

**“WE ARE ALL IN THIS TOGETHER”: WHAT
ARE THE CHALLENGES GOOGLE “HELPS”
MEDIA INDUSTRIES WITH?**

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Tiivistelmä – Referat – Abstract <p>Studies have shown that the platform companies Google and Facebook have a disruptive nature in how media companies organise their work, and some researchers claim they are a duopoly in digital advertising. However, Google says it supports media by "helping" media industries through funding and training. This study argues that by examining what media projects Google supports, we get a good overview of what challenges journalism is currently facing and the solutions for tackling these problems, and ultimately, how this connects to Google as a platform company and to its narrative. This study aims to investigate which media industry challenges Google tries to address by financial support and to examine the solutions to these challenges proposed in accepted Digital News Innovation Fund (DNI) projects. Thus, this research asks: What are the challenges for media and journalists that Google Digital News Initiative is addressing? What specific challenges get the largest support? What are the main solutions proposed in projects supported by Google DNI?</p> <p>Based on the review of the literature about the relationships between platform companies and media and responses to challenging conditions in the ecosystem of platforms, qualitative content analysis was used to examine the last round of the DNI Fund's 102 projects. The analysis demonstrated that Google supports projects that classify in three directions: Business Model Innovations, Product Development in Editorial Processes and Ecosystem Development Approaches.</p> <p>One of the most interesting findings shows that Google favours supporting projects that concern solutions for the increase in audience subscriptions rather than addressing what publishers have concerns about the most – Google's domination over the digital advertisement. The results open the discussion about the possible signs of Google's support in media industries being a "self-help" for their mission of organising the world's information. Further research is needed to identify what is the content of the other projects Google presents as "help" to media industries.</p>			
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1 Introduction

With digitalisation, a great deal of attention has been paid in media research on how media industries transform and adapt to the changing conditions. Transformations become a drive-force for innovations, where digital environment mechanisms both foster or encourage the development of the industry and create conditions where companies are urged to be innovative in order to stay in the market and be competitive. The digital world also has several leading players, so-called platforms, who dictate the rules of the market game.

Platform companies, such as Google and Facebook, account for around 84 per cent of the global digital advertisement spent in 2017 (Garrahan, 2017). Dominance over the Internet by these two companies led to them being called a duopoly and operating systems for journalists (Fanta, 2018b). Almost two decades of the 21st century have passed, and media industries are in search for sustainable business models since dependence on the digital advertisement market provided by platform companies is not sufficient (Piechota, 2017). This domination of revenue streams has a long-term effect on journalism organisations (Bell & Owen, 2017). Moreover, the media's dependence on such platforms has the effects not only limited to the business and economic side of the industry. Several researchers address the operational side of the impact and how challenging it is to media. It can go as far as how the content is created, distributed, and how relationships are built with audiences.

Paradoxically, Facebook and Google are also the largest external funders of journalism in the world funnelling their money in such journalism projects as News Integrity Initiative and Google News Initiative (Ingram, 2018). However, it is not clear what Google's objective to help media industries is.

Platform companies, such as Google and Facebook, have a significant impact on social, political, economic and cultural spheres. Some researchers (Andersson Schwarz & Larsson, 2018; Dijck, Poell, & Waal, 2018) use the words *platform society* to describe the way we form our lives around platform companies. Zuboff (2019) introduces the term *surveillance capitalism* to show the logic of the market that dictates the digital world. Surveillance capitalism is a term used to demonstrate how free material of any user experience in the digital world translates into behaviour data, which gives profitable outcomes to the market leaders (platform companies).

Media is part of the social information and digital world that a platform company such as Google tries to organise. Thus, exploring how Google "helps" media industries could show what roles Google takes in the media industry and what are those challenges media organisations face as a consequence. This study employs the term "help" as a verb with a definition "to give assistance or support to" (Merriam-Webster, n.d.) when talking about Google's funds as a supportive gesture. However, the word is used in quotation marks to signal the distance from the traditional meaning as this study touches the subject of whether by giving support and a "helping hand" to media industries, Google wants to help itself.

The title of this thesis represents the narrative which Google wants people to follow, for instance, when probing the underlying theme of Google's dominance. "We are all in this together" states Chinnappa (2017), Google's director of strategic relations, news and publishers. He underlines that the media industry and Google should be considered partners. The article emphasises the collaborative nature of Google and its commitment to news industries by, for example, providing journalism training or giving financial support. It states that Google is not competing for publishers' revenue. His arguments for that are direct: Google is sharing advertisement revenues with publishers, giving *reach* to the articles and the possibility for news organisations to join news aggregators, such as Google News and get other support.

However, there is no business model for most news media around *reach* and findability, which are the main benefits posed by Google and Facebook. Google wants to be seen as a part of the same information ecosystem it "shares" with the news industry, even when it comes to the business side of both industries. Chinnappa writes: "sustainable business models still need to be developed, and we are committed to working with publishers to be part of the solution."

In 2019 Chinnappa (Media Voices Podcast, 2019) mentioned three reasons Google pays attention to the media industry. The reasons are that the media industry is connected to (1) Google's mission, (2) Google's products and (3) Google's business model. The interactions with news ecosystem happen through a revenue share model: "And so, therefore, we're sort of selfishly incentivised to want the news ecosystem to thrive, because if they thrive and they make more money, we end up making more money." Regarding accusations from the news publishers and researchers that Google and Facebook are a duopoly, he argues that it is too simplistic to look at that ecosystem in this way since Google's incentives are similar to what the news organisations have. Google wants to be seen as a supplier to news organisations and not a competitor.

This study argues that by examining what media projects Google supports, we get a good overview of what current challenges journalism is facing and the solutions for tackling these problems, and ultimately, how this connects to Google as a platform company.

1.1 Aim of the study and objective

It is clear that there is a dissonance in how media researchers and how Google as a company positions itself when talking about media organisations and platform companies. To our knowledge, Zuboff's (2019) book about surveillance capitalism is so far the most insightful about the effects of digital dominance from the perspective of the users, us, society, the audiences of Google and Facebook. There is also a growing number of researchers who explore the roles of Google and Facebook in narrower contexts of

journalism and place them in media ecosystems (e.g. Doyle, 2015; Bell, 2016; Bell & Owen, 2017; Nielsen & Ganter, 2018, Ingram, 2018). One can see the disruptive nature of this duopoly in how media companies organise their processes. Meanwhile, platform companies deny the disruptiveness and emphasise their support to media organisations.

The present study aims to address this dissonance and the gap of knowledge by looking at the evidence of what projects Google supports through one of its funds. The results will be evaluated by looking at what problems news media are facing, and if those are caused by the environment platform companies have created. The study will offer a possible reason why Google would want to help to tackle these challenges.

I argue that this topic could be addressed by examining one of Google's projects aimed for supporting media organisations, The Digital News Innovation Fund (DNI Fund), which is part of the Google News Initiative. Google is a secretive company. The information outside of public relations publications is not easily accessible to the public, including researchers and journalists. (Zuboff, 2019.) However, what is available to the public are the names of the recipients of the DNI Fund and descriptions of their projects. This study examines what those projects are about.

This is how Google states its aim to help European media with its funding: “The Digital News Innovation Fund (DNI Fund) is a European programme that's part of the Google News Initiative, an effort to help journalism thrive in the digital age” (Google News Initiative, 2019a). The DNI Fund was launched in 2015, inviting any individual, newsroom, start-up or non-governmental body to apply for Google's financial support. The DNI Fund invited two rounds of applications per year, resulting in 6 rounds in total, the last round held in spring 2019. However, what exactly do those funded projects try to solve, and how? What challenges do they want to overcome? Are there any challenges that receive greater support from Google than others? What does it show about the environment of media industry?

1.2 Research questions and theoretical framework

This study addresses a knowledge gap around how Google “helps” media organisations and why it takes such role of a “helper”. The purpose of my research is (1) to investigate which media industry challenges Google tries to address by giving financial support, and (2) to examine the solutions to these challenges proposed in accepted DNI projects. Therefore, the research sets out to answer two research questions:

RQ1: What are the challenges for media and journalists that Google Digital News Initiative is addressing? What specific challenges get the largest support?

RQ2: What are the main solutions proposed in projects supported by Google DNI?

So far, there is to our knowledge only one extensive study on the DNI projects. It was carried out by Netzpolitik (Dachwitz & Fanta, 2018) where the objective of the study was to look at who receives the financing and how much, sorted by country, type of media organisation as well as type of orientation. However, the study did not include the data from the 2019 round of funding. The Netzpolitik study also showed only the general orientation of the projects grouped into categories. With this research, I aim to contribute to the research community in deepening the knowledge about DNI by examining exactly the last round of the fund and exploring the challenges these accepted projects address and the solutions that they present. The results of this research would help to understand how Google wants to help media industries and, hopefully, contribute to the discussion about why Google "wants" to help other industries and what role it has in the social world.

The theoretical framework of this research is based on expanding the understanding of platform companies as a part of societal structure through their interaction with media organisations. The literature review starts with an overall introduction of Google as a company and its mission. The following chapter concentrates on providing an introduction about the literature on platform companies and various ways researchers describe them. The chapter includes an overview of such terms as *datafication*, *platform society*, *media*

ecosystem, infrastructural capture, platformisation and others. The review moves on to explore the literature about the dynamics of the relationship between platform and media companies. Further, the review provides insights into the digital economy and platform companies' impact on media industry and society. The last chapter of the review concentrates on direct media responses to the environment created by platforms, including literature on such topics as media business model reconsiderations, innovation, data use, and the opportunities and challenges media companies face in producing and distributing content for platform companies.

1.3 Data and method

This study uses data from a specially selected sample of texts from Google's Digital News Initiative Fund website of the last round of fund winners from 2019. The method for the data collection is document analysis (based on Altheide, 2000; Rapley, 2007; Bowen, 2009; Coffey, 2014). In total, the content of 102 projects is analysed by using qualitative content analysis, and the results are introduced as conceptual models to show the ways Google funding "helps" media organisations.

2 Background: Google’s mission and “help” to other industries

In this thesis, the core research objects are media organisations and Google as a platform company. The subject of the study is Google helping media organisations, taking the Google News Initiative as an example. However, fundamental would be to understand what could be Google’s agenda as an organisation to help other industries.

At first, we would want to understand what Google is as a company. Google products include a Web browser, the world’s most significant online advertising network, phone operating systems and email. It established the concept that revolutionised search engines - Google PageRank, which made it possible to turn unstructured data into structured and rank its usefulness. Slowly, Google became a leader of search engines – it accounted for 89% of all Internet search uses by the year of 2015. (Marr, 2015, p. 243-248.) The company learned that the search engine could be turned into a learning system by the flow of the behavioural data from the users (Zuboff, 2019). Google monetised the search engine by collecting data for use as the basis of targeted advertisement and became the most prominent online advertiser in the world. Nowadays, it operates on the data-driven business model. (Marr, 2015, p. 243-248.) Creating such advertising tools as AdSense and AdWords, the Internet became a canvas for Google’s targeted ads (Zuboff, 2019).

In 2012 Google launched Knowledge Graph. It helps to “enhance Google search” by connecting information entities with similar semantic meanings together (Marr, 2015). Ehringer and Wöß (2016) define the concept: “A knowledge graph acquires and integrates information into an ontology and applies a reasoner to derive new knowledge”. Google (2012) explains that the Knowledge Graph helps to build information about real-world connections and collect information about the objects: “When you have a question to answer, others may have come to Google already to search for the same thing.” The search engine is not only about keywords anymore but also the user’s intent behind them and connections between places, time and related information entities to the search inquiry. “All

of the collective human wisdom that comes through our Search Engine, what people are searching for tells us what the interesting things to put in our database “(Google Support, 2019).

Google’s business became targeted advertisements because the company has enough data to be the most relevant search engine for the users, and simultaneously, the company brings value to advertisers by having data about the users (Zuboff, 2019). Most companies want to appear amongst the first results on Google when users search for specific inquiries. Thus, they use different SEO (Search Engine Optimisation) techniques to achieve it. Google encourages businesses to focus on SEO because “it helps Google to find the content of businesses” and “it helps Google to understand the website content” (Google Support, 2019). Google suggests some of the strategies for improving the company’s visibility on Google search, including optimising content, by making it more useful and giving the needed content to users. (Google Support, 2019)

Returning to what Google wants and the company’s mission, the original mission statement is “to organize the world’s information and make it universally accessible and useful” (Google Search, 2019). Here we can talk about why Google wants to “help” organisations. Google’s objective explains why it wants companies to optimise their content and websites: it helps to provide relevant search results on Google. Similarly, when the sites get more users from the search, Google obtains more accurate data about the users and how they find the relevance and usefulness in the content they clicked. When more pages rank highly in Google, more people find the search engine accurate, and it helps for overall search performance improvement.

Here we can discuss how Google’s “help” is about achieving their company’s goal of organising the information, making it relevant to users and building a knowledge database of the world. It can be considered that Google helps itself by supporting other industries,

including media organisations, who are the most critically important producers of quality content.

3 Platform companies and their relation to the media industry

This chapter reviews the literature that examines digital platforms as infrastructure or, in other words, the foundation of a social system where media is an integral part. It introduces the characteristics of platform companies and their role in the media ecosystem. The literature review progresses by exploring the dynamics of the relationships between media, society and platform companies.

3.1 What is a platform company?

Although people commonly use *digital platform company* as the term, the concept can vary depending on the discipline it is contextually used. The word *platform* has different semantic values and understandings; we can talk about computational, architectural, figurative and political platforms (Gillespie, 2010). Computational platform companies can be broadly defined as “online content-hosting intermediaries” (Gillespie, 2010, p. 350). The definition can be enriched by adding the function of the platform companies: “programmable architecture designed to organise interactions between users” (Dijck et al., 2018, p. 9).

To put this in context of operations and functions, Andersson Schwarz and Larsson (2018, p. 129) describe platforms as “connecting third-party actors within a comprehensive, interactive digital space”. They list seven features platform companies have: these are 1) software-based, 2) connected to the Internet, 3) data-driven, 4) automated, 5) scalable, 6) proprietary (most usually commercial) and 7) centralised. Lastly, Dijck et al. (2018) comprehensively illustrate the anatomy of the term: “a platform is fuelled by data, automated and organised through algorithms and interfaces, formalised through ownership relations driven by business models, and governed through user agreements.” (p. 9.) To sum it up, platform companies are software spaces for third-party actors (users) whose

operations are based on the mechanism of the platform policies. This mechanism is operating based on mainly *datafication* and data automation and has business characteristics attached to it.

Datafication is used as a term that indicates a transformation in how society is organised and how users are monitored, giving space for predictions about the individual and society by accessing data about them. This transformation requires to question power and control because the shift is not only technological but social and political. (Hintz, Dencik, & Wahl-Jorgensen, 2018, p. 8.) If studies before considered user data as a “by-product” of platform companies, over time, these companies developed into data owning firms with data being the main resource of their business. Every form of interaction on the platforms is data, and it can be a resource for delivering real-time analytics for a variety of business sectors. (Dijck et al., 2018.) Exactly the *predictions of our behaviour* based on our past interactions with the digital world are the products for profitable outcomes. Users, thus, are raw material suppliers for platform companies. The consumers of such products are enterprises. (Zuboff, 2019.)

In the discourse of the digital platform companies, the term *platform* gives us a promise to support those who stand upon it and gives the impression of technical neutrality and openness (Gillespie, 2010). However, how digital platforms operate does not guarantee neutrality since, for example, they seek sustainable business models or have the leading voice of what and how can be shown, monetised, organised or removed. Their architecture defines specific norms and values; therefore, platform companies cannot be value-free or neutral. (Dijck et al., 2018.) Digital platforms offer a space for content creators, but it is that these spaces are controlled by those who own them, and, therefore cannot be neutral in their core nor without defining values. Those who use these spaces are under the platform’s mechanism because by using the service, the user accepts the *terms* of service.

3.2 What are platform companies to media?

The definitions of the platform companies highlighted some of the characteristics of the structure. However, platforms cannot be studied independently from social or political structures as they are all dependent on global infrastructures (Dijck et al., 2018). Thus, looking at media ecosystems can be helpful. In this thesis, the media ecosystem as a term refers to a news network and to conditions on how news objects such as technologies, institutions, information and other news objects are altered in these networks (Anderson, 2016). In order to understand media ecosystems, it is necessary to look at both elements – distributor and producer (Whittaker, 2019). The following part moves on to examine the dynamics of these relationships in greater detail.

Studies about relationships between social media or digital intermediaries and journalism in the last decade have shown that researchers have two prominent occurring narratives – either about normalization or about control. In this context, normalization means exploring how journalistic norms have changed because of the new platforms. Meanwhile, narratives of control look at the distribution, selection and curation of news content where boundaries are “more fluid” between these elements. Studies on the news after the production process (distribution, monetization, and legacy) focus on Google and Facebook as those are the primary distribution channels and have the largest share of advertising revenue. (Lewis & Molyneux, 2018.)

Here we examine the different concepts used by scholars who concentrate on the relationship between media industries and digital platform companies. Ørmen (2015) uses *the algorithmic curation of content* as a concept to describe not only search engines and social media but websites and news sites more generally. McMullan (2017) calls platforms such as YouTube, Twitter and other as *digital mediums* of foundation technologies. Segev (2010, p. 173) observes Google’s transition *from personal advisors to global advertisers*. Meanwhile, Bell (2016) focuses on *distribution versus destination* to explain the complexity of the battle over whether an Internet user consumes news on the platform or a

news organization's website. News companies are evaluating the balance between distribution versus destination aiming to the "destination" for the reader (Bell, 2016). Some researchers call platform companies and their filtering algorithms the *new gatekeepers* between citizens and journalists. (e.g. Bozdag, 2013; Wallace, 2018, Russell, 2019). Wallace (2018 p. 288) notes that gatekeeping could be implemented as a framework to identify "who is selecting which information according to what mechanism, and how is the news item framed before reaching the public?"

Nechushtai (2018) refers to *infrastructural capture* to describe a condition "in which scrutinizing body is incapable of operating sustainably without the physical or digital resources and services provided by the businesses it oversees and is, therefore, dependent on them" (p.1043). In other words, digital platforms have created a condition which puts the content creators in a position where they either accept the new ecosystem (add value to another business without being directly part of it) or fail.

Moving on now to what is the narrative on media companies operating in such circumstances, Moller and von Rimscha (2017) views it through a techno-economic lens and uses the terms *centralisation* and *decentralisation*. *Centralisation* in this context refers to control over communication and data (which is essential for political and economic power) by digital platforms like Google or Facebook. On the other side, *decentralisation* describes the processes when this power is given (back) to the users. Concerning media companies, they are neither the agents of decentralisation nor centralisation. This idea suggests that media companies do have some independence from digital platforms. Firstly, different media companies have different links to platforms and can have alternative ways to support their business models; thus, for example, niche media companies tend to be fully independent. Secondly, media companies and platform companies depend and rely on each other in terms of distribution and content. (Moller & von Rimscha, 2017.) Therefore, there are arguments pointing to a beneficial duality in this relationship structure between publishers and platform companies.

3.3 Media organisations in the platform ecosystem or platforms in the media ecosystem?

The literature on platform companies and their position in the media industry highlights several profound aspects of their relationship. A considerable amount of the literature focuses on how power relations between these two elements work and whose role is more dominant. As we already noted, most of the recent literature shows that the dynamics of the relationship are in favour of platform technologies, using such terms as *decentralisation agent* or *infrastructural capture* or *gatekeepers*.

In the report about the platform press and about the ways how Silicon Valley is shaping journalism, Bell and Owen (2017) conclude that Silicon Valley companies do not only have a role as distribution channels. There is convergence between so-called platform companies and journalism, where the platform companies are in the control of what the audience sees, what type of journalism is succeeding, and what catches the attention of the reader. Similarly, Poell and van Dijck (2014) argue that platform technologies do not facilitate democratic journalism functions, although, in their view, some researchers may think so. They suggest that neither of these platforms (Facebook or Google) has a neutral role in journalism but shape how news is curated, measure how users receive them and, start to have a role in not just distribution, but also production and publication. Besides, they argue that platforms add a social nature to news, where users are driven to particular content, and that change does not present democratic character.

Moreover, if the relationships between news organisations and technological platforms are asymmetric, it leaves the question who acts and who reacts, and it is a situation where news organisations are left to react (Kleis Nielsen & Ganter, 2018). Platform companies have become a key element in the news ecosystem, and while they might care for the media industry, it still would not be their core purpose of the business (Bell & Owen, 2017). Digital platforms are interested in setting themselves as primary resources for news,

therefore offering various tools (for example, Google Trends or Audience Optimization), online training (for example, Google News Labs or Facebook Journalism Project) and providing funds (Nechushtai, 2018). For example, “Facebook Journalism Project” claims that it aims to have stronger ties with the media industry. However, in the broader spectrum of the news ecosystem, it can indicate the platform’s efforts to govern in the news sector as such or an effort to organise media companies’ strategies to be compatible with the platform. (Dijck et al., 2018.)

Significantly, although the relationships are complex, the majority of the publishers in media organisations have accepted Facebook and Google as their content distributors. Even more, some of the media companies claim that preparing content for the platform companies has become an integral routine in their production. (Moller & von Rimscha, 2017.) The question here is whether they have accepted platforms as their distributors only because there are no better alternatives at the moment. The data from 2017 show that only one-third of publishers are satisfied with Facebook’s performance in spreading their content and only seven per cent are satisfied with the display advertising performance (Bilton, 2017).

Platform companies and traditional companies might not always compete with each other but also benefit from each other (Andersson Schwarz et al., 2018). Although platform companies offer various sourcing tools for journalists, news organisations are still in favour of choosing traditional sources, such as press releases, financial reports, interviews and others when covering news topics. Nonetheless, Google and Facebook provide one essential thing – access to audiences – without which news organisation cannot exist and, thus, cannot produce revenue without the mediation of these platforms. (Nechushtai, 2018.) Thanks to platforms being able to break the traditional relationships with the audiences, media companies are putting their effort into rebuilding them again. Google and Facebook are an integral part of the people’s digital habits and these platforms attract most of the news consumer traffic for a certain type of content. Therefore, the central opportunity these

technology companies offer to media companies is *reach*, or, at least, they feed this perception. (Kleis Nielsen & Ganter, 2018.) On the other hand, for platform companies, it is beneficial to have a good relationship with the news outlets since news is free and is one of the primary sources for content and engagement. (Nechushtai, 2018). Here discussion could arise how platforms have created the illusion that news should be free.

The fundament of the digital economy is matching services with relevant customers. This is achieved by collecting personal data, consumer patterns, demographics and behaviours, which are often collected from providing free services. Platform companies provide value to users with personalised services, which are facilitated through data trading, personalised advertising and other activities connected to consumer profiles. (Andersson Schwarz et al., 2018).

While platform companies benefit from the media industry, it can be discussed if the same happens in the opposite direction. Media is in symbiosis with other systems and networks; therefore, it is sometimes called a parasite (Whittaker, 2019 p. 44). Segev (2010) explains that media including television, newspapers, radio should not be considered as separate elements from the Internet because they have slowly become “hybrid communication corporations”. Eventually, Google played a significant role in foreseeing this trend and tried to deliver this quality of service by integrating video and television content into the web. (Segev, 2010, p. 174.)

The most significant power of the search engine is to store and analyse what kind of information the user searches. Thus, search engines can progressively become media companies as they might know well how to fulfil customers’ expectations of the services (Segev, 2010, p. 173.) This connects with the preferences of the users. The Digital News Report from the Reuters’ Institute shows that the majority of people worldwide (65% of their respondents) choose to use other sources to access news instead of going directly to the news sites. Most people (53% respondents) favour accessing news through news

aggregators, search engines, social media instead of homepages, emails or mobile notifications, or as authors of the report say, *interfaces driven by humans*. (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018.)

The processes in media companies that go through the platforms (for example, monetisation or production) are not only platform-driven or user-driven. They emerge as a result of interactions between actors involved in the platform ecosystem. Data and metrics about users and its importance in news selection processes became significant not only because of the nature of platforms but also because media organisations organised their work around platform data. Likewise with business models in news organisations, platform companies contributed to a change in economic relations, but media organisations now have to find a way of native, new monetisation strategies. (Dijck et al., 2018) That can be a path back to history when media was dependent on reader revenues, and now it has to find a way back to a similar strategy.

To conclude, digital platforms have taken a crucial role in the news ecosystem where they are not only one of its elements but the core mechanism. Although this relationship between media and platform companies is beneficial for both sides, this view can be criticised as there is apparent asymmetry in this relationship that some researchers call "not democratic". Most importantly, even if such platform organisations as Google or Facebook offer funds and tools for journalists to use, this offering itself shows the power relations between news organisations and digital platforms. To sum it up, there are benefits both elements seemingly give to each other – if a media company gives free content and data to Google or Facebook, then those companies give back the reach and the audience flow. However, the question here would be: who “owns these audiences”? (Bell, 2016.)

3.4 Platform companies and society

Recently the discussion has arisen not only about what platform companies are to media but also what role these companies have in society. It can be argued that since the platform

companies have their impact on many aspects of our lives, they heavily influence how we see the world and how many businesses become dependent on their services.

A recent topic of contention is whether Google is a platform or infrastructure. It could be an infrastructure because it has a reliable network which is widely available and gives access to most of the information on the Internet. As a platform, it has such features as connecting users and content and overall programmability. To illustrate, on Google Maps, third parties can add data or overlay the original map with their data. This question about Google can show how convergence between infrastructure studies and platform studies demonstrate rapid changes in the networked digital world where its infrastructures are becoming *platformised*. (Plantin, Lagoze, Edwards, & Sandvig, 2018.) Similarly, this discussion about infrastructure being *platformised* appeared when the EU court received a case about Uber to decide whether it is a platform company or a taxi company. The court advisor declared it to be a taxi company, although the company itself claimed it to be a so-called *information society service*. (Fung, 2017.)

Andersson Schwarz and Larsson (2018) talk about *platformisation* as the process that is something yet not fully comprehended, and questions about digital platform economies, innovation or policy and regulation challenges keep arising in different communities. The evidence of platforms blending with societies can be clearly seen in the effects it poses on, for example, financial industries, healthcare, property management, insurance companies and anything where decision making can be automated. Platforms change the ways how society is organised. One could argue that social processes happen more effectively because of it. However, it should be kept in mind that platforms are based on specific technocratic control and governance where there is a significant lack of transparency. Besides, companies like Google, Facebook, Apple and Amazon have tremendous influence globally and many social actors, even small platform actors, have to depend on those big companies in many considerations. (Andersson Schwarz et al., 2018.)

Similarly, Dijck, Poell, & Waal (2018) have a comprehensive discussion in their book about online platforms and how they are infiltrating in, converging with other societal structures, and, within these changes, creating a social structure themselves. By the authors, digital platform companies are not independent entities of technology or economic phenomena but rather are an integral part of society. Platforms not only reflect or shape society; they instead produce the structures we live in. Dijck et al. (2018) use *platform society* as a term to emphasise the relationships platform companies have in society and with society: private benefit and corporate gain versus public interests and collective benefits. Such companies as Airbnb or Uber are given as illustrations on how platforms can be invading societal structures like hospitality or transport sectors, or Facebook, Twitter and Google and their products (such as Google AdSense, Facebook Instant Articles, Google News and others) creating media structure. Andersson Schwarz et al. (2018) use the same term *platform society* to describe the social dependency from platforms as global ecosystems on security, durability and social provision.

Platforms usually have their ecosystem that usually involves four elements. *Owners* of platforms have intellectual property and rights of governance, providers are the platform interfaces, while *producers* create offerings to *consumers*, who choose these offerings. (Marshall, Geoffrey, & Sangeet, 2016.) As mentioned before, it is hard to answer the question of what exactly Google is and how it impacts society or rather builds it around itself (building *platform society*). However, the environment it creates is becoming a hybrid of old and new applications to social actors. Media is part of society, and, thus, is under enormous impact as well. Google's director of strategic relations, news and publishers quoted the CEO of Google: "We consider ourselves an ecosystem company" (Media Voices Podcast, 2019). This sentence can present how Google views these relationships between societal structures and their business – they have created an ecosystem for others rather than take passive participation in other ecosystems.

4 Response to the environment created by platform companies: challenges, opportunities, innovation

The following part of the thesis moves on to describe in greater detail the challenges media companies experience as a response to the environment which platform companies have created. Platform companies such as Google and Facebook have created circumstances where media companies coexist with uncertainty about the future. What are these challenges, and what are the solutions media companies have at the moment? Moreover, what role do innovations have in this process and what fosters companies to innovate? This review expands on these topics.

4.1 What are the challenges media organisations face?

The data from 2018 shows that ad revenue has actually increased for US media companies across all platforms and news sites compared to the year 2017. However, the majority of it still goes to Facebook when it comes to “display revenue”, which includes such elements as banners, videos and other advertisement types which run along with the content. (Barthel, 2019.) *The News Media Alliance* published a study (Tracy, 2019), stating that Google made \$ 4.7 billion from the news industries. Google claimed that those numbers were inaccurate and that their company offers news publishers traffic – every month over 10 billion clicks to publishers’ websites (Tracy, 2019). As previously already mentioned, Google uses this argument to show that the relationship between media and their company is beneficial for both – Google receives most of the revenue, however media organisations receive the traffic and the audience flow. Nonetheless, it is clear that media organisations are left to react to these circumstances since the power is mostly at the hands of platform companies.

Media organisations are in tension from the short-term operational point and also from long-term concerns about dependence on digital intermediaries and strategic operations within these platforms. Their fear is about missing opportunities, the asymmetry in the relationships with platform companies, uncertainty about the ways how to evaluate the risks

and rewards, however, they have the desire to reach out to a broader audience. (Nielsen & Ganter, 2018.) Overall, there are three ways how media management researchers usually examine media organisations' response towards technology disruption: 1) how the effects of the uncertainty have influence on profitability, business models and strategy; 2) how media companies are creating a response to the transforming environment, and 3) how new strategies pose practical challenges in terms of managing media organisations (Oliver, 2018).

Numerous studies have attempted to identify media company responses to the existing environment; most of the responses are operational-based and existing strategies are not universal, according to Picard (2004). Some of the responses he mentions are: 1) creating strategic partnerships, 2) diversification into creating other media product portfolios and activities, 3) internalisation of the business and opening up to the global market, 4) creating niche media products. In other words, responses varied from searching for support in networks to offering diverse media productions and creating niche products. Pavlik et al. (2019) list four dimensions of how technology impacts journalism: audience engagement (e.g., through mobile), changes in content and user interface (voice news, virtual/augmented reality, interactivity, etc.), production processes (algorithms, AI, automation impact on professional practices) and policy and economic implications (for example, privacy).

4.2 Innovation as a response

Researchers look at innovation by exploring how it fits in the context of the surrounding socio-economical world. "A key to understanding innovations is that existing knowledge is implemented in new contexts and that this opens up new possibilities". (Storsul & Krumsvik, 2013 p. 14.) Further, Boczkowski (2005) views media innovation as a triangle, which interconnects three elements simultaneously: communication, technology and organisation. He argues that each element can be explained and contextualised only in relation to others (p.11). Innovation can be looked at as a notable element and a response to

the existing environment where technology and media organisations share the same space. Platforms create conditions that call for innovation to happen in this space to make this convergence successful.

By every year, it becomes more apparent that the barrier between the creative and technological sides of the media industry becomes more and more blurred. Hence, the scope of innovations is expanding. Innovations necessitate change and different organisational responses. (Küng, 2013, p.10.-11.) Likewise, Andersson Schwarz et al. (2018) claim that digital platforms constitute spaces for innovation since they create new social functions and business opportunities and shape our actions. In other words, innovations are different in diffusion, but their scope is enlarging since the technology forces to innovate in different directions, yet that demands organisational change.

However, not all organisations will respond similarly to the change, and challenging conditions do not always encourage the organisation to innovate. Lowrey (2011) explores why some of the news organisations are more likely to innovate than others. The study focuses on the aspects that are shaping managers' decision-making, especially uncertainty about the news institutions and the audiences. The results showed that those organisations that have factual evidence from the market, resources, and ties with their readers demonstrate a higher chance of innovating in the organisation. Although uncertainty about audiences and technologies seem to stimulate the organisation's capacity to innovate, it does not show any real correlation with product innovation, nor do any of the other independent measures show any considerable correlation. In other words, resources and market factors (public ownership, organisational size) and ties with the readers (monitoring the reader's discussion, the site usage and other) are the most critical factors that lead to product innovation.

Marshall et al. (2016) view the directions for innovation and companies' new strategies in consideration of platform economy: transformation from the pipeline to the platform

strategies, where there is significantly less need for physical assets and personal infrastructures. Thus, as they propose, companies must shift their operations. For example, companies have to understand the value of having hardly any tangible assets in the platform economy, and they have to come to an understanding that what they actually "own" are communities and the resources these members in communities contribute (networks). Another shift they suggest is to have internal optimisation to external interaction since platforms provide facilities for these interactions (shift from persuading participants to ecosystem governance). Lastly, the key shift and the space to innovate is the move of the attention from customer value to whole ecosystem value, which sometimes means for companies subsidising one type of consumer, to attract another one.

There are different suggestions on how a media organisation can attempt to innovate as a response to environmental change. For example, Doyle (2013) suggests that a vital factor for experimenting and innovating is to integrate editorial, IT and commercial strategist efforts. Another important criterion for innovation in media companies is to achieve two-way connectivity with the audiences. A report from World Association of News Publishers (Piechota, 2017) suggests the need for finding long-term strategic responses because changes in different platform algorithms would not affect long-term strategies as much as short-term ones. Another suggestion is to look at the behaviour of news consumers as the core issue and not platforms. Platforms have created an environment where users can separate advertisement from funded content. However, they find, for example, personalised news feeds as useful and preferred. Therefore, "data is the new competitive advantage" for publishers. Data analytics and administration should be considered as the leading business since modern audiences expect personalised services. (Piechota, 2017.)

Platforms such as Facebook have encouraged product innovations because it fit their needs. They gave tools, trained newsrooms and built new formats. Publishers accepted the help, since they hoped to receive revenue from display ads, and thus, needed the reach that platforms efficiently provide. (Piechota, 2017.) The question here arises if innovation

became “a conditional on the goodwill of large actors” (Andersson Schwarz et al., 2018) and, if so, how media companies react of being subjected to innovate in a practical manner, and in which directions these innovations occur.

4.3 News aggregators and search engines

Instead of homepage, email and mobile notification, a majority of markets prefer to read news through news aggregators, social media and search engines. However, there are differences across countries and regions. In Nordic countries, most of the people access news directly, whereas in countries like Chile, Bulgaria and Malaysia, the primary way to come across the news is from social media. Meanwhile, for example, in Japan and Taiwan, news aggregators play the central role in accessing news. In South Korea, Poland, Italy, most of the people access news from search engines. (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018, p. 13.) Engines, such as Google, especially reshaped relationships between media content and advertising. Since every piece of news content is a separate “selling product” and the audience can find them through a search engine, users more often consume separate news items instead of comprehensive news coverage. This difference in control of the news curation led to the development of different news aggregators (such as Google News, Apple News and other) from different news sources. This example shows how the shift of news selection from media organisations to platforms happens. (Dijck et al., 2018 p. 52.)

Consequently, the most recent data about the digital media from Reuters (Newman, 2019) reports a stable increase in the importance of smartphones for news, especially news aggregators. For example, in the United States news aggregator *Apple News* reaches more Apple users (27%) than the Washington Post (23%) (p. 10). Similarly, 55 per cent of news consumers prefer to access news either by social media, news aggregators or search engines rather than going directly to news websites.

In other words, platform companies influence the destination of the audiences. The news creator organisation can lose the importance of their credit (and significance in their brand) when their news is in a bundle with other news from different producers and companies (Bell, 2016). Interestingly, the research that examined audience attitudes towards content personalisation through editorial selections versus algorithmic selections concluded that audiences favour the latter. Further, the study showed that people think that technology has immunity from untrustworthy news media. (Thurman, Moeller, Helberger, & Trilling, 2019.) For media companies, it is not an easy task to create such value propositions that could influence the user's preferences to go to news websites or publishers' apps more often. One way to achieve it could be by personalising the content.

Even though one might think that media platforms represent a narrower diversity of news, most people have increased the variety of sources they access via social media and search engines rather than those who go to the website directly (Newman & Fletcher, 2018). Although there is an assumption that content personalisation might create an information bubble for the individuals, two exploratory studies on Google News showed that this might be an exaggerated view. However, the studies showed clear evidence that Google News frequently over-represents specific online news outlets and under-represents others. Authors conclude that this bias is troubling if looking at it from the *viewpoint diversity*. (Haim, Graefe, & Brosius, 2018.)

Overall, audience attitude towards personalisation of the news and algorithmic curation is positive, and the diversity of how one can access the content of the publisher has increased, however, such news aggregators as Google News can under-represent one media publisher among others. It is clear that publishers have the battle to be the "destination" for the reader, where one can choose to go to a news website or news app, instead of news aggregator or social media or search engine to search for news.

4.4 The use of data and content production

As previously explored, publishers have to search for new ways how to satisfy audiences' needs in the digital market. With the correct use of data, publishers can increase engagement with their audiences by offering more personalised, relevant content, which is essential for the publisher to establish a long-lasting relationship with a reader. The more time the reader spends on the website, the more data can be collected about him. If the publishers do not hold the most of the data about their content or their users, they cannot use AI in full power. Overall, there is a significant impact *datafication* has on news production. Automated writing, automation and algorithms can be used in the process of almost every step of journalism production – from information gathering and storytelling to distribution. (Diakopoulos, 2019)

There are several ways how newsrooms use data and data automation for their content production. Four fundamental automation decision tasks may be classified based on the functions into prioritisation, classification, association and filtering. In news media, one of the most vital tasks is prioritising. Similarly to optimisation, algorithms can select the content that is more informative or interactive as the first one to show to audiences in order to receive their attention. To illustrate, through computed prioritisation decision on headline variations, some articles will be picked as the ones that are pushed on top and rated through computed criteria. Such tasks reflect editorial choices created through algorithmic curation. (Diakopoulos, 2019.) Digital platform companies have an impact on how news is selected. If previously there was editorial independence of news production, now most of the decisions on news production are data-driven. (Dijck et al., 2018). This example demonstrates how through using data automation and decisions based on data, newsrooms respond to audience demands.

A report from the World Economic Forum (2018) shows that artificial intelligence (AI) is changing in value for creative content creators. Artificial intelligence and machine learning are powered by data, and more data makes it smarter. The report mentions several

advantages of using AI. It helps to successfully merge content with the audiences by sorting the preferences of the users and recommending personalised content. AI is also helpful for the tasks that are complex or time consuming for humans. For example, in advertising, it is used for creating a context on how consumers feel about particular products from data collected from social media interactions. However, disadvantages have serious consequences; for example, as algorithms usually encourage viral sharing, it raises the opportunity for misinformation and disinformation. (World Economic Forum, 2018.) Algorithms have a power of deciding what to emphasise, selectively show or filter away, while humans create rules and criteria for it (Diakopoulos, 2019). Besides, the more data there is, the more refined criteria for algorithms can be created.

Publishers have critical concerns about the lack of data and metrics about the success of the publications on the platforms, compared with the articles published on their site (Bell, 2016). Access to data is crucial. Especially it is fundamental for content-based media industries to have control between what they offer and what customer needs; however, this control mainly remains in digital platforms' hands. (Moller & von Rimscha, 2017.) As mentioned earlier, publishers use technology to find audiences for their content but have not as much control how the content is discovered (World Economic Forum, 2018). Doyle (2013) explains why exactly this two-way connectivity with the audience is a significant driving force for content production. The more refined is information about the preferences of the reader, the more value can be created through shaping and delivering news. Moreover, it helps to engage with the audience and create more opportunities for a revenue stream (Doyle, 2013).

The engagement of the audiences is also a necessity for companies that specialise in one type of content. There is a demand for diversity in content, but on the other hand, media companies try to reduce production costs. Especially it is problematic for niche producers. Even though more revenue is guaranteed if the retention and expansion of audiences are successful, segmentation of the content can equal to the decreased number of audiences and

harder times to approach larger masses. One way how to boost revenue is to increase the engagement of the audiences. (Pitts & Zeng, 2010.)

Publishers have admitted several concerns which are about the datafication and algorithmic workflow. For example, the lack of access to audience data impacts the companies' own branding possibilities. Another example is the concern over an algorithm force that drives the publishers to produce more content without explicit knowledge of whom the content reaches and how. Moreover, the platforms have a nature of being in favour of attracting the highest audience numbers, which means low-quality journalism is often more valued. These all challenges bring the dilemma to the news organisations whether they should invest in maintaining their publishing infrastructure or allow more prominent platforms to control revenue, brand and audience data in the exchange of the competitiveness and audience growth. (Bell & Owen, 2017.)

To sum up, the use of data and decisions based on automation is a valuable asset media companies have in the digital environment. The use of artificial intelligence is helpful for intricate work and can be an enormous help for delivering personalised content and interactivity. That is crucial for building long-lasting relationships with the audiences and increasing engagement. Notably, it is critical in an environment where companies compete for the loyalty of the audiences. The problematic aspect is the ownership of data that these operations require. Newsrooms are worried that platform companies have audience data which they do not have access to use.

4.5 Automated content production and distribution

Another consideration, especially when it comes to platform company impact on the media industry, is the multi-platform strategies for content creation and distribution. For media companies, it is hard to innovate because they have a long history of producing only one and constant product. (Picard, 2004.) Nowadays, not only multi-platform strategy is in use (such as newspaper paper version and digital version) but also cross-platform. Multi-

platform strategies and innovations have a feature of content decisions being made with the idea to maximise the consumer value through as many forms as possible, which can indicate methods of cost efficiency improvements in the newsrooms but also such strategies as the re-use of content. (Doyle, 2015.)

Digitalisation allows direct cost savings (up to 90 per cent) as news organisations are no longer the main distribution platforms. Therefore, they can invest more in content production. Simplified production processes allow more enterprises to produce content. (Picard, 2011a, p. 12.) The results of research with 20 journalists, who work in the most innovative media companies in Spain, showed that they think that most innovations happen precisely in the direction of content and narrative production. In the opinions of the journalists, other directions in which the changes and innovations occur are: 1) users and audiences; 2) technology; 3) media outlet organisation and 4) business models (Garcia-Aviles, Carvajal-Prieto, Arias-Robles, & Lara-Gonzalez, 2019).

To sum up, not only is the quality of content adding value to the reader, nor only the presence on multi-platforms but also personalised content and high level of engagement have significant importance for the content value. Interestingly, journalists think that most innovations occur in the field of content production. *Datafication* becomes increasingly crucial in journalism production processes. Therefore, the question to answer is not only about "who owns the audiences" but also "who owns the data about the audiences".

4.6 Towards the ideal of stable revenue: business model reconsiderations

The field of media management research considerably addresses its focus towards media organisations being in a transition state because of the external pressure. They try to secure revenues and create digital distribution strategies in the expanding network. While digital subscriptions have to find their way to become the most prominent long-term solution, there is a need for reorganisation in the news organisations and reconsiderations of transforming business models. (Evens, Raats, & von Rimscha, 2017.) Similarly, Picard

(2011) suggests that since the digital environment allowed everyone to create content and there is an oversupply of it, media companies can propose their value and use it in the business model through the curation of quality-control function. However, even with that, Picard (2011b) believes that media companies have to find new functions and new roles to offer in order to survive and be a sustainable business.

Media organisations are still searching for the ways how to generate new revenue streams. According to OECD (as cited in OECD, 2008), the main forms of revenue flow in media companies can be categorised into:

1. Voluntary donations and contributions,
2. Digital content sales (pay-per-track, pay-per-view, etc.),
3. Subscription-based revenues,
4. Advertising-based revenues,
5. Selling goods and services to the audience,
6. Selling user data and customised market research,
7. Licensing content and technology to other providers. (OECD, 2010.)

Most revenues, however, are advertising-based (OECD, 2010).

Based on the estimates, Google, which is a segment of Alphabet Inc., had in total \$89.5 billion revenue in 2016 (Bilton, 2017). From this revenue, \$35 billion was the cost of revenue. Around \$18 billion were shared with content rights holders and publishers within the advertising network. Looking at this data percentage-wise, Google shared only 20% of its revenue with publishers in 2016. Interestingly, YouTube, which is also part of Google, shared around 55% of revenue with publishers, which is significantly more. However, about Facebook, such data is not available. It is clear that news publishers cannot rely on revenues from the platforms as their only monetisation programmes. Even if the platform companies give promises to increase the monetising shares with publishers, it is unlikely that this form of revenue stream can be sufficient for all markets and all publishers. To illustrate, in 2016 World Association of News Publisher's members reported that Facebook

accorded to only on average seven per cent of all their digital business revenue. (Piechota, 2017.)

Furthermore, the study on publishers' opinion about platforms' impact on the industry showed clear evidence of worry about a new business model adaptation with platforms and financial uncertainty of outcomes. Those who are dependent on revenue from advertising (advertising-based model) view these platforms as the only way how to be able to maintain the industry. Thus, those who rely mostly on advertisement money, approach the situation by publishing as much content and on as many platforms as possible to reach the highest amount of audiences. This strategy has a disadvantage for the majority of publishers by having difficulties with the market for mobile advertising. Meanwhile, another group of publishers have a subscription-based approach. They see platforms as an opportunity to direct new readers to become paying subscribers. Therefore, they have a more strategic approach to posting content. (Bell, 2016.)

It is predicted that media outlets will continue losing audience interest, engagement and relevance in the possible future (Ruotsalainen & Villi, 2018). Following this, in the last year, data about traffic to direct news sites showed no growth, and time spent on these websites had declined as well (Barthel, 2019). One way to avoid such a condition is to create a hybrid of both the ideals of objectivity and of dialogue in journalism (participatory approaches). It is especially important in a condition where there is a shift in focus from decreasing advertising revenues to loyal paying customers. (Ruotsalainen & Villi, 2018.) In other words, building a direct relationship with the audience.

As seen by private media managers, the primary strategy for developing new business models is to create a connection with audiences (Donders, Enli, Raats, & Syvertsen, 2018). There are several tactics to use to create a dialogue with a news consumer and increase loyalty and some publishers are using them to redirect the audience to become paying subscribers. For example, mobile notifications, email news and apps from the publishers

are showing great results of an increase in direct traffic. To illustrate, the Washington Times found that when they send newsletters, their audience consumes three times more content than those who are not receiving the emails. (Newman, 2019.)

Nonetheless, even the shift and innovations in the business model do not constitute an instant success. A Reuters Institute report (2019, p. 11) based results on 40 countries worldwide and showed that although many publishers have added paywalls and created membership schemes, there still has not been a significant impact on numbers paying for any online news in the year 2019. The number of online paying customers has remained stable at 11% in the nine countries for the six years Reuters has been following. Additionally, current trends show that it is unlikely that people would be ready to pay in the future for any kind of news to which they currently have free access. Moreover, if they do, most of them are ready to pay for just one subscription. (Reuters Institute, 2019.) Hence, building a sustainable business model for media organisations is a challenging task.

To sum it all up and answer the questions proposed at the beginning of this chapter, media organisations respond in diverse ways to the environment where they coexist with platform companies. Nonetheless, the primary concern of the publishers is finding long-term solutions for monetising their content, since relying on platform companies is not sustainable and most of the revenue keeps being in the hands of platforms when distributed there. The response to this is finding ways how to propose value to the user and create user engagement and audience loyalty with the news organisations. It can be achieved either through format innovations or personalised content. It is clear that the need for innovations is strongly connected with the platform economy and has become a conditional aspect of the business. Thus, a lot of this brings uncertainty, and many responses to this environment are still somewhat experimental than long-term solutions.

5 Methodology

In previous parts of the study, the literature review included theoretical framework about platform companies and media, their relationship and media response to the digital environment. In this chapter, I will explore what my research approaches and methodology are. I will reflect on why I chose document analysis with the qualitative nature to be my stand-alone method in order to explore the underlying relationship between Google supporting media organisations and the nature of these supported projects. I will clarify how my research methodology and design align with my research questions and purpose of the thesis by exploring the research design, data collection and analysis procedures.

Before reflection on the chosen research method, I would like to position my research concerning the general paradigm. My research has a qualitative nature. A qualitative approach to research is not only a perspective of the research, but also implies the methods used. Instead of a focus on the measurements, intensity, quantity as it is in the quantitative method, the qualitative approach is about analysing relationships between processes and not variables. (Denzin & Lincoln, 2005.) The qualitative approach argues that subjectivity, interpretation and context should not be eliminated as they are inevitably blended into every research (Auerbach & Silverstein, 2003, p. 76).

The qualitative nature of the research aligns with my chosen textual analysis since it allows me to have space as a researcher to use carefully context-based interpretation during the research. In this approach, the text is seen as anything that is “an interpretation of something’s meaning” (McKee, 2003, p.10). Thus, textual analysis with the qualitative methods is about “gathering information about sense-making practices” (McKee, 2003, p. 52). That is my aim of the research because I gather information about the Google DNI Fund projects and explore their content in order to answer my research questions:

1) What are the challenges for media and journalists that Google Digital News Initiative is addressing?

2) What are the main solutions proposed in projects supported by Google DNI?

The keyword *exploration* is amongst one of the intellectual goals of using qualitative studies. Usually, studies that aim to understand the processes by which events and actions take place have an exploratory role. (Maxwell, 2009.) The analytical purpose of the research in qualitative research is usually either exploratory (“content-driven”) or confirmatory (“hypothesis-driven”). The main difference between these two elements is that in an exploratory study, the researcher constantly re-analyses the data, searching from themes or trends in order to outline the actual analysis. At its core, a confirmatory study’s task is to confirm, but exploratory research generates a hypothesis. (Guest, MacQueen, & Namey, 2012, pp. 7-8.) My thesis is with an exploratory nature since codes are derived from the data (project descriptions) and not generated from the hypothesis. Besides, I did not predetermine codes and categories before the analysis but generated those from the content of the project descriptions during the process.

5.1 Research design

I discussed the framework in the literature review where each element of the innovation process can be explained and put in the context only through a relationship with each element involved (technology, communication and organisation). Similarly, the methodology of qualitative approach helps to analyse relations between the processes and has specific methods to do so. The objects of my study are the descriptions and summaries of the proposed projects for Google DNI Fund. Thus, document analysis is the method of the study. Furthermore, the architecture in this study is inductive, qualitative content analysis since it allows revealing the processes (in this case, the content of the text) by building the knowledge framework while working with data.

Content analysis has three features: it is systematic, flexible, and it reduces data. The difference between other qualitative methods is that the qualitative content analysis instead reduces the amount of data to describe the meaning of it, but other methods usually open up

or add to data. Content analysis is systematic in terms of having a specific order of steps, and it also requires coding. It is flexible compared with qualitative content analysis since it can have both – concept and data-driven categories in the same coding frame. (Schreier, 2014.)

Relevant in this context is to differentiate qualitative content analysis from similar methods. The difference between qualitative text analysis and classical content analysis is that the categories might be referred to original data also after the coding and used throughout the analysis process in the qualitative text analysis (Kuckartz, 2014). However, to differentiate content analysis from other alternative qualitative methods, for example, thematic analysis, has proved to be challenging (Drisko & Maschi, 2015, p. 85). Since the main objective of this research is to analyse documented records, and this process involves skimming, reading and interpretation, it combines elements of both content and thematic analysis (Bowen, 2009, p. 32).

Another aspect to cover in terms of the qualitative text analysis is that it is usually with either deductive or inductive nature. Researchers commonly use the deductive approach when forming general theory and hypothesis and then, based on a confirmed sample, test it. The sample is most often based on the firmness of the statistical inference. (Popping, 2000.) However, the contrasting approach to deduction is the inductive nature of the text analysis, which I used as a strategy for this research. The researcher investigates patterns that appear within the restricted area of the study and builds reasoning from particular instances or facts. The procedure then continues when the researcher investigates whether this reasoning is still accountable or should be modified from patterns in similar instances. (Popping, 2000.) Kuckartz (2014, p.45) calls inductive approach *from text-to-code* (referred to the process of creating new codes during the task of reading through a text), and the deductive approach he names *code-to text strategy* implying that categories are elements of classification procedure.

Generally, inductive coding is used: (1) to condense extensive and varied raw text data into summary format, (2) to establish clear links between the research objectives and the summary findings derived from the raw data and (3) to develop a model of theory about the underlying structure of processes which are evident in the raw data. Most inductive studies report a model with three to eight categories. This approach offers coding derived directly from data. (Thomas, 2003, p.1.) It is an essential aspect for creating general outlines about the projects. I chose to use the inductive text analysis because the results and the reasoning of the results from such an approach appears from particular knowledge to general. Since the subject about Google-funded projects is rather unexplored, I decided to have a data-driven coding as the dominant method so that the knowledge about the Google funding is constructed from the content of the projects. My primary research area is about exploring challenges and solutions media organisations mention in their project descriptions and creating an overview or a model to illustrate the case.

Even though I chose data analysis to have an inductive approach to coding, my aim of this study is not to build a grounded theory. The aim is to reveal patterns from the data and understand if any theoretical concepts bring meaningful connections to the possibly formed result model. One way of creating legitimacy of a qualitative study with inductive analysis is to suggest using the results as a basis of developing even more accurate concepts and measures and applying other descriptive data sets. (Marvasti, 2014, p. 361.) Thus, I acknowledge the limitations of this study since generalisation of such small sample would not allow to scale it to other social environments and other researchers should re-test the concepts with other data sets to make it fully applicable.

Another critical aspect to mention in terms of the selected data collection is that this study's objects are documents in the form of website content and not direct social actors. The documented textual materials will be analysed and looked upon not through quantitative lenses as "physical traces of how organisations represent and account for themselves" (Coffey, 2014, p.367) but, instead, used as an objective to reveal temporal conditions in

which these organisations exist. That is another possibility when examining documented texts. Documents can decontextualise and recontextualise events and can show lived experiences and temporal settings of life or organisation. (Coffey, 2014, p. 374.) This is the main argument I found to outline why I think that by exploring project descriptions of Google fund receivers can help to answer my research questions. It can show a bigger picture of what challenges media and journalists face, and what are the relationships between media organisations and Google, and, finally, what solutions for that very moment are considered to be effective to cope with this temporary condition. There is a limited number of options that could describe these experiences. For example, interviews with media organisation workers or Google representatives could be one. However, I do argue that document records and qualitative content analysis of them can show as much of the process that media companies face as social actors could narrate about it.

Qualitative document analysis is about identifying relevant terms and topics while looking at several items, emerging coding and developing more systematic analysis, as well as continually returning to the themes (Altheide, 2000). However, it is important to note that by exploring documents, one can focus not only on *what is said* or *how is said* but also *what is not said*. The gaps and the “silences” are as important elements to notice. (Goulding, 2002, p. 66; Rapley, 2007, p. 112.) This aspect of noticing "gaps in information" is especially important in the context of my thesis, because I also aim to analyse results from the perspective of what kinds of projects were not selected or received less support than other fund receivers. I argue that this can give more valuable perspective on the relationship between Google and the news organisations.

It can be summed up that qualitative content analysis is simultaneously about exploring a new research field and describing what is found (Drisko & Maschi, 2015). Qualitative document analysis also helps to explore what is not in the text and find the *silence gaps* of the information. Presentation of the findings in qualitative content analysis is often about providing a comprehensive portrayal on the material under analysis, and it counts as a

method for data analysis itself compared with qualitative research where it is considered as an initial step for data collection (Schreier, 2014). In other words, qualitative document analysis as a chosen data selection method and qualitative content analysis for data analysis allows me to explore quantitative data (over 100 project descriptions) qualitatively. In addition, it allows me to open up the data and contextualise the relationship between Google and media organisations. Also, it helps me to sufficiently describe the evidence of the data from the project descriptions about what these projects are about and allows me to systematically answer the research questions and present the meaning of the research.

5.2 Data collection

In this research, the data is retrieved from one source – a specially selected sample of texts from the Google website. Thus, the method for the data collection is document analysis as described previously. Document analysis as a stand-alone form may be found necessary for research with the interpretive paradigm or can be used as a specialised form of qualitative research. It gives background information and context, and it can help to track change and development of the phenomena. However, in this type of research, the investigator explicitly has to report how he conducted the study. (Bowen, 2009.) Importantly, document analysis, compared with other research methods, requires data selection and not data collection (Bowen, 2009, p. 31). Further, I will explain how I selected data for the investigation.

The data I collected is from the section of the Google News Initiative website (<https://newsinitiative.withgoogle.com/dnifund/>) “Read the full list of successful Round 6 recipients”. The section contains information on 102 projects from 23 countries. I selected the fund’s sixth-round over others as the sample for my research for several reasons. Firstly, this round included a special requirement that was not present for previous rounds. Recipients had to have a monetisation component if they wanted to apply for a large or medium grant (Google News Initiative, 2019b). Secondly, no other studies have included this round as the study object. Therefore, the information contained in this sample is a

unique objective to research qualitatively. Moreover, it is the last announced and, thus, the most recent round of Google's Digital News Innovation Fund, which can show current challenges and problems media organisations face. Two projects had no descriptions. Therefore, there is no data about them, and I excluded those two from my research.

The information I retrieved contained 100 project descriptions about the Round 6 recipients. Every project listed has its own unique link. The project description includes such information as: country (from which country the project is from), project type (type defined by Google, which shows funding amount received (prototype/medium/large), recipient of the project (direct recipient of the fund/title of company or organisation), title of the project, summary of the project and the solution proposed by the recipient.

Large volumes of short text often require computing for systematic analysis using spreadsheets (Guthrie, 2010, p.165). Thus, I decided to use a Microsoft Excel sheet to start an initial sampling of the information and data selection. In the Excel sheet, all information from the website was included and organised by columns; projects were manually copied and organised in rows. The last column I dedicated to comments and any highlights I found important to note. Then, after the initial reading, I condensed the texts of summaries and solutions posted on the website for each project into brief descriptions under column *Brief descriptions*. I only selected the text that can answer the questions: *what the project is about/what project tries to solve* and what is the *primary solution* proposed. Annotating data is a method for opening data, and it works as a preparation for more systematic analysis (Dey, 2003, p. 98).

Rereading the sample, I realised that the *Brief descriptions* column still had excessive information for coding and I would need to refine each project by having not more than one sentence about *what challenges each project aims to overcome* and *by what means*. This process of breaking down the data into specific units of meanings Goulding (2002, p.76) calls *open coding*. With the result of such deduction and open coding, I condensed only

relevant key information, which helped to answer my research questions, in the column *Product*. In text analysis, categories refer to specific content, usually either about specific person, argument or topic (Kuckartz, 2014, p. 41). The information in the column *Product* was chosen to be a condensed meaning sample, and the records in this column were chosen to be the data for further steps of the analysis, which, by following qualitative content analysis steps, is the procedure of categorisation.

5.3 Data analysis

My choice of using qualitative content analysis without any predefined framework of categories or hypothesis defines to follow a specific procedure in order to ensure that the analysis is successful and reliable. I chose to follow guidelines by Auerbach and Silverstein (2003) on how to construct a narrative from the text using content analysis. First steps from the guideline are about stating research concerns and theoretical framework. Then, the next step is selecting the relevant texts for the analysis. That process is described in the Data Collection chapter of this research. The next two steps from the guideline included: (1) recording the repeated ideas and grouping relevant text and (2) organising themes by grouping repeated ideas in logical categories.

By using the Excel sheet, on a separate document, I copied all the content from the column *Product*, which holds condensed information on project and its aim, with project number as identification. After that, I started colour coding and searching for repeating ideas and writing them separately in the other document. The repeating ideas or categories were sorted, grouped and, lastly, named. The research problem gives an outline on how fine-grained the categories should be (Popping, 2000). A researcher decides how narrow or broadly focused those categories are. Nonetheless, the particular chosen path has to be consistent throughout the analysis. (Dey, 2003.) I chose to keep each category with its subcategories rather narrow in the idea it carries, and thus, firstly, large in number, since the importance of the details is relevant to my research question.

There are what Auerbach and Silverstein (2003, p. 61) call *orphans* or text units that seem to be left out because the idea did not get repeated, but it is still relevant. The authors say that in this situation the researcher makes judgments: if this text segment seems essential for understanding the phenomenon, it might be necessary to keep it, since qualitative paradigm predicts that individual differences have importance. During the analysis part I identified several *orphans*, in other words, projects that could not be grouped with other ones because the idea did not repeat, however I still included those projects as separate units because I found it necessary to get a full portrait of the projects that received the fund, even if a solution was represented only once. In the later process of the analysis, I found these *orphans* relevant as subcategory units, thus, applicable also in the main categories because even though they presented differences in the project solutions, they could be categorised under one theme of what the project wants to tackle.

In the situations when any of the text during the analysis seems not significant or relevant, it might be discarded (Auerbach & Silverstein, 2003, p. 61) as it is more important to have orphan ideas in an earlier stage of the research than orphan themes later in the process (p.71). During the analysis process, the project “Business News Platform” from Germany fell in the category of *other*, since it does not represent a solution that could be directly beneficial to journalism or media industry as all the rest of the projects, but, instead, is directed to business clients. The summary of the projects states:

[T]he Business News Platform (BNP) reads and analyses business and financial news articles and provides an overview of the most relevant topics. The BNP intends to condense news about a specific topic, brand, or industry and deliver a real-time analysis of what sentiment the coverage sets. This will provide business clients with an overview in a dynamic, real-time app / browser dashboard.

When creating categories, the researcher has to consider relationships between them, whether they are inclusive or exclusive, and think more about category set, rather than “unrelated haphazard collection of individual categories” (Dey, 2003). Thus, I decided to

discard this project and, therefore, 99 projects overall are analysed according to the emerged themes.

A preliminary category list consisted of eight themes in total that emerged. These eight themes derived from projects were directed to: (1) Audience: Membership/digital subscribers, (2) Format innovation, (3) Monetising separate digital products, (4) Digital commercialisation, (5) Journalism material production, (6) News ecosystem/technological operations, (7) Distribution opportunities, (8) Security/Verification/Bias detection. While the main themes represent the general focus of the innovation, the subcategories show by what means this innovation is proposed by the project participants. Each of the main categories included subcategories represented by the project number. An example of primary coding progress can be seen in Figure 5.1 and Figure 5.2 (fig. 5.1 and 5.2). Figure 5.2 shows how projects in subcategories with specific (*orphan* orientation) were still included in the coding frame, although some of the ideas were not repeated twice. The decision was based on the task of exploring a full portrait of the fund receiving projects.

1. Membership/Digital subscribers/Audience

- 1.1 Community engagement :**102, 85, 59, 62,59,12,46, 23, 22, 40**
 - 1.1.1 Crowd sourcing (contribution to the content): **65, 98,81**
- 1.2 Content optimised for the individual/Content personalization: **74, 64, 63,10,46,30, 32, 59**
 - 1.2.1. Personalization of content through hyper locality/regional context – **49, 23, 74, 13,46**
 - 1.2.2. Content format personalization: **64, 3, 14**
- 1.3 Churn prevention/prediction: **90, 56,34,43**
- 1.4 Loyalty programme:**62,20,70,85**
- 1.5 Data collection about the user to accelerate the conversion rate:**27**
- 1.6 Flexible membership model: **47** (“pay what to you read”), **75** (members co-decide topics and co-fund)
- 1.7 Exclusive services:**51** (audio), **53** (personalized conten), **54,59**
- 1.8 Value preposition: **101,7**
- 1.9 Approaching the new generations (children/youth/younger readers): **83, 81,79,26,38**
- 1.10 Engaging the reader through interactivity: **48,58**
- 1.11 Paywall solutions: **60,33**
- 1.12 Single sign on/new logged media ecosystem:**29,50,54,61**

Fig. 5. 1 Example of primary coding process

3.Format innovation

- 3.1. News voice assistant/Conversational News: **92, 88,11**
- 3.2. Augmented Reality:**28**
 - 3.2.1. Augmented Reality focused on hyper local setting: **80**
 - 3.2.2. Augmented 360^o videos: **82**
- 3.3.Real-time messaging infrastructure for delivering personalized news: **32**
- 3.4. Text-to- speech technology:**52**

Fig. 5. 2 Example of orphan subcategories in primary coding process

Recorded similarities that are in one common theme suggest the conceptual basis of the theme (Auerbach & Silverstein, 2003). After grouping ideas with similar themes into categories, I noticed that several categories could be formed and grouped even in broader concepts or categories. According to Goulding (as cited in Glaser, 1978) electing the core categories have several points of criteria. Criteria include such points as: 1) categories must be central and based on reoccurring data; 2) they must relate meaningfully to other categories; 3) they should give a reason for a more considerable proportion of data; 4) and they should be highly variable and modifiable (p. 88). Following the idea, I developed more abstract concepts in the form of core categories, and, thus, I formed a theoretical narrative, which I will present in Chapter 4. A full list of the categories with their subcategories is presented in the Appendix, which shows the logic of how the core categories were formed by grouping the subcategories.

5.4 Validity and reliability

Before proceeding to the result section, it is crucial to acknowledge reliability and validation issues when using the content analysis. According to Weber (as cited in Krippendorff, 1980) there are three elements to describe reliability: *stability*, *accuracy* and *reproducibility*. *Stability* can be seen when the same content is coded twice or more by the same researcher because inconsistency in coding equals unreliability of the study. However, that is the weakest form of reliability. *Accuracy* is the most definite form of the reliability and shows to which extent text corresponds to norm or standard. Lastly,

reproducibility is about receiving the same results when examining the same content by more than one researcher. (Weber, 1990, p.17.) Usually, problems with this method occur in reliability in the coding procedure and validity in the categories for data classification. Thus, strict rules apply to the categorising process where data must show concepts used in the research. Similarly with categories, they must be mutually exclusive and exhaustive since this is how the reliability shows in coding. (Gray, 2007, p.298-299.)

In order to reach the reliability and validity of the study, I explicitly presented the process of the procedures on how I selected text units as the samples for data analysis. I explained the coding process, and in the Appendix of the thesis, I present a full list of categories with their subcategories. Moreover, I followed the established guidelines of step by step coding procedures to ensure the accuracy of the data analysis. To reach reproducibility as the reliability measure, my supervisor reviewed the categories based on the content. Lastly, in the Result section of this thesis, there is a list of categories and three main conceptual themes that hold all of the categories under it. All of these elements are presented with a definition to show how mutually exclusive and exhaustive they are.

6 Results

6.1 General outlook on projects

In the 6th round of the DNI Fund, there were 102 accepted projects: 38 *large* projects, 30 *prototypes* and 34 *medium* projects. Google divides and shows this typology for the projects to describe the amount of funding they received. However, the exact sum of the funding for each project is not publicly announced. By the previous researchers from Netzpolitik (Dachwitz & Fanta, 2018), who analysed the first five rounds of the project, it was discovered that the estimated amount of the contributed money for the projects was 550 000 euros for the *large* projects, 220 000 euros for the *medium* projects and 40 000 euros for the *prototype* projects. For two projects out of 102 the descriptions are not available, and one was considered not relevant for the study since the solution of the project is for business clients and not media industry. Thus, 99 projects are presented as a sample.

The unique requirement from Google applied to this round for all participants. All large and medium projects must have a monetisation aspect indicated in the project proposal and explicit showcase how the project can add economic value to the business, giving priority to those applicants whose projects are about “innovation and diversifying revenue streams”. The successful recipients of the 6th round of the funding are from 23 countries in total. Top three countries receiving money from the Digital News Innovation Fund are France with 21 projects, Germany with 14 projects, and the United Kingdom with 12 projects (see Table 6.1).

Table 6. 1 Top receiving countries of DNI Fund by number of projects

Country	Number of projects
France	21
Germany	14
United Kingdom	12
Spain	8

By using the inductive content analysis of the project descriptions and coding condensed meaning units, eight initial categories are aims or orientations of the projects, and 38 subcategories are proposed solutions. The orientations of the projects are directed to:

1. Audiences (membership/digital subscribers): projects that are aimed directly to audiences, increasing loyalty and membership through solutions like crowdsourcing, community engagement, membership models and other monetising models directed to creating digital subscribers;
2. Format innovations: projects aimed to deliver journalism products through using new technology capabilities, such as real-time voice assistants or augmented reality products as new formats for the content;
3. Monetising separate digital products: projects aimed for product development that is targeted as an independent selling item and does not fall in category 4 or 1;
4. Advertisement/digital commercialisation: projects that aim for direct revenue optimisation or propose advertisement solutions for the business side of media companies;
5. Journalism material production: projects aimed for easing or optimising editorial work with such solutions like news automation, data content prediction systems, news sources optimisation and other;
6. News ecosystem/technological operations: projects that aim to develop optimisations for co-operation or integrated services in media ecosystems for news agencies, between publishers and news agencies, and between local publishers and independent journalists;
7. Distribution opportunities: projects directed to media professionals for reaching wider audiences;
8. Security/Verification/Bias detection: projects that are directed to solve cybersecurity issues or are about disinformation and bias detection.

Derived from these descriptive categories about the project aims, this thesis presents three broader areas of project classifications. Those three conceptual themes are *Business Model Innovations*, *Ecosystem Development Approaches* and *Product Development in Editorial Processes*. These three themes I use as the basis of the research as they are exhaustive and purposeful enough to establish a primary classification of the innovations that DNI projects try to create, and they help to answer the first research question about the challenges these innovations are addressing. Besides, in the frame of each theme, the primary categories, and their subcategories, will be presented. This narrower classification helps to find an answer to the second question of the thesis about the main solution presented by the project funded by Google.

6.2 Business Model Innovations

Business Model Innovations is one of three broad categories developed from the analysis of the project descriptions posted on Google's Digital News Innovation website. In the present study, Business Model Innovation (BMI) is used to refer to those projects that are directed to solve challenges for media and journalists concerning revenue streams and monetisation by using already existing resources rather than developing new ones. In other words, the BMI category includes projects that focus on creating revenue streams by innovating ways media products and processes are brought and presented to the market, rather than creating direct revenue streams from developing new processes or products. From data analysed, two directions of the projects fell in this category from which BMI was derived: those which focused on 1) audience, membership/digital subscribers' increase, and those which focused on 2) advertisement and digital commercialisation (Fig. 6.1).



Fig. 6. 1 Conceptualisation of projects that aimed to respond to challenges by Business Model Innovations

In total, 52 projects were identified under the BMI theme. The data shows a clear pattern: the most common solution for the membership increase and digital subscriber growth is through community engagement (13 projects) and content personalisation (16 projects). However, there is no clear "leader" for projects concerning advertisement and digital commercialisation. Two most common projects in this category are about the usage of local audiences for local ads (three projects) and ad personalisation (three projects). Besides, projects that are connected to the digital subscribers/membership approaches, have more projects in volume than those about the advertisement solutions. To explore more in depth, most common project types will be presented with examples of how those projects see overcoming the challenges they face.

In the BMI category, most of the projects accepted for the Google fund are about innovation with the goal of increased revenue. Those projects aim to increase digital subscribers as the solution. The dominant way how to achieve membership increase appeared to be content personalisation. Sixteen projects presented their solution under this theme. Most of these projects are aimed to optimise the content for the individuals by using machine learning and available data about the users to deliver relevant news to the user.

One case example of this type of innovation is the large French project called "Personalization: Breathing New Life Into Our Business Model". The description of the project states that

personalisation is considered as a business model innovation and presents the underlying reasons why it is topical:

[I]t must be reinforced and bolstered to build audience loyalty and get to know our readers better in order to optimize revenues and subscriptions. Personalized content recommendations are a great opportunity to breathe new life into our business model and journalistic output. The goal is to increase subscribers and increase the use of the platforms. In an era of rapidly spreading digitalization worldwide, the abundance of information can quickly overwhelm and even turn off certain users.

In this example, one can see how loyalty, optimisation on revenues and subscribers go hand in hand with a solution of content personalisation, or, in other words, how content personalisation can help to optimise monetisation streams.

Interestingly, one-third of the projects that aimed for personalisation of the content is about the use of the regional context or hyperlocality (personalisation by locality) of the news. The description of the project named “A.Z. Personalization: Content layers for a regional focus” as one of many, explains well why such a trend is important: “personal relevance is characterized by the regional and social context of the individual”. Another project, “Jyske Fynske Medier”, classified as large size by Google, demonstrates in its description that some of the local stories are highly relevant to a small community while not interesting to others. Therefore, such personalised content could help to connect the right audience with the right content and support local journalism (hyperlocality).

Not only was content personalisation set to be a solution for an optimised reader experience, but also personalisation through content format. Customised presentation of news is an aim for three projects, although some projects aim to tackle both – customised news content and personalised format. As an example, a large Italian project “SESAAB SPA” proposes the use of AI algorithms to deliver “right news, in the right format to the reader at the same time”.

The second most popular solution for the revenue increase with addressing audiences and digital subscribers is about engaging communities. Most of those projects that propose to innovate new business models through community engagement have submitted diverse approaches to it. Only three projects proposed rather traditional crowdsourcing or direct user contribution to the content. The rest aimed to innovate with building conversational relationships between journalists and their audience. Even more engaging ideas included involving audiences in the editorial processes. For example, the Polish media project "Brit" wants to allow the readers to co-decide which topics the newsrooms should focus on investigating and it monetises the decision-making process with co-funding as well. Another project named "ThinkIn Network", which received a large level Google grant aims to create an open editorial conference for paying users. This type of engagement can help to show a value proposition for potential paying users, as well as build the relationship between newsrooms and the readers. One example that illustrates a project that increases engagement through conversational nature is "Fórum Público". The innovation is not only about creating such a discussion platform but also encouraging users to be more active:

[F]órum Público will be a platform for online discussion that includes real time online conversations between users and journalists, as well as real life events and a reward system to encourage users to be active members and, ultimately, subscribers.

Other solutions that are about relationship building with audiences as the potential monetisation method propose to approach younger users or new generation (total of five projects). Four projects aim to create a single-sign-on system. For example, the Spanish project "LoVer" explains single sign-on as a "basis of a paywall and programmatic advertising common approach of more than 40 Spanish websites". Another four projects dealt with churn prevention or churn prediction. To illustrate, the Slovakian project "REMP" received a large level of funding for churn prevention, and it explains the project

by addressing the cost-benefit of keeping existing subscribers instead of attracting a new audience:

[I]t will help publishers understand which customers are not prolonging their subscriptions and why, predict the churn of individual subscribers and then take appropriate action via various marketing channels to prevent the churn. After a few years of launching their subscription business, most publishers see gradual slowing of subscribers' growth, caused by churn. Although most companies agree that keeping existing subscribers is cheaper than attracting new ones, there are many more tools available for customer acquisition than for customer retention.

Some of the projects with a focus on audience-based monetisation are about creating specific loyalty programmes. The way these projects address loyalty is varied. Four projects proposed different reward systems for building long-lasting relationships. Three projects tried to increase loyalty by introducing exclusive services only to paid users. Other examples of loyalty approaches include creating flexible membership models.

Although not as common, some projects have a monetisation aspect in more visible form, for example, offering paywall optimisation. To illustrate, a project called "ROTAS - Revenue Optimisation Tool for Ads and Subscriptions" wants to create a smart dashboard that uses data and applies it in the form of a paywall for a specific piece of content.

The most significant finding is that projects that are about digital commercialisation and advertisement as the primary revenue stream solution are smaller in size than those that are about revenue increase through addressing audiences. Those projects that address advertisement as their main monetising component are roughly just one-fifth of all projects that talk about revenue increase as the main aim of receiving the fund, which serves as one of the main findings of this thesis. Projects about advertising focus mainly on using local audiences for the local ads as it brings well-targeted potential (three projects), personalisation of ads (three projects), direct relationship-building between advertisers and

media houses (2), CMS optimisation (2) and other. One of those projects about advertising aims to create a tool for advertisers to regain control on which media they publish their ad content and exclude fake news sites.

To sum it up, Business Model Innovations include projects aimed at audience (subscribers/members) increase and loyalty creation on one side and projects about advertisement and digital commercialisation on the other. The commonality between these two is that the target of the projects is about finding ways how to boost the company's revenue by existing resources and creating an innovative aspect in it. From the results of the analysis, most projects in this theme addressed monetising solutions through approaching audiences with either personalisation of content and format or engagement of users. Only a small number of projects accepted for funding addressed advertisement and digital commercialisation solutions for company's business model, which could be explained by fund giver – Google – wanting to remain as the primary solution for this revenue stream.

6.3 Product Development in Editorial Processes

Product Development in Editorial Processes (PDEP) is another theme which emerged from the analysis, where 42 projects were identified under it. The term *Product Development in Editorial Processes* will be used solely when referring to the projects that mention in their descriptions that their solution is about developing new products and bringing them to the market, which in one way or another helps with editorial processes. The term has been broadened to include innovations also in existing products or processes that help to produce, deliver or support editorial work. The broad category PDEP emerged and was derived from 3 directions found in the data of the project descriptions: 1) format innovation 2) monetising separate digital products 3) media and journalism production with its separate subset of projects concerning security, bias detection and verification (Figure 6.2).

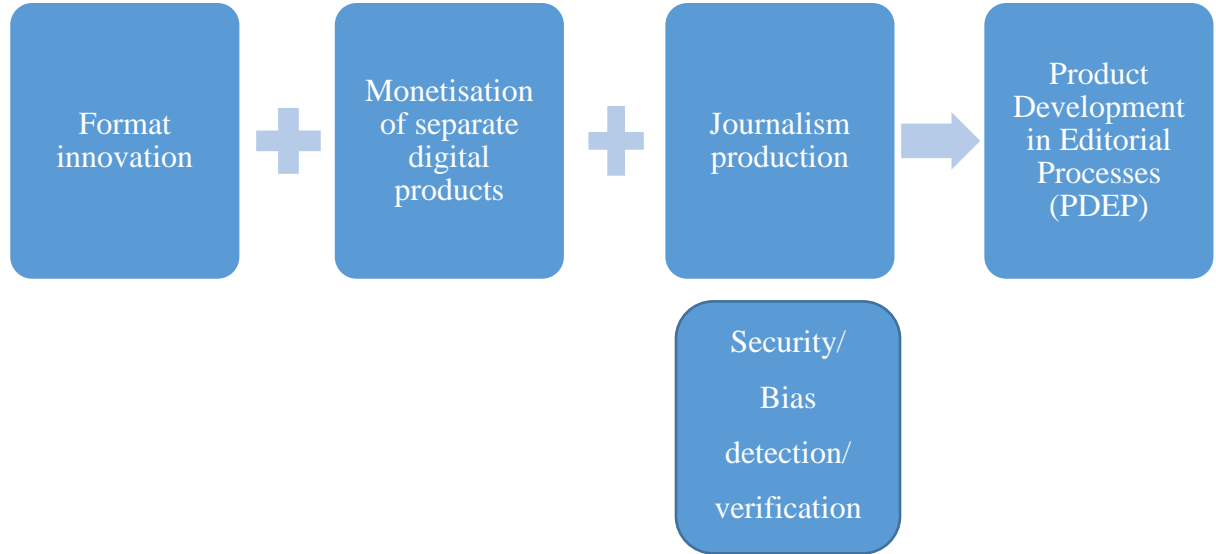


Fig. 6. 2 Conceptualisation of projects that aimed to respond to challenges by Product Development in Editorial Processes

The most common projects under this theme are about media and journalism material production (24 projects) and projects that propose solutions for cybersecurity and verification of the content (8 projects). Format innovation and projects about monetising digital products are not frequent in round six of the DNI Fund.

The category containing the greatest number of projects with similar aims is the one about optimised content evaluation and content success prediction systems (six projects). Those projects are related to journalism production. To illustrate what is meant by optimised content evaluation, the Spanish project “AI Radar” wants to create a tool that identifies how relevant is breaking news to audiences before a journalist even starts to consider writing about them. The German project “Editorial Insights Engine” helps journalists to navigate in the data sets with actionable insights that help to write more relevant content for the user and publishing industry. Similarly, the Helsingin Sanomat project “Trike” gives an example of how content prediction optimisation works. The project’s core is to utilise user engagement data, which would give real-time feedback to journalists during the writing and help with the content decisions.

Five projects that help journalism production present their solutions for creating either new news sources or optimising them. One project, for example, focuses on software that digitalises court cases and sends cases that deserve coverage to reporters. Another example that could illustrate the solution of source optimisation is called “SoJoHub” that proposes “exchange platform with a set of simple tools for journalists and media professionals, including a database of initiatives, content sources, contextualised data and case studies.” It gives the reasoning that media specialists have challenges selecting reliable sources and case studies or identifying stories (or data) that are left uncovered. Overall, source optimisation tackles these challenges.

Other projects that are about journalism production propose open data automation connected to data-driven journalism. This type of projects would help journalists and editorial team to ease the process of shifting over quantities of information, would save time and would allow for processing the information for those who are less skilled. Similarly, four projects that aim to match content with new visual formats (content format) propose that it would allow more successful allocation of resources. To illustrate, the project “Storypepper” in their project description write:

[S]torypepper lets publishers repurpose their news content through a simple service which automatically converts it into visual stories, without the need for additional human or infrastructure resources. Publishing can be done in form of Google AMP and social media stories.

To conclude, content format optimisation and open data automation serve similar purposes in the editorial processes – it eases the processes of complex tasks and helps in the production stage.

Other projects that target media production processes include such solutions as direct news automation, developing audio and podcast content for local audiences, uncovering potential gaps in news coverage and machine-learning-based automatic tagging.

In addition to media production, a separate subset of projects (eight in total) were identified, which are concerning security, bias detection and verification. Two of these projects present a solution for combating “deepfakes” (fake video content made with the help of AI). One of these projects wants to create a tool that detects audio tampering in videos, while another wants to build software that can scan videos for malicious alterations. Other projects concerned about content verification are about the detection of biased content, including detection of sentiment and gender bias, disinformation deconstruction and statistical error detection in reports. One project aims to create a secure network for journalists. To sum it up, projects concerning security are mostly about bias detection or “deepfake” issues.

Roughly one-fifth of projects under the theme Product Development in Editorial Processes focus on format innovation. Three of them intend to develop news voice assistant (or conversational news), three deal with augmented reality, one introduces text-to-speech technology, and another project proposes real-time messaging infrastructure. These types of projects aim to give users new ways of experiencing media content. Only three projects directly target separate digital products. Those products are archives of digital photography, niche newsletters and licenses for digital images.

To conclude, projects under Product Development in Editorial Processes are mostly those funding recipients who propose a solution for helping journalism production processes. They include such approaches as content format optimisation, news sources optimisation, data-driven journalism support and prediction systems with optimised content evaluation and others. It can be said that most of these innovations are in connection with finding ways how to optimise existing resources. Format innovation and projects that approach cybersecurity are less popular. Nonetheless, one can track a trend that conversational news and text-to-speech approaches to news are popular format innovations. When it comes to

cybersecurity, most of the focus is on combating either fake video content or finding biases (mostly made by journalists) in reporting.

6.4 Ecosystem Development Approaches

The third broad theme that emerged from the content analysis, *Ecosystem Development Approaches* (EDP), refers to the projects that were found to be related to a change in media environment or innovations that directly influenced relationships between at least two elements in the media environment. The term EDP was reduced from two project directions found in the research: 1) news ecosystem and technological operations 2) new distribution opportunities for journalists/media organisations (Fig. 6.3). This theme holds the smallest number of projects under it – five projects in total.



Fig. 6. 3 Conceptualisation of projects that aimed to respond to challenges with Ecosystem Development Approaches

Two projects are about news agencies and their stance on the media ecosystem. Both projects received a large level of funding. The first project proposes content performance optimisation for news agencies for tracking the usage and performance of their content since media organisations use the content of news agencies widely. The second project is about building a “feedback-driven supply circle”, where the news agencies (biggest content providers) optimise the news content based on usage and user data provided by the publisher. This project aims to build fruitful cooperation between the publishers and news agencies, so that “publishers can compensate the agencies sufficiently”.

Another project that aims to change the media ecosystem is targeted to build a platform that will transform the local Polish media environment into “integrated platform with multimedia and information system for local publishing companies.” In the project description, it is stated that the aim is to support local media and independent bloggers.

The other two projects provide new distribution opportunities in the European network. One project is aimed at journalists of non-English speaking countries to reach an international paying audience. The other one is about developing a platform where local media organisations can pitch stories, and European media can contact the potential partners to co-finance or purchase stories. It proposes to help the news ecosystem to be more diverse:

[I]t will create an accessible and safe online collaborative space where content can be developed, co-financed, and shared. Mediabridge.org will enable an innovative news ecosystem that satisfies the demand for agendas-setting stories from European media with a supply from their non-European counterparts.

This project was given the highest level of funding from Google – a *large* type of fund.

To sum it up, Google fund receivers who approach the issues of the whole ecosystem development are not many. Those projects that received the fund are either about supporting news agencies or creating platforms for new distribution opportunities in Europe or for supporting local information systems.

6.5 Funding distribution across the projects

The data shows that most projects are connected to Business Model Innovation as a direction (52 projects). However, less than half of the projects are directed to Product Development in Editorial Processes (42 projects). Only a minority of the projects (5) aim to tackle Ecosystem Development Approaches. 99 projects overall are analysed according to the emerged themes mentioned before and not 102 of available in the source, because for

two projects the descriptions are not given and one project does not fit into any of the categories.

If we compare funding types by the amount of money sponsored by Google, projects that aim to have Business Model Innovations are the most numerous among those projects that receive “large” funding. It can be seen in Table 6. that 22 projects out of 52 (42%) received the “large” amount of funding, whereas from projects that aimed for Product Development in Editorial Processes only 11 out of 41 (26%) projects received the highest level of funding. Although projects that aim to tackle challenges connected to News Ecosystem are the smallest in numbers, the funds they receive are comparably higher. Three out of five projects for the development of News Ecosystems were given the “large” level of funding.

Table 6. 2 Funding distribution across the directions of challenges

Funding Level	Number of projects for BMI	Number of projects for PDEP	Number of projects for EDA
Large	22	11	3
Medium	21	11	1
Prototype	9	20	1

There is a significance of funding distribution also found in the lowest category of funding. For the “prototype” level of funding most of the projects were aimed for Product Development in Editorial Process. It is interesting to note that if we compare “prototype” level funding projects across the three directions, PDEP has the biggest number of projects that received it (48%).

To conclude, most of the funding distribution goes for developing Business Models. This was concluded by taking into account that the most projects (52% from all participated) were proposed to tackle the challenges in this field. In addition, the proportion of the highest level of funding compared with the other two was distributed to projects with the

aim of Business Model Innovations. These results provide significant insight into what challenges Google Digital News Initiative is trying to help with by giving DNI Funding.

7 Discussion

In the introduction part of the thesis, I talked about the problematic area of media companies losing their revenues to two platform companies (Google and Facebook) since they take a significant share of digital ad revenues. Nonetheless, the oddity emphasised in this situation is the fact that Google and Facebook are also the largest external media funders. Google states that “we all in this together” as a response to accusations of being a duopoly with Facebook. They create a narrative of them being a partner to media rather than a competitor for revenues. They say that Google gives media companies *traffic* and *reach* to articles (even though media organisations do not directly benefit from that). Meanwhile, media companies provide free content, which platform companies cannot exist without. Even how Google narrates the problem brings the idea that this deal does not sound complex and is equally beneficial. However, a deeper investigation showed the opposite.

“We are all in this together” I chose as the symbolic element to describe Google’s position on the ecosystem the company has created. Many publishers and media researchers talk about the challenges of the media business because of the conditions created by platform companies. Yet, Google presents itself as a partner to media companies and tries to emphasise how it helps the media industry, for example, by giving funds and providing training to media organisations. However, the gesture of giving help to media shows in itself some power imbalance in the relationship between media organisations and Google. Part of the literature review dealt with this issue.

With this thesis, I set to explore one Google fund given for innovative journalism projects, Google Digital News Initiative. The study aimed to understand what projects Google supports in these funds and how it can be contextualised through looking at the relationship between platform companies and media. One can see that these platform companies are

deeply rooted in the media ecosystem. Thus, the literature chapters of the thesis also explored the relationship between media organisations and platform companies.

By exploring the literature, I discovered that several researchers suggest that there are significant problems media companies face that are in connection with the digital economy, and many of these issues are connected to conditions platform companies have created. One of the issues is about data ownership (e.g. Piechota, 2017; Dijck, et al., 2018; Zuboff, 2019): the technological side of the media operations needs more data about the users to “power” the artificial intelligence or machine learning to provide, for example, more personalised content, but who owns the data if the previously mentioned *traffic* and *reach* are through platform infrastructures? Another challenge is about “owning” the audiences (Bell, 2016) and being in a battle for the destination of the reader with social engine searches, social media or news aggregators (Reuters Institute Digital News Report, 2018)– whose audience is it? Does media have audiences, or do platforms? Probably the most concerning issue for publishers is creating a sustainable business model in the digital environment (Picard 2011b; Evens, et al., 2017). It connects with the problematic aspect of Google supporting media companies with funds or journalism training, however taking most of the shares of revenue from digital advertisement. Thus, the analysis part of the thesis explored the questions about media challenges that Google supported with their funding and discovered what solutions project applicants proposed to overcome these challenges.

I will briefly answer the first research question (RQ1) of this study, which asks “What are the challenges for media and journalists that Google Digital News Initiative is addressing?” with sub-question “What specific challenges get the largest support?” The results of this study show that Google DNI Fund helps with projects in three directions that are about Business Model Innovations, Product Development in Editorial Processes and Ecosystem Development Approaches. The most considerable support is to those projects that deal with Business Model Innovations, both in the number of projects and in funding size. However,

the funding requirements with this round of the projects proclaimed the need to have a monetisation aspect in the projects that aimed for large or medium size of funding from Google. The results of the study showed that most projects and the biggest funding size projects are the ones aimed at Business Model Innovations.

The second research question (RQ2) asks “What are the main solutions proposed in projects supported by Google DNI?” This study shows that projects about Business Model Innovations tackle monetising problems mostly through addressing audiences rather than advertisers. Solutions for targeting audiences include content personalisation and community engagement. The proposed solutions for Product Development in Editorial Processes are mostly about innovation in journalism production through content optimisation, open data automation and projects concerning security and misinformation. Projects that deal with Ecosystem Development do not have a common approach for solutions since there are not many identified projects in this category. These projects mainly base solutions on technical operations in the news ecosystem and create new distribution channels for journalists.

To explain the results more in detail, I would like to specify how accepted projects tackled the challenges in the media industry in each of the directions. Ecosystem Development projects proposed solutions that optimise processes in news agencies, propose new distribution channels for journalists and media organisations in Europe and create integrated platforms for local media. Projects that deal with Product Development in Editorial Processes include such solutions as content format optimisation, news sources optimisation, data-driven journalism support and prediction systems with optimised content evaluation and others. Format innovation and projects that approach solutions for cybersecurity are fewer. However, most of the format innovations are about conversational news and text-to-speech formats. When it comes to security, most of the solutions focus on combating “deepfakes” or finding biases in journalistic content. Projects that deal with

Business Model Innovations will be further explained in more detail as it is the most frequent theme among all projects.

So far, there has been one study on the same topic about the DNI Fund in Europe by Netzpolitik (Fanta, 2018a). The study aimed to investigate who gets the most financing by organisation type and country. The study also includes a basic classification of the orientation of the project, which can be considered similar in the idea as the one presented in this thesis. The results from the Netzpolitik study show that most projects are about automation, followed by format innovation, community engagement and *monetising not through advertising*.

If following similar typology, the results of my study would read that the most projects from the round six of the funding divide in two groups: those that are about optimising production of journalism content and projects that are about monetising not through advertising (not direct revenue optimisation, focus on audiences). However, this thesis has a different classification. Netzpolitik's categories included such elements as automation, fact-checking, community engagement and crowdsourcing, monetisation through advertising, monetisation not through advertising and others. My categories were created from the content of projects without predetermining framework, and I discovered that, for example, projects that can fall in Netzpolitik's "automation processes" category, can have a different aim for such automation. It can be a news automation tool that generates news based on templates or task automation tool that helps journalists with open data, or even it can be churn prediction system automation. Thus, for example, the "automation" category can also fall in the "monetisation not through advertising" category if one thinks about the solution for bringing new revenue streams. Thus, I believe this thesis brings a new contribution to the research community about the aims of the projects approved by Google by viewing not the orientations of the projects but the challenges and solutions proposed as their study objects.

Even if the Netzpolitik's study is not precisely comparable with this study, one can conclude that the similarity in the results lies in the fact that both of the studies found that community engagement and "monetising not through advertising" is one of the most dominant themes that these projects hold.

In the report of the previous rounds of the projects, Google emphasised four challenges that industries face: "battling misinformation, telling local stories, boosting digital revenue and exploring new technologies" (Google News Initiative, 2018). Those are the directions Google wants the public to think that they help media industries with. These four "key challenges" are not only on the cover of the report but also used as categories to explain funding breakdown and used as chapter titles to show examples of projects that received the funds in these directions. In the literature review, only two of these challenges were described as the main concerns of the publishers – new technologies and digital revenues (Bell, 2016). Battling misinformation, for example, in the literature, connects with the nature of algorithmic curation of the platforms and does not appear as a major, direct concern of the publishers.

If we compare the media challenges presented by Google with those examined in this study, the ones about "battling misinformation" and "exploring new technologies" are only a minor part of all projects. Less than one-tenth of projects are about direct format innovation, such as augmented reality or conversational news. However, one cannot predict what Google means by "exploring new technologies". If any optimisation or automation processes fall into this theme, then results could be different. Similarly, less than one-tenth of projects from round six of the fund is about battling misinformation (including all projects about bias detection in journalism content). Two other challenges Google presents as the key issues are about "telling local stories" and "boosting digital revenue". From the results of this study, projects that help "telling local stories" could be the ones that use hyperlocality as a solution for more personalised content and for helping to create digital subscribers. Similarly, some projects aim to support smaller publisher groups. Nonetheless,

it is not the major theme by the number of projects to be separately addressed. However, “boosting digital revenue” as Google names it, is the most central solution also in this study. To sum it up, three of the four main project themes Google presents as the central ones the DNI Fund addresses, in this study are found to be in the minority.

This study discovered that Business Model Innovations are the central focus of the projects from round six of the funding. Projects about Business Model Innovations mainly can be divided into two types: those that are about monetising solutions through audiences (as well as creating relationships with them) and those that direct solutions to advertising or digital commercialisation. This finding of two main ways how media business models operate is not surprising because, in the reviewed literature, publishers draw a similar picture of the business model considerations in the study by Bell (2016). It shows that publishers are strongly reconsidering ways how to find sustainable business model solutions. Those who have an advertising-based business model publish as much content as possible and on as many platforms. Those who rely on subscription-based model use platform companies as a possibility to redirect readers into paying subscribers. From the results of this thesis, those projects that focused on memberships and increase in digital subscribers mainly see a solution in engaging community, personalising content and creating different membership models and paywall solutions. Particular focus on creating audience loyalty, similar solutions are mentioned in the literature review. However, these business model reconsiderations happen mainly because relying on digital advertisement revenues through platform companies is not the way to keep the business sustainable. Thus, according to the literature review and the results of this study, publishers divide business model considerations into two groups: either mostly rely on platform’s revenue stream or either create new revenue streams and have less dependence on the platforms.

However, when answering RQ2, I found probably the most exciting and unexpected finding in this study. Most of the projects that deal with business models and are accepted to receive funds from Google are about revenue increase through addressing audiences and

not about innovations in digital advertisement solutions as the primary revenue solution. Two types of projects are especially significant in the context of this study: those that aim to find direct advertisement solutions other than using existing methods; and those projects that try building a direct, common solution with advertisers and media houses. Those can be considered as competitive projects to Google because Google is an advertising facilitator to newsrooms. However, Google gives funds for all these projects and, thus, supporting something that goes against one's business model is not practical. Hence, the number of such projects is tiny, compared to other supported solutions for business models. This finding is important as it could show the "bias" of Google's funding agenda. Although many studies (Picard, 2011; Bell, 2016; Ingram, 2018; Russell, 2019;) emphasise publishers concerns about the platform companies' control over digital advertisement revenue streams, a fund that helps "journalism thrive in the digital age" (Google News Initiative, 2019a) does not address one of the main worries of publishers.

To sum it up, although publishers are concerned about dependence on the digital revenue from platform companies, this type of fund reinforces the situation because the most of the support is given to all the solutions that are not in connection to advertising. It is because the fund provider is Google, who is also an impactful revenue supplier and wants to stay in this position. Therefore, even if there is "help" provided from Google to the news industry, it does not address the most concerning issue regarding digital revenue shares. This finding emphasises the situation where Google wants to keep its ecosystem "that no publisher can ignore, where one could call it operating system for journalists", as Fanta (2018), one of the authors of a similar study by Netzpolitik, concludes.

In the introduction, I mentioned Zuboff's (2019) ideas about surveillance capitalism and how platform companies play the central role in selling data about users' behaviour predictions to advertisers. According to Zuboff, Google is a pioneer of surveillance capitalism, and it aims to extract as many reference points about our behaviour and Internet experiences as possible. One of the main tasks of Google is to be valuable to the advertisers

and be relevant to the users. Similarly, I presented earlier in this study that the company's official mission statement is organising the world's information. Here, we can discuss what Google as a company receives and why it wants to *help* media industries.

Amongst all recipients of Google support, one of the most common aims for projects is about innovations, improving the content and addressing audiences through *personalization*, including hyper-locality. Zuboff (2019) says that personalisation is like camouflage for the actions that retrieve the more in-depth details about our experiences and supplies the company with the "raw material". One can argue that by supporting media companies, who want to personalise their content, Google benefits not only by retrieving more specific data about the users, but also the content becomes more organised and relevant to the user, which connects with the Google's mission. Similarly, projects that aimed at helping journalism production processes included such solutions as prediction systems and content evaluations. That can indicate the direction of the primary support: helping journalists and media organisations being more relevant to the audiences, which fuels Google's business.

Thus, one can say that the projects such as Google News Initiative are about Google's self-help – supporting what aligns with the company's agenda and ignoring what does not. This idea hopefully continues the discussion in the research community about the reasons why a company like Google, who contributed to creating many problematic situations to media, is involved in helping it. The idea of self-help connects with what Google's director of strategic relations Chinnappa (Media Voices Podcast, 2019) recently said – Google wants the media ecosystem to thrive so that they as a company can thrive and make more money as well.

This study has potential limitations. The sample of using just one round of the winning projects of the funds can potentially create bias about the fund and content of all funded projects and, therefore, the generalisability of these results is rather low. This thesis

acknowledges that the selected round had a particular requirement of the monetisation aspect in all large or medium-sized projects. This fact was discovered after the initial analysis and, thus, the empirical results about funding distribution across the projects presented herein prove Google's criteria.

Another limitation concerns the lack of many other prior research studies on similar topics about the contents of Google's provided support to media industries. This led to developing and using inductive approaches to analysis and creating categories within the data rather than using a pre-existing framework or categories that are about media challenges and solutions. This led to further limitation of the study connected to the study methodology and the inductive nature of it. The process of coding, naming and defining the codes, as well as such crucial decisions as combining the smaller categories into broader ones and selecting the most critical ones, relies merely on the researcher. This process is subject to error and would be hard to replicate.

Another limitation is in connection with data availability. There is no data about projects that were not accepted for the fund since Google does not provide such information. Thus, exploring *the silences* in data was not possible. We know what Google supported but we do not know what it did not want to support. Having the information about what was not supported would help to answer with higher certainty why Google wants to help other industries.

Taking these limitations into account, the research questions were formed to be as less interpretative as possible and categories defined precisely, and final concept categories formed exhaustively. Moreover, the scope of the study took into account that a larger sample might be too extensive for the purposes of qualitative content analysis. Nonetheless, the limitation of content analysis is the result of subjective opinion and is limited to recorded content. Thus, these results must be looked at with caution and should be re-tested with other data sets before the next study.

Further research is needed to determine the implications of these results and to enrich the conclusions by either researching all the rounds of this funding or using created categories in this study for analysing other media projects or training Google has supported. There is a need for further development of this study area about Google's agenda helping other industries since the platform companies are becoming an integral part of the societal structures, including media.

8 Conclusion

This study examined what kind of media projects Google Digital News Initiative fund supports. This study used content analysis to retrieve data from the project descriptions about what challenges these projects try to address and what are the solutions. After examining 102 project descriptions, the conclusion is that projects can be classified in three directions: Business Model Innovations, Product Development in Editorial Processes and Ecosystem Development Approaches. Solutions for Business Model Innovations focus on digital subscribers and audiences or digital advertisement innovations. Solutions connected Product Development in Editorial Processes focuses on format innovations, separate digital products, security solutions and journalism production optimisation. Ecosystem Development Approaches target solutions that are about technological operations connected to news ecosystems and new distribution opportunities.

The most central theme for projects is about business model considerations. Although previous findings of past funding rounds showed that project orientations are mostly about automation, this study took the *aim* for innovation as the main object of the research. Thus, the result differs. Nonetheless, it is possible that the outcomes would be different if this study researched all projects from all the rounds of the funds or looked at the orientation of the projects rather than what these projects *aim* to solve and how.

Similarly, the results come with the limitation of the nature of using content analysis and, thus, other researchers should re-test the concepts with other data sets to make it fully applicable. Despite, this thesis has shown how funds offered by Google can support and fuel the created ecosystem of platform companies. Thus, it brings new consideration to the recent and not as much explored area of research about platform companies and their dominance in the media industry. To better understand the connotation of the results, future researchers could consider investigating other funds or related initiatives Google or similar

companies offer as it can show the relationships between platform companies and other societal structures (or even society) in a new light.

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Appendix

Below is the set of categories and subcategories which were created based on the content analysis of the project descriptions from the DNI Fund's sixth round. Each project was given a unique number identification. Each project number falls in at least one of the subcategories. The way each of the elements is grouped presents the logic of how the conceptualisation of the project directions was created and how the core themes (in bold) hold the sub-categorical units (in yellow), following even more detailed classification of each project.

Business Model Innovations:

1. Membership/Digital subscribers/Audiences

1.1 Community engagement: 102, 85, 59, 62, 59, 12, 46, 23, 22, 40

1.1.1 Crowd sourcing (contribution to the content): 65, 98, 81

1.2 Content optimised for the individual/Content personalization: 74, 64, 63, 10, 46, 30, 32, 59

1.2.1. Personalization of content through hyper locality/regional context – 49, 23, 74, 13, 46

1.2.2. Content format personalization: 64, 3, 14

1.3 Churn prevention/prediction: 90, 56, 34, 43

1.4 Loyalty programme: 62, 20, 70, 85

1.5 Data collection about the user to accelerate the conversion rate: 27

1.6 Flexible membership model: 47 (“pay what to you read”), 75 (members co-decide topics and co-fund)

1.7 Exclusive services: 51 (audio), 53 (personalized content), 54, 59

1.8 Value proposition: 101, 7

1.9 Approaching the new generations (children/youth/younger readers): 83, 81, 79, 26, 38

1.10 Engaging the reader through interactivity: 48, 58

1.11 Paywall solutions: 60, 33

1.12 Single sign on: 29, 50, 54, 61

2. Digital commercialization/Direct revenue optimization/Advertisements

2.1 Use of local audiences for local ads: 95, 84, 71

2.2 Direct relationship building between advertisers and media houses: 87, 66

2.3 Personalized ads: 71, 1, 39

2.4 Real-time linked data from audience, content, advertising: 18

2.5 CMS optimization: 31, 55

Product Development in Editorial Process:

3.Format innovation

3.1. News voice assistant/Conversational News: 92, 88, 11

3.2. Augmented Reality: 28

3.2.1. Augmented Reality focused on hyper local setting: 80

3.2.2. Augmented 360° videos: 82

3.3. Real-time messaging infrastructure for delivering personalized news: 32

3.4. Text-to- speech technology: 52

4. Monetizing separate digital product

4.1. Archive of digital photographs: 97

4.2. Licensing digital images: 73

4.3. Niche newsletters: 39

5. Production of journalism materials

5.1. External source creation/optimization of news sources: 93, 78, 94, 37,41

5.2. Uncovering potential gaps in news coverage: 89

5.3. Match content with new visual formats/Content format: 86, 79, 76, 8

5.4. Open data automation/Data-driven journalism: 67, 44, 57, 96, 91

- 5.5. Data optimized content evaluation/prediction system: 17, 25, 35, 42, 34
- 5.6. Direct news automation: 6
- 5.7. Audio/podcast content for local audiences: 99
- 5.8. Machine learning based automatic tagging: 61

6. Security/Verification/Bias detection:

- 6.1. Cybersecurity/Combating “Deepfakes”: 69, 19
- 6.2. Secure network for journalists: 9
- 6.3. Biased content detection: 2
 - 6.3.1. Sentiment bias detection: 21
 - 6.3.2. Gender bias detection: 5
- 6.4. Statistical error: 4
- 6.5. Disinformation deconstruction: 36

Ecosystem Development Approaches:

7. News ecosystem/technological operations:

- 7.1. Content performance optimization for news agencies: 72
 - 7.1.1. Feedback-driven content optimization for relationships between the publishers and news agencies: 15
- 7.3 Transformation of local media ecosystems into an integrated platform: 77

8. Distribution opportunities for journalists

- 8.1. Journalists of non-English speaking countries to reach international paying audience: 68
- 8.2. Local media organizations can pitch stories and European media can contact the potential partners: 24

No data: 100, 45