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Pivot! A framework for evaluating newsroom technology experiments

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Between 2011 to 2022, 1,282 complaints against Roblox have been filed with the FTC. Complaints originated from 28 countries, including the U.S., Canada, Mexico, France, Nigeria and the Philippines. Among the complaints, 33% are about lost or stolen digital assets; 27% deal with banned, deactivated or locked accounts; and 5% raise safety concerns. 20

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Introduction

Traditional news media has been playing a game of catch-up for the past four decades, from the moment the internet revolutionised how people create, consume and communicate information.

In my own two decades as a journalist, I've seen newsrooms initially resisting experimentation online and then suddenly lurching from one new technology to the next as the tide of digital transformation became too strong to swim against.

In the past seven years alone, newsrooms have dabbled in streaming breaking news on Facebook Live, using virtual and augmented reality for immersive story-telling and leveraging TikTok to reach elusive new audiences. [1,2,3]

These initiatives often carry with them the air of forced pivots, with enthusiasm waning as soon as the next bright and shiny thing comes along. And each pivot seems determined entirely by what the internet technology world has pushed out.

As a journalist who has been part of a transition from full print to a digital newsroom, I wanted to understand why our industry can't seem to stay ahead of the curve – or invest in creating our own curve.

I set out in the Autumn of 2022 to research news innovation opportunities in the metaverse during my fellowship at the Reuters Institute for the Study of Journalism.

At the time, all signs pointed to the metaverse being the next big thing: no less than Facebook founder Mark Zuckerberg had thrown his weight behind the development of this "successor to the mobile internet". [4] He even changed the name of his

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[1] Trends: *Facebook live and news publishers (*no date) Trends: Facebook Live and News Publishers Meta for Media. Available at: https://www.facebook.com/formedia/blog/trends-facebook-live-and-news-publishers (Accessed: 28 July 2023).

[2] Kangasniemi, J. (no date) *What we can learn from the best examples of immersive journalism*, *Reuters Institute for the Study of Journalism*. Available at: https://reutersinstitute.politics.ox.ac.uk/what-we-can-learn-best-examples-immersive-journalism (Accessed: 28 July 2023).

[3] Newman, N. (no date) *How Publishers are Learning to Create and Distribute News on TikTok*. Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-12/Newman_How_Publishers_are_Learning_to_Create_and%20Distribute_News_on_TikTok.pdf?trk=public_post_comment-text (Accessed: 28 July 2023).

[4] Zuckerberg, M. (2021) *The metaverse and how we'll build it together*. Connect 2021, YouTube. Available at: https://www.youtube.com/watch?v=Uvufun6xer8 (Accessed: 28 July 2023).

company from Facebook to Meta, and the social media giant pumped billions into developing its own virtual world. [5]

While many were still trying to figure out the ramifications of the metaverse (they still are), Bloomberg Intelligence calculated the market opportunity in the metaverse could approach US$800 billion in 2024, while consulting firm McKinsey predicted it would have a US$5 trillion market value by 2030.

If the metaverse was to be the next big breakthrough, newsrooms needed to get in early to stake a claim, I reasoned – maybe even shape this new Web3 development in some way?

> The term "metaverse" was coined by author Neal Stephenson in his 1992 novel *Snow Crash*. He described the metaverse as a 3-D high street that people could access through a "heads-up display" no matter where they were in the real world.
>
> At Meta's annual developer conference on October 28, 2021, Zuckerberg defined it as an "embodied internet where you're in the experience, not just looking at it".
>
> Matthew Ball, the author of a book called *The Metaverse And How It Will Revolutionise Everything* defined it as "a massively scaled and interoperable network of real-time rendered 3D virtual worlds, which can be experienced synchronously and persistently by an effectively unlimited number of users each with an individual sense of presence while supporting continuity of data such as history, identity, communications, payments, entitlements and objects."[6]
>
> What is clear is there isn't just one metaverse, and the term refers loosely to a collection of three-dimensional virtual worlds where people can have immersive experiences using virtual and augmented reality.

Rapper Snoop Dogg recreated his California mansion in a blockchain gaming platform called Sandbox to host members-only parties. Singapore's biggest bank, DBS, bought land in the same platform to spread the word on sustainability issues. Both Saudi Arabia and South Korea announced plans to experiment with providing services to their citizens in the metaverse. In Korea's metaverse people can visit a municipal office to file civil complaints; in Saudi they can undertake a Hajj.

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[5] Mann, J. (no date) *Meta has spent $36 billion building the metaverse but still has little to show for it, while tech sensations such as the iphone, Xbox, and Amazon Echo Cost Way less*, Business Insider. Available at: https://www.businessinsider.com/meta-lost-30-billion-on-metaverse-rivals-spent-far-less-2022-10?r=US&IR=T (Accessed: 28 July 2023).

[6] Ball, M. (2022) *The metaverse explained in 14 minutes*. Available at: https://bigthink.com/series/the-big-think-interview/why-the-metaverse-matters/ (Accessed: 01 August 2023).

Vogue, meanwhile, became one of the first publishers to venture into the metaverse, opening up virtual islands and virtual booths in various virtual worlds. [7,8]

Over before it began?

By now, with the benefit of hindsight in the summer of 2023, we all know that the metaverse was just "having a moment".

Given how many big tech and gaming players invested in developing it (and how much), the buzz will probably be back. But, for now, there are those who have already pronounced the death of Meta's metaverse. [9]

Towards the end of 2022, generative AI (particularly ChatGPT) had become the new technology obsession. Now it feels like hardly a day goes by without another article about how generative AI will revolutionise or disrupt everything: from how we learn, to how we work, and how we practice journalism. [10] The *Wall Street Journal*, the *Daily Mirror* and *Express* are among news organisations that have used AI to write news reports. [11,12]

Will newsrooms remain true to form by jumping from harried conversations about the metaverse to generative AI conversations? Probably.

A new problem statement

The metaverse might be dead (for now), but the metaphor it leaves us with is steaming fresh. And it perfectly encapsulates the contradiction newsrooms face in embracing technology: get in too early and you risk wasting time, money and effort

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[7] Team, V.B. (2022) *Highlights from the Vogue Business Metaverse Atelier with epic games*, Vogue Business. Available at: https://www.voguebusiness.com/events/highlights-from-the-vogue-business-metaverse-atelier-with-epic-games (Accessed: 01 August 2023).

[8] Peters, J. (2023) Metaverse fashion week had big brands but few people, The Verge. Available at: https://www.theverge.com/23668846/decentraland-metaverse-fashion-week-2023 (Accessed: 01 August 2023).

[9] Olinga, L. (no date) *Mark Zuckerberg quietly buries the metaverse* - thestreet. Available at: https://www.thestreet.com/technology/mark-zuckerberg-quietly-buries-the-metaverse (Accessed: 01 August 2023).

[10] Diakopoulos, N. (2023) *What could chatgpt do for news production?*, Medium. Available at: https://generative-ai-newsroom.com/what-could-chatgpt-do-for-news-production-2b2a3b7047d9 (Accessed: 01 August 2023).

[11] Newman, N. (no date a) Journalism, Media, and Technology Trends and Predictions 2022 . Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-01/Newman%20-%20Trends%20and%20Predictions%202022%20FINAL.pdf (Accessed: 01 August 2023).

[12] Sweney, M. (2023) *Mirror and Express owner publishes first articles written using AI*, The Guardian. Available at: https://www.theguardian.com/business/2023/mar/07/mirror-and-express-owner-publishes-first-articles-written-using-ai (Accessed: 01 August 2023).

on something that has no longevity or profitability; wait too long and you may end up on the backfoot.

We know from nature that those who fail to adapt to change will die out, but:

- Where should we be putting our adaptive energy?
- How can newsrooms effectively evaluate whether – and how much – to invest in the next technological innovation?
- Are there reliable guidelines that might help newsrooms cut through the hype cycles and assess the profitability of opportunities more accurately?
- When is it safe to say no to adopting a "shiny new thing"?

The over-arching question: in pursuit of profitable news innovation, where does technology fit in?

A history of (non-)innovation

First, a bitter pill: journalists are considered bad at innovation. I'm not being unkind: studies finds people in the editorial department are less likely to be interested in digital media innovation (Westlund et al 2020, fig 1), are likely to "chase fads" with no framework (Posetti 2018, p. 7), or – perhaps worse – demonstrate a "reluctance to innovate" (Nel 2017, p. 5).[13,14,15]

So what exactly is digital media innovation? According to Julie Posetti, Global Director of Research at the International Center for Journalists, and author of *Time to step away from the 'bright, shiny things'?*, innovation is broadly: "[...] something new and useful, or a different way of doing things (from the incremental to the transformative) that supports the digital era development of journalism."

The disruption

In the early years of the internet, many news organisations were still extracting enough value (read: profit) by upholding traditional values. They saw no incentive to innovate. After years of information monopoly, digital innovation seemed like a reckless disruption.

In a 2006 piece for the American Journalism Review, titled *Adapt or Die*, author Rachel Smolkin wrote: "For years, newspapers have treated innovation like a trip to the dentist — a torture to be endured, not encouraged... 'Please, tell the dentist to add a veneer and leave the rotting core alone'."

Anyone who worked in a newsroom in the early 2000s will remember having arguments about when it was "safe" to publish a story online to avoid cannibalising the print edition. Online experimenting was undertaken out of a fear of becoming irrelevant, rather than excitement, wrote An Nguyen in *Facing "The Fabulous*

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[13] Oscar Westlund, Arne H. Krumsvik & Seth C. Lewis (2021) *Competition, Change, and Coordination and Collaboration: Tracing News Executives' Perceptions About Participation in Media Innovation, Journalism Studies*, 22:1, 1-21, DOI: 10.1080/1461670X.2020.1835526

[14] Posetti, J. (11 June 2020) *Time to step away from the 'bright, shiny things'? Towards a sustainable model of journalism innovation in an era of perpetual change*. Available at: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2018-11/Posetti_Towards_a_Sustainable_model_of_Journalism_FINAL.pdf (Accessed: 01 August 2023).

[14] Keung, L (2017) *Going Digital: A Roadmap for Organisational Transformation* Retrieved from: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2017-11/Going%20Digital.pdf

[15] Nel, F. 2017. *World News Publishers Outlook 2017 - The Annual Perspective on the News Media Industry*. Paris: WAN-IFRA.

Monster", a 2008 paper in Journalism Studies.[16] That early start has spawned an industry with a fear-driven innovation culture.

The FOMO

By 2013, the writing was on the wall: the internet was upending the business model of traditional news organisations, there was new and intense competition from non-media players. As John Pavlik wrote in *Digital Innovation*, innovation was necessary for survival.[17]

The fear of losing a print exclusive by publishing online evolved into a fear of missing out (FOMO) on recapturing audiences by adopting the next "bright, shiny thing". That is, as Posetti puts it, the "relentless, high-speed pursuit of technology-driven innovation", which often leads to "ad-hoc, frantic, and often short-term experimentation". [18]

Her 2018 work found that innovation was "too often conflated with, and misunderstood as, gimmicky technology and fads"; an audience engagement tick-box exercise undertaken by editors to prove to media owners the jig was not up. But adopting technology for the sake of it is not innovation and can even be dangerous.

"Strategies are being thrown off course by what feels like a ceaseless stream of new technologies and products. These can be stepping stones to the future, or expensive distractions from the core mission, and are highly disruptive," wrote Lucy Kueng, a professor and expert on strategy, innovation, and leadership, in *Going Digital: A Roadmap for Organisational Transformation* (2017).[19]

The rare birds

Both Kueng and Posetti agree: just because many of us have been historically bad at innovation, doesn't mean we should stop experimenting with new technologies.

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[16] An Nguyen (2008) *Facing "The Fabulous Monster"*, Journalism Studies, 9:1, 91-104, DOI: 10.1080/14616700701768147 Retrieved from: https://www.tandfonline.com/doi/abs/10.1080/14616700701768147

[17] John V. Pavlik (2013) *Innovation And The Future Of Journalism*, Digital Journalism, 1:2, 181-193, DOI: 10.1080/21670811.2012.756666 Retrieved from: https://www.tandfonline.com/doi/abs/10.1080/21670811.2012.756666

[18] Posetti, J. (11 June 2020) *Time to step away from the 'bright, shiny things'? Towards a sustainable model of journalism innovation in an era of perpetual change*. Available at: https://reutersinstitute.politics.ox.ac.uk/our-research/time-step-away-bright-shiny-things-towards-sustainable-model-journalism-innovation-era (Accessed: 01 August 2023).

[19] Keung, L (2017) *Going Digital: A Roadmap for Organisational Transformation* Retrieved from: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2017-11/Going%20Digital.pdf

The key is in identifying which tech opportunities will address a real audience need. To do so, I propose a five-point framework.

The framework is based on a combination of the literature outlined above, in-depth interviews with three news veterans with a proven track record of successful digital media innovation (from the *Guardian*, BBC and GMA TV), as well as interviews with media innovation researchers, including Arne H. Krumsvik and Ragnhild Kr. Olsen.

A five-step plan for evaluating digital innovation opportunities

The framework I've distilled from expert interviews follows a five-step plan for evaluating when and how to undertake a digital media innovation project.

Step one: Identify the nature of the opportunity
Step two: Know what your audience wants and needs
Step three: Pinpoint the problem being solved
Step four: Look to the future
Step five: Define your goals and strategies for managing change

Let's take a detailed look at each step.

Step one: Identify the nature of the opportunity

Start with a clear-eyed look at what change a new technology can bring, and where it falls in the overall newsroom strategy.

As multiple studies in the previous section show, innovation is often not clearly defined in newsrooms. This can leave staff wondering what they are trying to accomplish, whether it is necessary, and who they are doing it for.

Krumsvik, considered one of the founders of media innovations studies, told me that innovation is about change and creating value. But with so much flux in the media industry it can be hard to know what change to focus on.

This is where existing typologies on innovation can help newsrooms define what exactly they hope to achieve by adopting a new technology. I found two particularly helpful for this purpose.

The first is Making (Sense of) Media Innovations by Krumsvik and his colleagues, in which they define six types of change an innovation might be classified under:

> ***Product innovation****, which relates to changes in products and services. (For example, the introduction of an app.)*
>
> ***Process innovation****, which refers to changes in the ways that products and services are created and delivered. (For example, adopting agile newsroom workflows.)*

> ***Position innovation****, which relates to a reposition of brands, products or services. (For example, redefining your target audience.)*
>
> ***Paradigmatic innovation****, which includes changes in mindset, values, and business models that can shift the entire model an industry is based on. (For example, print to online-only.)*
>
> ***Genre innovation****, in which new categorisations of media products evolve or emerge. (For example, the emergence of live blogging).*
>
> ***Social innovation****, which involves the innovative use of media and communication services for purposes that meet people's social needs and improve their lives. (For example, community forums or local business support.)* [20]

Krumsvik and his colleagues advise asking of each innovation: "what is changing?", and then "to what degree of novelty?".

The second typology is presented by Posetti, who created a Journalism Innovation Wheel to define dimensions of journalistic innovation. Posetti's innovation wheel has eight spokes:

> ***Storytelling & Reporting****, which could include experimentation with storytelling formats*
>
> ***Audience Engagement****, such as moving beyond clicks and shares to audience participation in journalism*
>
> ***Distribution****, which deals with new strategies to distribute a product or service*

[20] Krumsvik, A. H., Milan, S., Bhroin, N. N., & Storsul, T. (2019). 14. Making (sense of) media innovations. Making media: Production, practices, and professions, pp193-205. Available at: https://www.researchgate.net/publication/329644384_Making_Sense_of_Media_Innovations

> ***Technology & Products****, such as tools and solutions designed and developed inside the newsroom*
>
> ***People & Culture,*** *which refers to moving and hiring talent and encouraging an agile adoption culture.*
>
> ***Organisation & Structure****, such as innovations in workflows and collaboration*
>
> ***Leadership & Management****, clear strategic focus and dedication to change.*
>
> ***Business****, for instance, adding new revenue streams.*

In both models, some categories are more applicable to digital news media weighing tech innovations than others. With Krumsvik's model, I would focus on Product, Process, Paradigmatic and Social innovations. With Posetti's, Storytelling, Audience Engagement, Technology, Distribution, Business, and Organisation innovations.

You can use the language provided by Krumsvik and Posetti to categorise and communicate how a tech opportunity will complement your newsroom strategy. Be honest in your assessment of whether this is something necessary or desired.

Step two: Know what your audience wants and needs

"Tell me what you want, what you really, really want," the Spice Girls crooned in their 90s hit, *Wannabe.* It should be the soundtrack for any newsroom in relation to understanding audience needs in relation to innovation, according to Krumsvik.

When it comes to matters of strategic importance, nothing tops understanding who your audience is and how your innovation meets a specific want or need. Ask: how much will this innovation change the lives of my audiences for the better?

That was the case for GMA News, one of the leading television networks in the Philippines, when it ventured onto TikTok in 2021.

Jaemark Tordecilla, head of Digital Media at the network who is in charge of audience development, had been studying young viewers for a while. He saw TikTok as a good way to reach out to them; about 40% of the social media platform's users were aged 18-24 at the time.

Tordecilla told me that when GMA News first went on TikTok, it was mainly for the purpose of spreading awareness of its brand among this younger Gen-Z set.
With this in mind, his team conceived of the #24OrasChallenge, inviting netizens to join their favourite news anchors in reporting on the COVID-19 situation, entertainment news, or viral social media news for the company's flagship Kapuso newscast.[21] The challenge involved reading the news off a teleprompter, then posting the clip.[22]

The campaign attracted 55.5 million views on the social media platform.

What they did not predict was that they would find such a high demand for news from their young audience on the Bytedance-owned platform. "Some people who are not familiar with the platform think it's all about dancing, which is not true," he told me.

For many young people, a mobile phone is the first connected device they have access to. They turn to it for everything from entertainment to connecting with friends… and getting information. It made sense that, if they were already spending hours on TikTok, they should also be able to get whatever news they needed there, Tordecilla said.

Soon, his team was adapting news reports into short one-minute clips for the platform. "Our strategy is to bring the news or content to where the audiences are," he said. Ultimately, it was about being audience-focused and audience-led.

Asked how newsrooms should decide whether TikTok is for them, his advice is to look at the data. "The data will tell you what your audiences are consuming and how to make it more convenient for them to get the content. The great thing with digital is you get to know your audience better," he said.

It is important to bring improved utility, and not just novelty. For example, experiments with virtual reality suggest transporting readers to disaster zones might help them understand the story on another level. But how many of your users own VR goggles? Will they have to travel to special terminals to use the content? The imagined benefits must be worthy of any real inconvenience.

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[21] Viernes, F (September 13, 2021) W*ant to be a reporter? Test your skills with this #24OrasChallenge on TikTok*. GMA News Online Available at: https://www.gmanetwork.com/news/lifestyle/hobbiesandactivities/803178/want-to-be-a-reporter-test-your-skills-with-this-24oraschallenge-on-tiktok/story/

[22] #24oraschallenge, TikTok Available at: https://www.tiktok.com/tag/24oraschallenge

According to Posetti, "too much time chasing 'bright shiny things' inevitably leads to the eye being taken off the 'end user' ball".

We finish as we began, with more sage Spice Girls lyrics: "Now don't go wasting my precious time/Get your act together we could be just fine."

Step three: Pinpoint the problem

Innovation involves doing things in a new way that creates value. Value is most often inherent in something that solves a problem, according to Ragnhild Kr. Olsen, associate professor in journalism and media studies at the Oslo Metropolitan University in Norway, who researches value creation in journalism.

Her research on how local news media responded to the COVID-19 crisis, she described how outlets adopted technology tools such as Teams, Zoom, Slack, Workplace Chat and Trello, among others, to keep newsrooms running after they had to abandon their physical offices.[23] Adoption of these technologies – in some cases, after years of resistance – was made simpler and faster by having a clear problem that required a solution.

In the same way, newsrooms should approach decisions on technology adoption by first identifying the problems they want solved. For the BBC, their move to offering radio online (live streaming) and then as podcasts (on demand) in the early 2000s was driven by inefficiencies specific to analogue radio.

Simon Nelson, who was heading BBC's radio and online offerings at that time, said the BBC made a bigger investment in original radio content than anyone in the world. Yet this expensive, crafted content would only ever be listened to once – at the time of broadcast, by whoever happened to be listening.

"It was a really inefficient model. There wasn't a commercial DVD market or CD market. So often [programmes] would just be buried in an archive," he explained.

Having identified the problem, his team set out to give archive content new life by experimenting with making it available on the internet. This started with on-demand streaming services, when they created a product called the BBC Radio Player in 2002.

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[23] Ragnhild Kr. Olsen & Peder Inge Furseth (2023) *Service Innovation and Value Creation in Local Journalism During Times of Crisis*, Journalism Studies, 24:4, 496-514, DOI: 10.1080/1461670X.2023.2173510 Retrieved from: https://www.tandfonline.com/doi/full/10.1080/1461670X.2023.2173510

It became the home for all BBC radio programmes, and they could be listened to for up to a week after they had first been broadcast. It was the first BBC service to be provided on demand – a forerunner of the iPlayer, launched in 2007.

The service became extremely successful in a short time, helping the BBC reach new audiences.

As Apple's iPod gained traction, Nelson's team started looking into how to get the BBC's radio programmes onto the iPod through MP3 downloads. It was a controversial move at the time, said Nelson, because of worries that people would be able to keep the radio programmes in perpetuity and what this meant for rights.

"Most stakeholders thought this would be impossible, in particular rights owners, because even though there was no commercial market, people just assumed and hoped that one might appear one day," he said.

To appease all involved, the decision was made to offer the Reith Lectures, broadcast annually on Radio 4, for people to download as a trial in 2004.
The Reith Lectures are a series of four lectures delivered annually by leading figures, and are aimed at advancing public understanding and debate about significant issues of the day.

"We said, 'Clearly there can be no commercial market for these lectures; clearly there is public value in offering them and making them as widely available as possible'," Nelson told me.

Over the initial 10-week period, the lectures received around 50,000 downloads and demonstrated the public's appetite (step 2) for new ways of consuming the BBC's content.

That small experiment paved the way for the BBC's podcasting services to be launched in 2005, with that year's Reith Lectures on the Triumph of Technology also part of the offering, together with 20 other news and speech radio programmes.

"The thing we were most proud of was that we had taken programmes from BBC speech radio outputs that many thought were dying, and irrelevant, and old-fashioned in the coming digital age, and we made it cool. We reinvented it using on-demand downloading and podcasting," said Nelson.

The journey was not without obstacles (more on that later). But by being focused on a problem and how technology could solve it, the BBC was able to grow its audience.

Today, from that humble start, the BBC is able to chalk up more than 1.48 billion plays of radio, music and podcasts on BBC Sounds in an 11-month period.[24]

Step four: Look to the future

I am not advocating crystal-ball gazing, but rather a technique for unlocking new markets proposed in *Blue Ocean Strategy*, a book by Professors of Strategy at INSEAD Chan Kim and Renée Mauborgne.[25]

Sometimes, entire industries are subject to external trends that will affect their business over time. Kim and Mauborgne suggest companies can look across time to decide if a trend is "decisive, irreversible, and has a clear trajectory".

The exercise starts with identifying the trend then asking yourself what the market might look like in the future if the trend were to play out. Using this analysis, companies can then think about what must be changed today to unlock new demand or value in the future.

A good example here is the *Guardian*'s decisive move into the online world in the 1990s, when it was still unclear how any news organisation would make money from being on the internet. Before the paper took the leap, it sent a team to the United States to "see the internet".

It was 1993 and the World Wide Web had been launched in the public domain. Tasked with finding out more, Alan Rusbridger, former editor of the *Guardian* credited with taking the newspaper online, hopped on a plane with several colleagues for a whirlwind trip to several U.S. cities.

In Chicago he saw videos of a house on a rudimentary computer screen – a new way to advertise property for sale. In Boulder, Colorado, he saw a block of wood with a "front page" glued to it, a kind of iPad imagined for a group working for media company Knight Ridder. And in New York, he visited the *New York Times*, where he heard they did not think that news would work well on the internet, and just planned to push some restaurant reviews.

Recounting the trip, Rusbridger explained why it was necessary: "Sitting in the *Guardian* office with the one computer attached to the internet, it was difficult to imagine that. So you really needed – oddly, given the internet is about the universality of everything – to jump on a plane to see what it looked like," he said.

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[24] BBC Sound stats, January to November 2022.

[25] Chan, Kim W., and Renee A. Mauborgne. *Blue Ocean Strategy*. Harvard Business Review Press, 2005.

Rusbridger also met with a number of futurologists who had been looking at the internet, through a partnership that the *Guardian* had with *Wired* magazine.

“If you’re not a technologist, just keep talking to people who are. If you want to either future-proof yourself or imagine the opportunities that lie in the future, then you obviously have to understand people who are excited about the future – and understand that they’re probably not within your staff,” he said.

Having done the legwork, he was convinced that digital would be the future. “So I get back and tell my editor there’s this thing called the internet and we have to be on it; if we're not, we’re stuffed,” he told me.

Having identified a paradigmatic change (step 1), Rusbridger, who became the editor of the *Guardian* about 18 months after the trip, set up a product development unit. The rest is history.

Step five: Define your goals and strategies for managing change

With paradigmatic innovation in particular, the process is not easy to manage. Even after having peered into the future, newsrooms will need to keep everyone on the same journey to successfully navigate to the “blue oceans”.

When Rusbridger set up his product development unit, the rest of the organisation dismissively referred to as “the playpen”. Journalists felt those in the team were “not proper journalists” and would not know how to “do the news”, said Rusbridger.

“News organisations constantly stub up against the ‘proper journalists’. So training your organisation to listen to people who understand the technology but don't necessarily understand journalism is quite a chat,” he said. “We constantly had that, and it was heartbreaking sometimes because some really talented coders and developers came to work at the *Guardian* because they believed in our mission and our journalism. The journalists were just very dismissive: didn’t want to talk to them, didn't want to work with them, regarded it like a sort of service.”

At the BBC, Nelson faced similar pushback trying to offer radio programmes online. At every step of the way, he and his team had to overcome pushback from within the BBC, as well as the commercial sector and the government.

“The arrival of the internet was a very important battleground with government and competition over the ongoing role of the BBC. Even within the BBC I remember there were fierce arguments. I very strongly argued back that if the BBC did not adapt in a variety of manners, then the BBC would die. This was where the market was going. And we needed a public service offer in that market,” Nelson said.

Disagreements often involved people arguing about what would happen in the next six to 12 months, he said, and missed the perspective of what was going to happen in the next five to 10 years. “This leads to short-term actions and underfunded short-term projects, rather than appreciation of where the market is going over the longer-term,” he said.

I’ve referred repeatedly in steps one to four to the importance of an overall newsroom strategy. Without a clear direction and goals, newsrooms will continue to act upon new technology ideas in a haphazard way that can be both costly and distracting from overall value.

You can identify an opportunity, define your audience, pinpoint the problem the innovation will solve with a keen visionary insight for the future… and still fail in the rollout if you do not complete step five.

Successful long-term innovation hinges on having a plan that outlines how you will test, innovate, and adapt if key goals are not met.

That plan should be clearly communicated by top leadership in a way that outlines both how it fits into overall newsroom strategy, and what the measures of success will be.

All of that should be well documented, so that you can refer the newsroom back to the intended goals and illustrate successes when necessary.

Note that goals and measures of success are likely to shift as you continue to test, innovate and adapt your new technology plan.

Applying the framework

Let's conclude by applying the framework to the question we began with: is there an opportunity for journalism in the metaverse? Luckily for us, the Knight Lab Studio has already been looking into this question.

Jeremy Gilbert, Knight Professor of Digital Media Strategy, generously shared the findings of their Metaverse Media Project with me.

Step one: Identify the nature of the opportunity

For now, technology companies seem to be working on their own versions of the metaverse, with different companies coming up with their own virtual worlds. Such walled-garden social spaces will have limited appeal and utility if in the end people are not able to move from one to another like going from one website to another.

The opportunity for journalism is likely to be an evolution of genre or a storytelling innovation. The Knight Lab Studio did not land on journalism's place in the metaverse, but Gilbert told me he believes it is still worth experimenting.

Step two: Know what your audience wants and needs

Gilbert believes what we are seeing now is the natural end of the initial hype cycle that got people excited about the metaverse, or rather, Meta's Horizon World, that is based on this closed-garden approach.

Roblox is the biggest virtual world in the metaverse, with 230 million monthly active users.[26] Other platforms with considerable userbases include Minecraft with 165 million and Fortnite with 85 million monthly active users. 51% of the metaverse user base is 13 or younger.

A successful journalistic application would bring improved utility 13-year-olds, primarily active in the environment for leisure.

[26] Available at: https://www.banklesstimes.com/metaverse-statistics/

Step three: Pinpoint the problem being solved

Between 2011 to 2022, 1,282 complaints against Roblox have been filed with the FTC.[27] Complaints originated from 28 countries, including the U.S., Canada, Mexico, France, Nigeria and the Philippines. Among the complaints, 33% are about lost or stolen digital assets; 27% deal with banned, deactivated or locked accounts; and 5% raise safety concerns.

Other problems might involve: having independent information about best game strategies, or profiles of the best players and game trends. Other metaverse platform problems might include: not knowing the best places to visit, needing a break from the action, feeling cut off from reality, needing interesting conversation starters, wanting to be informed about a different region to facilitate interaction with users from another country. It's an environment better versed in micro-payments in return for gaming advantage, which is worth noting.

Note that the problems we are concerned with identifying and addressing are those of our potential audience – NOT problems in journalism that we hope to leverage a new audience to solve.

Step four: Look to the future

Statista estimates 98 million people worldwide will be using AR and VR devices in 2023, meaning adoption is still only around 0.0012% of the global population.

Gilbert warns that waiting until there is wide-spread adoption would be too late. "In large part, it's where we ran into trouble ceding discovery of news to social platforms," he said.

By getting in early, newsrooms might have a chance to shape conversations about the technology, or even its development.

But for now, there is still the risk that the metaverse may not take place as envisaged. Would we then be chasing bright shiny things if we divert resources from elsewhere in the newsroom to experiment now?

If it supports your wider newsroom strategy and have the right goals and a plan of approach, the answer might be: not necessarily.

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[27] Available at: https://truthinadvertising.org/articles/complaints-against-roblox-have-a-common-victim-children/#:~:text=33%20percent%20of%20complaints%20are,5%20percent%20raise%20safety%20concerns.

Step five: Define your goals and strategies for managing change

One approach here is to experiment where it will not cost too much to do so. That probably means you won't be investing in the arsenal of tools needed for producing virtual reality and augmented reality content just yet.

But creating an account in one of these 3-D virtual worlds or testing out the established journalism ethics and values in them could be a start.

Whether the metaverse will develop into Ball's definition of an "interoperable network of real-time rendered 3-D virtual worlds, which can be experienced synchronously and persistently" remains to be seen.

But if it does, it could bring paradigmatic innovation to the media industry. Newsrooms no doubt will also be able to use it for product, process and social innovation, using Krumsvik's model.

I mentioned earlier that the problems we are concerned with identifying and addressing are those of our potential audience, and not problems within journalism.

But it is worth knowing some of the journalistic problems that the metaverse provides utility for: connecting with audiences more authentically, and experimenting with new business models, including micro-payments.

Conclusion

There are three guarantees in life: death, taxes, and that technology will keep evolving. News organisations must learn to assess and respond to those evolutions appropriately to survive.

We may not be ahead of the curve all the time, or even successful in our experiments, but I agree with Rusbridger, who told me: “It seems more important to be trying stuff and failing, rather than sitting with your arms crossed saying – as lots of people did – that this is all nonsense and it’s never going to work.”

I hope this framework will start a conversation about how we assess the "bright, shiny things" so that we can decide which ones to embrace and which ones to abandon, and maximise our chances of innovating successfully.

Ultimately, what’s most important amid all this talk on innovation is to remember why we are doing so.

As we tap into data, social media and generative AI to enhance our storytelling abilities, connect with wider audiences, streamline our workflows and even build new business models, our mission remains the same: to empower the public with the information they need to make informed decisions about their lives, communities and societies.

In this sense, technology will change but traditional news values should not.