



Journalist Fellowship Paper

# From empty hype to a crucial tool: pushing the boundaries of immersive journalism

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# Contents

Acknowledgements	4
Introduction	5
Why immersive journalism?	7
The evolution of immersive journalism	9
The aftermath	10
The second wave	11
The lessons: Building your team	13
It's not a one-person job	14
Concentrate on what you excel in	16
Curiosity above coding	16
Give innovation lots of time	17
Be ready to redefine success	18
The audience	21
Study effects as well	21
Don't forget to study processes	23
Take your stories out of the newsrooms	23
The story	25
Less is more	25
Emotion & ethics can't be separated	26
Build agency	28
Decide who to reach	31
Branch out	32
Diversify genres	33
The technology	34
Don't forget audio	35
Experiment on social media	35
Bundle up	37
Get inspired by other industries	38
Conclusion	40

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# Introduction

“How have the circumstances you were born into shaped your life?” A single question, shining against a white backdrop on the newspaper’s usually busy website. It is a simple inquiry, but thought-provoking – so you engage.

You are then presented with a set of choices. Were your parents over or under the age of 20 when they had you? Did they read to you a lot when you were a child? Did you have a friend you could trust? With every answer you input, the storyline adjusts accordingly, explaining how your childhood made it easier or more difficult for you to thrive in society.



Minkälainen oli sinun ja perheesi  
terveys?

13. Oliko sinulla lapsena ahdistusta tai pelkoja, joihin et saanut apua?

oli paljon  oli jonkin verran  ei ollut lainkaan

14. Oletko kokenut fyysisä tai henkistä kaittoinkohtelua lapsuudenperheessäsi?

olen  en ole

15. Onko toinen vanhemmistasi ollut vakavasti sairaana tai kuollut, kun olin alakäisen?

on  ei ole

*“Ingredients of Life” is an interactive story format that merges a personalised storyline with unique data (Photo: hs.fi)*

This article –*Elämän evääät* (translated as “Ingredients of life”) – was one of the most well-received creations of Finland’s leading daily newspaper *Helsingin Sanomat*, where I work as a lifestyle editor.<sup>1</sup> It is a prime example of one of the newspaper’s trademark formats called “evolving story”, which uses unique data responses to create personalised storylines. The interactive element encourages reader agency, situating them directly within the story while simultaneously maintaining the narrative and addressing the complex question of societal privilege.

<sup>1</sup> <https://dynamic.hs.fi/2019/elaman-evaat/>

It's also a great example of immersive journalism, a genre that has steadily gained popularity over the past few years. Immersive journalism is an umbrella term for news in a form in which people can gain first-person experiences of events or situations described in news stories.<sup>2</sup> In other words, immersive journalism constructs a world where the user is encouraged to play an active role.<sup>3</sup>

Over the past few years, major advancements in the field of technology have been made, and as a result, journalism has undergone a flurry of immersive content creation.<sup>4</sup> Perhaps the most hyped about formats have been Virtual Reality (VR), Augmented Reality (AR), and 360° or omnidirectional video.

By now, the genre has emerged from its early experimental phase, becoming a more integral part of newsrooms. It hasn't been a steady upward curve, though. After the initial hype of 2015 and 2016, the field went quiet. Many immersive teams moved onto other industries willing to fund experiments, and those tech collaboration dollars dried up. The goal of this paper is to find out how we can emerge from the plateau of interest and make immersive storytelling a sustainable part of newsrooms.

I started my career in the highly visual world of lifestyle magazines, where every story was looked at from a personal perspective. A few years later I took a step in a completely different direction to work in a mobile game development team. Our game, too, was about wellbeing and life paths; the simple idea was to encourage the player to make a set of good, science-backed choices each day and then reward them for doing so.

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<sup>2</sup> de la Peña, N., Weil, P., Llobera, J., Spanlang, B., Friedman, D., Sanchez-Vives, M. and Slater, M., 2010. *Immersive Journalism: Immersive Virtual Reality for the First-Person Experience of News*. *Presence: Teleoperators and Virtual Environments*, 19(4), pp.291-301.

<sup>3</sup> Sundar, S., Kang, J. and Oprean, D., 2017. *B eing There in the Midst of the Story: How Immersive Journalism Affects Our Perceptions and Cognitions*. *Cyberpsychology, Behavior, and Social Networking*, 20(11), pp.672-682.

<sup>4</sup> *Viewing the Future? Virtual Reality in Journalism*. [online] Knight Foundation. Available at: <<https://knightfoundation.org/reports/vrjournalism/>>

For a long time, I considered my odyssey to the gaming industry to be fun but completely separate from journalism. Never could I have imagined how deeply the experience would shape the way I think about storytelling.

I brought three thoughts with me back into the newsroom. One, there is immense potential in the technology we use, yet we hardly harness half of its potential. Two, we ought to harness it if we want to survive and thrive. Three, if we merge the personal elements of lifestyle and immersive storytelling together, we can create truly unique, powerful stories. But if we don't push the boundaries of storytelling now, we won't be ready for the demands of the future.

### Why immersive journalism?

Journalists everywhere are tackling major challenges, including younger audiences who report being fatigued by the mere amount of news.<sup>5</sup> But those same young audiences who are the hardest to reach with traditional media express more interest in experimental visual and mobile news formats than anyone else. The notion that people don't want to spend time with journalistic content has been debunked. Now, media companies are showing growing interest in creating slower, more immersive journalism that manages to communicate complex issues, and gives the user some choice and control.

At the same time, the industry is advancing in its digital transformation and slowly starting to figure out how to make people pay for news. Many newsrooms have moved to a subscription-heavy strategy, with various paywall models the most likely to yield profit. For immersive storytelling, this could turn out to be great news: editors need to invest in offering something unique, as readers have spent good money and will want to spend time with more exclusive, carefully crafted content.

Close your eyes and try to recall a story that stuck in your imagination long after you finished it. It is likely these stories possess an element of intimacy. You might remember

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<sup>5</sup> Reuters Institute Digital News Report. 2021. *Reuters Institute Digital Report*. [online] Available at: <<https://www.digitalnewsreport.org/survey/2019/>>

an emotional attachment, perhaps a character or a place you sympathised with. It is your unique relationship with a story that makes it memorable.

Immersive journalism ticks all of these boxes. It is often more personal than traditional news and has the potential to induce deep emotional responses. Immersion brings you right to the centre of everything, making you imagine what it looks and sounds like in a cave threatened to be destroyed by tourism or locked in as an inpatient in a mental asylum. A high-quality immersive piece allows the reader to “get lost” in a true story.<sup>6</sup>

According to early research in this field, immersion may enhance memorability, understanding and empathy.<sup>7</sup> Studies show that being highly “transported” to another place or event has a positive effect for readers in terms of believing information. This suggests that immersion could rebuild trust among audiences.<sup>8</sup> In the age of fake news, the implications are promising.

Immersion marks a major shift in the role of the reader.<sup>9</sup> The passive scroller becomes an active user, nearly like a player in a video game. Thus the immersive genre holds great potential in reaching tech-savvy readers.

But first, journalists must rethink their role and interrupt the narrative.

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<sup>6</sup> Kang, S., O'Brien, E., Villarreal, A., Lee, W. and Mahood, C., 2018. Immersive Journalism and Telepresence. *Digital Journalism*, 7(2), pp.294-313.

<sup>7</sup> Sánchez Laws, Ana Luisa. "Can Immersive Journalism Enhance Empathy?" *Digital Journalism* 8.2 (2020): Pp213-228. Web.

<sup>8</sup> Nielsen, S. and Sheets, P., 2019. Virtual hype meets reality: Users' perception of immersive journalism. *Journalism*, pp.1-17.

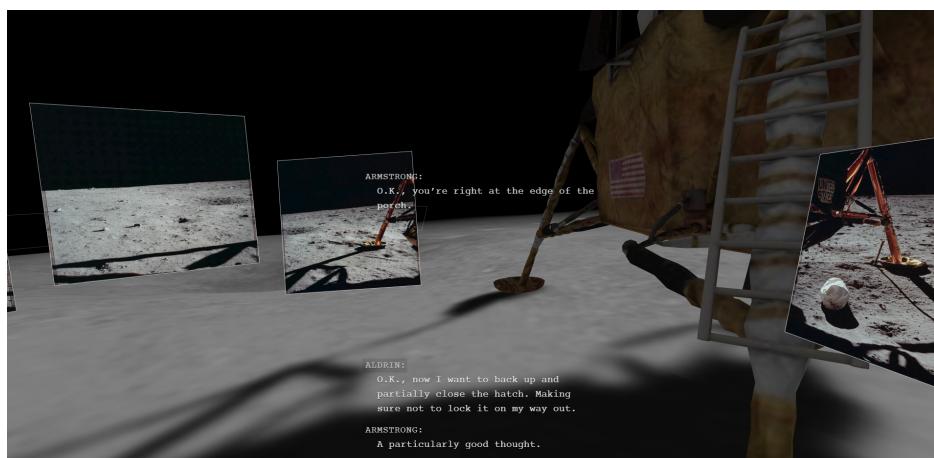
<sup>9</sup> Magdi Fawzy, R., 2019. Neoliberalizing news discourse: A semio-discursive reading of news gamification. *Discourse & Communication*, 13(5), pp.497-515.

# The evolution of immersive journalism

‘Is everyone going a bit mad?’ thought BBC’s editorial lead Zillah Watson while browsing through the headlines. The year was 2015, and everyone was raving about Virtual Reality. Buzz-phrases like “omnidirectional video” were on every tech-loving journalist’s lips. Oculus Rift had announced their first consumer-directed VR headset. A new generation of technically advanced smartphones had conquered the market. More academic papers attempting to define the field of “immersive journalism” were beginning to spring up.

Not surprisingly, newsrooms wanted a piece of the action, too. Early discussions around immersive journalism were framed by the limitations and possibilities of commercial hardware, partly due to the fact that many experiments were sponsored by companies like Samsung and Google.<sup>10</sup>

Among the forerunners in the field were the *New York Times*, *USA Today*, CNN, the *Guardian* and the BBC. Praise and prizes were aplenty. *New York Times’* long-form multimedia story *Snowfall* won multiple awards after it was published in 2012 and was held up as masterclass in news VR. Outside the English-speaking realm, renowned brands such as Euronews, *El País* and *Aftonbladet* experimented with their own partnerships.



*New York Times*, one of the forerunners of immersive journalism, recreated the Apollo 11 Moon landing as an AR/VR experience (Photo: New York Times)

<sup>10</sup> Sirkkunen, Esa; Vázquez-Herrero, Jorge; Uskali, Turo; Väätäjä, Heli (2020). Exploring the immersive journalism landscape. In Uskali, Turo; Gynnild, Astrid; Jones, Sarah; Sirkkunen, Esa (Eds.) Immersive Journalism as Storytelling : Ethics, Production, and Design pp.13-24. Oxon: Routledge.

Immersive storytelling undoubtedly showcased the technical and artistic capabilities of newsrooms. Yet the unavoidable question remained unanswered: is this going to make us more profitable?

“Was there any early advantage to going in fast? Maybe in terms of building business relationships with platforms; not in terms of audiences, I’d say,” Watson recalled.

Above the excitement loomed a darker cloud. The fast pace of the digital evolution had caught many newsrooms off guard. Massive layoffs fostered cynicism, and cynicism rarely fosters innovation. It was only natural that there was a strong desire to be ahead of the curve on “the next big thing”. Narrowing the gap between technology and the media industry might ultimately pay journalists’ salaries, or so the theory went.

### The aftermath

Immersive storytelling expert Martin Edström, who first started experimenting with VR in 2012, admits to being pulled in by the initial hype. He also witnessed the aftermath.

“It feels natural that everyone is hunting those firsts for novelty. But then it had to translate into a storytelling format that is actually viable to continue working with. And that’s where you lose a lot of people’s interest,” he said.

Unfortunately, headsets in every home did not turn out to be the next big thing. (Not yet.) Faced with a lack of users, monetisation and robust audience research, many immersive teams moved onto other projects, and the tech collaborations dried up. The downsides of investing in tech-heavy innovation became apparent when Google discontinued their Cardboard headset as well as its successor Daydream, both of which several newsrooms had been betting on.

## The second wave

Edström believes that many of the ‘firsts’ in the immersive space have already been achieved. “I would say this is a good thing. We’ve now come to the point where we talk about why. Why does this make sense as an immersive story? What can this add?”

This paper aims to bridge the gap between the past, present and future, and find answers to those whys. It is tempting to look around for the next trend, but reflecting on the past is crucial. What did the early immersive storytelling teams learn? Looking back, what would they have done differently?

I interviewed experts from various newsrooms that all have a unique perspective on immersive storytelling. They represent a variety of backgrounds, from team leaders to photojournalists, graphic designers to tech company representatives.

It is worth noting upfront that two schools of thought exist within the immersive genre: The first one emphasizes the hardware (think VR headsets); the second one (which I strongly lean towards) emphasizes the narrative aspects and treats immersion as a broad umbrella term that includes a variety of techniques (Nielsen & Sheets 2019, 3). An AR story where you see objects planted in your room can be immersive. A gamified story on mobile can be immersive. Audio can be immersive.

This flexible definition implies that powerful immersive stories are doable even if you don’t have the resources of the *New York Times*. I will talk about VR too, as the bulk of the early content was made for VR. More importantly though, I want to find out what can be applied in smaller newsrooms.

When the BBC’s Watson took an updated look at the business models around immersive journalism in 2019, she found the concerns over whether the content was good had been resolved. We know audiences enjoy immersive stories. The next question was about money: has the genre shown a return on investment yet? In terms of high-end VR, the question is still hard to answer.

The truth is, many outlets can't afford to invest in expensive experimental technology anytime soon, yet we do need to keep reinventing ourselves to stave off decline. Not every story can or should be immersive, and not every immersive story should be the fanciest VR experience.

Trial and error is embedded in innovation. Thus the plateau upon which we now find ourselves is natural. The early adopters created strategies and gathered data that we can now build on. Something that we could call the second wave of immersive journalism is starting to form. Newsrooms are finding ways to implement strategies sustainably – without necessarily relying on the shiniest tech but rather clever storytelling that mixes elements of virtual worlds with more accessible mobile storytelling, and utilises the tools that we already know well.

## The lessons: Building your team

One of the hardest things in any profession is to see past your own biases and established ways of thinking. Journalism has its roots in words, and the binary mode of text and image is deeply embedded in journalistic thinking. Vincent Ryan, who works at the intersection of editorial and technology at *Google News Lab*, has witnessed this both in his former career as a journalist and in his current work where he coaches newsrooms in adopting new technologies.

“The capabilities of telling stories online are unlimited. What you can do with interactive graphics, visualisations, data... we’re only scratching the surface of that. There’s incredible scope that I think people don’t fully realise.”

In a newspaper environment, the traditional brainstorming process starts with an editor or a journalist pitching a story idea. Other experts are brought along later on; photographers, graphic designers, coders. This means that most brainstorming inevitably starts in the frame of text. There is nothing inherently wrong with this, yet it may hinder innovation when attempting to create something completely new from scratch – such as nonlinear immersive stories.

“Immersive storytelling doesn’t have to be hugely different,” Ryan said. “Broadcast is done by specialist teams. They have cameramen. They have audio. In a documentary production, you’d have a director and a journalist involved. You just replace your cameraperson with an audio person, the cameraperson becomes somebody who can code. The experience of this exists within journalism.”

In terms of production, one could think about immersive journalism as a combination of documentary film and gaming; engaging audiovisual narratives with interactive elements. From these fields, we can learn that brainstorming is treated as a more horizontal process; writers, coders and designers are brought to the same table early on.

“The perfect immersive piece could be something where you don’t even read any text, where you’re simply interacting and get to hear a character speak”, Martin Edström says.

Edström runs his own immersive studio, and he usually works as a director of his own projects. This means he is able to navigate the process from the start. Yet when he works for news outlets as a freelancer, the clash of cultures is obvious. Often when a newsroom pitches him an idea, the editors have already produced a script and want Edström to create immersive media as a secondary element. According to Edström, this can work for text-dominant immersive stories, but not so much for predominantly visual experiences.

“Planning for a regular video versus immersive is completely different. And if you begin working on a script for a regular video, that’s completely different from what you do in an immersive story. A text story is a text story. Converting things to immersive [format] too late is never a good idea.”

This doesn’t mean newspapers can’t experiment with immersive storytelling. Yet it is crucial to recognise that immersion isn’t something that you can necessarily simply add on top of already existing practices. You might need to go deeper and change the way you treat storytelling. That, in turn, might require rearranging your workflow and teams.

### It's not a one-person job

Immersive journalism requires multidisciplinary work in newsrooms. When it comes to mastering new technologies, there are two approaches: some think everyone should know a little bit of coding, others prefer deep specialization in a narrow field.

Juho Salminen, who leads the visual and innovative storytelling projects at the *Helsingin Sanomat* newspaper, has learned that the all-rounder mentality doesn’t work very well with more complex online storytelling. Not every journalist can or should become a coder, he will tell you. Every team should, first and foremost, have skilled specialists. “If we look at what’s happening in the field now, it is crystal clear that some kind of specialization is the only way journalism will stand out from any other type of communication,” he said.

Tom Byermoen works as a designer at Norway's leading newspaper *Verdens Gang* (VG) in the editorial development department. VG is a good example of a newsroom that has managed to integrate immersive storytelling into their daily practices without enormous technology investment, while still being able to create groundbreaking projects, such as the well-known true crime mystery *Oslo Plaza*<sup>11</sup> where the reader could move around in a hotel room and look for clues in an unsolved murder.

All Byermoen's team members have varying degrees of knowledge of design, coding and writing. Each person knows at least the basis of what the other team members do. Byermoen himself is a trained designer, but learned to code later. This means he can help with and better understand the possibilities of programming.

"I'm not the best developer in VG, but I can make many things. Some of my colleagues dive deeply into technical stuff. I think you need both. Everyone has to have at least an interest in journalism, because that's what we're doing: researching and telling stories."

One-man band solutions to immersive storytelling haven't really taken off, supporting the idea that journalists first need to master their specialisation. The BBC's Watson once experimented with giving journalists 360° cameras and a little bit of guidance, then sending them off to the field.

"Generally what would happen is somebody would have a go at doing a couple of shots after they had already got the main TV news report in the can. Rarely did they live up to expectations. It needed somebody there thinking about what would make a VR story."

There are examples to the opposite, however. Martin Edström mentions the *New York Times'* daily 360° series that he shot a couple videos for himself. The commission was simple: each day, you could dive in a new environment and news story in a 360° video.

"It was nowhere near perfect and sometimes it was really poorly done, but it still represented a new step with an actual direction. But again, that was the start of immersive

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<sup>11</sup> <https://www.vg.no/nyheter/innenriks/i/xRjoWp/mystery-at-the-oslo-plaza>

journalism. If you go into long-form immersive narratives on the web, you need resources. A good story deserves to be treated well, no matter the format.”

### Concentrate on what you excel in

Hype has a tendency to create hiveminds. During the early phases of immersive journalism, a lot of “shoulds” were in the air. Different newsrooms experimented with VR and AR because everyone else did – and with varying results. A more sustainable approach going forward would be to think about what new angle your newsroom can bring to the table. How can you create something that is truly unique and also looks like your brand?

*Helsingin Sanomat* is known for its strong tradition of text-based storytelling. The outlet still relies on text as a major source of navigation, even in its immersive stories. Juho Salminen has never seen this as a problem, though – especially if a paper still has to adapt its stories to print. Text articles with immersive elements might be a more sustainable option for the time being than predominantly visual or audio stories.

One example is the evolving story format mentioned earlier, which combines a series of questions and interactive elements to personalise the narrative. The format has been well-received because it ticks all the important boxes: it speaks the same language as its brand, it is easy to recreate for different topics, and it has the power to create deep engagement. It also, however, uses a lot of text for navigation.

“I always try to emphasize intentionality. How do we match the format with the content? Everything we do should serve the purpose of delivering a message,” Salminen noted.

### Curiosity above coding

Without curiosity, innovation doesn’t exist. Francesca Panetta, former executive editor of the *Guardian’s* VR unit, said her best experiences happened when the whole team was fully invested and threw their heart into the project at hand.

“In innovation, everyone is slightly adapting all the time. You have to be interested in the possibilities of the platform and trying new ways of working. Flexibility and curiosity

[about the possibilities] is really important, as well as being really skilled in what you're bringing [to the team]."

Multidisciplinary fields like immersive journalism allow room for many different viewpoints. Seek these out, and from a diverse group. Google's Ryan noted that we often tend to associate shiny new tech with young journalists. If we are too obsessed with this young view of tech, we might lose valuable expertise.

*Verdens Gang* developed several in-house template tools so that all journalists can create some interactive stories themselves. According to Tom Byermoen, this has democratised the way their newsroom approaches innovative storytelling, because it has enabled people from different backgrounds to learn about new formats.

"Sometimes older journalists had good sources and made great stories, but they traditionally didn't know what to do online. Then we were trying to use their advantages, our advantages, and mix them together. [...] It's more collaborative now because we all use the same tools. They can interact more with the story than just deliver a text."

#### Give innovation lots of time

New formats will ultimately take more time to master. Timelines for delivery have to be realistic, but beware of making them too tight before best practices are established. Ultimately, trying out new things can prove to be valuable in itself.

"What I needed was people who had time to think. Apart from anything else, it was the people with the right skillset and the right understanding of journalism to have the time to step away from the day-to-day grind of the news factory to think, and play, and apply their knowledge to a new thing," Watson said.

When technical tools become more advanced, each journalist becomes a skilled specialist, and gaps in knowledge between experts grow. Communication becomes more important, which has to be taken into account when planning timelines. With immersive journalism, this is especially true about the role of the coder. Coding is an integral part of both

high-end VR stories as well as immersive stories on mobile devices, be it 3D modelling, or embedding 360° video into online stories. Out of every area of journalistic expertise, programming is still perhaps the least common area to find a regular journalist.

“The potential of an immersive story should be recognised as early as possible. Another important lesson is that everybody should be brought to the same table as early as possible, so that the coder is not just a separate technical thing somewhere,” said HS’s Salminen.

Often the issues are something an uninformed editor wouldn’t even think of. Even giving time estimates can be difficult. “Some of the stories that my boss thinks are just a quick fix can in fact take many weeks,” Byermoen said. “For instance, you can make something that looks ready, but then you have to adapt it for all types of screens and fix all the bugs for the next few weeks.”

#### Be ready to redefine success

Right now, immersive teams are still project teams. For the *Guardian*, financial gain wasn’t the most important thing to start with.

“I think that these things should be seen as R&D [Research and Development] and experimentation. Putting too much pressure to build new revenue streams out of new technologies is quite dangerous in terms of stifling the originality and imagination,” Panetta said.

Another problem is that technology moves forward fast, and pieces become obsolete quickly. This is an important point to remember when investing in any kind of innovation. “VR is not stabilised as a platform. AR really isn’t either. So I think at the moment all of these things are experiments, and we need to embrace that rather than try to hide away from it,” she said.

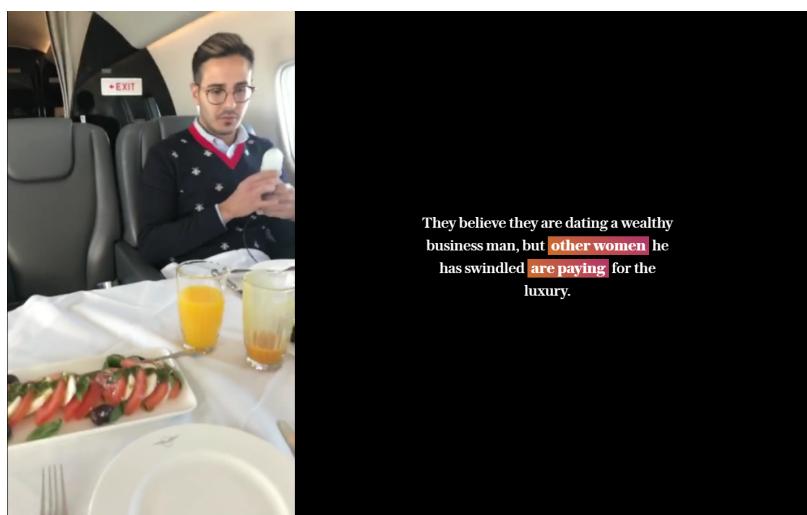
An important thing to discuss early on is how your team defines success. What happens if this ends up not bringing in money?

“What we’ve got to do to make these projects work is to redefine success sometimes; we did some amazing work to really understand the audience issues, the distribution and business issues around it, as well as how to make great content. None of this knowledge will be lost,” said Watson.

VG approaches innovative storytelling by giving the editorial development department lots of freedom. The thinking behind this is that specialists know the affordances of their tools best, often better than their supervisors.

“We’re sort of a research lab. We test our own ideas and push the storytelling forward. We see that something works, and we build a tool for making similar stories. Then we can make 3D graphics and maybe explore some VR and AR opportunities.”

Byermoen mentions the *Tinder Swindler*<sup>12</sup> project that tells the story of a man who seduced young women on social media. The story was told in a mixed multimedia format, making it resemble an authentic Tinder experience.



*Tinder Swindler* is a mixed multimedia story that mimics the Tinder app experience (Photo: VG)

The in-house tool built for that story was then used to create more stories in the same format. Through this, another story called *Den digitale blotteren*<sup>13</sup> developed. It is a story about a criminal who sent sexual images to minors. This story, in turn, was told in a

<sup>12</sup> <https://www.vg.no/spesial/2019/tindersvindleren/english/>

<sup>13</sup> <https://www.vg.no/spesial/2019/blotteren/>

format that resembles a Snapchat experience. Both pieces received a lot of praise in- and outside the newsroom.

“I’m not always a fan of the stories that journalists make with this tool. Not all stories are visual enough, and visual thinking is a skillset, not just a tool. But these projects opened the minds of many journalists in VG,” he said.

Sometimes success is just that: you manage to spark curiosity among the cynical. During a busy news cycle, creativity is often the first thing to suffer. There is inherent value in making your newsroom aware of the possibilities of emerging technologies.

# The audience

When the BBC set up its Virtual Reality Hub in 2016 and appointed Watson as editorial lead, the unit served as a testing ground. As a big legacy organisation, BBC was fortunate to have a generous budget to invest in platforms that were technically advanced at the time. However, all choices were based on strategy and audience insights. This included a 2016 ethnographic study about Virtual Reality in homes.

“We were very aware that the predictions about [VR hype] were constructed around a scenario based on the introduction of the iPhone. We didn’t start from there; we based it on some sound insights and really thought about where and how in the organisation it would be best to do this.”

BBC used audience surveys to verify how many people had tried VR headsets in the UK. This independent data gave them a clear sense of what to focus on. The second step was to look at tech companies using similar platforms. What would it take to be seen as a serious player in the field of market leaders such as Oculus and Google?

“We made a very clear bet to go for very good-quality mobile VR headsets. We were very focused on where we thought we could achieve the most impact with our audience. It had quite a lot of background research before we attempted to move forward.“

## Study effects as well

Analytics and metrics are an essential part of all news projects now, but even more so with emerging formats. This is something I learned quickly in the gaming industry: prototypes are brought to the audiences early on and user experience can be honed later on. Immersive storytelling generally requires more resources than traditional storytelling, so it is crucial to be able to see if these narrative devices are actually working.

The academic world has recently been interested in the audience effects of immersive journalism. Extensive studies on effects are harder to duplicate in a newsroom.

“We still have relatively little data on how the innovative narrative devices we use resonate with the audience and affect the message,” Salminen admitted. “Even the tools we [win awards] for.”

Luckily, there are more accessible ways to do audience research than full-scale studies. In 2017, BBC commissioned a VR experience on the Congo river in Africa. When the piece was shown to the audiences in libraries across the UK, the team created a survey on-site as well as a follow-up study that was conducted three months later.

“We were testing memorability: is this content going to stay in people’s heads better than watching a TV news report or documentary? And it seemed to be the case. People remembered and talked about – unprompted – standing in the station in Kinshasa which is an extraordinary case,” Watson said.



*BBC’s immersive team brought the Congo VR documentary to public libraries and afterwards conducted a memorability study (Photo: BBC)*

For the BBC, these audience insights were a vehicle to both understand the potential of VR but also to get to grips with the distribution challenges. Once news becomes business as usual, it becomes a machine. Creating content from scratch is different. With new immersive projects, one can’t separate strategy from daily work.

“I think all digital news has this in common when it’s good,” she said. “You’re looking at your numbers, you’re constantly shifting things to make it work. You have to be incredibly agile and react to changing circumstances.”

### Don't forget to study processes

Looking back on the first wave of immersive hype, Panetta would give herself one bit of advice: slow down. She highlights the importance of studying not only audiences and content, but also production processes. It’s important to do the research for all the skills that are needed before embarking on tenuous experimentation.

“I’ve seen that time and time again in audio and video, where newsrooms don’t do that research as to what production processes are like, and they assume a proper [story] can be made on the same timeline as a news article.”

So if a newsroom is considering adopting immersive tools in their storytelling, Panetta would advise them to go spend time in production houses. What skills do your team have and need? What are the different timelines for different scales of production?

### Take your stories out of the newsrooms

Especially in the early stages of experimentation and with high-end VR experiences, taking stories out of the newsroom is crucial. When the *Guardian* created their famous piece *6X9*<sup>14</sup> that showcased the experience of solitary confinement, the story was also used by campaigners doing advocacy work and taken around festivals. It even got to the White House where policymakers were invited to try it out.

“For me, that felt like ‘this has real potential for impact’,” Panetta said. “But we also did a Google cardboard version where the *Guardian* audience could view the piece. So it felt like it really gave something to different audiences and worked very well for the form as well.”

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<sup>14</sup>

<https://www.theguardian.com/world/ng-interactive/2016/apr/27/6x9-a-virtual-experience-of-solitary-confinement>



*6X9, a project showcasing the experience of solitary confinement, was brought to festivals and even to the White House to policymakers (Photo: The Guardian)*

For the Guardian, peer recognition and publicity wasn't just marketing but also a tool to figure out what journalism looks like in this new format. Is it interesting as an organisation to be able to tell stories in a new way, and does it offer the journalists anything? Early experiences show that it does.

One of the core problems of immersive journalism is that it is still scattered across websites and rather hard to find. Thus building and studying brand awareness outside of newsrooms becomes even more important. When you bring immersive stories to the people, the content can speak for itself.

# The story

Which topics work as an immersive piece? Which tools should I adopt? These are common questions, yet they all miss a crucial point.

First, it is helpful to go back to the dictionary definition of immersion: *The fact of becoming completely involved in something.*<sup>15</sup> Immersion is the psychological experience of being so powerfully transported to a place that you get close to a ‘flow’ experience and lose sense of time. In a nonfiction context, flow requires both a degree of escapism and the reader’s engagement with the information.<sup>16</sup>

## Less is more

The challenge is that there’s always a subjective element involved: the user and the environment that they consume the content in affects the level of immersion. We can only better the odds of creating a flow experience. There is no magic tool.

One obvious mistake with many of the early immersive pieces was that they were overstuffed with text, video, audio – every element you can possibly imagine. NYT’s famous multimedia story *Snowfall* pushed the boundaries of storytelling in 2012, yet now the interface feels gimmicky. If a story takes a lot of effort to navigate through, and if this effort is not an enjoyable experience in itself, the flow is lost.

“Whenever I do a newsroom tour around new tools, I always say it needs to be the right tool for the right story,” said Google’s Ryan. “There is definitely a tendency to go for the shiny new thing instead of thinking about what this tool adds to this particular story.”

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<sup>15</sup> Dictionary.cambridge.org. 2021. Available at:

<<https://dictionary.cambridge.org/dictionary/english/immersion>>

<sup>16</sup> <https://www.ucviden.dk/en/publications/multimedia-journalism-and-narrative-flow>

In the second wave of immersive storytelling, the importance of seamless user interaction is growing. The sign of a good user experience is that you don't even realise the interface exists.

Simultaneously, the role of mobile in online storytelling is growing, and the limitations of the platform have to be taken into account, and this often means simplifying. According to Byermoen, optimising immersive stories to mobile screens has actually helped streamline storytelling for other platforms, too. The small size of the mobile screen forces designers to focus on the essentials. Through their analytics, VG has learned, for instance, that their audience prefers scrolling to clicking. These details might seem minor in the big picture, but they can have a huge impact on design.

To help strip down stories, I use what I call a multisensory planning method. I dissect the different elements of a topic and look at them through all our different senses.

Depression, for instance, can feel like objects that are far away, a narrowed field of vision, or loud inner voices. The classic slogan “show, don’t tell” applies. Once you approach the subject from this perspective, you can strip down the story to its core.

#### **Emotion & ethics can't be separated**

When we watch horror movies for the sheer thrill of it, we enjoy the safe distance of fiction. Journalism doesn't have that distance. Even without modern technology, journalism deals with gut-wrenching topics, from warzones to pandemics. A certain amount of distance is healthy. Immersive journalism, on the other hand, comes close to the user. Thus we need to make sure we are not creating experiences that are unbearable.

Another aspect that has to be taken into account is respect and fairness. Virtual reality experiences in particular have an entertainment aspect embedded into them, yet not all topics should be treated as entertainment.

One of the challenges of an emerging format is that it takes time to create established guidelines, and teams have to learn lessons through trial and error. For VG, the balancing

act became apparent when the team was designing a VR experience to support its murder mystery *Oslo Plaza*.

“At that time we were considering printing Google Cardboard VR glasses with the VG brand and shipping them with the newspaper,” Byermoen recalled. “But it was a murder story and we were not quite sure about the ethics of promoting a murder story with VR glasses. So we didn’t end up marketing it.”



VG had planned to market Google Cardboard glasses with the Oslo Plaza story, but in the end, the entertainment aspect of VR didn't feel right for a murder story (Photo: VG)

All of these aspects were highlighted in a study, “To be there when it happened” (Steinfeld, 2020) where the group of researchers designed an immersive experience about a girl who was being sexually harassed.<sup>17</sup> The example was fictional and constructed purely for the study, yet it raised important questions: would it be fair to recreate something similar with real people? Even if the purpose is to enhance understanding of an important issue, is intimacy a good thing if it means crossing personal boundaries? When we use emerging technologies that we are not yet used to, how can we make sure everybody knows what they are signing up for?

<sup>17</sup> Nili Steinfeld (2020) To be there when it happened: Immersive Journalism, Empathy, and Opinion on Sexual Harassment, Journalism Practice, 14(2), pp.240-258.

When thought out carefully, immersive storytelling can enhance social empathy. According to Edström, it is hard to reach into the heart of our audiences these days. He has witnessed this during many global crises; for instance, while covering the European refugee crisis in the 2010s.

“They’ve seen the kids dying on the beach and floating ashore. They’ve seen the horrible facilities at refugee camps. That doesn’t stir attention anymore. [...] But when you come out of an immersive story about a refugee camp, you get to meet a few people, it almost feels like you felt the heat because you had the headset on, you heard the flies in the air.”

Immersive journalism cannot match real-life experience, but it can give the audience a little bit more access and perhaps a little bit more understanding.

“Be it the format or the novelty, there is something about stepping into a story in a more spatial direct way where you feel like you’re transported there. Immersive storytelling does seem to affect people more,” he said.

When BBC’s VR hub produced the series on the Congo river, the team made sure to include positive elements in the story. On the surface level, the goal was simply to make the adventure enjoyable. The other mission, however, was deeper: to tell positive stories about a continent that is too often reduced to stories of natural disasters or poverty. Immersive storytelling is not just about creating gut-wrenching emotional experiences; it can sometimes be the very simple act of diversifying the narrative.

### Build agency

The term “reader” traditionally implies written text and a linear process from content to recipient. Immersive storytelling adds a higher level of interaction to the mix. Thus, I personally prefer the term “user” when delivering immersive stories.

When you bring the user to the forefront, you start prioritising their experience. The focus is now on the point where the story, format and the user interact. This is where agency

comes to play. What is the user's role? Does it make sense to give them an active part in this particular story?

Immersive journalism is not only about transporting the user to another place. Ultimately, the user will ask *why* they are transported. Immersion requires extra effort from the user and this effort has to be very well motivated. Is it enough if they're just looking at a landscape with no sense of control?

"There are lots of very techy pieces that don't immerse me at all and I want to take the headset off immediately," Panetta said. "For me, it is about craft, approach, technique and intention. [...] I try to use the latest tools to envelop my audience in the best way possible."

In a similar vein, AR often gets automatically defined as immersive. Simply pointing at things with your phone might be immersive if it makes sense in the context of the story... or plainly annoying if it diverts the user away from the storyline.

"We're definitely using that terminology in sometimes very specific, and sometimes very loose ways. For me, the broader the definition the better," Panetta said.

By broadening the definition of immersion, we open the way for a more diverse set of tools for creating agency. Sense of control doesn't always have to mean moving around in a physical space. It can mean interacting with the story on different levels, like text or audio navigation. In a carefully crafted piece, agency is a meaningful element that pushes the story forward.

Of course, in the context of journalism, there is a limit to how much the user can change the course of events. Journalism can rarely resort to fully fictional scenarios, and it has to balance agency with impartiality.

A project where this balancing was well motivated was a scenario-based asylum seeker news game that Salminen created while working for the Finnish public broadcasting

company YLE.<sup>18</sup> In the game, the user could play as an asylum seeker who has to face all the choices that a real asylum seeker would when arriving in Finland. The game garnered widespread attention in the media industry and won awards for innovation.

“Even though the character was fictional, the choices and their consequences were as real as they can be. We chose the gamified format because the goal was to showcase palpably the choices that these people face in real life.”



“*You have been turned away*” is a newsgame that puts the reader in the shoes of an asylum seeker (Photo: YLE)

If we take the idea of agency even further, we can look at it in the broader context outside of a single story. When VG created the *Oslo Plaza* article, they did publish a VR story, but they also invited the audience to take part in looking for clues, encouraging them to engage in discussion outside of the VR piece.

Our younger audiences in particular consume media in more diverse ways than we sometimes realise. Gaming is becoming more mainstream. Social media is being created *for* but also *by* its users. Future audiences are used to molding and interacting with content. The key is to look at agency right from the start of the brainstorming process and treat it as a multi-level value.

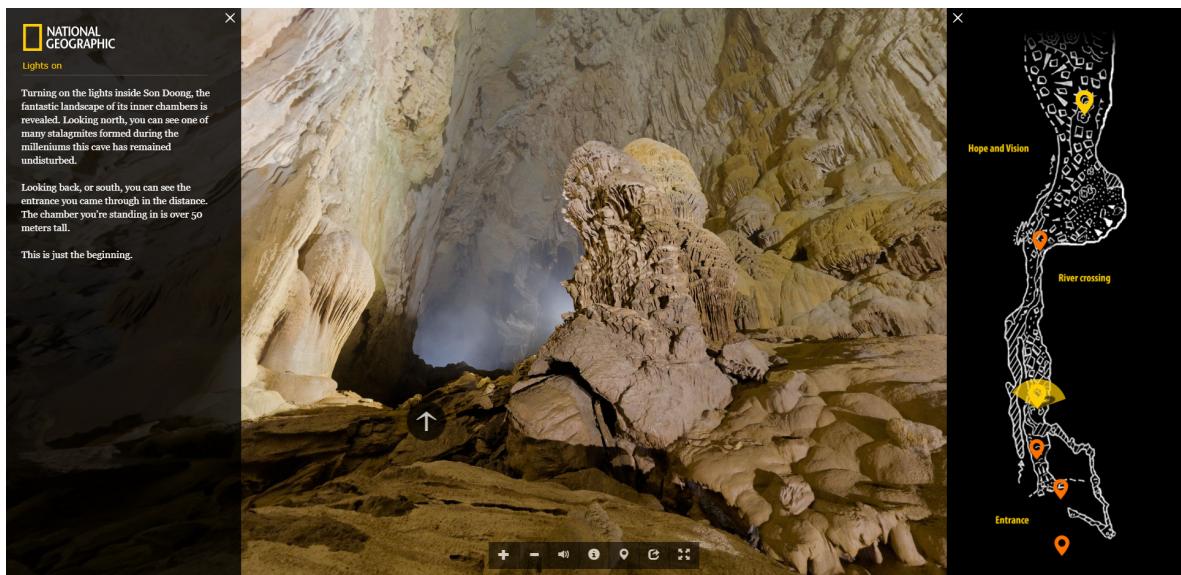
<sup>18</sup> <https://yle.fi/uutiset/3-9136482>

## Decide who to reach

Every immersive story told need not be readily available to everyone. Sometimes it is more meaningful to reach a few select people. Certainly in the early phases of experimenting, it made sense to take the stories out of the wider public domain and raise awareness of the emerging genre among early adopters.

It is crucial to think early on about not only who but also how many you want to reach, as this will greatly impact what platform you choose to build on.

One of the most successful projects for Edström was a conservation story about a Vietnamese cave that was threatened by plans to build a cable car system for tourists. According to scientists, this meant the ecosystems in the cave would be destroyed. Edström teamed up with local activists who were working on a campaign to save the cave. Edström's team shot and gave the activists a VR story where the user could step inside the cave and see the natural wonders that were at stake.



*The immersive story of Son Doong cave in Vietnam was successfully used by activists to stop a tourism project (Photo: National Geographic)*

The activists then went around Vietnam with the VR story to get people to sign a petition. In the end, hundreds of thousands of people signed, and the tourism project was stopped.

The story even reached Barack Obama, who mentioned Son Doong cave by name in his last foreign address as president.

Edström recalled: “The activists said this was a 100% working tool and that without the VR they would’ve never achieved something close to that. [...] We only lent our storytelling, they did the main work.”

Of course, journalism that ventures so close to activism only suits a few select publications. Moreover, Edström notes his evidence is anecdotal; we cannot prove that it was the format that made the campaign so influential. But academic studies support this view. Immersive journalism might be able to tap into a deeper level of emotion.

### Branch out

One way to make immersive storytelling more sustainable is to create a wide variety of content around a certain topic. VG’s *Oslo Plaza* murder mystery started with an investigative journalist who had been working on the subject for years. This then led to a VR story, several smaller articles, and even a Netflix documentary.

“The idea was that when you read this story or saw this documentary, you could get more by visiting this site – you could read more about the clues and even go into this room to see it for yourself. That story was like a supplement to the rest,” said Byermoen.

*6X9*, the first VR piece that Panetta commissioned and co-directed for the *Guardian*, was also a part of a large body commissioned around the VR piece: articles, podcasts, videos and a number of news and op-ed pieces. The VR piece was seen by fewer people than the other media commissions but it added an experiential dimension to the story that the other pieces couldn’t.

“It also supported those really important pieces of journalism that VR’s not very good at; statistics, figures and details.” she said. “I really liked this idea of journalism working across forms to support each other.”

Throughout the years, Panetta has become more and more interested in stories that do not rely on one big story but have a variety of complementary pieces of journalism around them. Oftentimes this can be more sustainable than building a new media vertical.

### Diversify genres

Phenomenons like the refugee crisis make newspaper front pages. It is only natural that many immersive teams play with similar subjects; they are highly valued within news organisations.

My background is in lifestyle, and I've always been passionate about diversifying the news agenda. I'm equally passionate about bringing immersive storytelling tools to stories that don't typically benefit from them. During the COVID pandemic, we saw an uptick in new forms of innovative visual stories in the health and science sections. Renowned newspapers crafted innovative 3D models that showed how the virus spreads in the air. VG's dedicated portal for pandemic statistics in visual form has broken every user record.

"In the last few years, our newsroom has seen the important role our team can play in lots of stories," Byermoen said. "The statistics site has been the most successful page in VG's history, it has close to 500 million views now. There are 5 million people in Norway! Sometimes the page had one million visits a day. So one year with that kind of traffic, that's huge."

There is immense potential in creating a variety of content under the umbrella of immersive journalism. It is also worth noting that genres such as lifestyle are very visual mediums, so there is a lot of expertise that could benefit immersive storytelling.

# The technology

If you've made it this far, you may be asking yourself: great, what new tools will I have to learn to use now? The experts suggest you flip the questions around: could you look more closely at the tools you already possess?

"When tech-oriented people ask me what the next big thing is, my only answer is that we have to learn to better utilise the tools we currently have," Salminen said. "To me, that's the only truthful answer."

Innovation is not only about adopting new tools, but learning new ways to use old ones. Consider your mobile phone. "I think there is a lot of unused potential in our mobile phone and its sensors," Byermoen said. "I think that's something we should explore more. Tools such as facial recognition could be used for many interesting things."

During the years that Byermoen has worked at VG, he has seen tools come and go. His newsroom used Flash for years, but Adobe stopped developing it in 2020. It is an ongoing race. So instead of attaching huge resources to learning one specific tool, it is crucial to think about what is common to all the tools we use. Which elements can we take with us if and when they change? Without this thinking, change isn't sustainable.

Edström sees huge potential in web XR. This refers to VR and AR that works on a website with headsets but can also be experienced without it. XR translates easily to various devices, yet it still creates new possibilities for immersive storytelling.

Google News Lab recently de-emphasized VR and 360° video in their training. According to Ryan, it felt tone deaf to tell struggling newsrooms to invest in unproven technologies. Yet the majority of our planet will soon have access to a smartphone, so crafting immersive experiences for mobile will always reach billions more people.

“It’s not that we aren’t excited about the possibilities or that it won’t come. But the challenges that newsrooms were facing were at much lower end of the tech scale and in places you wouldn’t have expected,” he said. “You have to meet the industry where it is, not where you want it to be.”

### Don't forget audio

Audio is a multi-faceted trend, from news podcasts to smartspeakers and audiobooks. The BBC has recently been experimenting with Audio Augmented Reality (AAR) and binaural immersive audio that creates 3D experiences in the head. Immersive audio doesn’t always require high-end hardware, but it can help create powerful immersive experiences.

According to Panetta, immersive audio has been happening for over 20 years, but it is only now finally taking off. “I often use this example: I went to the *Guardian* to do a podcast in 2006 and it took 10 years for that form to become really, really popular. [...] It just took that long for phones to have enough capacity to download a lot of stuff and to be able to stream it.”

Right now, we can see interesting developments at the intersections of audio and artificial intelligence. Smartspeakers such as Amazon’s Alexa are commonplace in parts of the world. Some of them even utilise forms of immersion, such as Alexa’s interactive audio adventures where the storyline changes according to the user’s voice commands.

### Experiment on social media

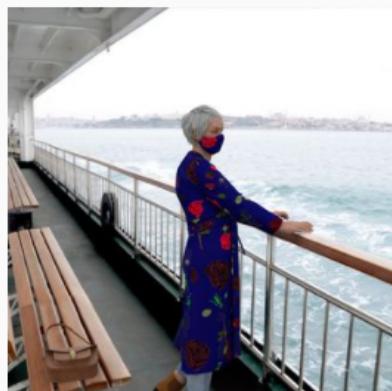
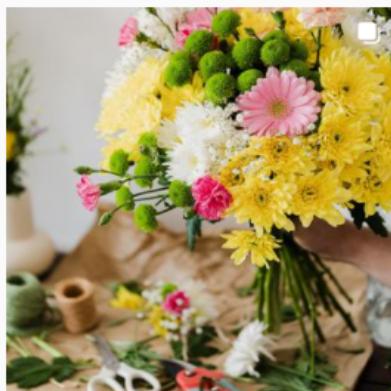
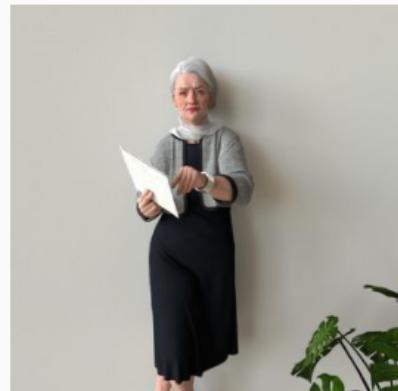
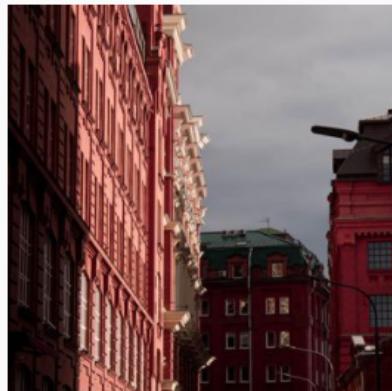
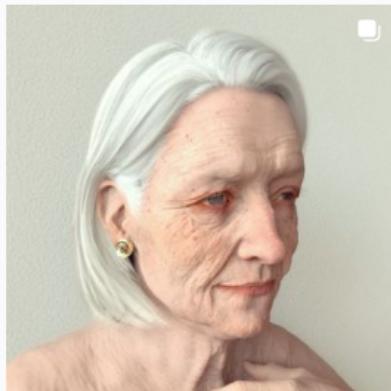
Web 2.0. refers to the distribution and consumption of digital content shifting from rather static entities to more decentralised and horizontal practices. This has radically changed the way our audiences consume content. The journalistic view, however, is still very much focused on linear and binary processes: print to online, video to audio.

As soon as the digital transformation is somewhat stabilised, the question will not be who is first but rather who utilises online platforms in the cleverest way possible. Some of the most intriguing experiments are happening on social media. The Norwegian television series *Skam* was not only a TV series, but a media phenomenon. The episodes were

published as short clips on the internet, and the viewer could follow the characters' discussions and fictional lives on Whatsapp and Instagram.

Panetta mentioned the multimedia story *Sylvia*, a virtual influencer created using AI and computer graphics. The project was published as a non-linear series on Instagram where it served as a commentary on themes such as our society's obsession with youth and influencer culture. It was highly interactive on a level similar to *Skam* – mixing fact and fiction, coaxing its messages into the private moments spent scrolling on Instagram.

"We're seeing amazing new genres coming out from the grassroots and I would love to see newsrooms using these," Panetta said. "What does it look like to break a story on Instagram, or to commission a really big piece that goes first on TikTok? That, for me, would be really interesting innovation."



*Sylvia* is an AI/CGI project and nonlinear Instagram narrative by the artist Ziv Schneider (Photography: Ziv Schneider)

One of the positives of experimenting on social media is the relatively low cost and risk, and the chance to meet the younger audiences where they already are.

The BBC initially started using YouTube for their 360° video news. It worked well for the first phase, where the goal was to find audiences and test their reactions. Had 360° been really successful, at some point a decision would have been made to invest in integrating that content back on-platform. “[That’s when] you get a chicken and egg thing, when news won’t create more 360° because they can’t put it out on the news site, and their target is to get more hits. That very much keeps you in an experimental phase until you can prove that there will be more,” Watson said.

Ultimately, we find ourselves balancing between collaboration and competition. How to stay independent and also benefit from the tools and audiences on tech platforms? Monetisation remains another problem. When does it make sense to take people away from the main news site where your advertisers are?

At the same time, testing new tools on existing platforms opens up unique possibilities: it can be used to study audience segments, build brand awareness, and create communities in a way that is often harder to do on news websites.

### Bundle up

In the entertainment industry, market leaders are creating bundle subscriptions such as *Playstation Now* and *Amazon Gaming*. This is only logical after the success of streaming services such as Spotify and Netflix. People want to find content easily in one place.

“That’s the same kind of challenge as with internet magazines,” Edström said. “In the beginning, newsrooms got a website just because it was cool, but it didn’t make money. Slowly web news outlets grew and became a big part of business. We are kind of at the same early moment in immersive journalism.”

As immersive content becomes more accessible and widespread, bundling subscriptions could be something that could very well benefit immersive journalism.

## Get inspired by other industries

Hype is not an inherently bad thing. We sometimes need to mimic others to learn. Panetta, for instance, has done several projects with gaming companies through the years.

“Games are a very different type of storytelling and one we can learn huge amounts from,” she said. “What would a year-long collaboration with a gaming company look like where you just experimented with lots of different approaches and looked at each other’s workflows and questions, [like] ‘What does character or agency look like?’”

Immersive tools are picking up again in other industries: AR is now growing in consumer-facing platforms, and VR is seeing new applications with the Playstation 5 console, and branching out into areas such as therapeutic games where it is used for rehabilitation purposes. “When those things happen and they’re good, they usually get the journalistic stuff coming in [after],” said Ryan. “Things often go ridiculously high-end gaming first and then they become more accessible to a broader consumer market.”

During the early phases of BBC’s VR unit, the innovations stumbled into some technical difficulties. For the *Damming the Nile* project, Watson’s team made CGI graphics in a game engine. It worked fine in the headset, but when the team used the same graphics in a green screen VR news studio on TV, the fidelity of the graphics was too high for the processing power of the studio.

Now we are seeing a new generation of more advanced studios develop within the industry. Media houses like *Al Jazeera* are building studio sets and game engines to use VR and AR in their news broadcasts. Watson believes this will all come together in the next line of studios.

“Where it will get really exciting is when the graphics we create for an immersive journalism piece for people to use on their phones can also be used in the news studio for journalists to present the news.”

After the initial hype, immersive journalism suffered from brain drain, as many storytelling team leaders moved away to industries such as film and gaming. This means we now have skilled experts who experienced the first wave of immersive journalism but were also a part of the early adoption of new technologies in other industries. If we can combine these worlds again, the potential is immense.

# Conclusion

In *The Elements of Journalism*, Bill Kovach and Tom Rosenstiel write that the purpose of journalism “is not defined by technology, nor by journalists or the techniques they employ”.<sup>19</sup> Rather, the principles of journalism are defined by “something more basic: the function news plays in the lives of people”. Journalism is about reaching the right people at the right time with the right stories.

Journalists sometimes tend to forget that our audiences never consume content in a vacuum. Quite the contrary, they lead their lives in a hectic world filled with an excess of choices. We need to be strategic about when we choose to present them with even more choices. Immersive journalism is, in its essence, a form of activation and deep reciprocal engagement. In fact, interaction has been emphasised so much in the age of social media that we tend to forget that sometimes all we want is to throw our feet up on the sofa and enjoy our Netflix.

“I’ve always tried to tell people that immersive was never poised to be the new TV,” Edström said. “It’s never going to replace the impressionability and the quick instant gratification of images and short videos. Immersion is always going to be something separate. We are still in the process of figuring out where that fits in.”

A while back, Salminen attended a journalism seminar filled with technology-oriented people and noticed something important: every expert started their speech by talking about meaning. The tech-first discourse was starting to morph into a meaning first discourse.

“After working with innovative storytelling for years, I have realised how much you have to emphasise the importance of the journalistic purpose instead of simply surfing with technology. Innovative storytelling is not just about some separate entity somewhere writing a code. Even the code has meaning.”

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<sup>19</sup> Kovach, Bill, and Tom. Rosenstiel. *The Elements of Journalism*. London, 2003.

Martin Edström says we are now in the beginning of what he calls the democratization of immersive journalism: taking the technology down a notch and turning from high-end, hardware-focused stories to more accessible, consumer-facing technologies.

“To me that’s the only possible future. Otherwise we will have to rely on hardware manufacturers to fund projects just to fill up their platforms, and that creates all kinds of weird dependencies. That’s fine in an entertainment space, but in journalism we can’t have Oculus and Google defining an important story.”

Both in the gaming and the journalism industries, the moments when I have felt like my work has the most impact is when our audience has approached me with personal anecdotes – that a story has encouraged them to change their life, or simply helped them see the world from a new perspective. To me, that means the right story reached the right person at the right moment.

Postmodern philosophers will tell you the age of grand narratives is long over and replaced with scattered identities. This is echoed in the idea that journalism has lost its power in building a collective truth. I would say that we haven’t lost our power, but rather that our role has changed. The desire to be seen and heard is universal, and helping to create social empathy will always be a powerful tool.

The image of immersive storytelling is shiny, techy and rather elitist. Yet immersion has another side that is not talked about as much: immersive technologies bring visual and audiovisual elements to the forefront, and a far more accessible and instinctive form of communication than written text.

The ability to experience places and events with your own eyes and ears, without words, can reach across language and culture boundaries, and can even have a democratising effect, as long as the tools are accessible. This, in my mind, is what our industry should focus on if we are to be part of the next wave – the shift from tech to meaning.