NEWS ARCADE - Seriously, Play the News!

D2.1 User Requirements

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REPORT AUTHORS

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INTRODUCTION

Since the media industry began distributing its products online in digital formats, engaging younger audiences in journalistic products has been an ongoing struggle for news outlets around the globe. This is somehow a paradox, since younger audiences as "digital natives" are known to be both first movers and heavy users of digital media products.

With co-funding from Creative Europe, News Arcade is commissioned by European Education and Culture Executive Agency (EACEA), European Commission as a project aiming to address the problem and even turning the scene into a potential. News Arcade[1] is being designed to offer publishers and broadcasters a method to engage young adults in their online news production, still based on the core values of journalism.

Merging journalism and news consumption through gamification is the core methodology proposed in News Arcade. By creating the necessary tools and a new format for gamified news that can tell a comprehensive 360 degrees news story, the project aims to improve young adults' news literacy, build critical thinking skills and thus strengthen the position of media outlets that will also be able to leverage the improved engagement in news media and journalism.

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[1] When the research for this project was made, it was referred to as News Craft. Since the consortium behind has decided henceforth referring to the name News Arcade instead.

1. Foreword

"What should News Arcade do for me as a young adult media user?"

This question has been underlying all research behind the present report, in which we suggest a series of requirements, extrapolated from preliminary answers to that simple question. Preliminary, because further user investigations will be conducted for the length of the project.

Being a news consumer in a digital media environment is a complex position. Your feed is flooded with content from a constantly increasing number of sources on different platforms and channels. Meaning that the answer to any given question contains infinite nuances and individual variations.

The same challenge was experienced while researching this report. Yet, the research qualifies our capability to formulate a first set of user requirements to qualify our efforts with designing News Arcade as an engaging tool for young adult news consumers.

To simplify, we have extrapolated from the answers a shortlist of things that News Arcade should provide to its end users:

- **Empower me** to become an informed and responsible citizen by keeping me updated on the news
- **Engage me** in a game experience while I consume real world news I would like to follow
- **Educate me** in identifying quality information by taking me behind the scenes in the newsroom
- **Create shortcuts** for me to understand the current affairs that affects my life
- **Connect me** to a news environment of inspiring people and peers

Please continue reading to learn the sense-making leading us to our conclusions. You will be introduced to three sets of user requirements. Those of the end users seem obvious to articulate. But the report also examines requirements for the realisation of a newsgame in a news media outlet, both from the point of view of the newsroom and of the publisher.

November, 2022
Aslak Gottlieb, Journalistic Lecturer
Southern University of Denmark, SDU

2.   About this report

This report investigates requirements for designing a journalistic tool to engage young adults in the news through gamification of journalism from three stake holding perspectives:

1. End users - young adults from 18 to 35 years
2. Newsrooms - journalists and other news content producers
3. Publishers - private news media houses as well as public broadcasters

Although investigations are designed to specifically point out the user requirements needed to develop and deploy News Arcade as a newsgame, findings could be of interest in broader terms for news media professionals, news literacy advocates, media researchers, educators and game developers.

By leaving this report with open access to the public, the consortium behind News Arcade invites everyone with interest in the topics addressed to use the results and findings laid out in the following. The readers of the report will meet research done in different ways in the three mentioned stakeholder categories.

End users' requirements are investigated through a desktop study examining primarily young adults media behaviour, but also covering news literacy and gamification aspects.

Newsrooms' requirements are induced with the use of an online survey among primarily journalist from news media organisations in four European countries

Publishers' requirements are extracted from in depth interviews with primarily executive media professionals.

3.   User requirements

The shortlist reported in the foreword addresses the general objectives of News Arcade, while the specified user requirements indicates how the game should fulfil practical demands from all of its stakeholders: (A) end users, (B) newsrooms and (C) publishers.

The research and reasoning on how the user requirements are articulated, are summarised respectively in chapters A, B and C.

News Arcade should be …		
A. End users	**B. Newsrooms**	**C. Publishers**
Giving behind-the-scenes access to newsrooms	Introduced with sufficient documentation on young media users behaviour and preferences	Transparent to gain user's trust
Able to generate content produced by users in News Arcade worthy of being shared on social media platforms	Backed by training in games and gamification	Explanatory to educate users
Disseminated by persons and peers	Igniting the educational claim for newsrooms to support news literacy	Entertaining to create engagement
Narrated in short video formats	Featuring a narrative closely associated to the ways stories are told in news media	Kept simple to be seamlessly adapted in the organisation
Designed primarily for execution on smartphones	Intuitive to use from backend	Open ended to invite users to collaborate

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4.   Method and sources

The three major categories of stakeholders are identified as (A) end users, (B) newsrooms and (C) publishers (including public service broadcasters).

Since these three categories are interdependently connected in a cyclic consumer relationship as illustrated below, investigations were categorised to match this pattern.

Consequently the user requirements have been articulated from each perspective. The reasoning behind this decision is to optimise the chances of success when employees of the news industry are finally deploying News Arcade to their users.

Section A contains a desktop research analysis involving both academic papers and industry analysis leading the way to define a set of user requirements of the end users, being young adults 18 to 35 years.

Section B describes how newsrooms have been investigated through online surveys of professionals - primarily journalists - from four of the consortium's countries condensing their set of user requirements.

Section C is finally where the publishers' user requirements have been investigated through a series of interviews of executives from the news media industry.

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A. YOUNG ADULTS, NEWS LITERACY AND GAMIFICATION

The desktop research aimed at defining the audience user requirements involved academic sources as well as industrial research and analysis. Empirical end user research will be conducted in subsequent phases of the project.

The overall themes of the research were:

- Young adults as media users
- News literacy
- Gamification in news

To ensure relevance the research was limited to recent papers, only sources published between the years 2017 and 2022[2] were consulted.

A.1 End user requirements

To end users, News Arcade should be:

- Able to generate content produced by users in News Arcade worthy of being shared on social media platforms
- Disseminated by persons and peers
- Narrated in short video formats
- Giving behind-the-scenes access to newsrooms
- Designed primarily for smartphones

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[2] See Appendix I for a list of literature actively being quoted in the report

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A.2 Profiling Young Adults as news consumers

When it comes to profiling young adults as news media users, important nuances are easily missed. In 2019, Generation Z became the largest generation on Earth, constituting 32 percent of our global population[3]. While defining such large numbers of media users, generalisations are bound to happen.

News Arcade operates with young adults and the target is the age group 18 to 35 year olds. Center for Generational Kinetics define the presently living generations as:

- Gen Z, born 1996 to 2015
- Millennials, born 1977 to 1995
- Gen X, born 1965 to 1976
- Baby Boomers, born 1946 to 1964
- Traditionalists, born 1945 and earlier[4]

Taking into account that News Arcade will probably not be fully deployed before 2025, it is reasonable to consider the target group as *Generation Z* (in the literature also referred to as *Zoomers* and in the following shortened to *Gen Z*).

Yet, if distinctions in this broad target group is to be made, Nic Newsman et al. suggests two age brackets in their latest reporting on digital news from Reuters Institute: … *we consider how **social natives (18–24s)** – who largely grew up in the world of the social, participatory web – differ meaningfully from **digital natives (25–34s)** – who largely grew up in the information age but before the rise of social networks – when it comes to news access, formats, and attitudes.*[5]

According to several sources, Gen Z as media users generally are both more sceptical and picky than their print-reading predecessors . *"Zoomers can sniff out a marketing ploy and are leery of fake news …"* claims Paula Felps in a recent INMA-report[6].

Nic Newman et al. seem to agree, when they state that *"… younger audiences are also particularly suspicious and less trusting of all information".* Note that the quote also refers to the youngest of Millennials, the ones up to 34 of age.

The fact that the younger generations by nature do not ascribe authority and trust to (online) news media, should be tackled proactively by legacy media outlets. According to Konrad Collao, *"News brands should investigate creating social and digital content that feels more of young people and contemporary internet culture. Using emergent platforms, respecting their codes and conventions, is the key"*[7].

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[3] Eric Spitznagel: "Generation Z is bigger than millennials — and they're out to change the world, New York Post", January 25, 2020
[4] Center for Generational Kinetics, 2016: genhq.com/generational-birth-years
[5] Digital News Report 2022, Reuters Institute for the Study of Journalism 2022
[6] What Gen Z + Media Need From Each Other, INMA 2022
[7] The Kaleidoscope, Young People's Relationship With News, Craft., 2022

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Based on the latest reporting on digital news from Reuters, Collao identifies three major types of young news consumers:

Hobbyist/dutiful	Main eventer	Disengaged
Consume the news for enjoyment or out of a civic duty to know what is happening and contribute to the discourse. They can be activist, though are by no means always 'woke' or 'liberal.'	Young people in this group are attuned to the practical need to keep up with developments as they impact day-to-day life, rather than out of enjoyment or duty.	Although avoiding 'the news' as a general rule, young people in this group feel they need to know the unavoidable 'big' things going on in society, those that have practical impacts on their lives. They are also motivated by a type of FOMO, needing to know at least a little of what is happening around them so they can be part of conversations, though these tend to be rarer among their social groups.

Collao's typification is well aligned with the definitions on what motivates news consumptions in the age group constructed by Lucas Galan et al.

In a 2022 paper also commissioned by Reuters, they explain: *"The role of news for young people appears primarily individualistic; it's about what it can do for them as individuals – rather than for society as a whole. And while it's true that the industry is moving toward producing more content of this kind, most traditional news brands are still not associated with being useful, interesting or fun".*[8]

Schematically, the authors give examples of what drives youth news consumption

Personal Utility: news that…	Entertainment: news that…	Point of View: news that…
Is useful in my life Helps my personal development Contributes to my status & identity Can act as social glue	Is enjoyable and engaging to consume Has high entertainment value Has fun content and delivery	Has a point of view or an angle on a story Is clearly informed by facts (rather than prejudice or agenda) Helps me develop my own point of view

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[8] How Young People Consume News and The Implications For Mainstream Media, Flamengo 2022
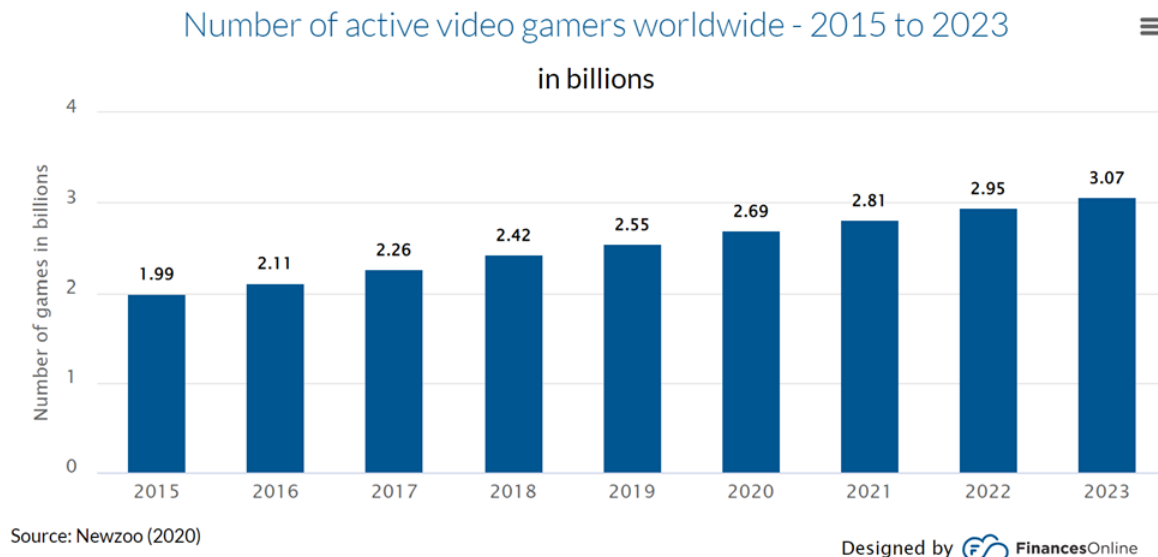
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		Is different to predictable / politicised / extreme opinion and ideology

In the INMA-report *What Gen Z + Media Need From Each Other*, Rachel Richardson, Editor at News UK, and former Head of Editorial, Snapchat, effectively sums up the characteristics of young media users in this quote: *The one thing that I always keep top of mind when creating or curating for Gen Z is that their personality and passions define them more than any socio-economic categorization.*

A.3 News Games and gamification of news

According to Newzoo, gamers undoubtedly are on the rise. At a global scale the increase exceeds the exploding population rates. Considering games as media products, gaming can inevitably be considered as a rival to news media, in terms of time spent.

Number of active video gamers worldwide - 2015 to 2023

in billions

Source: Newzoo (2020)   Designed by FinancesOnline

According to Newzoo[9], in 2020 there were 386 million gamers in Europe. Also the mobile gamer population is on the rise, reaching 2.6 billion in 2020. While these overall numbers are quite easily accessible, segmented statistics that break down the reach of newsgames are hard to find. Still, academic literature offers substantial definitions and proof, that news games and gamification can be considered a genre, with positive effects.
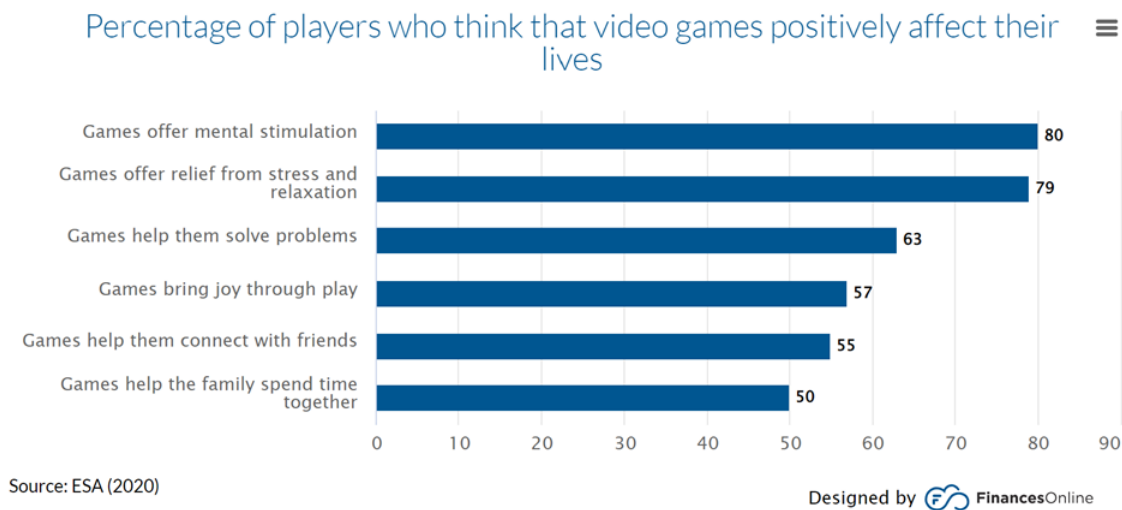
"Gamification has proven to be useful in attracting younger audiences and boosting news consumption, while newsgames provide "more options of informing, sense-making, storytelling and persuasion than simply remediating 'old' forms of news production". Their ability to show information in an experiential way, as well as the possibility of placing the user at the centre of the narrative, allows reaching new audiences accustomed to virtual and participatory environments," explain Jose Alberto Garcia-Aviles et al.[10]

As we shall learn later in this report (A.4), today's young "news avoiders" lack a connection to what could be called a "news community" – a sense of belonging to social groups that value news. Indeed, consuming news is (also) related to social structures and the notion of affecting life positively.
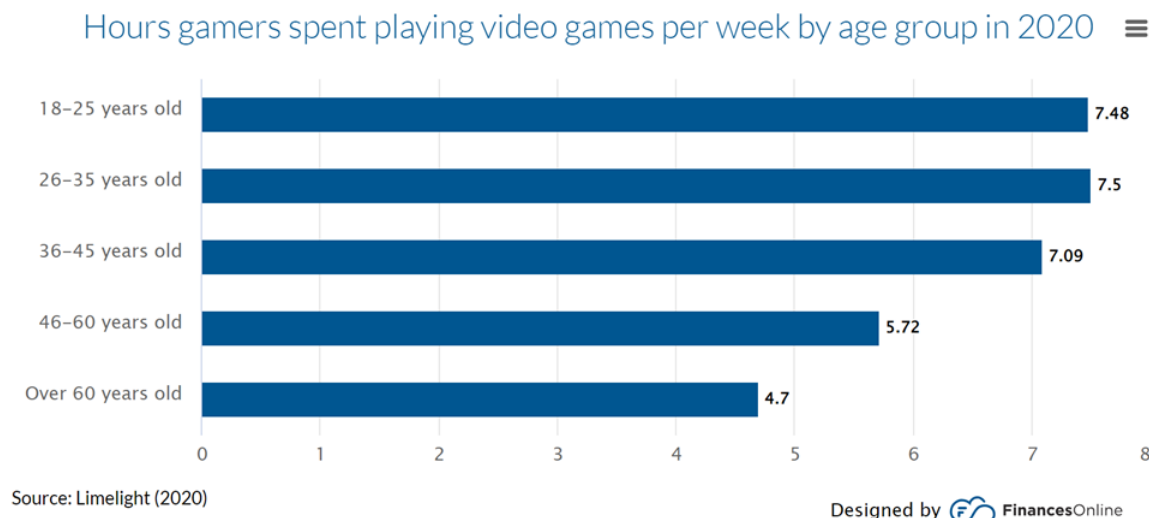
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[9] financesonline.com/number-of-gamers-worldwide
[10] Jose Alberto Garcia-Aviles, Raul Ferrer-Conill, and Alba Garcia-Ortega: Gamification and Newsgames as Narrative Innovations in Journalism, Convergence The International, Journal of Research into New Media Technologies, Vol. 26(3), 2020

When asked which way video games positively affect their lives, gamers provide explanations that suggest the high potential of solutions that would merge news and games.

Percentage of players who think that video games positively affect their lives

Category	Percentage
Games offer mental stimulation	80
Games offer relief from stress and relaxation	79
Games help them solve problems	63
Games bring joy through play	57
Games help them connect with friends	55
Games help the family spend time together	50

Source: ESA (2020)

Designed by FinancesOnline

Broken down in age groups, it appears that it is the youngest adults who spend the most time gaming. This again suggests that news, games and young adults could be a productive match.

Hours gamers spent playing video games per week by age group in 2020

Age group	Hours
18–25 years old	7.48
26–35 years old	7.5
36–45 years old	7.09
46–60 years old	5.72
Over 60 years old	4.7

Source: Limelight (2020)

Designed by FinancesOnline

Yet, Raul Ferrer-Conill[11] et al. underline the obvious discrepancy to be dealt with in this cocktail: *"While journalistic professionalism is how news media establish their epistemological authority, digital games use computational power and procedural rhetoric as*

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[11] Raul Ferrer-Conill, Maxwell Foxman, Janet Jones, Tanja Sihvonen, and Marko Siitonen: Playful approaches to news engagement, Convergence The International, Journal of Research into New Media Technologies, Vol. 26(3), 2020

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their unique and essential mechanism to create meaning." Jose Alberto Garcia-Aviles et al. seem to agree: *"Newsgames integrate two opposing logics: the culture of journalism, based on truthfulness and credibility, and the culture of games, characterised by the creation of imaginary worlds, persuasion and mechanics."*

But the antagonisms recognised by academics are not to be misunderstood as scepticism towards the notion of gamified news. As Garcia-Aviles et al. clarifie, *"Gamification has proven to be useful in attracting younger audiences and boosting news consumption, while newsgames provide "more options of informing, sense-making, storytelling and persuasion than simply remediating 'old' forms of news production" [Wiehl, A.: Newsgames-Typological approach, re-contextualization and potential of an underestimated emerging genre. IFLA Lyon (2014)]. Their ability to show information in an experiential way, as well as the possibility of placing the user at the centre of the narrative, allows reaching new audiences accustomed to virtual and participatory environments."*

Researchers Garcia-Aviles et al. show a certain enthusiasm at the potential for engagement: *"Compared to traditional reporting, newsgames might be an innovative way to attract the users' attention and involve them in dealing with complex realities and current events, such as climate change or precarious employment. The genre shows the implications of a topic, encourages critical thinking, and helps to generate debate among the users. In this way, newsgames can integrate both the mechanics of the game and journalistic standards, encouraging young people to inform themselves about issues that do not usually interest them."*

Raul Ferrer-Conill et al. seem to agree: *"Accordingly, news organisations and news producers should be invested in adopting digital games and playful approaches to attract and maintain new news consumers. At the same time, game developers could use editorial content as a conduit to engage with the public and civic life. Serious games, newsgames, the gamification of news and other playful approaches are a new iteration of the tradition of popularising journalism."*

A.4 Addressing News Literacy

"As individuals, we now have more control than ever over what we see and hear, which is a good thing, but it also puts a lot of pressure on each of us to know what we're doing. We each curate our own news consumption based on the seemingly limitless options provided in the digital era, and the picture of the world we end up seeing has enormous power to shape our perceptions of reality, which in turn shape our behaviour and our attitudes. So the job of curating our own news consumption is an important one, and it's become harder than ever."[12]

As a news literacy expert and advocate, Seth Ashley, PhD and associate professor of Journalism and Media Studies, effectively defines why it is important to not only strengthen the civic level of *media literacy* but also to focus on *news literacy* as a sub discipline: *News literacy begins with the analysis of news content and the need to examine and verify claims. Next, we need to learn about the forces that influence news and information content, beginning with the routines and conventions of journalists and other information producers and ending with a broad understanding of news media systems. After that, we turn inward and examine the psychology of information production and consumption, and finally, we take responsibility for our news consumption and spread the word about news literacy in order to increase awareness and help others acquire the knowledge, skills, and attitudes of critical news literacy.*

In our empirical research for the present report, we found that a majority of journalists find that parents and schools should bear the main responsibility of getting young people interested in quality news. Ashley's definition makes it apparent that becoming a news literate in a digital media environment is a complex matter. Being news literate does not necessarily motivate a desire for quality news. On the other hand, recent studies reveal that not being able to find reliable information stimulates news avoidance.

As Stephanie Edgerly[13] suggests: *Extremely low news consumption is related to a disinterest in politics, perceptions of news lacking relevance, low news self-efficacy and a lack of knowledge about the news system … Not knowing where to find credible information may explain why some adults avoid news all together.*

Observations like these qualify the core hypothesis of News Arcade, that a strengthened level of news literacy would lead to more trust in quality journalistic content, and thus would motivate younger users' positive engagement in news media.

As also shown in A.2 this evolution does not seem to happen by itself: news content providers must play a role. The assumption that parents and schools would alone bear the full responsibility of sensitising youth to quality news content is simplistic, if not naive.

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[12] Seth Ashley: News literacy and democracy, Routledge 2020
[13] Stephanie Edgerly: The head and heart of news avoidance: How attitudes about the news media relate to levels of news consumption, Journalism 2022, Vol. 23(9)

The complexity is stressed by Leonie Wunderlich et al, explaining in The International Journal of Press/Politics[14]: *Participants from the two young cohorts* [15-17 years and 18-24 years]*, who grew up in hybrid media environments, neither developed routine information habits, nor did they connect to a specific news brand or outlet. Consequently, they lacked orientation, showed high levels of distrust in online information in general, and subsequently employed various verification strategies, such as comparing different sources, before deciding what information to trust. Young participants' understanding of journalism was constructed in distinction to non-professional actors even though they expressed a broad sense of quality journalism's characteristics.*

To assume that new generations adapt news habits from their parents is wrong. Based upon a study of news avoiders in UK and Spain, Ruth Palmer and Benjamin Toff[15] found: *"… that, although most news avoiders in our study had grown up in homes where news was consumed, as adults, they felt that news consumption was far more costly than beneficial, especially in terms of time and emotional investments. Moreover, they lacked two, likely interrelated, motivations to consume news that have been found in past research to balance out the negative aspects for news consumers. These can be summarised as (1) an internalised norm that consuming news is an important civic duty, and (2) a sense of belonging to social groups that highly value news and expect their members to keep up to date with news, which we call a connection to a "news community." Combined, these factors provide social incentives to follow news, and they reinforce connections between distant-seeming current events and daily life".*

Luckily there are indications that news avoiders do not act based on principle. In addition Gen Z and Millennials in general seem to have a desire to follow the news, although there are segments finding it hard. Eric Young[16] concludes in a report based on young American's media behaviour that: *"Gen Z and Millennials have both traditional and novel views of what they want from the press. Majorities, for instance, want news outlets to be fair to all sides, be neutral, and be accurate. They also want the news to provide diverse points of view, and to help people understand communities and people unlike their own … At the same time, these Americans show unmistakable signs of news fatigue and are deeply troubled by misinformation online. Fewer 16- to 40-year-olds than seven years ago say they enjoy getting news, and they are talking less with friends and family about the news. Many also report feeling worn out by being online."*

Leonie Wunderlich et al. argue that interventions by both schools and news media itself are crucial: "*We would argue in stronger terms that the identification of persistent patterns between generations regarding the understanding of news and journalism presents implications for journalistic practitioners and educators. News literacy interventions should*

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[14] Leonie Wunderlich, Sascha Hölig, and Uwe Hasebrink: Does Journalism Still Matter? The Role of Journalistic and non-Journalistic Sources in Young Peoples' News Related Practices, The International Journal of Press/Politics, 2022, Vol. 27(3)

[15] Ruth Palmer and Benjamin Toff: What Does It Take to Sustain a News Habit? The Role of Civic Duty Norms and a Connection to a "News Community" Among News Avoiders in the UK and Spain International Journal of Communication 14, 2020

[16] Eric Young, NORC: Fatigue, Traditionalism and Engagement: The News Habits and Attitudes of the Gen Z and Millennial Generations, American Press Institute 2022

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focus on the transfer of knowledge, focusing attention on the role journalism plays in democratic societies as well as awareness and experience of the skills required to recognize trusted sources. Practitioners, who struggle to reach young audiences, could focus on communicating the benefits they offer in terms of providing reliable and fact-checked information. In addition, journalistic actors should maintain their journalistic values such as diversity of opinions and neutrality that are clearly valued by young people."

IMVA/IN is an acronym presented in the Digital Resource Center at Stony Brook University, Center for News Literacy[17]. It is to be used by students to methodically evaluate sources who show up in news stories. Being well proven and tested as useful, it might serve as a compass when designing the game mechanics in News Arcade:

I: **Independent** sources are better than self-interested sources

M: **Multiple** sources are better than single sources

V: Sources who **Verify** with evidence are better than sources who assert

A/I: **Authoritative** / **Informed** sources are better than uninformed sources

N: **Named** sources are better than unnamed sources

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[17] digitalresource.center/content/introducing-imvain

B. CHALLENGES AND POTENTIALS IN THE NEWSROOM

To define user requirements in newsrooms, the consortium conducted a survey among 48 journalists and other news content producers in Cyprus (11), Denmark (16), France (10) and the Netherlands (11).

An online questionnaire[18] was filled-in anonymously by employees in both private publishing houses and public broadcasting stations. Respondents were recruited by the partners in their own networks, what leads to the possibility of bias in positive attitudes to the scope.

The survey was conducted in the countries' native languages, with the exception of the Netherlands, where English was used.

B.1 User requirements in the newsroom

The overall conclusion on the inquiries made in newsrooms are positive in the sense that many journalists express their support and curiosity to the initiative. That being said, their experiences with newsgames are very limited.

Here below is the resulting set of user requirements for the newsroom. News Arcade should be:

- Introduced with sufficient documentation on young media users behaviour and preferences
- Backed by training in games and gamification
- Igniting the educational claim for newsrooms to support news literacy
- Featuring a narrative closely associated to the ways stories are told in news media
- Intuitive to use from backend

The lack of knowledge combined with unfavourable traditions in the news industry are the main obstacles for developing new ways to engage younger audiences. Seemingly, time constraints would not be an obstacle to the implementation of News Arcade. Only 11 % of respondents indicate time pressure as a possible hurdle..

While many respondents reported to have experience with news quizzes, only a few felt familiar with deeper interactive or gamified news formats. Only a minority of the respondents claims to spend very much time or pay attention to gaming.

The sample is too small to conclude that journalists throughout Europe are ignorant of gaming as a phenomenon. Yet, a majority of participants in the survey consider gaming a commercial and entertaining activity, rather than a tool for building culture. This suggests that information about types of games and gaming are required to nuance and qualify the opinion on gamification in newsrooms. Since News Arcade includes educational objectives,

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[18] The full questionnaire is found in Appendix II

the respondents were asked to rank in order of importance "who carries the (most) responsibility in making sure younger audiences develop the desire to consume quality news". Significantly parents and schools were indicated as the ones primarily responsible for the next generation being news literate, what suggest the need for some alignment of expectations to the aim of the project Although many free form answers show very positive attitudes to the idea of gamifying the news, scepticism is quite clear when respondents are asked directly about their reaction were they asked to publish news stories in a *gamified* format. On the contrary, the views on publishing in *interactive* formats are quite optimistic.
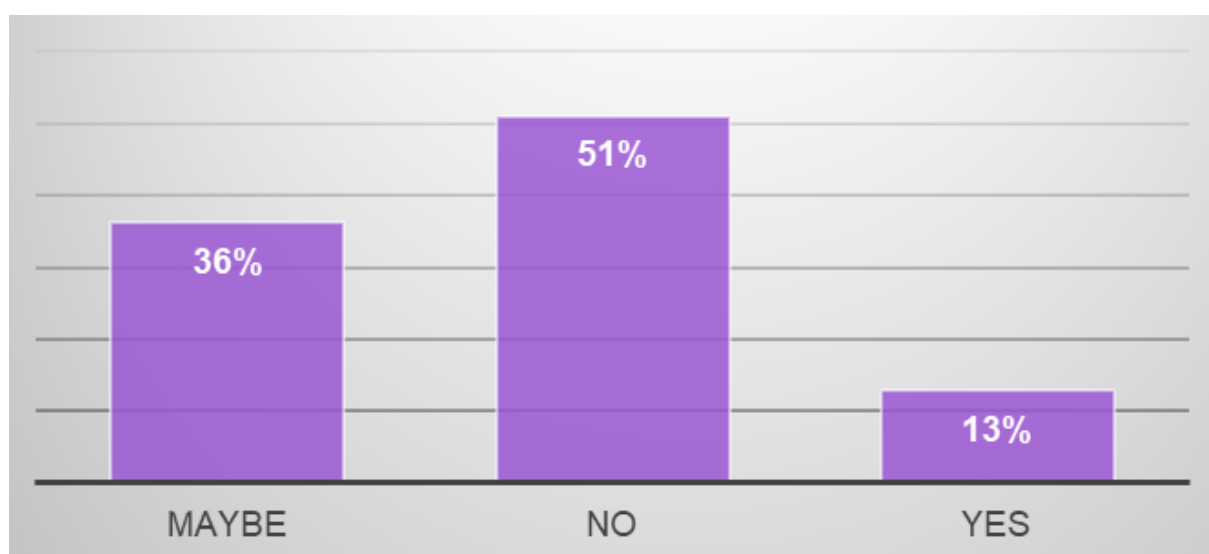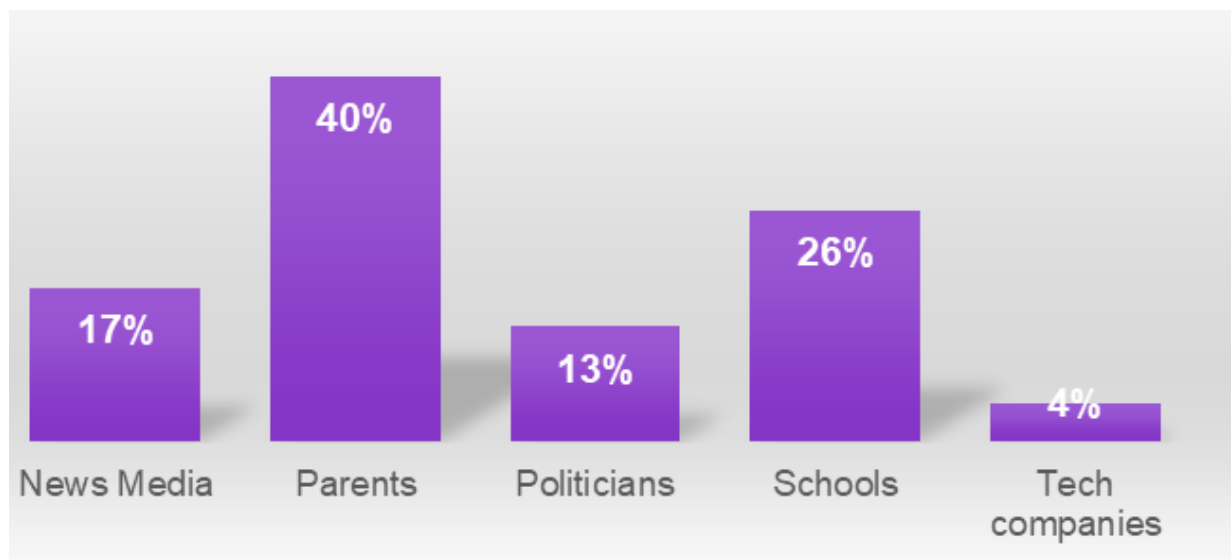
B.2 Selected results

Whereas the full data set is archived for detailed investigations throughout the developing stages of News Arcade, the following results are selected to illustrate how the newsrooms' requirements are deduced.

Any differences across countries are not significant to draw substantial conclusions on national levels. The figures are illustrating averages for all respondents.
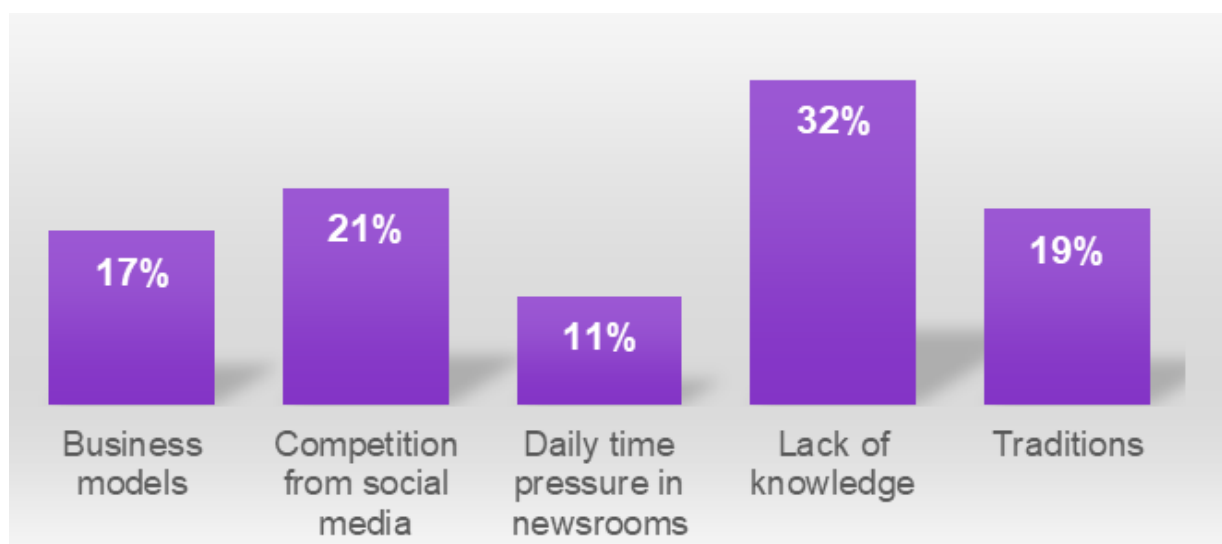
Q1: Do you believe that younger audiences when growing older automatically will transform their social media diet into a traditional news diet?
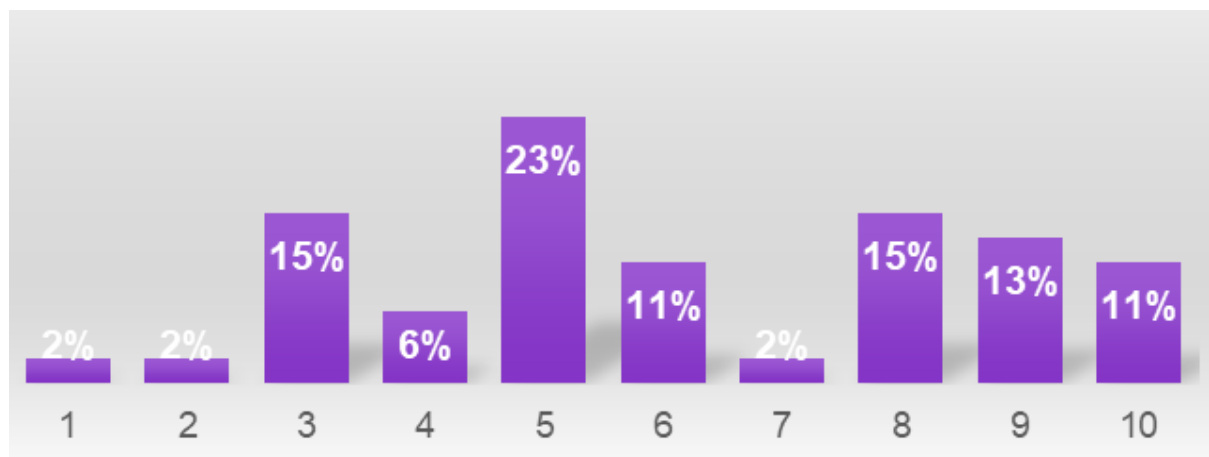
Q2: Who carries the most responsibility in making sure younger audiences develop the desire to consume quality news?

News Media	Parents	Politicians	Schools	Tech companies
17%	40%	13%	26%	4%

Q3: What are the biggest challenges in developing new methods to engage younger audiences?

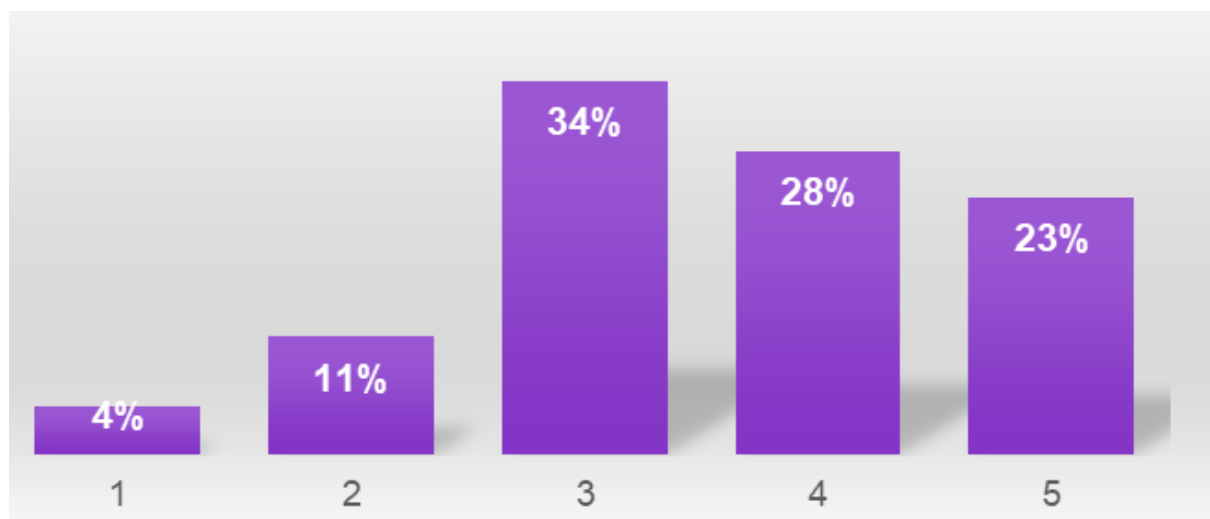| Business models	Competition from social media	Daily time pressure in newsrooms	Lack of knowledge	Traditions
17%	21%	11%	32%	19%

Q4: Do you generally consider gaming most as a forming cultural activity or commercial entertainment?

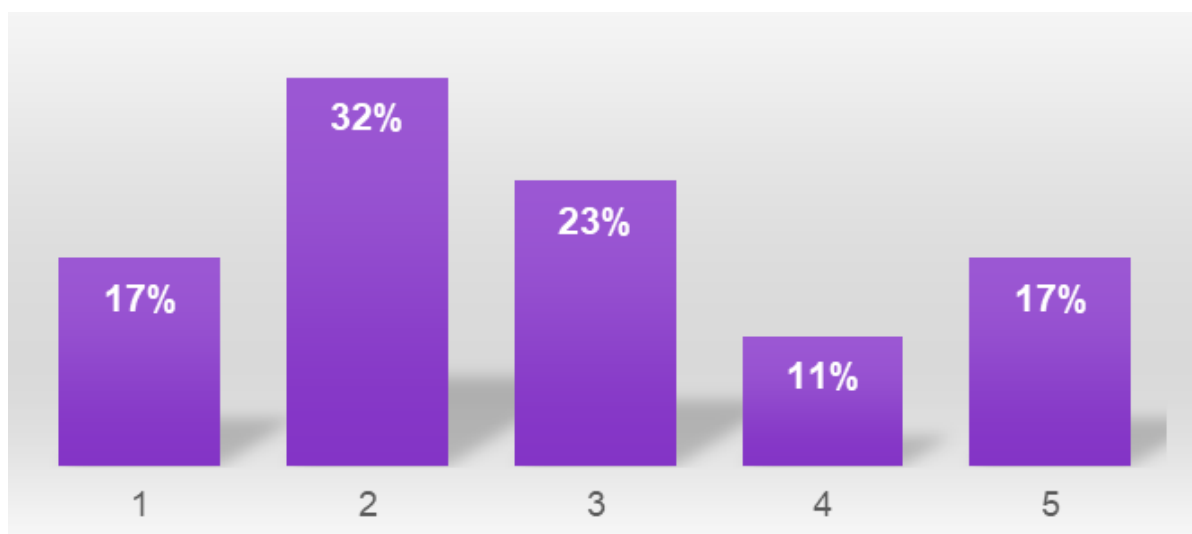1 = Cultural formative   10 = Commercially entertaining

Q5: How would you react, if you were asked to publish current news stories in an interactive format?

1 = Sceptical   5 = Enthusiastic

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Q6: How would you react, if you were asked to publish current news stories as an online game?

1 = Sceptical   5 = Enthusiastic

B.3 Selected quotes

The questionnaire also contained free form rubrics allowing respondents to elaborate answers. The following quotes are selected to further illustrate how the newsrooms' requirements are deduced.

Q7: What are your biggest needs to engage younger audiences?

Finding the key to getting them to see quality content. The amount of material available on YouTube and the choice of empty calories is massive. There is a marked discrepancy between the topics they say interest them (climate, for example) and the number of users. Without a presence on the platforms they use, it is hopeless. Even by being present, it is a difficult task.

In my job I solely engage younger audiences (18-35). Everyday my colleagues and I talk not only about but, very important, WITH young audiences about what they like and need. Both subjects and form, that is. We constantly find new ways to bring news to a young audience by taking them seriously and not looking at online/social as a little brother of tv/print. The language, storytelling and subject choice is way different online. And I think many organisations fail to seriously recognize that. So my biggest need in engaging younger audiences is actually more people taking them seriously.

I think the young people will be able to find news and other serious factual material, but in order for this to be possible we have to use all the windows that exist to get their attention, involve them and create content that they can see the relevance of. This requires that we do not think in silos and work together across industries and sectors. And exploits the new narrative techniques (including gaming, why not) that exist already and used by other content producers.

Development of writings, topics and reportage that directly relate to the everyday life of young people as well as the greater interaction of those under 25 years old with social media. Most of our readers are between the ages of 25-54 and above.

Q8: Describe your experiences with news games or interactive news formats

Positive	Negative
Interactive news formats provide directness and audience engagement	*The fact is that news games are not preferred by young people, but by older age groups!*
Minimum experience. Interactive news is, however, attracting a larger audience.	*Quite frankly miserable in a Danish context, quizzes are the only thing that really works because they are simple to make, and therefore the technology behind them works. Bigger, more advanced games require better technology and tools. It costs money. I have yet to experience a media employer who is willing to set aside the necessary resources for this sort of thing.*
Good - it can work when there is a focus on information combined with entertainment	
Novelty game, zero experience. Interactive news formats - some experience. The question is relevant and revealing, because I spend a lot of time targeting public service content to a target group that is basically not interested in the content.	*Often look nice, but in practice used by a very small audience. Often gains more traction in the media industry itself than the general population knows about them.*
Have tried edu gaming a few times. Fun!	*A lot of wishful thinking goes into it, but it is hardly ever entertaining and informative at the same time. Interactive news formats are interesting, for example interactive videos. Not sure yet how that will work out. Interactive in a sense of user engagement and user content is widely proven to be successful.*
Personally, as many times as I have been involved in them, I have gained knowledge.	
Great with a quiz	

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Q9: What do you think of the notion that we are developing a CMS to publish news stories to young adults in a gamified format?

Enthusiastic	Sceptical
An experience worth trying. Under the condition to be able to measure its real impact, in numbers of people reached but also, at first, in terms of efficiency. Favorable, but if we find an economic model that corresponds to our business model. Great idea. The idea of reaching young people makes you dream. On the other hand: I am afraid that its use for journalists is time-consuming. Interesting. I've seen a lot of formats that didn't quite make it. So curious to see what kind of CMS could be successful for a gamified format with an engaging journalistic narrative. If we can strike the right balance. And it can activate the young people, then I'm all for it. We should probably bring the journalists along. But it requires thorough research. If this is a way to bring quality news and knowledge to young people, then I would have no objection! Quite the opposite in fact!	I can't imagine how it could work practically, so as not to affect the objectivity, validity and immediacy of the news. I don't think it can have a big impact I think it undermines seriousness and credibility Not something I would be interested in Against. Playing is not a way to get informed properly It's a niche format that publishers and/or broadcasters would not use.

Q10: Write us any comments, tips, good ideas and honest feedback.

Less is more – technology and format can't make for a good, engaging story. I hear often experienced leaders believe that you can dress up for success. You can't do that. The good story wins the day. Not the fancy presentation. Think external presentation from the start - Games that aim to make us smart quickly seem boring. No one wants to do homework. But games made to entertain can easily get away with making us smarter

The young are not just the young. A small part of the target group loves nuanced and documentary narratives, which is my subject area. The vast majority are not. Without being present on the right platforms, it is stillborn. Even being present on the right platforms it's difficult. I believe that high visual quality, documentary storytelling, traditional and better informed news speak are a no-go. There must be more stories that appeal to the target group - but e.g. climate stories must be characterised by hope and someone doing something.

Don't make too much of the fact that it's a game, so that the form doesn't overshadow the content.

Create and test prototypes continuously. Centre the work on developers, UXers and programmers rather than editorial forces. The content should be the last priority. Mechanisms, functions, functionality and design should come first.

C. PUBLISHERS' OPINIONS

A total of nine executives at news media organisations in Cyprus, Denmark and France were interviewed to identify the attitudes of publishers and broadcasters towards News Arcade. The same questions were asked to two reporters and three news literacy advocates from the Netherlands, in an effort to obtain a "second opinion" and vertically challenge the findings.

All 14 interviews[19] followed the same matrix and were conducted by team members of the News Arcade consortium one-on-one and in the interviewees' native language. The answers were subsequently translated into English. All interviews were recorded and the following transcribed.

C.1 User requirements for publishers

From the answers we were able to extrapolate a set of user requirements that are necessary from the perspective of a news publisher. News Arcade should be:

- Transparent to gain user's trust
- Explanatory to educate users
- Entertaining to create engagement
- Kept simple to be seamlessly adapted in the organisation
- Open ended to invite users to collaborate

Publishers, broadcasters and news literacy advocates agree that the biggest threats to journalism are 1) the lack of users' trust in media, 2) business models disrupted by social media and 3) the vast supply of misinformation online.

This ubiquitous point of view resonates with topical literature studies claiming that young adults have developed a strong scepticism towards online content; what and whom to trust. As described earlier in this report, the youngest adults can be characterised as *social natives,* maybe even *born sceptical*.

A Digital Director explains … *the young compared to the older generations have a behaviour that begins on social media, and do not have SoMe running on the side – but as the actual starting point …*

A General Manager insisted that the consequences of the lost news distribution monopoly are severe: *First, it's the fact that news is free on social networks, which gives the illusion of being media but are not media.* This observation points out a crucial premise to be dealt with when developing a gamified news media format. What kind of media content is this? Why should I trust it?

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[19] The full interview guide can be found in Appendix III

To obviate the trust issues, transparency is mentioned by several as a key feature. A Reporter and news literacy advocate suggests: *I think that every journalist, every media outlet has to work on gaining trust with their audience by explaining, for example, how they work, why they make choices, which choices they make.*

Another key to gain trust as well as engagement is collaboration on creating content in collaboration with the users. A CEO reflects: *… making people participate in the news story in some form that would make them more engaged; to get some of these facts that we continuously presented to them in an article or format, and, thus, make them knowledgeable and educated people ...* This opinion is reinforced by that of a General Manager who stated: *We are aiming for new programs where young people would be embedded in the newsroom to create content with journalists.*

Some interviews indicate the need to get closer to the audience.

As one Head of News claims: … *Innovation, research, the time spent with the people we want to understand so that we can build together. We need to allocate time to listen to them. The sole tool, by itself, is not enough.*

C.2 Advice and recommendation from publishers

All interviewees were asked to give a final recommendation or advice to the News Arcade consortium. Many answers to this request are characterised by integrating both strategic and operational levels leaving the impression that the interviewees carry deep insights in their organisations and the markets they operate in, also making it difficult to categorise the data.

The following list is an attempt to illustrate an important data source upon which the user requirements for publishers have been formed.

We use gamification to get close to the youth so the game must never stop being a game - so it must be fun from the beginning to the end. If we turn the game violently into what we want as a result to happen then we will lose our access to youth. If we lose the elements of the game which are the participatory element - interactivity, then we will lose the reason and goals why we are doing it.

It needs to be simple and understandable, with no particular headaches for the young people who are asked to interact with it and not time consuming. It also needs to have an element of competition or reward and the user should feel a sense of being able to participate and produce a specific outcome - to co-determine the outcome rather than everything being predetermined/pre-selected by others.

CEO, private news media house

The teamwork element could attract young people as it would be more interactive. But this element requires dedication and adults have obligations so there should be a lone rider mode in the game for people who would not like the group mode.

News Director, commercial TV-station

We need to consult with people who are experts in the news topics we will involve in order not to lose the objectivity and authority of the news that young people will engage with through this game. Also we must consult the young people themselves about their needs.

Pilot the tool in some media to collect feedback on the effectiveness of the tool (e.g. journalism schools, schools, media companies) and get ideas for its improvement. Build on a model that may already exist to fill in any gaps.

Customise preferences of the tool according to age, preferences, themes, region, etc. through the use of filters

Editor in Chief, online news portal from private publisher

We are perhaps some of those who think more in strategic partnerships, and also in finding developmental projects, but there are other media around doing the same. So if you could include this in something for which you could apply for funding to test and try out, and then report on it, that would make it easier for us to take a risk because we would then have more resources to do it, as many of our resources are bound into daily operations.

What would actually make a difference was if we could read it into some projects we already have, get extra resources to test it and not limit it to the young audience, because that way we would be omnibus, that is, be for all interested citizens and not leave out someone.

If we are to use it and test it in our journalism, it has to be relatively simple. You should be able to use relatively simple formats, not because we are not flexible, but because we have so much of the old operations and the classical journalistic work that takes time. If it has to be experienced as something additional, then it must be relatively simple to use.

CEO, national daily quality newspaper

I would not invest a lot of money in a large and expensive game that can explain how news is produced etc. It would be too difficult and too complicated to build. I also think that if it existed, then many newspaper readers would find it interrupting and complex.

It must be part of the education, it must be used in schools/teaching – to understand journalism, priorities, and media etc.

The challenge is how you get it to connect naturally with the product – that is the newspaper's website and this universe.

First, they will have to become interested in the game, then they must understand it and what it's all about and, finally, they should wish to come back again and again.

Digital Director, national daily quality newspaper

It should read in news, let the users decide for themselves and or make sure that there is enough knowledge to make good choices.

Sub-Editor, national press agency

I would say that in the end, when you play the game, the last part is creating a news outlet that you can share with your friends. It could be interesting if you let people create a news story themselves, and let them distribute it.

I think you should create a format with, for example, ten headlines or five headlines, five photos, five intros. Five sources or examples. So you have to create a gaming format which can be filled up every day by an editor. So once you get a new news story, the editor has to think about five possible headlines.

Reporter, radio station

I think you should make it a primary goal to make it entertaining, because if it's not entertaining, then nobody's going to play it. And so it needs to be one of your priorities to make sense. But if you make it fun to play then and just take little small steps into the educational part of it, then I think you have a bigger chance that people keep playing the game.

CEO, media literacy consultant house

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If you want someone to be aware and more conscious and more resilient, you'd better not show them how not to do it, or how things should not be. But you'd better teach them how things should be done.

I'm a big fan of providing a lot of information in context and to just let people dive into something uninformed. I always find it a very challenging thing, so I prefer to kind of take them by the hand a bit … to give them the proper background and the proper tools and ingredients.

Producer, media literacy research organisation

C.3 News media criteria

Digital Director Troels B. Jørgensen at Danish national daily Politiken shared a set of values or criteria resulting from years of experience developing products for younger audiences.

We have made many qualitative and quantitative studies in recent years with young people, and here is shown several clear demands the young have, and they want us to fulfil – through media – but they are not demands that our media or marketing articulate:

- *Keep my brain working and sharp*
- *Make it easy for me to get smart*
- *Bring knowledge and activism into my everyday life*
- *All trivial everyday choices and actions have dilemmas: help me, guide me!*
- *Enable me to form an opinion*
- *Calibrate my media time to fun time*
- *Show me some role models - someone who has made it through the 20-30-year phase*
- *Tell me it's ok to let go, and tell me how*

All these needs are in fact a cry for help from the young. Now we are using much time to try to translate these needs into content and production, staff, structure etc. And we are no way near finished with this. But it is necessary to begin with a thorough preliminary work to determine their complex needs.

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CONCLUSION

The most uplifting finding in this report might be that journalists across newsrooms in four different European countries seem to agree that it is lack of knowledge on younger audiences that prevents them from trying to reach younger audiences. Not financial matters and neither time pressure. The latter two being the most difficult to solve, it seems within range to be able to address the demand for knowledge. More complex is the matter looked upon by publishers, but still with an overall optimistic approach.

Also it is promising that journalists respond with curiosity and to some extent enthusiasm to the idea of publishing news stories in interactive formats and some even being very positive to the idea of gamifying the news. These trends in attitudes are backed by publishers' opinions to matters alike.

The findings indicate that cells in the news industry are open to undergo quite determinant changes in the perception of how news stories are told as user interactive narratives rather than with the linear and monopolised story lines we have been used to throughout modern media's history. Until today most news content - analogue as well as digital - can still be characterised as one way communication with no or very little user engagement features integrated at any stages of neither content distribution and consumption nor the content production.

The exclusive privilege of news outlets being the supreme providers of quality information is no longer automatically acknowledged by the users, earlier referred to as readers, listeners and viewers. To oppose this trend, newsrooms must act in more inclusive and engaging ways to engage future audiences and learn from how both the gaming industry and social media soon has conquered two generations of media users.

On the other hand it seems there is a lack of understanding in the newsrooms, that news media have to take their part of the common responsibility to educate critical news consumers. With an audience developing their career as heavy media users in their early childhood with the algorithms of games, streaming services and social media as their most influential mentors, it is evident that strengthening news literacy in younger audiences can only succeed with the intervention of news media itself. Parents and schools can no longer keep the pace alone.

The results of our research on user requirements for the project News Arcade confirms a potential to address some of these core challenges of the news industry by designing an interactive journalistic methodology framed in a newsgame. A newsgame in itself will not make a difference. To succeed, we will have to put journalism at play by integrating its core values and principles with those of serious game mechanisms.

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APPENDICES

Appendix I: Literature

Eric Spitznagel: "Generation Z is bigger than millennials — and they're out to change the world, New York Post", January 25, 202

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Seth Ashley: News literacy and democracy, Routledge 2020

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Appendix II: Full questionnaire to newsroom surveys

Thanks for spending time with us!

NewsCraft is a news media development project in five countries supported by Creative Europe. We are building an online publishing platform for news media outlets, allowing their users to interact with current news stories and even play them.

We aim to find new journalistic ways to engage younger audiences in quality news content and raise the users level of news literacy.

This survey is part of our initial research to define user requirements. By responding to it, you are qualifying our approach to newsrooms potentially using NewsCraft as an authoring tool.

Your response will be handled anonymously. Estimated time spent on the survey is 5-10 minutes.

We appreciate your effort. Again, thanks!

dd = dropdown

cm = check mark

sc = scale

fft = free form text

rt = rating

Age
   (dd) 20s, 30s, 40s, 50s, 60s, 70s

Biology/sex/gender
   (dd) he, she, other

Country
   (dd) Cyprus, Denmark, France, Germany, Netherlands

Job title
   (fft)

Position
   (dd) content producer (journalist e.g.), management and development, other

News media sector
   (dd) public service broadcaster, commercial news publisher, other

Type of news media
   (dd) local, regional, national, international

Legacy company media outlet
(dd) newspaper, radio, tv, social, online

2. Audience

What is your experience with producing news aimed at younger audiences?
(cm) none, some, comprehensive

Do you believe that younger audiences when growing older automatically will transform their social media diet into a traditional news diet?
(cm) no, maybe, yes

What do you think will happen in the future, if news media presently don't succeed in engaging young adults?
(cm) no change, news media will eventually adapt, journalism as we know it today will become extinct

Who carries the most responsibility in making sure younger audiences develop the desire to consume quality news?
(cm) parents, schools, news media, politicians, tech companies

How much interest do you pay to younger audiences' news consumption?
(sc) None - [5pt] - A lot

To what extent would you like to engage in serving younger audiences with news?
(sc) None - [5pt] - A lot

What are the biggest challenges in developing new methods to engage younger audiences?
(rt) Business models, competition from social media, traditions, lack of knowledge, daily time pressure in newsrooms

What are your biggest needs to engage younger audiences?
(fft)

3. Respondent

How often do you play digital games yourself (e.g. mobile, console, PC, web-based games or similar)?
(cm) daily, weekly, monthly, never

What kind of games do you play?
(Action/RPG/Sports/Simulation/Strategy/Puzzle/Platformers/Adventure/Management/Shooters/Party Games/Casual/Multiplayer/Other/None)

Do you generally consider gaming most as a forming cultural activity or commercial entertainment
(sc) Cultural - [10 pt] - commercial

Describe your experiences with news games or interactive news formats
(fft)

How would you react, if you were asked to publish current news stories in an interactive format?
(sc) skeptical [5pt] - enthusiastic

How would you react, if you were asked to publish current news stories as an online game?
(sc) skeptical [5pt] - enthusiastic

What do you think of the notion that we are developing a CMS to publish news stories to young adults in a gamified format?
(fft)

Write us any comments, tips, good ideas and honest feedback.
(fft)

4. Consents

I wish to remain informed about the NewsCraft project

[yes -- enter email]

[no]

I am interested to participate in a later trial of the NewsCraft format and can potentially be contacted by the project partners for further feedback.

[yes] [no]

Appendix III: Matrix for the interviews of publishers

What are the biggest threats against journalism today?

What are the biggest potentials for journalism in the future?

Can you describe your strategy or considerations for reaching young adults?

What are the most important efforts to reach young adults, you have implemented within the last decade?

What do you find challenging about young adults' media behaviour from a professional perspective?

What are the potentials for the news industry in young adults' media behaviour?

What are your experiences with gaming in general as a user yourself?

Do you generally consider gaming as a forming cultural activity or solely as commercial entertainment?

What are your experiences with news games or other interactive news formats?

How could you imagine publishing current news stories in a gamified or interactive format?

What do you consider to be the biggest challenge of a project that is building news games or other interactive and online experiences for young adults?

How would you advise, when told we are developing a platform for publishing news stories in a gamified format?

In what ways could you use a platform like NewsCraft - maybe even addressing older audiences or creating strategic partnerships?

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