

Hedging against Disruption

Using Venture Capital to understand Web3 in Content and Service Businesses

Authored by Martin El-Khouri

Abstract

Web3, also known as the decentralized web or the internet of value, is an infrastructure built on blockchain technology and governed by smart contracts and communities. It has the potential to revolutionize traditional business models across various industries by enabling new business mechanism. This can create new opportunities for companies in various sectors to streamline their operations, reduce costs, create new revenue streams, and democratize the digital economy. Overall, it is important for companies in the digital space to understand and stay informed about the developments in Web3 as it represents a significant shift in the digital landscape with wideranging implications for their business models.

With our mission to empower entrepreneurs all around the world, Bertelsmann Investments is also empowering innovators in the Web3 era by leveraging its international exposure and ties to the Bertelsmann Divisions. To enable adoption of innovation across its divisions, BI has identified three key pillars: Investments, Education and Strategic Ventures and Partnerships. Investments include expanding our Fund-of-Fund Network to capture lasting, relevant trends and ventures in Web3 and expanding our exposure to companies in Web3 with strategic relevance to Bertelsmann. Education includes leveraging our Fund-of-Fund network to extract strategic insight and inform our Divisions and Group leadership on Web3 disruption, showing existing examples from our network. Strategic Ventures and partnerships include co-development and partnerships with early-stage Web3 startups, collaborating on strategically relevant themes with Bertelsmann Divisions, engaging with key opinion leaders and partnering with academic institutions. With these initiatives, Bertelsmann Investments expands on the foundational work conducted by Bertelsmann Digital Media Investments (BDMI) and Bertelsmann Asia Investments (BAI), who established initial access to the global Web3 startup community, and the Bertelsmann Tech & Data Team, which leads the internal exchange and alignment on Web3 and metaverse related activities across Bertelsmann Divisions.



Table of Contents

1	Introduction	4
2	Web3 – The Evolved Internet Architecture A Brief History of the Internet: From Web 1.0 to Web 3.0	5 5
	Blockchain: What it is and why it is important Main Concepts of Web3	6 7
	Current Ecosystem Challenges	9
	Web3 Infrastructure can revolutionize traditional Business Models across a Variety of Industries	10
	Web3: A New Digital Infrastructure transforming Industries and creating Opportunities for Bertelsmann	11
3	Which Signals does the Market send?	13
	Exploring the Growth and Potential of Web3 as Venture Capitalists	13
	Typical Web3 Deal structure and exemplary Investments	14
	Why are we getting involved now?	16
	What does that mean for Corporate VCs?	17
4	How do we ensure Access to Web3?	19
5	Join us on our Journey	21
6	Industry Statements	22
7	Case Study: Re-Evaluating Value – How blockchain redefines the worlds of content and media	23

1. Introduction

"Internet 'may be just a passing fad as millions give up on it'."¹ At the very beginning, the internet was a research project. When it started to emerge, it was an internet pursuing only one goal: Maximizing the reach of information. It was a static Web, without trust systems, user identities or economic incentives. Even when the possibility to send e-mails appeared, people doubted that the internet would be a lasting thing. With the burst of the DotCom Bubble in the early 2000's, many critics felt confirmed. As the Daily Mail wrote on December 5, 2000:

"Internet 'may be just a passing fad as millions give up on it'."1

But the internet has continuously transformed and stood the tests of time. Technological advances gave birth to interactive content, leading to the evolution of the internet we know today – Web2 - with open participation and contribution mechanisms, and a user-friendly front end. This advanced internet is central to business in the 21st century, with its centralization of internet services leading to the onboarding of billions of people to the World Wide Web. However, in this internet dominated by powerful platforms like Google, Facebook, Amazon, there is still no framework for economic incentives. Usage of these platforms is free, and users pay with their data, which is monetized through advertising.

Web3 represents a back-end revolution, in which value creation in the digital space is reinvented. It is enabled by the application of blockchain technology, which allows for the transfer of ownership from companies to communities and the implementation of a new ownership logic that puts power, governance, and responsibility in the hands of individuals rather than corporations. This new infrastructure layer for digital businesses is decentralized and built, operated, and owned by its users. Web3 therefore not only proposes a solution to the dilemma of a centralized web, but it also has the potential to significantly disrupt the way value is created in the digital world, posing new challenges and opportunities to corporates in the digital realm.

22 years after the Daily Mail article was published, the Web3 space is facing a similar situation, with the total crypto market capitalization being in a constant downturn. However, adoption of Web3 is following a similar pattern to the adoption of the internet in the late 1990s, and if this trend continues, it is estimated that there could be between 1 and 1.5 trillion Web3 users by 2027², leading to the largest disruptive shift in value creation since the emergence of the early internet.

This whitepaper addresses startups and VC funds who are leveraging the innovation of Web3, as well as corporates operating in the fields of content, services, and education. Specifically, it is important for Bertelsmann Investments, a global Venture Capital Investor and part of a content, services, and education group, to closely monitor the impact of this technological infrastructure shift on their business models and support the likely transformation that many of their businesses will go through into a Web3 economy. Web3 represents a back-end revolution, in which value creation in the digital space is reinvented.

¹ Daily Mail, Tuesday 5th, 2000

² World Bank; Crypto.com

2. Web3 – The Evolved Internet Architecture

A Brief History of the Internet: From Web 1.0 to Web 3.0

The internet, developed by Tim Berners-Lee, is a constantly evolving construct that has undergone numerous changes since its inception.

Web 1.0, which occurred between 1990 and 2004, was the first iteration of the internet and was characterized by a focus on providing access to information. During this time, the first web browsers and search engines were developed, allowing users to access and browse simple websites containing data. However, these websites were static and did not allow for user interaction or the creation of user-generated content. One example of a Web 1.0 website is the early version of the Encyclopedia Britannica's website, which provided access to informational resources and articles, but did not allow users to contribute or modify the content or interact on it.

Ultimately Web3 is a new digital infrastructure layer that is changing the way businesses operate across various industries.

Web 2.0 is the internet we know today. It emerged around 2004, when we saw the emergence of social media platforms and the ability for users to create and share content online. This period was facilitated by technological advances such as HTML and JavaScript, as well as the widespread adoption of smartphones, which made it easier for people to access and interact with the internet. The probably most popular example of a Web2 platform is Facebook, which allows users to create and share their own content, as well as interact with each other and engage with content created by others. Other examples are Twitter, TikTok, but also Service platforms like Uber and Air B&B. All these companies benefited from because of a revolutionized front-end.

Web 3.0 is a generation of the internet, which is still in development. At its core, it aims to bring about a backend revolution to the internet by decentralizing services, establishing trust and economic incentives, and enabling internet-native payments through the use of cryptocurrency. It will also feature a framework for digital ownership and a focus on user privacy. It is built on ecosystems – blockchains – that are designed to serve as a foundation for applications to be developed. This paper will elaborate on some examples of how applications in Web3 will look like, and the implications it will likely have on how business is done.

To put it in very simple words, although Web3 is often referred to as a group of technologies such as Blockchain, Decentralized Finance, Cryptocurrency and NFTs – ultimately Web3 is a new digital infrastructure layer that is changing the way businesses operate across various industries. It is not an industry in and of itself, but rather an underlying layer that impacts how different verticals, such as healthcare, publishing, or music, function.

The emergence of this technology can be of similar impact as the internet in terms of changing the way digital business is conducted.

For example, the internet has had a significant impact on the healthcare industry, providing new opportunities for virtual appointments, telemedicine, and the rapid transmission of medical information. Similarly, the music industry has been transformed by the internet, with the ability to send music as data and platforms like Pirate Bay making it more accessible than ever before. However, these changes also pose challenges, such as the protection of intellectual property rights and the difficulties faced by artists in making a living off their music.

Blockchain: What it is and why it is important

What is blockchain technology?

A blockchain can be seen as a type of database that stores information across a network of computers. Each block in the chain represents a number of transactions that can vary depending on how the blockchain is architected. Every time a new transaction is added to the block, it is also added to the chain automatically and becomes a permanent part of it. Each transaction is represented by a so-called hash, which is used to identify and link blocks in the blockchain and to ensure the integrity of the data stored in them. This allows us – for the first time in the digital world – to solve the digital double-spend problem without the need for an intermediary.

Each digital asset (e.g. token) can only be spent once, since any attempt to spend the same token twice would be immediately apparent from the chain's history. When a blockchain is organized in a decentralized manner, consensus algorithms are used to confirm the validity of transactions, further ensuring that double-spending does not occur. With regards to content, this means that every piece of data can become investible and include a logic of ownership, hence facilitating an entirely new logic of digital value. And: The logic of a piece becomes programmable, meaning that we can include certain characteristics and processes to a piece of data.

Why is cryptocurrency a part of blockchain?

Cryptocurrencies in the blockchain ecosystem are digital means of exchange. When someone sends or receives cryptocurrency, that transaction is recorded on the blockchain, creating a permanent record of the transfer. This allows for secure and transparent transactions without the need for a central authority. However, the terminology of "currency" is misleading, as the tokens are essential for any type of transaction, and hence also processes that are operated on a blockchain. Native tokens are used to pay for transactions on the respective networks. When a user wants to interact with a decentralized App (dApp), they must pay a small amount of the native token to the network to cover the cost of processing the transaction to those who validate them. It can hence be seen as fuel to operate the infrastructure, a blockchain provides. As an example, the role of Ether in the Ethereum ecosystem is to provide the necessary "fuel" to run smart contracts, decentralized applications and to facilitate the exchange of value among users. This is what provides an intrinsic value to Ether.



Main Concepts of Web3

The decentralized nature of the Web3 ecosystem introduces some new considerations and potential challenges compared to traditional business models for operators in the digital space to consider. Some key differences include:

Decentralized marketplaces: These are online platforms that allow users to buy and sell goods and services directly with one another, without the need for intermediaries such as banks or payment processors. An example of a decentralized marketplace is Openbazaar.³, which is a peer-to-peer marketplace that allows users to buy and sell a wide range of goods and services using cryptocurrency. Decentralized marketplaces change the way business is done by eliminating the need for intermediaries and allowing for more direct, peer-to-peer transactions, in a user-friendly interface.

Digital assets: Digital assets refer to a wide range of items that are stored and traded digitally, including cryptocurrency, NFTs, and other types of digital assets such as music, eBooks, and in-game items. An example of a platform that allows users to buy and sell digital assets is OpenSea⁴, which is operated on the Ethereum blockchain and allows customers to purchase Digital Art, Collectibles, Gaming Items, virtual real estate and music NFTs. Digital assets change the way business is done because they introduce a concept of digital scarcity to the internet. Data becomes investible, and that creates new logics of value and business.

Non-fungible Tokens (NFTs): An NFT, or non-fungible token, is a type of digital asset that represents ownership of a unique item or piece of content, such as a medical record, a video, or even a tweet or an e-mail. NFTs are created using blockchain technology, and represent unique digital assets that can be bought, sold, and traded like physical assets, and can entail their own, programmed business logic when combined with a smart contract. The revolutionary aspect of NFTs is that they allow for the creation of scarce, digital goods. This concept of scarcity will redefine the way we think about ownership and valuecreation in the digital world. NFTs have the potential to disrupt various industries. For example, in the music industry, an NFT can represents an album of an artist, which can be made investible. Fans can own fractions of the respective rights, supporting the artist and benefiting from a potential upside from supporting a rising star. NFTs also allow artists to sell their digital artworks directly to buyers, cutting out the middlemen and giving artists more control over the distribution and pricing of their work, while at the same time, building and shaping a community. NFTs can also be used to fractionalize book royalties, which allows authors to sell partial ownership of their future royalties to investors, providing a new source of funding for creative projects and allowing fans to become co-owners of their favorite artists' work. The utility reaches almost every data-related industry. For instance, NFTs can be used to securely store and share medical records, allowing for more efficient and accurate patient care by making it easier for healthcare professionals to access and share patient information. The same technological innovation can be used to track patients and record data in clinical trials, providing transparency and accountability in the research process, or they can be used to track and verify the authenticity of pharmaceuticals, medical devices, and other healthcare products throughout the supply chain. In particular in the content industry, NFTs are a major milestone with regards to intellectual property right protection, because the creator of any piece of data will not only be always identifiable, but also - if coded in a smart contract - be rewarded for every secondary transaction or sale of their NFT that includes a monetary incentive, hence rewarding the initial creator.

NFT marketplaces: These are platforms that allow users to buy and sell non-fungible tokens (NFTs), which are digital assets that represent unique items such as artwork or collectibles. An example of an NFT marketplace is OpenSea , which is a platform that allows users to buy, sell, and trade a wide range of NFTs, including art, collectibles, and in-game items. NFT marketplaces change the way business is done by allowing users to trade unique digital assets that have value in and of themselves, rather than just as a means of exchange.

³ Mobazha

⁴ OpenSea, the largest NFT marketplace

Decentralized finance (DeFi): This is a new type of financial system that operates on the blockchain and allows users to access a wide range of financial services, such as lending, borrowing, and trading, directly from their digital wallets. An example of a DeFi platform is Compound⁵, which is a decentralized lending platform that allows users to lend and borrow cryptocurrencies, with interest rates being set algorithmically based on supply and demand. It is built on the Ethereum blockchain and utilizes smart contracts to automatically manage the lending and borrowing of assets.

Staking and governance: Many blockchain platforms allow users to earn rewards by "staking" their cryptocurrency and participating in the governance of the network in exchange for rewards for contributing to the operations and maintaining the blockchain networks. This can be a significant source of revenue for users who are able to contribute valuable resources and time to the network. Almost every proof of stake blockchain assets can be staked. An example of a platform that utilizes staking and governance is Cosmos.⁶, which is a decentralized network of blockchains that allows users to earn rewards by participating in the network's governance and staking their tokens.

Prediction markets: These are platforms that allow users to make predictions about future events and outcomes and bet on the likelihood of those predictions coming true. An example of a prediction market is Augur.⁷, which is a decentralized platform that allows users to create and participate in prediction markets on a wide range of topics. Prediction markets change the way business is done by allowing users to hedge their bets on future events and outcomes, and potentially earn returns based on their predictions. In media, this can be particularly relevant for the live broadcasting and advertisement industries.

Decentralized autonomous organizations (DAOs): These are organizations that operate on the blockchain and are governed by a set of rules encoded into smart contracts. DAOs can be used to facilitate a wide range of business activities, including fundraising and decision-making. An example of a DAO is The DAO⁸, which was one of the first decentralized autonomous organizations and raised millions of dollars in funding through a crowdfunding campaign. DAOs change the way traditional businesses are structured by allowing for decentralized decision-making and governance.

Metaverse: The metaverse is a virtual shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual space, including the sum of all virtual worlds, augmented realities, and the decentralized internet. An example of a platform that is building a metaverse is Decentraland.⁹, which is a decentralized platform that allows users to create, experience, and monetize content and applications. The metaverse changes the way business is done by creating new virtual spaces where users can interact, create, and trade in a virtual environment. As blockchain ecosystems now allow for digital scarcity, a concept of a new, virtual reality with a logic of ownership becomes more realistic.



⁵ Compound

⁶ Internet of Blockchains - Cosmos Network

⁷ Augur is the world's most accessible, low-fee, no-limit betting platform.

⁸ Ethereum Classic - DAO (ethereumclassicdao.org)

⁹ Welcome to Decentraland

Digital identity: In a Web3 environment, digital identity refers to the way individuals and organizations represent themselves and prove their identity online. This can be achieved through the use of blockchain-based systems that allow users to securely store and manage their personal and professional information. An example of a platform that is working on digital identity solutions is Civic.¹⁰, which is a decentralized platform that allows users to store and manage their personal identity information securely on the blockchain, using a combination of blockchain technology and biometrics.

Current Ecosystem Challenges

The examples above are just a fraction of what is possible. The recent two years have also indicated that the potential Web3 holds and its relevance for the world of digital business is going to last and some shape or form, with numerous companies and institutions dedicating increased attention to it. Nevertheless, there are several risks that corporations, institutions, and venture capitalists should be aware of when it comes to exposing themselves to Web3.

Regulatory uncertainty:

Web3 technologies are still relatively new and are not yet fully understood by regulators. This can create uncertainty for corporations and institutions, as well as venture capitalists, who may be unsure of how to comply with existing laws and regulations when working with these technologies. In 2022, major steps have been taken on a global scale to speed-up regulatory processes, mainly driven by the devastating industry events with the downfall of Terra LUNA, the downfall of the crypto trading firm voyager, the filings for bankruptcy of Crypto Hedge Fund Three Arrows Capital, Crypto lender BlockFI and of course, the most recent and biggest development, the filing for bankruptcy by crypto exchange platform FTX.

Lack of security and technical expertise:

The Web3 ecosystem is highly complex and constantly evolving, making it difficult for corporations and institutions to stay up to date with the latest developments. Additionally, there is a lack of security experts who have experience in this space, which can make it hard to ensure that systems are properly protected. This can be a significant risk for venture capitalists who are investing in this space. The number of Web3 developers is growing rapidly.¹¹ as more and more people become interested in the technology and its potential use cases. Furthermore, many existing developers who have experience with traditional web technologies are starting to explore and learn about Web3 development. Developers who have a strong understanding of the concepts and technologies behind Web3 and who are familiar with the programming languages and frameworks commonly used in Web3 development, can transition to Web3 development. However, for developers with little or no experience with these concepts, it likely takes more time and effort to become proficient in programming in Web3. The success of Web3 will hence also depend on the number of people migrating into the space and contributing to it as developers.

Volatility:

The value of cryptocurrencies and tokens can be highly volatile, creating risks for investors and those who hold them as inventory. Moreover, the cost of managing and tracking digital assets can be high, especially in light of the regulatory uncertainty. Token prices can fluctuate rapidly, which can lead to significant gains or losses in short periods of time. This makes it hard to predict the value of an investment, which can make it difficult for investors to make informed decisions and affecting the decision making process for venture capitalists with regards to timing of investing and exiting. The same is true for companies generating revenue in any kind of token. When a project's native currency is undervalued, operative process can quickly be undermined.

Fraud, scams, and hacking:

Hackers can take advantage of the lack of security expertise and complexity of the ecosystem to steal digital assets. Hackers frequently attacked exchanges, DEXes and hot wallets¹², but also ecosystems, in the past.

¹⁰ Civic Pass - identity management tools for Web3

¹¹ Boston Consulting Group, 2022

¹² The 10 largest crypto hacks and exploits in 2022 saw \$2.1B stolen (cointelegraph.com)

In most cases, the stolen funds can be recovered, but not in all of them. Frequently, new projects emerge that are just instated with the intention to fraud investors. Often, these dApps promise high returns and claim to be completely secure and decentralized, while they are actually controlled by a group of frauds who created the app with the single purpose of stealing money.

Lack of adoption and use cases for Web3:

There is still a lack of understanding with regards to how cryptocurrencies work and why they are relevant for Web3 based business models. In addition, cryptocurrencies are stored in digital wallets, and many potential users are deterred by the idea of having to take full responsibility for custody and owning their data, let alone the fact that wallet adoption is far away from being part of the consumer mainstream. The fact that wallets are not commonly used yet can make it difficult for companies to generate revenue and for venture capitalists to see a return on their investments in the short term, simply because potential users do not yet entail the infrastructure needed to use the applications.

Overall, while the Web3 ecosystem holds a lot of potential, it also comes with several risks that corporations, institutions, and venture capitalists need to be aware of when becoming involved.

Web3 Infrastructure can revolutionize Traditional Business Models across a Variety of Industries

Blockchain enables a comparable infrastructural shift as cloud technology. It has the potential to change the way business is conducted, by applying new concepts. Companies like Spotify and Audible for instance, which were made possible by the shift to cloud technology, are examples of businesses that have emerged as a result of infrastructural shifts. Others, such as Netflix, Disney+, and Apple have disrupted their own business models in response to these shifts. By adapting, they were able to gain or maintain a competitive edge.

Taking these learnings from the past into consideration, it is important for corporates in general to understand and pay attention to Web3 because it represents a significant shift in the digital landscape that has the potential to impact their business models. Companies that fail to stay informed about these developments and adapt their strategies accordingly risk falling behind their competitors and missing out on potential opportunities.

This is particularly relevant in the media industry, where the adoption of Web3 technologies could particularly lead to the emergence of new business models leveraging powerful communities and disrupt traditional approaches to providing content. For example, the use of blockchain for content distribution and licensing could change the way that media companies monetize their content. The ability to use smart contracts to automate business processes and facilitate transactions could streamline operations and reduce costs for media companies. With NFTs, advertisement logics might be disrupted, leveraging community and digital scarcity and emphasizing exclusivity over quantity of output. NFTs can fundamentally disrupt the advertisement industry by leveraging the power of communities and the concept of digital scarcity.



Web3: A New Digital Infrastructure transforming Industries and creating Opportunities for Bertelsmann

Web3 is often described as the internet of value and is a new, digital infrastructure that combines the user-friendly frontend of Web2 with a decentralized backend featuring trustless, programmable, and immutable mechanisms for governance and incentives. Web3 infrastructure enables token-based incentives, trustless payments, and decentralized governance, creating a more democratized and diverse digital economy through the use of digital provenance, fractional asset ownership, and community governance structures.

For a company like Bertelsmann, understanding and paying attention to Web3 is particularly important as it operates in various sectors within the media industry, including publishing, advertisement, and music, but also in financial and supply chain services. All these services contain, collect and use loads of data. Web3 is disrupting the way data-based businesses can function.

By staying informed about the potential impacts of Web3 on these sectors, Bertelsmann can adapt its strategies and take advantage of any opportunities that may arise. This could help the company maintain its competitive edge and hedge against the likely disruption, Web3 introduces to the ever-evolving media landscape, but also to every digital service industry. Here are some examples:

Music:

In the music industry, Web3 technologies can facilitate more control over the distribution and monetization of content for artists, and this can potentially lead to new business models. One example is how Web3 technologies could be used to allow fans to own fractions of the content they love through the use of tokenization. Artists could create tokens that represent ownership of their content or a share in their future earnings. Fans could purchase these tokens as a way to support the artist and own a piece of their work. This could give fans a sense of ownership and investment in the artist's success and provide an additional revenue stream for the artist. In addition, artists could use tokenization and crowdfunding to raise funds for their projects. For example, an artist could create a crowdfunding campaign on a decentralized platform, setting a goal for the amount of funding they need to complete their project. Fans could contribute to the campaign by purchasing tokens, which could represent ownership of the finished project or a share of future earnings. This could provide a way for artists to raise funds and build a community of supporters early on in their careers, while rewarding these early contributors in the case of success.

Publishing:

With regards to the publishing industry, Web3 technologies might enable the creation of decentralized platforms for the distribution and monetization of content. This could allow writers and other content creators to share their work directly with readers and receive payment in a more efficient and transparent manner. One example is a decentralized blogging and social media platform that is built on top of a blockchain ecosystem and allows users to create and publish content. Users can earn rewards in the form of tokens for their contributions, which can either serve as a currency within a respective ecosystem or be redeemed to access unique and exclusive content or events. This can provide a new revenue stream for content creators, as they can earn money for their work through the platform. The same could work for books as well. Considering the powerful communities many authors have, Web3 technologies could open up the gateways for a new way of author-audience interaction, online in the metaverse, or offline, accessed by scarce NFTs.

Factoring and Debt collection:

Not only in the media realm but also in the world of finance, Web3 technologies could potentially be used to automate and streamline processes. For factoring and debt collection, smart contracts and other decentralized technologies could be used to automate the process of verifying and tracking invoices and payments, reducing the need for manual intervention and increasing efficiency. Such a service could look as follows:

- 1. A customer purchases a product.
- 2. The company that sold the product generates an invoice and sends it to the customer.
- 3. The invoice is automatically registered on the blockchain, along with the payment terms (e.g. payment due in 30 days).
- 4. The customer pays the invoice, and the payment is also registered on the blockchain.
- 5. If the customer fails to pay the invoice on time, the smart contract could automatically trigger a debt collection process, including, for example, sending automated reminders and notifications to the customer, as well as reporting the late payment to credit agencies.

Blockchain technology can also provide liquidity in this process by allowing for the creation of a marketplace for buying and selling invoices. This can make it easier for companies to outstanding payments for their invoices in a timely manner, as they can sell them to third parties who are willing to purchase them at a discount. Additionally, the use of decentralized technologies can increase transparency and reduce the risk of fraud, as all invoices and payments are recorded on the blockchain and can be easily verified by all parties.

Healthcare:

In the digital health industry, Web3 technologies can be used to store and share patient health records securely and efficiently. This could allow for better coordination of care between different healthcare providers and improve patient outcomes. Many critics of digital healthcare records could be more open to decentralized activities, in which patients hold custody over their sensitive data, instead of centralized institutions. In addition, Web3 technologies could be used to create decentralized platforms for the buying and selling of healthcare services, allowing patients to find and compare treatment options more easily. A potential example of how Web3 technologies could be used to incentivize the creation of high-guality research data in the pharmaceutical industry is through the use of tokenization. Research data could be divided into smaller "fractions" or "tokens," which could be bought and sold on a decentralized platform. Researchers who contribute high-quality data to the platform could be rewarded with tokens, which could be traded for other assets or used to access additional research or resources. This system could create an incentive for researchers to contribute high-quality data, as they would be more likely to receive a larger number of tokens in return. It could also create a marketplace for research data, allowing researchers and other interested parties to access and use the data in a more efficient and transparent manner. Those that accumulate and sell the datasets could be rewarded for medical breakthroughs achieved using their data in the long-term, creating quality enhancing incentives.

3. Which Signals does the Market send?

Exploring the Growth and Potential of Web3 as Venture Capitalists

If we look at the adoption of Web3, one striking aspect is that it has been following a similar pattern as the early internet of the 1990s. At the end of 2021, the Market Capitalization of all crypto-related assets stood at USD 2 Trn and 200 million users¹³. Even though the market has undergone a significant correction in 2022, if the trend of increased users holds, Web3 users will amount to somewhere between 1 and 1.5 bn users by 2027. As the relevance of blockchain technology is sector-agnostic, and as use-cases can affect everything data and content related, research suggests that 10% of the world's GDP could be stored on public blockchain technology by 2027.¹⁴. Black Rock CEO Larry Fink stated in December 2022: "The next generation for markets, the next generation for securities, will be tokenization of securities."¹⁵ Despite the volatility in the crypto markets, not only user-adoption has remained stable, similarly, the influx of talent from the traditional tech and finance industries continues to grow, and the number of developers has been growing by 69% per annum since 2014¹⁶.

"The next generation for markets will be tokenization of securities."¹⁶







 Reports predict up to 1.5 billion crypto users by 2027

→ ~ minimum of **5x increase** from today's estimate of around 200 million crypto users

17

When it comes to understanding what the themes and trends of future business are, global Venture Capital activity can be a helpful indicator. It is the nature of business for every investor to price-in future potential and expectations.

¹⁶ Boston Consulting Group

¹³ Coinmarketcap; Boston Consulting Group

¹⁴ World Economic Forum, 2015

¹⁵ BlackRock CEO Says 'Next Generation for Markets' Is Tokenization - Decrypt

¹⁷ World Economic Forum 2021; Boston Consulting Group

Overall, VC spendings into crypto and blockchain related businesses is showing a growing trendline. 2021 has been by far the most dynamic year in terms of investment volume, with more than USD 30bn invested in the technology¹⁸. In addition, pre-money valuations for blockchain-related businesses are higher than in the global VC average, again, indicating the expectations that investors price into the technology when investing.

From Q2 to Q3 2022, median premoney valuations in all VC dropped by 9% but in crypto and blockchain, valuation declined by just 3%.¹⁹. So despite the challenging market environment, general investor sentiment, similar to the technology's adoption, remains stable.

2022 has been a turbulent year, with huge macroeconomic uncertainty due to recession fears and crypto markets struck by industry-specific events, in particular, the collapses of platforms that were deemed crucial for driving mass-adoption in Web3. That has significantly stress-tested the industry.

VC Money Invested in Crypto/Blockchain & Deal Count



Median Pre-Money Valuations (Crypto/Blockchain vs. All VC)



It remains to be seen whether Venture Capital spending will follow the price-pattern of the digital assets markets. So far, regardless of boom- and bust-cycles, adoption has been growing.²¹

As mentioned above, it is important to note that the crypto and blockchain industry also faces a number of challenges and risks that could impact its growth and adoption. Nevertheless, as a Corporate VC, these number and figures indicate that Web3 is not just a flu passing by. For the corporate part of our identity as a VC, these numbers, and the new logics of business we continuously observe from startups in the field in particular, indicate that there is substantial relevance for Content, Services and Education companies and the future of their core businesses.

Typical Web3 Deal structure and exemplary Investments

Early-stage VC deals in Web3 are usually a combination of equity and token investments. The VC firm provides capital to the company in exchange for a combination of equity in the company employing the core team, and tokens (future tokens, token warrants etc.) in the protocol itself once they are ready to be issued. VCs may also receive equity shares in the foundation that governs the protocol. The terms of the deal, including the valuation of the company and the protocol, the amount of equity and tokens being sold, and the rights and obligations of the investors and the protocol, are outlined in a term sheet similar to traditional VC. In the case of token investments, the VC firm receives a portion of the protocol's native tokens that are yet to be issued or sold on the open market at a discount. Early stage Web3 deals may have provisions such as token vesting, token lockup periods, and voting rights to

¹⁸ Pitchbook; Galaxy Digital Research

¹⁹ Pitchbook; Galaxy Digital Research

²⁰ Pitchbook; Galaxy Digital Research

²¹ Pitchbook; Galaxy Digital Research

protect the interests of the VC investors. The equity part of the investment often is done as a downside protection, as the token themselves due to their opensource nature are not "governed" by a centralized entity. Early-stage investments in Web3, especially in tokens, are high-risk-high-reward approaches, where the appreciation of the native tokens of a protocol can lead to higher returns than equity investments, as the value of the tokens can increase as the protocol and its ecosystem grow. At the same time, tokens are more volatile and often do not yield the stable return on investment as through ownership in the core team that develops such a protocol.

Exemplary investments VCs could conduct:

1. **Technology infrastructure** improving the infrastructural layer of blockchain technology, in particular by scaling up networks and increasing interoperability in Web3:

Example1: Layer 1 blockchain

Solana is a high-performance blockchain that is designed to provide fast and efficient execution of decentralized applications and decentralized finance (DeFi) protocols, which are expected to drive demand for Solana tokens as users transact and interact with these applications. Solana's token value is driven by several factors, including the growth and adoption of the Solana network and its ecosystem, meaning the number of applications built on top of the blockchain, the utility of the token as a means of exchange and payment, and the potential for the token to appreciate in value as the Solana network and its ecosystem mature.

Solana has attracted significant investment from venture capital firms and other investors, who see its potential to become a key infrastructure provider in the Web3 space. The investment capital has been used to support the development of the Solana network and its ecosystem, as well as to drive adoption and integration with other protocols and dApps.

Example 2: zk-bridges

Zk-Bridges are Web3 infrastructure solutions designed to enable interoperability between different blockchain networks, allowing developers to transfer data, assets, and value between them in a secure and efficient manner.

Loopring, a decentralized exchange (DEX) protocol built on the Ethereum blockchain facilitating interoperability between Ethereum and other blockchain networks, is an example for that. The Loopring zk-Bridge enables users to transfer assets from one blockchain network to another, such as from Ethereum to Binance Smart Chain (BSC), without the need to go through centralized exchanges. Revenue is generated by charging transaction fees for asset transfers between different blockchain networks. For example, if a user wants to transfer an asset from Ethereum to BSC, they will pay a transaction fee to the Loopring zk-Bridge. This fee is paid in the native token of the Loopring zk-Bridge, which in this case is LRC (as transaction fees are always paid in the native token corresponding with the respective architecture). The value of zk-Bridges and their tokens is driven by a number of factors, including the growth and adoption of the solutions and the blockchain networks they support, the utility of the solutions to developers and users, and the potential for the companies to generate revenue through their services and products.

2. Legitimacy and reliability solutions to increase mass adoption of Web3, in particular solutions that enhance the security of transactions on blockchains or decentralize transaction mechanisms:

One example of an investment in a legitimacy and reliability solution in Web3 is "MEVGuard", a platform that provides real-time monitoring and protection against MEV (Miners' Extractable Value) exploits in DeFi protocols. MEV in Web3 refers to the amount of value that can be captured by a miner or validator through their privileged access to the underlying protocols and systems of a decentralized network (e.g. through front-running, censorship, or manipulating consensus mechanisms). MEVGuard uses cutting-edge technology to detect and prevent such malicious activities, generating revenue by charging fees for its services to users and protocols in the DeFi space. The company's revenue and the value of its native token, the MEVGuard Token (MGT), are driven by several factors, including the level of adoption of its platform, the level of trust and confidence that users have in its solutions, and the overall growth and development of the DeFi and Web3 markets.

3. Use cases on the application level leveraging the novel infrastructure of Web3 to revolutionize or enterprise applications:

One example is the fractionalization platform twelve x twelve. Based in Berlin, they provide access to NFTs on songs or albums and currently work on fractionalizing these asset to provide blockchain based financial products. Essentially, they are leveraging the power of NFTs to mint the royalties on the Ethereum blockchain and fractionalize the asset so that investors can purchase shares of this asset on their own marketplace, and – potentially – on secondary Ethereum marketplaces, such as OpenSea. Thus, they make previously un-investible assets investible without the need for numerous intermediaries, as the entire ownership, dividend and transaction logic is coded in the smart contract. They make money by either taking a share of the catalogue they fracture, taking a fee for providing the service (at some stage as a White label solution) or taking a transaction fee on their own platform.

Why are we getting involved now?

Web3 is seeing strong traction, not only when it comes to users and capital invested. For a technology to thrive, multiple aspects must come into play. The regulatory frameworks are moving fast, as decisionmakers have acknowledged the relevance of the emerging ecosystems in Web3. Governments are further building central bank digital currencies, acknowledging the frictionless nature of blockchain technologies, and proving that the space is becoming increasingly stable. Institutional and large corporates are increasingly adapting their perception of the space, and terms like NFTs and Metaverse have reached the corporate mainstream.

The adoption of digital assets is rapidly growing, and more professionals are building their careers on it. For example, Citi states that the metaverse economy could be worth USD 13tn by 2030 and could boast as many as 5 billion users.²². Most Wall Street Banks are building out their crypto teams and are competing with the startups sector for talent. Giants like Meta have made the technology a priority of their corporate strategy, incorporating NFTs on Instagram.²³, and Google has announced to run validator nodes for Solana, Ethereum and Cosmos.²⁴.

Many companies see the potential for these technologies to disrupt traditional business models and are looking to explore opportunities in the space and the market for decentralized applications, making the use of blockchain technology grow rapidly.

Blockchain and decentralized technologies are also becoming more mature and stable, making it easier for companies to build and launch products on these platforms that are secure, decentral and scalable at the same time.

The interest and adoption of digital assets is rapidly growing, and more and more professionals are eying the space to build their careers on it, from the traditional finance space to business development, from Human Resources to legal and accounting. This, combined with a growing talent pool of developers with experience in blockchain and decentralized technologies makes it easier for companies to find the resources they need to build Web3 products and services.

²² <u>Studie: Das Metaverse kann bis 2030 einen Wert von bis zu 5 Billionen Dollar erreichen. E-Commerce ist der größte wirtschaftliche Treiber im Metaverse mit 2,6 Billionen Dollar. | McKinsey & Company</u>

²³ Introducing Digital Collectibles to Showcase NFTs on Instagram | Meta (fb.com)

²⁴ Google Cloud auf Twitter: "Did you think we only had one announcement? Think again. Google Cloud is working with @solana to bring Blockchain Node Engine to the Solana chain next year, so it will be easy for anyone to launch a dedicated Solana node in the cloud 1 https://t.co/CzrM90fQpp" / Twitter

All these reasons combined make it an exciting time for companies to explore the potential of Web3 and begin experimenting with different use cases and applications in Web3. At Bertelsmann Investments, we have been among the early investors in Web3, investing for the first time in 2016. Since, our funds have increased their exposure consistently. Now the time for us has arrived to double-down on and structure these initiatives, and carry our insight, expertise and network to the Bertelsmann Divisions, to help them flourish in the new era of the internet.

What does that mean for Corporate VCs?

Understanding the impact of technological innovations requires a suitable architecture. Transferring the innovation into the existing businesses requires understanding, education and commitment by the respective leadership.

Corporate Venture Capital often plays a significant role in the corporate innovation process. Usually, Corporate VCs are not exclusively incentivized by monetary returns, but also by strategic insight. On some occasions, that can trigger adverse selection, leading to a suboptimal outcome for the investment.

In Web3, being a new infrastructure for all business sectors to potentially thrive on, any investment automatically becomes strategically relevant, as long as it helps a company better explore and understand the space and the underlying ramifications for its core businesses. As a Corporate VC of a parent company focusing on content, services and education, we expect to be particularly affected by the impact of Web3 technology, and our startup and fund partners play a crucial role for us to hedge against this possible disruption.

Corporate VCs often collaborate closely with inhouse tech departments, providing them with access to new technologies, or their business units, facilitating access to startups that could potentially be integrated into the parent company. This can contribute to a Corporate M&A strategy and help the parent company identify and potentially acquire startups with strategic potential. Under the assumption that for some of the major Web2 business models, there are better and more efficient alternatives in Web3, the value of Corporate VC as an innovation framework becomes ever more obvious.

Some of the main challenges, Corporate VCs face when entering the Web3 space are closely related to the general challenges the Web3 ecosystem is facing. Most Corporate VCs do not have experience investing in blockchain or decentralized technologies, which can make it difficult for them to evaluate the potential of a Web3 startup or project. The war for coding talent in Web2 is already heated. In Web3, however, where code is law, a malfunctioning smart contract may have significantly more dangerous side-effects than in traditional e-business. Hence, having enhanced technical capacities becomes increasingly important, and judging potential startups beyond their financial outlook becomes critical, not only when it comes to challenging decentralized Applications. These apps and the underlying business models also technologically depend on the ecosystems they are built upon, so investors need to select wisely, which underlying chain their investment encounters, especially since the value of dApps is also likely to be correlated with the protocols it is built upon.

As cryptocurrencies and other blockchain-based assets can be highly volatile, and the overall ecosystem is still in the early stages of development, it requires expertise and deep understanding to predict which projects or companies will succeed in the long term. Considering the rapidly moving legal environment, legal teams of Web3 investors need to be very adaptable, in order to keep up to date with this dynamic, and geographically varying situations.

Given the nascency of the ecosystems, Web3 companies also often are not ready or even applicable for exits via traditional M&A or IPO routes, which can limit returns for Corporate VCs. On the flipside, liquid markets for tokens can be an opportunity to react to signals from the market and adjust risk more flexibly. Here, it is worth noting that traditional VCs usually lack experience and infrastructure in liquid trading.

Moreover, the projects that are being developed often do not have a track record (and may very well be at the idea-stage with only a whitepaper at hand). As industry standards are not yet established, it is difficult to evaluate the potential of the projects, especially when it comes to very early-stage deals and when the investment team does not also comprise of crypto / Web3 native experts. As a consequence of the ecosystem's early stage, and despite the increasing number of Web3 related startups, there are fewer opportunities for Corporate VCs to invest in compared to traditional, digital businesses. This becomes imminent by looking at the most popular business models currently, which often revolve around digital marketplaces, NFTs and DAOs. Most ideas point into very similar directions, and it is difficult to distinguish noise from signal.

Despite these challenges, many Corporate VCs believe that the long-term potential of the Web3 ecosystem justifies the risk of investing in it, as it has the potential to radically change the way business is conducted in a number of industries. We are one of them.

The long-term potential of the

Web3 ecosystem justifies the risk of investing in it, as it has the potential to radically change the way business is conducted.

4. How do we ensure Access to Web3?

At Bertelsmann Investments, we are driven by our mission to empower entrepreneurs all around the world. We understand that today's rapidly-evolving technology landscape brings new challenges and opportunities for Bertelsmann's core businesses, and new demands and needs from consumers. That is why we are constantly on the lookout for blind spots that could be addressed through new disruptive trends and technologies, so that we are not caught off guard.

To leverage the above mentioned financial and strategic potential of Web3 and serve as a magnifying glass for our divisions, we have identified three pillars to position ourselves well in the arising Web3 ownership economy.

- 1. Investments
- 2. Education and fostering understanding
- 3. Strategic Ventures and Partnerships

Investments can help us gain valuable insights into this emerging space, and sharpen our understanding of what is possible in Web3. We can use this knowledge to inform our divisions specifically on themes relevant for their core-businesses, raise awareness, understanding and acceptance and create fertile grounds for Web3 innovation to flourish in our operations. Strategically motivated, long-term partnerships shall become a consequence of these endeavours as well, as we intend to strengthen our ties with business leaders, the academic world, and strategically relevant businesses that cover themes of signifcant, disruptive impact. With this approach, all three pillars cross-polinate each other, creating the foundational work for us to navigate through the still unknown territory of Web3 in a structured manner and make sure that synergies are facilitated by design, not by coincidence. What does that mean in detail?

1. Investments in Web3 innovation create Win-Win situations

This includes Fund-of-Fund and selected early-stage deals. Fund of Fund investments help us activate our network, identify potential partnerships for the Group, and gain valuable market intelligence while mitigating risk and diversifying capital allocation. This increased exposure will not only give us access to a wider network of founders, but it will also help us establish Joint Ventures and new types of strategic partnerships if needed. This increased exposure to new and emerging business models will serve as a hedge against disruption for Bertelsmann as a company and for our Bertelsmann Investments portfolio.

Our partners can benefit from our entrepreneurial expertise, which we have gained from partnering with hundreds of businesses and studying thousands of different business models. As Web3 brings new technological knowledge, many of the new business models we partner with can be a value-add for the operating businesses. In addition to funding, Bertelsmann Investments can open doors and facilitate partnerships with these units, thereby scaling the startup's operations through the divisional network.

2. Education and understanding

With infrastructural paradigm shifts always comes the challenge that an adoption is not only appreciated, but paramount to sustain market share. If we take the most recent, comparable paradigm-shift – with the rise of cloud computing - as an example, that becomes obvious. Companies like AWS were not only born out of such a paradigm-shift, they are without alternative in a world of interactive, user generated content that is not downloaded, but streamed.

Not every cloud offering matches every specific demand, but for different demands, there is different cloud offerings. In Web3, we might very well witness a similar situation.

Identifying the best suitable, potential partners is closely related to departments within large organizations that have exposure to the venture ecosystem in Web3. Translating and transmitting the strategic insight we gather from our existing investments can fertilize the ground for decision makers on an operational and Business Unit level and for the Bertelsmann Tech & Data Team, who lead group wide partnerships and efforts. Hence, we have started to undertake tailored efforts in informing Bertelsmann leadership on the relevance of Web3. We will co-develop regular workshops and events that serve as knowledge transfer events and pursue the goal of making innovative approaches by startups tangible and accessible to our decision makers.

3. Strategic Ventures and Partnerships

Beyond these operative endeavors, we will expand our strategic insight by engaging with the global Web3 community, connect with Key Opinion Leaders, Researchers and Pioneers in the space and partner with academic institutions to be at the forefront of Web3 innovation.

Engaging with key opinion leaders in the industry shall provide BI with valuable insights and help us to stay informed about the latest developments and trends in the field. Additionally, by partnering with academic institutions, BI can tap into cutting-edge research and gain access to talented students and researchers who can help drive innovation.

Overall, this approach of strategic ventures and partnerships allows BI to stay nimble and adaptable in the ever-changing Web3 space, and gives it the resources and expertise it needs to grow and succeed.

5. Join us on our Journey

It is our pleasure to invite investors, start-ups and partners to join Bertelsmann Investments in our efforts to shape the future of Web3 innovation. Our long-standing history of successful partnerships with venture capital funds has allowed us to gain valuable market intelligence, identify potential partnerships and expand our strategic insights.

We have a strong network of global funds that focus on different themes and stages, and invest out of the Bertelsmann balance sheet. As we continue to expand our fund-of-funds investments in Web3, we recognize the potential for new business models and the value they can bring to our divisions, and we look forward to create partnerships within Bertelsmann in close collaboration with the recently established Web3 Leadership Circle set up by the Bertelsmann Tech & Data Alliance.

Partnering with Bertelsmann Investments will provide start-ups with access to our entrepreneurial expertise, which we have gained from working with numerous businesses, and our global reach through offices in Beijing, Delhi, New York City, Berlin and Gütersloh.

We understand that with the rise of Web3, comes the challenge of adoption and understanding. Therefore, we have made it a priority to inform Bertelsmann leadership and create awareness about Web3 through internal and external events.

Now, we are expanding our network and would like to extend an invitation for potential partners to contact us and learn more about how we can work together to drive the adoption of Web3 and harness the benefits of this paradigm shift. With Bertelsmann Investments, you will be at the forefront of technological advancement and business innovation and help us in empowering enterpreneurs all around the world.





6. Industry Statements



Carsten Coesfeld Chief Executive Officer at Bertelsmann Investments

"Bertelsmann Investments has always been at the forefront of technological innovation. With the emergence of Web3, we see significant potential for growth and development in the digital economy. Our investments and partnerships in this space are a testament to our commitment to leveraging new technologies to create value for our partners, including the divisions at Bertelsmann. We believe that Web3 has the potential to transform the way we do business and are excited to be a part of this new chapter in digital innovation."

"Web3 is a rapidly growing area of innovation in technology and business. With the new technology based on blockchain, new business models are emerging that improve efficiency and create new revenue streams, for example through digital assets. At Bertelsmann Investments, we believe it is essential to understand this paradigm shift and the opportunities it offers for entrepreneurs, and for Bertelsmann and its businesses. Through investments from our network of funds as well as partnering with leaders, entrepreneurs, and institutions in this space, we aim to play a role to steer innovation in this field. This approach will help us identify the main drivers of value in the Web3 ownership economy and, given the nascency of the





Shobhna Mohn Chief Strategy Officer at Bertelsmann Investments



Sebastian Blum Co-Founder & Partner at **Greenfield Capital**

"Web3 is a concept for a more open, decentralized and robust architecture of tomorrow's internet that aims to provide greater data security, privacy, and transparency. For companies, Web3 is highly relevant as it provides the ability to automate business processes and handle transactions more securely and efficiently. By using blockchain technology and smart contracts, corporations can ensure that business processes are more transparent and accountable, leading to higher customer satisfaction. Web3 can also reduce costs for companies through the elimination of intermediaries and middleware systems. It opens up new business models and opportunities by allowing direct data exchange between parties that were previously not possible. Especially consumer brands can develop additional revenue streams around digital ownership and token-gated access to scarce digital products, content and experiences. Overall, Web3 offers a novel approach of conducting business transactions that can enhance commercial success across various verticals."

"Our research in entrepreneurial finance at TUM School of Management constantly assesses value drivers in emerging technologies. In the case of Web3, the potential for decentralized and transparent systems may revolutionize economic and social interactions. Blockchain technology and smart contracts may improve existing business models' security, transparency, and efficiency. Web3 may also give rise to novel business models altogether. Against this background. I am particularly excited about collaborating with Bertelsmann Investments to train the first Ph.D. in Web3. The practical exchange with a leading institution such as Bertelsmann adds substantial value to our academic research. It also improves students' classroom experience by providing a real-world perspective on the implementation and impact of Web3 technology."



Prof. Paul P. **Momtaz** Professor of Entrepreneurial Finance at TUM



"The next generation of the web empowers creators to control the entire value chain in unprecedented ways and represents significant opportunities for new business models which require deep thought leadership around business strategies, mandates and overcoming risks and challenges."

Prof. Jamiel Sheikh Serial Entrepreneur / Founder & Managing Partner at CBDC Think Tank

7. Case Study: Re-Evaluating Value – How blockchain redefines the worlds of content and media

Content is everywhere. That most certainly is no secret. And if we assume – as I often do – that blockchain technology has the potential to significantly change the way business is done, then it would only be logical to assume that it can also disrupt the media industry in its roots.

The third article of "Blockchain Myths Decoded" focusses on exactly this. It revolves around the one thing the blockchain solves – the digital double spend problem, without the need for an intermediary, and the world of opportunities this opens for the content industry as a consequence.

The Revenue Eaters

Is there at all a necessity for the media and content industry to change, you might ask? Why would anyone want changes to occur? The answer on the first question certainly is "yes", because value creators are not the ones benefitting the most from their content. And the answer to the second question is even simpler: Because it is in the best interest of all consumers.



Simplified illustration of the media value chain in Web2

How does the current value chain look like? Very simplistically, the media industry has two main revenue streams:

- 1. Monetizing the content itself
- 2. Monetizing brands that utilize the content

In an ideal world, the content creator would just create the content and sell it to their audience, directly, without any intermediaries involved. The reality, of course, looks different. With regards to both, direct monetization of content and the advertisement industry, the processes are crowded with intermediaries.

The blockchain, of course, will not eliminate them all – take the discovery of content as an example: Without discovery services, it is incredibly hard for content creators to raise awareness and shine through the masses. The content can be brilliant, but no one will notice, if it is not discovered. Hence, I am certain that discovery services will remain paramount, but it will change, as I will describe further below. The other essential service, of course, is distribution, a service that various platforms have offered in Web2, and will continue to be offered in Web3 as well. Discovery and distribution, however, are only two of a plethora of intermediary services, and not all of them add the same, significant value.



Simplified illustration of the media value chain in Web3

In a world of transparent, liquid and decentralized alternatives, some of these services will not be needed any more, as smart contracts can be programmed to automatically execute them. These contracts can be incredibly cost-efficient compared to the existing offerings. While creators now might depend on all types of intermediary services, they will only be willing to give away a significant share of their revenue as long as there is no such thing as a more cost-efficient alternative. As we move increasingly into Web3, more and more of these offerings will be replaced, freeing up revenue that can be redistributed to those instances that really add value, in particular to the content creators. This is also true for the advertisement side of things – but with the added complexity that charging for adds is a highly untransparent process, built on assumptions rather than on facts, on reach and impressions, rather than on de facto, dedicated attention. Transporting concepts like the Basic Attention Token (BAT) could solve that issue, rewarding viewers with tokens for watching, and hence measuring the de facto attention on an immutable and decentralized chain. But that is just a side note.

Existing services – sure, some of them intermediaries – will not disappear, but will change their role with the improved technological opportunities at hand. I mentioned content discovery as such an example; Let us look at the fundamental tool to help audiences discover suitable content: Recommendation Engines. These tools are made to help us discover the content we really want to see, based on our individual preferences. However, we are not able to exercise any type of control over these recommendation engines. As they are highly centralized, and not open source, we in fact have no idea of how they are composed, and it is – at least in theory – easy to suggest that not always, the best content is delivered to our sphere of attention, but the one that has the strongest lobby (and /or financial incentives). So the underlying question is: Do we really discover the best content? And if yes, how come that content has become so mediocre.

While that certainly is an important aspect, the striking feature of the – again, highly simplified media chain in picture 1 – is in fact that the second most important parties in this process, the consumers, are not rewarded for consuming. They pay in two different currencies: Money and Attention. And when they become a community, they become highly valuable, but can't leverage this value.

An obesity of content, a highly fragmented revenue distribution, untransparent recommendation engines: Content is as easily accessible as never before, which makes it increasingly inflationary.

Provenance gives power to communities – Why NFTs are not a hoax

How can we tackle the issues identified? There is no simple answer, but there are powerful tools we can leverage.

In media, NFTs will play a crucial role. Blockchain technology, particularly NFTs, allow to redefine digital value. And this kind of value is created through the merger of creator, content and community. That is the concept of provenance. This concept alone has the potential to disrupt many of the media industry's current logics. Introducing the concept of exclusivity and scarcity to the industry, for the first time in history, there is an incentive to challenge the current logic of measuring value in the digital space.

In fact, it was incredibly hard, if not impossible, to define the value of a digital asset before blockchain technology was there. NFTs make this possible.

The creator, the content, and the willingness to pay by a significant number of consumers to become part of an exclusive community determines a price. The price is the amount, people are willing to pay to join a community.

As every piece of content must be worth paying for in order to own it, and every community worth joining requires a tangible buy-in (...), the focus in the content industry can shift from selling as much as possible to providing content that is as valuable as possible. In such a world, those who add value are rewarded. And as the community defines the true value of an asset, they will also be rewarded – by exclusive experiences, shares of generated revenue, the appreciation of the NFT they hold, etc. There is no limits to your fantasy.

To put it in a nutshell: The value of a media asset will equal the value of its community. And the value of a community can be evaluated by measuring the virality of its narratives. That is why, in contrast to Web2, in such a world, brands and communities merge. The narratives chosen by the community define the brand. And the community defines the brand value.

Why that matters

While that all might sound interesting, you might be wondering why you should care. You don't have to. At the end of the day, as so often, it is a matter of preference. But when I look at how the content landscape is developing, I certainly would wish for a wind of change.

Every single minute, 500 hours of YouTube Videos are uploaded. The library of Spotify contains more than 70 million songs, and Netflix alone releases more Originals than the entire global TV industry. The entrance barrier to become a content creator has become as low as the barrier to become a consumer with platforms like YouTube, Instagram, TikTok etc. To me personally, it feels like we are suffering from content obesity. Sure, some players might benefit from that, some might not. Netflix might be struggling, Disney+ might be doing better. Is that surprising? If you ask me, it is not, in fact, it is a symptom of what I just described. Of course, I am thrilled over the announcement of the Obi Wan series. Why? Because I am a fan of Star Wars. But will it be so easy to make me passionate about just another, random, Netflix Original? Certainly not. To convince me, it needs quality content and a community I wish to belong to. But often, when quantity is prioritized, quality suffers.

The above described developments might force creators and platforms to re-evaluate their approaches. And they can best do that be re-evaluating the value of their content, by disrupting themselves, and by doing what the media industry has ultimately been doing forever: Monetizing passion – but this time, together with the communities involved.

A tale of no competitors

The content industry is witnessing the birth pangs of a disruptive shift similar to the cloud revolution. New competitors emerge that still are perceived as "Minting Companies" or "Marketplaces". I am sad to bring it to you, but they are not. These companies have opened a wedge into the world of content and will compete with the likes of the big music labels, large book publishers, main production firms and influencer houses. These platforms possess the technological capacity to realize the above mentioned brand experiences, and the numbers should be alarming for today's media and content giants: Total transaction volume on Opensea has surpassed \$30 billion, which means that the platform has generated \$750 million in fees since its launch in 2018. Increasingly, famous creators enter the platform – of course, why wouldn't they, its easy money at the end of the day. But, and this is important, the technological edge has the caveat that in fact, it is the only edge these companies have.

Today's large content houses have one, huge competitive advantage. They sit on a golden treasure of already existing communities. Those that cater to these communities with the best experiences will overcome not only the new competition, but ultimately attract some of the strongest brands, their competitors have. If they utilize the disruptive momentum as the biggest opportunity of our decade and reshape the content industry – they will come out stronger as ever and reshape the industry as we know it today – and it will be to the benefit of us all.

This publication is authored by Martin El-Khouri, Bertelsmann Investments

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Bertelsmann SE & Co. KGaA Carl-Bertelsmann-Strasse 270 33311 Gütersloh Phone +49 (0) 52 41-80-0 · Fax +49 (0) 52 41-80-623 21 info@bertelsmann-investments.de · www.bertelsmann-investments.com

B Bertelsmann Investments