation, and therefore using AM, is age. Editors and managers said that the ease of adaptation to using AM in their work is largely dependent on their age, which in turn affects their motivation to participate in it. According to the editors and managers interviewed, the older, the harder to adapt to innovation, as DB (Verhagen) explained:

> *"Editors must recognize that [AM] is good, that it's an opportunity. And some will be able to do that a little easier than others. Because usually the older it is anyway, the more solid. That's also very different for each person. But in general, of course, it is."*

Editors and managers refer to this as an age gap. As visible in Table 3, the average age of employees in local news media is on the high side (M = 48). Editor HB (60 years old, West Media) admitted that sometimes she still has some difficulty with the developments regarding AM:

> *"I once started in the early 1980s with an electric type machine. And then you do notice a difference with younger colleagues who are very focused on those numbers. Some are more fanatical about it than others. You just see that, for example, Debbie [DE] is much smoother with that, has much more feel for it. I do get a little fired up by colleagues around me. I do need that."*

Despite the obvious difference in age and expertise regarding using AM, HB (West Media) said she is not discouraged:

> *"I am always a little behind. Of course, I'm the silly senior citizen who must work on a website. So yes, if I am successful, then everyone will know about it. That's just the way I am."*

The three managers also indicated that they see the age gap that is now occurring as an obstacle in editors' attitudes toward using AM and their attitudes toward innovation in general. Nevertheless, they do understand this. RH (West Media) explained:

> *"Some editors have been in the business for thirty, fourty years. They have always done newspapers. The Internet did exist, websites did exist, something was always being done. But always hesitantly because they just wanted to be involved with their newspapers. Sometimes it is a challenge to enthuse these people. Look how nice it is to see that your message is well read, what is read well, what is not, the interaction you can have with your readers on the Internet, how fast and easy it is. For many older editors, the focus remains with the newspaper. And that makes sense."*

Manager DB (Verhagen) supported this point of view:

> *"The editors we have now are almost all 55 plus. Well, that's totally focused on print. Young people, say in their late twenties, early thirties, have grown up very differently. They also look at print differently, and also look at online differently, and they are much sharper about it."*

Table 3 shows the number of years editors and managers have experience in local journalism. Graph 1 below clearly shows the ages of editors and managers in addition to the number of years they have been working in local journalism. The chart shows that the ten editors and managers over the age of 40 also have the most experience in the field. There are a total of three editors who have less than 10 years of experience in the field. Their ages range from 25 to 35 years old.

Graph 1. Age and years of experience in local journalism compared of editors and managers
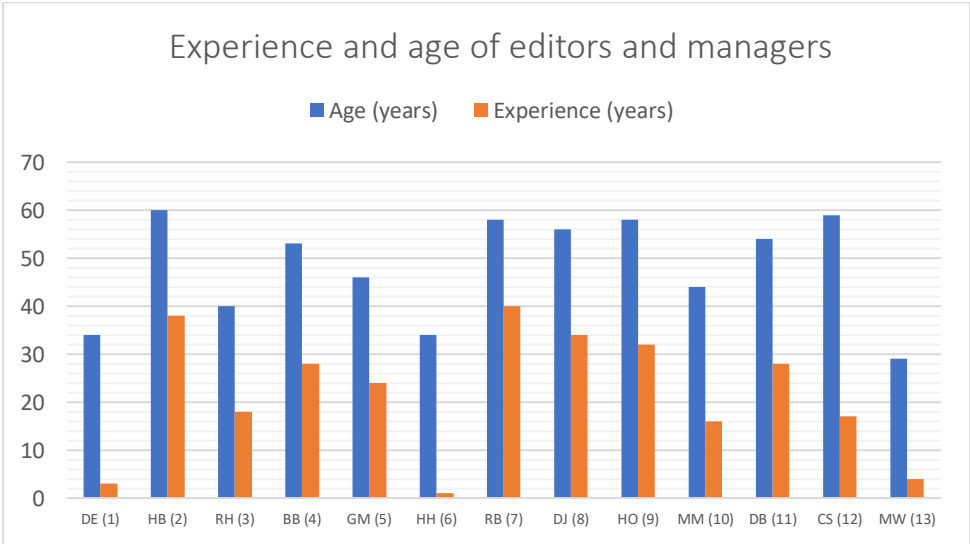
Manager DM (Verhagen) mentioned coaching and directing older editors as an important part of top-down communication about innovation. He described his approach in communicating new work to older editors, such as using AM in the news production process, as follows:

> *"And the moment the plan is there [for digitization of Verhagen], then those editors who are a bit older now will have to be coached and especially directed. And I tend to be tough on that. In the sense of, I always try to be soft on people and hard on business. And that can be tough sometimes. But I believe that becomes the route. Then you must go with that route. And if you don't want to, equally good friends, but then you must do something else. That's how sharp it is. Because otherwise it won't go."*

Manager RB (Het Kontakt) also sees obstacles among older editors when it comes to innovation on the editorial staff:

> *"I think they all see the point. But to then also roll it out and start doing it actively, there's a bit of a gap there. Not everyone can make that leap just like that. Sometimes that also has to do with age. It also has to do with personal interest. We can really still make progress in that area."*

4.4.4 Advertising is unsustainable

Besides age, the current revenue model of local news media plays an important role in the attitude of editors and managers toward the use of AM. For all local news media, advertising revenue from the print newspaper is the only and, therefore, the main source of income. Investments made in the field of online come from print revenues. BB (Het Kontakt) explained:

> *"We see that with the revenue model of the newspaper, that's where 80, 85 percent of our revenue comes from. But you do see that that's diminishing. And so you have to find other ways to bring in your revenue."*

Editors and managers all indicated that they are aware that it is important to focus on online revenues as well, because that is where the future lies for their revenue model. Manager DB (Verhagen) explained why this shift is difficult for local news media to make:

> *"The difficult thing is that we still have paper as a solid base. This is where we make our money, and we all know that it's familiar. We don't want to just push that aside, either. Because a wise entrepreneur once said to me 'be careful of the well from which you drink,' and he's right about that. So we don't just put that aside."*

Editors and managers recognize that AM can be a useful tool to make this shift to a solid online revenue model. The insights local news media have from their readers can help them sell even better targeted, local, and personalized ads to (local) advertisers. Editor MW (Verhagen) explained:

"That data does give us another opportunity. Then you can say to advertisers because of Facebook's new privacy laws, you can no longer advertise only to women from Katwijk, of so many years. But on our website, you are completely focused on Katwijk. So I do see that as a positive development."

Editor GM (Het Kontakt) also sees benefits in generating revenue through AM, he described:

"We are increasingly aware of the importance of data and making the website profitable. Those data are very important tools to further define our strategy on. Also, to indicate to advertisers that they can have a certain reach if they advertise with us. For example, that we can say, if you put a banner on here, then you can be sure that hundreds of thousands of people will come by and see your message."

Manager DM (Verhagen) described how AM can contribute to the revenue model:

"I can imagine that we are going to look primarily at what is commercially interesting? What data from which target groups. For example, after the summer we have one of those four-day walking days here. We are a partner of that. I can imagine that the articles we are going to write about that, that a lot will be written about foot care. Then we can start bringing in advertising companies that offer foot care products. And then you come up with a commercial arm that then goes with that, or with shoes. That's how I see it, because of course we are a commercial company."

Another way to generate more ad revenue through the website is by writing 'sustainable content.' This means that local news editors are going to focus on news stories that are not topical, but that people are searching for via Google, for example, HB (West Media) explained:

"These are articles that are not topical at the time, but that people are searching for on the internet. For example, what is there to do on King's Day in The Hague? Where are the flea markets? You can prepare that weeks in advance. If people then go Googling for 'kleedjesmarkten Den Haag', that's what they'll find. So that's a mission, to get as many people as possible to your website that way. To get to the top of that ranking. That's also great for sales again, to sell banners that way."

Other examples editors cited as sustainable content are articles about the city's best terraces, a list of places where residents can park for free, or what events are taking place in the neighbourhood this summer. This way, local news media want to generate more website traffic, and in turn, they can sell more ads that way.

In addition to optimizing ad revenue through the website, editors and managers said they see AM as a useful tool to improve the quality of news. This could then make people see the added value of local news and be willing to pay for it in the future, through a paywall or subscription. Editors and managers are still hesitant about this type of revenue model. Most indicate that they are afraid that readers will be reluctant to pay, because they are used to news being free, and because there is a lot of competition offering the same news for free. Manager DB (Verhagen) explained that he does want to focus on improving the quality of the news with an eye to the future:

> "So yes, that quality does become more important. I would much rather have one huge article that everyone is talking about. Then we'll fill empty spaces with ads after that."

4.4.5 Implementing innovation

The local news media managers indicated that they are busy innovating. Editors and managers are all aware of the changes that must be made to maintain a healthy business. Important named necessary changes include an alternative revenue model by, for example, achieving higher ad revenue through the website, setting up a pay wall, or through donations from readers. Using AM also plays an important role in implementing innovation. Editor BB (Het Kontakt) described this clearly:

> "The numbers [AM] are presented by Rick [the manager] and another person from marketing who keeps track of Google Analytics. With the goal that we [editors] are more and more aware of it and that we are going to generate more and more online traffic. Because after all, that's where the future of our door-to-door magazines lies, of course."

Even though many editors see the positive aspects of AM, several editors indicated that they have too little time to devote to it. So does editor GM (Het Kontakt):

> "But in all honesty, I don't look at that very closely. That's kind of expected, that you look at that closely. But you must imagine that I get twenty or thirty e-mails a day, and then this is added to that. Let's just say that there are a lot of orders coming from management that we must read it more carefully. That often indicates that it's not always read very well."

This also applies to editor DJ (Telstar Mediacentrum):

"I have been asked, though, to see how many pages people view, or how long they stay on the site. That does get tracked. But I'm not very concerned with that myself. For example, tips are given on how to do certain things. To make sure that people look more and look longer."

All three managers said they are in the process of hiring new people on the editorial staff, with a new position, who will help them implement innovation. Hiring new people is part of their strategy. DM (Verhagen) explained:

"I want to establish a small team within the company. These are two young people, say in their late twenties, or early thirties, who grew up differently [with digitization] and who also look differently at print, and look differently at online. One example is that one of them says to me 'we have to become online-first.' I want them to start writing a format for the fourth quarter that includes a plan for publishing. And I want them to primarily do coordinating tasks and write less."

RB (Het Kontakt) explained that he is also creating a new feature to help innovate:

"So, one of the things we want to do now is to have an extra person take a good look at our editorial organization. Who will see if there is a way to find a way by organizing the current team differently, that by doing so we will intelligently free up time for other things we would like to do, such as spending more time making news videos or background stories."

Finally, RH (West Media) also said that their parent company, conglomerate Rodi Media, has already hired people exclusively for AM:

"The fact that they employ someone to do that [with AM] almost exclusively does indicate that they take that pretty seriously."

The cost of innovating is very low, according to managers. The biggest cost involved in innovating and using AM is personnel. DM (Verhagen) said the following about this:

"Personnel, of course, is almost always the biggest cost. Especially since the system is already in place. So I think the lion's share of the cost is freelancers and those new positions."

RB (Het Kontakt) said about the cost of innovation is not an obstacle to making changes:

"At least those costs are not an obstacle or impediment to putting things in place. In fact, there are hardly any costs involved. Only, of course, it could be that if we really want to change things on a structural basis, that an FTE must be added, for example. So, it's actually mostly in salary costs."

4.4.7 Main result subquestion 3: Attitude

The main result for the subtopic 'attitude' is that the general attitude of editors and managers toward innovation is positive. Editors take an open attitude toward using AM but are aware of the risk of focusing too much on 'scoring' instead of 'informing.' Change is easier for young editors than for older ones. Most editors are over the age of 40, and age is an important factor in implementing innovation. Managers are realizing new FTE positions for new people, specialized in implementing AM in the news production process to increase reach and sell more ads.

Chapter 5: Discussion and conclusion

This chapter describes the answer to the central question of this study: *How do editors of local newspapers appropriate technologies for audience metrics?* Section 5.1 consists of the Discussion. This contains the similarities and differences compared to the literature review [5.1.1], and the validity is discussed [5.1.2]. The main findings are described for each subquestion and the central research question in section 5.2, Conclusion, [5.2.1 on Tools, 5.2.2 on Agenda-setting, 5.2.3 on Attitude, and 5.2.4 on the central research question]. Finally, the strengths and weaknesses of the research design are discussed in 5.2.5, and this chapter concludes with suggestions for follow-up research [5.2.6].

5.1 Discussion

5.2.1 Similarities and differences literature review

Chapter 2 'Literature Review' provides a review of existing literature on the central research question. Now follows a comparison of the literature review with the results and outcomes found in this study.

Based on the literature review, I had some expectations of the results. The following is a description of the expectations and the outcome for each subquestion. The first subquestion concerned the tools that journalists use to view AM. In the literature review, this included tools such as Facebook (Meta), Chartbeat, Google Analytics, Omniture and Facebook Audience Insights (Borchardt, 2022; Dodds et al., 2023; Kristensen, 2021). This research shows that all editors use AM insights through the Pubble layout system. In addition, editors also cite Facebook and Google Analytics tools as important measurement tools for AM. It is notable that Pubble does not come up in the literature review. Perhaps this can be explained by the fact that local journalism is an underexposed research topic within journalism studies, and regional and national news media use other, more expensive, tools like *SmartOcto*, for example.

The literature review revealed that editors use AM to obtain a 'datafied version of their public' (Christin, 2017). However, this study found that editors do not deal with the profile of their readers much, if at all. They indicate that they leave this to the organization's marketing team. Editors of local news media are more interested in AM such as clicks, views and best-read stories. So, they are more focused on successes of news stories rather than the profile of their readers.

The second subquestion addressed the influence of AM on agenda-setting. The literature review found that AM at national and regional newspapers influences journalistic decision-making (Welbers et al., 2016). This study suggests that this is also true for local news media.

AM has caused editors to write more often about certain news values, such as small businesses (MKB) and human interest stories. These are surprising, new news values that were not mentioned by the most recent research on news values in the digital age by Mast and Temmerman (2021).

In addition, for the website, 112 news and entertainment stories are written more often. For political news, this is handled differently than before, as it is now described more succinctly. It is also notable that in Paulussen and D'heer (2013) study 'crime' is described as one of the most important news values for local news. This news value is hardly mentioned by editors in this study.

This research shows that editors view AM insights as a useful tool for learning from successes or underperforming stories, and in making choices in the future. This is consistent with studies by Christin (2017); Ferrer-Conill and Tandoc (2018); Vandendaele et al. (2021), among others. Furthermore, Welbers et al. (2016) described in their research that the risk of AM is that editors become too focused on what the audience wants to read rather than what they should read. This research shows that most editors are aware of this risk and factor it into their editorial decisions. Moreover, all editors say they remain in full control of what they write about, despite AM's insights. This therefore somewhat contradicts the outcome of the research of Møller (2022). Indeed, Møller described in his research that AM causes journalists to feel that their editorial freedom, independence, and watchdog role is taken away. Editors of local news media pay attention to this and do not want it to prevail.

Furthermore, Dodds et al. (2023) described that AM may affect journalists' feelings of professional anxiety because AM shows very clearly which articles are doing well and which are not. This research shows that older editors admit that they engage in AM less than younger editors. However, they do not see this as professional anxiety. Older editors do not deal with this daily, but they do enjoy sharing their successes with other editors. Editors generally say they do not suffer from professional anxiety.

The final comparison between the literature and the outcome of this study for the second subquestion on agenda-setting is about the commercial pressures that editors experience in the news production process. De Jong and Koetsenruijter (2019) described in their research that local media regularly experience commercial pressure when making editorial choices, for example, by advertisers. From this study, this commercial pressure does appear to play a role in making news story choices. Editors report that they are increasingly writing stories that qualify as 'sustainable content.' These are news stories about topics that are frequently searched for via search engines such as Google, to increase the number of website visitors and thus advertising revenue.

The third and final subquestion was about the difference in editors' and managers' attitudes toward implementing AM in the news production process. I expected that there would be a big difference in editors' attitudes compared to managers' attitudes toward implementing AM. This was described in studies by Hendrickx et al. (2021); Keij and Van Kranenburg (2022); and Kristensen (2021). I expected editors to have a more negative attitude toward AM, due to strong journalistic values, compared to a positive attitude of managers, who would be more focused on generating advertising revenue. This difference in attitude does not appear to be so bad from this study. Both groups are willing to use AM and see its benefits. This research shows that especially age and personal interest play a major role in the implementation of AM. This is consistent with findings from the research of Keij and Van Kranenburg (2022), in which they emphasize that willingness to learn, flexibility and adaptability are crucial when implementing innovation in newsrooms.

Another important agreement with the literature is that editors and managers indicate that they are open to implementing AM because they feel it is necessary to remain a financially independent media company. This is consistent with the findings of the study by Keij and Van Kranenburg (2022). In addition, the studies by Hendrickx et al. (2021); and Keij and Van Kranenburg (2022) describe that external consultants are increasingly being used on regional and national editorial boards to teach editors how to deal with AM. This research shows that local media in South Holland are in the middle of the process of hiring new staff members to achieve innovative transformation. So, managers are still working on this, but the starting point has arrived already.

5.2.2 Validity

Conducting interviews has provided a clear picture of how editors of local news media appropriate to AM. They described what tools they use, what type of insights they mainly look at and specifically why and how often they do so.

The study was conducted among local news media in South Holland; therefore, the results of this study are most likely to be mostly generalizable to similar local news media in this province. The research does show that the large, national conglomerates such as Mediahuis and DPG Media cut off all free local newspapers two years ago, which makes it likely that local news media in the rest of the country are organized in the same way as here in South Holland, i.e., by clustering free local newspapers at a conglomerate.

5.2 Conclusion

To answer the central research question, the conclusions for each subquestion are now presented. Paragraph 5.2.1 discusses Tools, Paragraph 5.2.2 Agenda-setting, Paragraph 5.2.3 Attitude, and Paragraph 5.2.4 answers the central research question. Then the

limitations of this study are revealed [5.2.5]. This chapter concludes with implications and recommendations for future research [5.2.6].

5.2.1 Editors use Pubble, the website and Google Analytics for analyzing clicks and views

The first subquestion was 'What tools do editors use to analyze audience metrics?' Based on the interviews, it is possible to conclude that editors mainly look at views, clicks, and best-read articles. They see these insights through the layout system Pubble, a monthly overview in the Google Analytics mailbox, and the newspaper's website. They also focus on readers' comments on news posts on social media channels such as Facebook and Twitter. Editors said they often take a cursory look at AM; they often see AM by accident, for example, the current number of website visitors via Pubble or the top five list of best-read articles on the newspaper's website. This is because they have a wide range of duties and are responsible for producing the entire newspaper and keeping the website up to date. Therefore, editors report that they do not have enough time to look at AM extensively as they would like or in the way that is expected of them from management.

Other important factors that play a role in the editor's involvement in using AM are age and personal interest. Interviews show that the younger the editor, the more involved he or she is in viewing AM. Many editors cite personal interest as an important factor in the extent to which they use AM. In general, editors are allowed to decide for themselves how they use AM in the news production process, but managers do try to make editors aware of the numbers during weekly editorial meetings or monthly mailings that include an overview of the most important AM.

5.2.2 Less politics and more focus on small businesses (MKB) and human interest stories

The second subquestion was 'Are audience metrics changing notions of agenda-setting in the local newsroom?' Based on the interviews, it is possible to conclude that writing about political news is most important according to editors and managers. The key journalistic values that fit with this are public service, the controlling function, and objectivity. On the other hand, political news is also the most described changed news value from the advent of AM. Editors indicate that they write political news more succinctly or, in one case, not at all because AM shows that political stories are poorly read online. These insights do not discourage most editors from still writing about it.

Editors told us that based on AM insights, they started writing more about small businesses (MKB) and human interest stories. They were particularly surprised by the success of small businesses (MKB) stories. Most of the editors indicated that even before the advent of AM, they knew that human interest stories were well-read. AM has given them confirmation of this. Furthermore, for online news AM has caused editors to write more about 112 news and

entertainment news. According to editors, the reason these news stories score well is because people are always curious about negativity such as an accident or fire, and the reason for the success of entertainment posts is that they are shareable (via social media) and entertaining.

Finally, it can be concluded that AM also influences the choices made by the editor for the weekly print newspaper. Editors indicated that they decide which stories make it into the newspaper and which do not, based on AM on posts that appeared on the website the week before. Here, the better a post scores online, the more likely it is to make it into the newspaper. Editors pay attention to topicality and a good balance in the type of news stories. For example, editors said they almost always put political news and human interest stories in the paper. In addition, the print newspaper has more room for background stories, and political stories are more detailed than on the website. One explanation for this, according to editors, is that they assume that the print newspaper is read by an older target audience, for whom editors expect that they want to read political news.

5.2.3 Editors are aware of necessary changes to innovate and managers are enthusiastic about possibilities

The third subquestion was: 'How do managers and editors compare in attitude regarding the use of audience metrics?' This subquestion was posed because it is interesting to see if managers and editors view AM differently or not because of their different priorities. The interviews show that despite the different priorities of managers and editors, both are generally positive toward using AM in the news production process. The editors' priority is to inform the public, and the managers' priority is to produce a profitable and quality newspaper.

Based on the interviews, it can be concluded that editors find AM convenient and informative. Many said it inspires them in writing stories. Through AM, they learn from past successes or failed productions. In addition, editors know that it is necessary to generate revenue with the newspaper and are willing to delve into opportunities to do so, such as by using AM. Editors are generally positive about AM, in the sense that it helps them in making choices about news topics, and what stories to put in the weekly paper, and what place a story gets on the website. It also appears that the age of respondents plays a role in their attitude toward using AM. The older the editor, the less interested. Thus, personal interest here is also an important factor in editors' attitudes toward using AM.

Despite the advantages they mentioned of AM, editors also see some disadvantages in using AM. Editors are concerned that AM may focus too much on scoring rather than informing. The scoring news topics they refer to are 112 news, entertainment news, and human interest stories. What almost all editors said in this regard is that even though, for

example, political news scores poorly online, they still want to write about it, in view of their journalistic responsibility to monitor the government. Another frequently cited disadvantage of using AM is that editors are already busy enough. They all produce an entire newspaper via Pubble, sometimes more than one, on their own. They also write for the website and manage their newspaper's social media. Many editors see using AM as an extra task they do not really need and have too little time for.

Interviews with managers indicate that they view AM positively. They see opportunities in using AM to generate more ad revenue, for example, by placing related ads to certain news topics. This study shows that conglomerates are aware of the need to innovate and are doing so, but they are not all equally advanced in this. One of the four conglomerates, Het Kontakt, is part of an innovation project for local journalism by the SVDJ. As a result, this conglomerate is ahead of the other three conglomerates in terms of innovation. For example, only newspapers from Het Kontakt also have an app, and the other three conglomerates do not yet have one. However, they are working hard on this and are eager to innovate but have not reached that point yet. However, they do indicate that a lot is going to change in terms of innovation in the coming years. All the managers indicate that innovation is necessary to maintain a healthy and sustainable company. Managers communicate about newsroom innovation during weekly editorial meetings, and they encourage editors to look to AM, by showing, for example, that it works to write about a particular topic that has done well online before.

This research shows that managers think that AM can help them improve the online revenue model. For example, using AM, such as demographic data of their readers, they can show better targeted, and personalized ads on the website. This, in turn, increases ad revenue. In addition, the research shows that local news media are engaged in writing sustainable content. These are timeless stories about topics that people often search for on Google. This focuses on increasing the number of website visitors using Search Engine Optimization (SEO). And this should also increase advertising revenue. Moreover, managers say AM helps improve the quality of news. This, according to managers, should eventually lead to an increased reluctance to pay for it in the future, for example if a paywall is used or if the news is offered in a subscription form. However, these are plans for the future. For now, the focus is still on increasing ad revenue through the website.

Finally, this research shows that conglomerate managers are busy hiring new FTEs to help innovate the newsroom. These new employees should help guide and coach editors in using AM in the news production process. Applying innovation to the newsroom such as investing in formatting systems and tools for AM is not very costly, according to the managers spoken

to. The only thing that costs a lot of money is hiring new employees, i.e., salary costs. For example, at Verhagen, the manager DB plans to hire two new employees who will help him take this new step in terms of innovation in the editorial department. At Het Kontakt, there is already a new employee currently helping with the innovation process as they are part of the SVDJ's innovation project. For West Media, there are employees from the conglomerate Rodi Media working full time to optimize AM in the news production process at local newsrooms.

5.2.4 Answer to central research question

Based on the answers to the subquestions, an answer to the central research question can be provided. The central research question for this study was 'How do editors of local newspapers appropriate technologies for audience metrics?' The answer to this question is that based on tools such as Pubble, their website and Google Analytics, editors primarily look at AM such as clicks, views and best-read stories. They usually do this cursory because analyzing AM is an additional task on top of the already long to-do list. How often editors engage in AM depends on their age and personal interest in this.

Because of the insights gained from AM, editors change the attention they pay to certain news values. Especially news about small, local businesses (MKB) and human interest stories now get more attention than before. Political news stories remain the most important but are now written in a more concise form. Furthermore, for online news, insights from AM mean that more attention is paid to 112 news and entertainment news that is shareable on for example social media. In addition, AM affects the way editors make choices for their weekly print newspaper. Editors pick stories for their newspapers based on AM about that week's best-read stories.

Editors use AM primarily to learn from past mistakes or successes. Furthermore, they are aware of the dangers of AM, such as focusing too much on scoring than informing. Finally, editors are encouraged by their managers in using AM because it is advantageous for generating ad revenue according to managers. Editors are aware of this, and they understand the need to pay attention to AM for the sustainability of the local newspaper.

5.2.5 Limitations

There are some unavoidable limitations to this research. First, this study focuses only on local media belonging to a conglomerate. This was chosen because this way it was possible to make a comparison between attitudes of editors and managers. Of course, there are many other independent local news media operating in South Holland. These news media organizations are not included in this study at this time.

In addition, it is difficult to clearly define local news media. In fact, many regional news media also cover local news. Now in this study the choice was to focus on the same type of local news, namely the free newspapers. Most regional news media have a different revenue model, working with a subscription form, for example like Leidsch Dagblad or AD Groene Hart.

5.2.6 Implications and future research

This study of how editors appropriate to AM in local newsrooms has painted a clear picture of exactly where local news media are in the process of innovation. It is clear that local news media are aware of the need to innovate, to keep up with digitization and to open themselves up to new ways of working in the newsroom. This is because they see that revenues through print are stagnating or declining. Therefore, now is the time to look at other possible revenue models, with the help of AM.

If local news media do not keep up with innovation, there is a risk that they will not have enough income and therefore be able to hire fewer editors which in turn has the effect of lowering the quality of news. The quality of local journalism matters because this research shows that monitoring local government is the most important job of local news media. If they do not do it, no one will. And that poses a great danger to democracy. This is consistent with the implications described by De Jong and Koetsenruijter (2019) and Keij and Van Kranenburg (2022) in their research.

The result of this study is that the research gap regarding innovation of local news media has been largely filled. Previous research concerning innovation on newsrooms has been conducted mainly on international, national, and regional news media. This research offers new insights specifically for local news media in the Netherlands.

For follow-up research, I would recommend that local news media that are separate from a conglomerate also be included in research. My expectation is that they are further behind in innovation due to a smaller financial safety net. It would be interesting to see how they view innovation and the use of AM and how they are preparing for the future. In addition, I would recommend that follow-up research include an anonymous survey on the true impact of AM on the agenda-setting process, as I feel editors in this study still gave socially desirable answers during the in-depth interviews regarding this topic. The same goes for the feeling of professional anxiety among editors due to the availability of AM. I suspect that this plays a larger role among editors than they currently admitted. Finally, a stand-alone follow-up study comparing innovation among local news media in all provinces of the Netherlands, in addition to South Holland, could provide insight into where local news media in the Netherlands stands compared to international local news media. As described in the

literature review, Scandinavian countries are now ahead in innovation in local newsrooms. It is interesting to be able to compare this with the situation in the Netherlands.

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Appendix 1: Topic lists (editors & managers)

<u>The topic list for editors</u>

Start of the interview:

Introduction

- Explaining the study. The main research question for this study is: How are editors of local newspapers appropriating technologies for audience metrics?
- Do you give consent for recording this conversation for research purposes? (*start recording*)
- Do you consent to using your answers in this study and to use quotes from this conversation?
- May I write your name down in the research outcomes?

Three main categories:

- News values
- The news production process
- Attitudes toward Audience Metrics

<u>Category 1: News Values</u>

Based on the following literature studies:

(Welbers et al., 2016)

(Kristensen, 2021)

(Dodds et al., 2023)

(Møller, 2022)

(Galtung & Ruge, 1965)

(Harcup & O'Neill, 2001, 2017)

(Borchardt, 2022)

(Tessem et al., 2022)

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1. **Can you tell me a little bit more about yourself and your work here at …**
2. **For how long have you been working here?**
3. **What is the name of your job title?**
   a. Can you describe your function?
   b. What are typical tasks that include your job activities?
   c. How often do you write articles that get published online?
4. **What would you describe as important news values for local news media?**

    a. How do you decide which news values are more important than others?

    b. You decide this on your own, or do you involve other colleagues in this decision?

5. How important are readers in the news production process?

    a. What role do they play in filling the newspaper?

6. How do you find stories to fill this newspaper?

    a. Sources approach you?

    b. Other ways? Advertisers?

7. How would you describe the brand identity of this local newspaper?

    a. How do you make sure to write articles that add to this brand identity?

8. How is the news presented to the readers online?

    a. Since when?

    b. Through only the website? Or also app available?

    c. Possibility for personalisation/news preferences?

Category 2: The news selection process

Based on the following literature studies:

(Moyo et al., 2019)

(Dodds et al., 2023)

(Hendrickx et al., 2021)

(Christin, 2017)

(Borchardt, 2022)

(Kristensen, 2021)

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9. Which tools do you use to track audience metrics on your website?

    a. Which tool has your preference, and why?

    b. Since when do you use this tool for AM?

10. To what type of metrics do you pay attention?

    a. And why this type?

11. How often do you look at these metrics?

12. What do you do with this information?

    a. Do you share this information with other editors in the newsroom?

13. What are the effects of using AM for your local newspaper?

    a. Think in terms of revenue, subscriptions, readership, engagement etc.

Category 3: Attitudes toward AM

Based on the following literature studies:
(Hendrickx et al., 2021)
(Welbers et al., 2016)
(Møller, 2022)
(Dodds et al., 2023)
(Kristensen, 2021)

14. **In what extend has the availability of AM changed your perception of news values for local news media?**
    a. Can you name at least three news values that have changed because of AM?
    b. Do you notice a difference in this viewpoint among other editors in this newsroom?

15. **Do you think this is a good or bad thing, and why?**
    a. Do you think the availability of AM changed journalistic values / professional judgement about which topics to cover in this newsroom?
    b. For you in particular?

16. **Has there been orders from upper-management about implementation of AM in news production process?**
    a. How did you experience this?
    b. Notice differences in viewpoints?
    c. Other editors' viewpoints?

Final questions:

17. **Can you describe the strategy regarding the website for this local newspaper?**
18. **How would you describe the future of reporting at this local newspaper?**
    a. Concerning using AM?

Check-up final facesheet information:

    a. Name
    b. Age
    c. Gender
    d. Position in company
    e. Number of years employed
    f. Different positions

<u>Topic list for managers</u>

Start of the interview

Introduction

- Explaining the study. The main research question for this study is: How are editors of local newspapers appropriating technologies for audience metrics?
- Do you give consent for recording this conversation? (*start recording*)
- Do you give consent for using your answers in this study and to use quotes from this conversation in the study?
- May I write your name down in the research outcomes?

The topic list for managers of local newspaper conglomerates include three categories:

- News values
- Attitudes toward AM
- Strategy choices

<u>Category 1: news values</u>

> **Based on the following literature studies:**
> (Hendrickx et al., 2021)
> (Welbers et al., 2016)

1. **Can you tell me a little bit more about yourself and your work here at …**
2. **For how long have you been working here?**
   a. Relevant work history?
3. **What is the name of your job title?**
   a. Can you describe your function?
   b. What are typical tasks that include your job activities?
4. **What would you describe as important news values for local news media?**
   a. How do you decide which news values are more important over others?
5. **How would you describe the brand identity of the local newspapers part of this conglomerate?**
   a. How do you make sure editors write articles that add to this brand identity?
6. **What journalistic values do you think are important for reporting at a local newspaper?**

Category 2: attitudes towards AM

Based on the following literature studies:
(Hendrickx et al., 2021)
(Welbers et al., 2016)
(Møller, 2022)
(Dodds et al., 2023)
(Kristensen, 2021)

7. **Since when did your publishing company start using a website for publishing news?**
8. **Can you describe the strategy of using websites for publishing news?**
9. **Do you use audience metrics?**
   a. Yes? Which tools?
   b. Which metrics do you focus on and why?
   c. No? why not?
10. **What do you think are benefits of using AM?**
11. **What do you think are downsides of using AM?**
12. **In what extend has the availability of AM changed your perception of news values for local news media?**
    a. Can you name at least three news values that have changed because of AM?
    b. Do you notice a difference in this viewpoint among editors in local newsrooms?

Category 3: strategy choices

Based on the following literature studies:
(De Jong & Koetsenruijter, 2019)
(Welbers et al., 2016)
(Hendrickx et al., 2021)

13. **What are the plans for the future considering using AM?**
    a. More training?
14. **How did the implementation of AM go in different local newsrooms from this conglomerate?**
    a. When did this newsroom start implementation?
    b. How did you implement this? (workshops/training?)
    c. Include editors in decision-making?

    d.   How did editors react to using AM in reporting?

15. What are the costs for AM?

    a.   Other options for innovation?

Closing off the interview

- Thank you for the answers
- Stop the recording

Check-up final facesheet information:

a. Name

b. Age

c. Gender

d. Position in company

e. Number of years employed

f. Different positions

Appendix 2: Table news media overview by De Jong & Koetsenruijter (2019)

Appendix 3: Dataset respondents pre-masters 2021-2022

Welke organisaties spreken we?	Wie spreken we?
Verhagen 1. Hoofdeditor 2. De Katwijksche Post 3. Alles over Katwijk 4. Katwijk Speciaal 5. De Rijnsburger 6. De Hillegommer 7. Het Noordwijkerhouts Weekblad 8. LisserNieuws 9. De Teylinger 10. Oestgeester Courant 11. Leiderdorps Weekblad	**Contactpersonen** Teuntje van Delft, 06-12746478 Teuntje.van.delft@uitgeverijverhagen.nl Ongeveer 1 editor per krant en 1 eindeditor.
Het Kontakt 1. Hart van Lansingerland 2. Heel Rotterdam (Havenloods) 3. Groot Hellevoet 4. Streekblad Zoetermeer 5. Leidschendam Voorburg 6. Pijnacker-Nootdorp	**Contactpersonen** 1. Denise Quik, 06-28317238 (5 -freelance- medewerkers) denise@telstarmediacentrum.nl (Alissa) 2. Peter Zoetmulder, 06-83626921 Volgende keer Emile van de velde bellen: +31623366745 (PAS OVER 2 WEKEN) 3. Madeleine, 06-42117920 madeleine@groothellevoetmediacentrum.nl Kan misschien niet eind april, maar wie weet ervoor of erna (alissa) 4. Helene Ouwerker-Koeleman 0629053714 helene@telstarmediacentrum.nl 5. Dick Jansen, 0629191744 6. Martijn Mastenbroek, 06-28792157
De Mare	**Contactpersoon** Frank Provoost 0629426742 frank.provoost@mare.leidenuniv.nl (6 vaste red 10 freelancer)
Den Haag Centraal	**Contactpersoon** Herman Rosenberg

	Rosenberg@denhaagcentraal.net
DordtCentraal	**Contactpersoon** Kees-jan Visser 078-6133223
Alphens Nieuwsblad	**Contactpersoon** Marike Markus van het Alphens Nieuwsblad. 020-3980887. redactie.aln@rodi.nl Bart van der Lek (?) (Gouwe Koerier)
Algemeen Dagblad 1. Groene hart 2. Rotterdams dagblad 3. Haagse courant 4. Dordtenaar/rivierenland	**Contactpersoon** Derk Westra (0627746836). D.westra@ad.nl **BELLEN:** • **Luc** → groene hart en dordrecht, rivierland, utrecht, rotterdam, den haag 0615825463 wil meewerken! mail: l.vandenoever@ad.nl • Jan-Cor Jacobs → 2 dagen presentator print utrecht en amersfoort. 2 dagen eindredactie (1x in de week eindredactie van den haag/groenehart/ rotterdam/westland) • **Tirza** → rotterdam na 15:00 bellen! • **Bart Boeroep** → den haag en groene hart 0653837827 den haag, rotterdam, utrecht en groene hart. mailadres: b.boerop@ad.nl. • Martijn Verburg → ook meer utrecht
Het Kontakt (locaties zuid-holland) 1. Goudse Post (Gouda) 2. Alblasserwaard 3. Krimpenerwaard 4. Ijssel en Lekstreek	**Contactpersonen** HR: Rick den Besten 1. Marianka Peters 0653943754 Mariankapeters@gmail.com (drie medewerkers) 2. Bert Bons 0651543595

	b.bons@kmp.nl (fte: 2,3 corres/freel: 6) 3. Robert van der Hek (0653110867) 4. Huub Lakerveld 0682055377 redactie.ijsselenlekstreek@kmp.nl
Het Kompas (Hoeksche Waard)	**Conno Bochoven** T. 06 - 2203 8509 redactiekompas@groothellevoetmediacentrum.nl
Uitgeverij Uitgeverij West Media 1. Het Hele Westland 2. Maassluise Courant 3. De Lierenaar 4. De Schakel MiddenDelfland 5. De Hoekse Krant 6. Monsterse Courant 7. Rozenburgse Courant 8. Wateringse Krant 9. De Posthoorn Escamp Oost 10. De Posthoorn Escamp West 11. De Posthoorn Loosduinen 12. Groot Vlaardingen 13. Nieuwe Stadsblad 14. Groot Rijswijk 15. De Posthoorn Leidschenveen-Ypenburg 16. De Posthoorn Centrum Laak	**Contactpersoon** 0174-671797 Rene de Hoog rene@uitgeverijwestmedia.nl Zeven redactieleden, zestien titels **vier interviewkandidaten** MAANDAG, DINSDAG, DONDERDAG
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TOTAAL	**17 def.** **8 in de wacht (Uitgeverij West Media, Verhagen & AD)**

Appendix 4: Codebook

Code Dutch	Code (English)	Coded When	Examples
(Tools) inzichten	Tools (insights/metrics)	Editors and managers talk about specific tools they use for analysing AM.	DE: "But on Pubble you have a box with an overview. And then you can just very quickly see how many people are looking at your website right now." RB: "We really do get the statistics mostly from Google Analytics."
Aantal jaar werkzaam	Number of years in service	Editors and managers talk about the number of years they are working at the local newspaper.	HO: "And I've been working in local journalism for about 32 years. And different newspapers all I've had, all in this Haaglanden region"
App	App	Editors and managers talk about if they distribute news via a news app.	BB: "Yes, we are also on app. A news app. We are also in the app store. That will be renewed soon." MM: "We are working on it now. Much to the chagrin of our management, it has taken a very long

			time. But we just wanted to develop it really well. Partly because, of course, we have a large organization, so not one app for one newspaper. It has to be applicable everywhere. And broad."
Functieomschrijving	Job description	Editors and managers describe their job.	DB: "Actually setting policy. And making sure the right persons are in the right places." BB: "And then being a coordinator means that I have the overview of what is happening in the editorial field, that I set out lines, put the correspondent to work, work with colleagues to fill the paper editorially. And that also includes the website."
Houding tegenover innovatie	Attitude towards innovation	Editors and managers talk about how they feel towards innovation in	BB: "No, it's okay. Because it helps you see what's important and what's unimportant. And it

		general and AM in particular.	also kind of ensures that you don't put your own preferences in the paper. If you like soccer a lot, that you write about soccer a lot. But that you just look at what do my readers find this interesting." CS*:* "That, again, you can promote your inspiration. And that you also stay alert that you shouldn't do it on autopilot. That you also have to be open to new things. And that that can also be fun for yourself." RB: "And what I see from the data, measuring is knowing, that's for sure."
Huidig verdienmodel/strategie	Current revenue model/strategy	Editors and managers talk about the current revenue model and the current	DB: "So all investments made online are paid for from print."

		strategy of the newspaper.	RH: "And still, the money is made from the newspaper. So the website is not the most important thing, but we are much more serious about it. Also because we know that... Yes, I don't think the newspaper is going to disappear in the foreseeable future. That's what I thought 10, 15 years ago. Maybe even more so. Now I have much more confidence in the local newspaper. But the website does become more important."
Identiteit	Identity	Editors and managers talk about the identity of the newspaper.	DB: "Those three key words, committed, reliable and local." DE: "Representative of the local community." GM: "Actually, we are just very neutral and objective."

| Kosten innovatie | Costs innovations | Editors and managers talk about the costs of innovation. | DB: "Well, personnel is almost always the biggest cost, of course. Especially since the system is actually already in place."

RH: "Revenue doesn't, but income might. Because publishing revenue is very important. Publishing a newspaper, of course, is very expensive. Printing, distribution, paper, and so on. And that has become very much more expensive in recent years. Because of the war in Ukraine and the energy crisis and so on. And managing the website is less expensive. You still have the journalists that you have to pay. And you have the server costs and so on. For the website, you don't have to print and distribute. |

			So your costs are lower. So with less revenue you can make a profit sooner. But it's mainly the combination of both." RB: "Yes, it's not that bad. Even more so. Look, to have your editorial staff vetted once. Of course there are some costs involved with that. But with the other things I mention. In fact, there aren't even hardly any costs involved in that. Only it could of course be that if we really want things on a structural basis, that an FTE has to be added."
Leeftijd	Age	Editors and managers tell their current age.	DJ: "Before you finish that report, I'll be 56." RB: "58 years old"
Leeftijdskloof	Age gap	Editors and managers talk about differences	DB: "The editors we have now are almost all 55 plus. Well,

		in age and the influence on innovation.	that's totally print. What I'm working on now, I want to start putting down a tandem within the company. Those are two young people, or young, say late 20s, early 30s, who have thus grown up differently, who also look differently at print, and also look differently at online, and are much sharper there." HB: "Of course, yes, I started in the early 1980s. And then you do notice a difference with younger colleagues who are very focused on like, how many people are on the website now?" HB: "Yes, I'm always a little behind. Of course, I'm this silly senior who has to work on a website. So yes, if I am successful, then

			everyone will know about it. That's just the way I am." MM: "I can imagine, if you're 63 and you work here and you've always made your own little newspaper. And then all at once you have to Instagram based on statistics. That that can be quite a bit on you."
Nieuwe functies	New functions	Editors and managers talk about new functions that arise from innovation in the newsroom.	DB: "So there's going to be a tandem, and that tandem, it's going to replace some of that old guard over the next few years. My managing editor is already gone. Well, he was coming of age, I just told you. So there's a sudden gap there. The editor last year left to retire. So that's 80 hours already. 76 hours. So suddenly there will be 76 hours of space for your people."

			RB: "So one of the things we're going to do now is, have an outside person is take a good look at our editorial organization. Of, is there now a way to find by organizing the current team differently. That we thereby cleverly free up time for other things that we would like to do."
Nieuwswaarden	News values	Editors and managers talk about current, important news values.	BB: "So local is the most important thing and the news aspect also plays a role. And then that's very broad, because that's sports, politics, associations. You can pretty much think of those, hobbies and everything."
			HO: "The hard news always comes first, of course. So the news from politics and developments in the city."
Opmaaksysteem	Layout system	Editors and managers talk	DJ: "But that's in Pubble, I don't know

		about the layout system they use for publishing news on the website, social media and for editing the newspaper.	if you know the system. That's easy. Just check a piece, check your Twitter, check Facebook. And you put the article on the website."

GH: "And then you have to imagine, when we post a message online, we check Twitter and Facebook. And then that is automatically linked to our, well, per edition you have a Twitter channel and a Facebook channel. And then that gets distributed through those channels as well." |
| Redactie | Newsroom | Editors and managers talk about how they interact in the newsroom about AM. | BB: "Yes, well we have the monthly meeting with the other coordinators. And then we go through all the figures from the different editions. So in that sense it's shared with each other. And beyond that, yeah you know, |

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			we have weekly meetings within our team."
			DE: "But it is good for the competition among ourselves and that also makes you then again more committed to that, yes, to make that website so popping. There is a healthy competition among colleagues, if I may say so."
Strategie en toekomst	Strategy and future	Editors and managers talk about the future strategy for the newspaper.	DB: "To grow into a more multimedia company, where social and websites are going to have a different role in the next three to five years. But that also needs a revenue model. We don't have subscribers." RB: "We are also one of the participants in the innovation track of Stimulation Fund for Journalism. And this is really a part of that."

			RB: "So we are also quite convinced that actually readers should also start contributing, through a premium model or otherwise."
Tips lezers / engagement	Tips readers/engagement	Editors and managers talk about the way they interact with their audience and how they communicate with each other, and if they receive tips, and how.	BB: "But it's all villages here and each village has its own culture. And that's really its own little world in some ways. So I don't know what exactly is happening two villages away. I don't know that exactly, so then you depend on readers as well." CS: "Through the mail or they just call us. We also have regular, I do have about 1 column left now. Then I have a standard phrase, tips, do you have something nice for the paper? Call or email us."
Top-down communicatie	Top-down communication	Editors and managers talk about the way upper	DB: "And the moment the plan is there. Then those editors who are a

| | | management communicates and gives orders about implementing AM in the newsroom. | little older now will have to be coached. And especially need to be directed. That's how we're going to do it. And I tend to be tough on that. In the sense of, I always try to be soft on people and hard on business. And that can be tough sometimes. But I believe that becomes the route. Then you have to go with that route. And if you don't want to, equally good friends, but then you have to do something else. That's how sharp it is. Because otherwise, you can't."

BB: "Did I have to get used to it. It was just another task. That's often the case with such things. It used to be just a lot easier. Then you had that newspaper to make, you filled it. Then you had one |

			deadline in the week. And now you feel like you have hundreds."
Type inzichten	Type of insights/metrics	Editors and managers talk about the type of AM they use.	DE: "How the post are shared and liked and so on. And how many views it has too." HB: "Reach, clicks and comments"
Veranderde nieuwswaarden	Changed news values	Editors and managers talk about if and how AM has changed notions of important news values.	BB: "What we do often see is that business news just does well. And that politics just actually disappoints a little bit. And sometimes things just go viral because it gets picked up nationwide." BB: "What readers think is not always professional of course. That's the tricky thing. They do find something and you do something with it. But you also always make your own consideration. What also if politics

			is not read very much, we have really agreed with each other. We continue to actively follow this and we remain very alert in it. And we absolutely continue to write about it." CS: "Is that personal stories, human interest stories, that those are better read than, say, official posts about an alderman opens something. Or stories with a bit of depth."
Website en social media	Website and social media	Editors and managers talk about the way news is published on the website and on social media.	CS: "I am officially only allowed to carry six editorial pages in the newspaper. But that also has to do with the fact that now you make much more of a connection with our website. So if I can't get rid of it, we're more likely to put it on the website."

			DJ: "But that's in Pubble, I don't know if you know the system. That's easy. Just tick a piece, tick your Twitter, tick Facebook. And you put the article on the website." GH: "Well in fact almost 100 percent of the articles I write do get on the website. We had quite a discussion about that several years ago. Website first or print first. Well, it really is website first."

Appendix 5: Code groups

Document Group	Code (in English)
Tools	(Tools) Insights App Layout system Type of insights website and social
Agenda-setting	Identity news values tips readers /engagement Changed news values
Attitude & managers	Number of years in service Job description Attitude towards innovation Current revenue model/strategy Cost innovation Age Age Gap New functions Newsroom Strategy and future Top-down communication