Media Tech Trends

Blockchain

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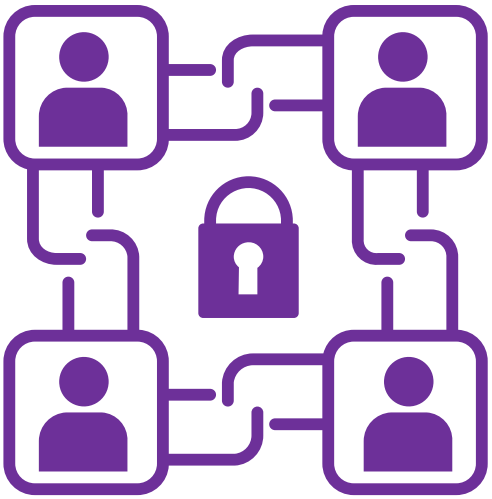

Introduction

IABM Media Tech Trends reports annually track the adoption of specific emerging technologies within the broadcast and media sector. The purpose of these reports is to enable member companies to better understand the drivers of emerging technologies' adoption within customer organizations. This should provide member companies more tools to better address the challenges lying ahead, from new product development to marketing strategy. These reports contain a discussion on the state of adoption of the emerging technology in broadcast and media as well as an analysis of significant customer deployments.

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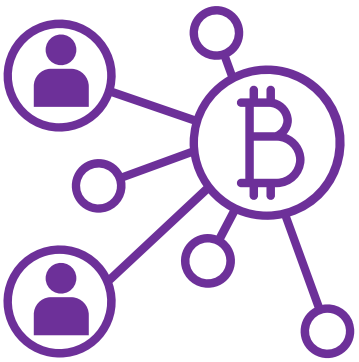
Blockchain Essentials

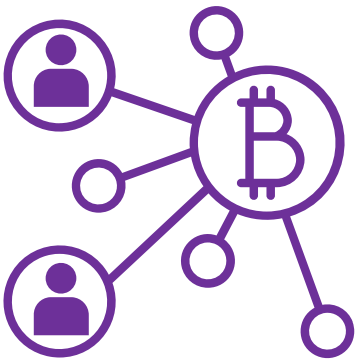


What is it?

Blockchain, the technology behind cryptocurrencies, can be defined as a digital, immutable and **decentralized ledger** that chronologically records **transactions** in near real-time. In the process underpinning this technology, a digital transaction is **verified and validated by a public or private network of computers** (or nodes) and then added to an immutable ledger – the blockchain - as a new block of data. **All blocks of data** in the blockchain are **chronologically linked** to each other **through timestamps**.

Digital transactions going through this process must be **approved by all network participants** to be added to the ledger – network participants are also able to access all the records in the blockchain. This eliminates the need for a centralized authority to manage the verification process.

Blockchain Essentials



What is it?

The immutability of the ledger – which is safeguarded by the encryption of each block – prevents participants from changing recorded transactions, thus boosting their **trust** in the network, and non-participants from accessing them. The decentralization of the ledger means that there are multiple exact copies of it. This makes sure that, even if one node in the network fails or is hacked, the remainder of it can continue to operate seamlessly. However, it should be noted that this does not make the blockchain impossible to hack.

There are several features of blockchain technology that are attractive to the media industry. Blockchain is **a trust enabler** due to its decentralized nature. This may be a panacea for both brands and broadcast advertising sellers. Blockchain also provides tracking and **transparency** capabilities that are applicable to various media use cases such as **monetization** and **rights management**. Although some media companies have already invested in this technology, blockchain can be considered as a truly emerging trend in this sector.

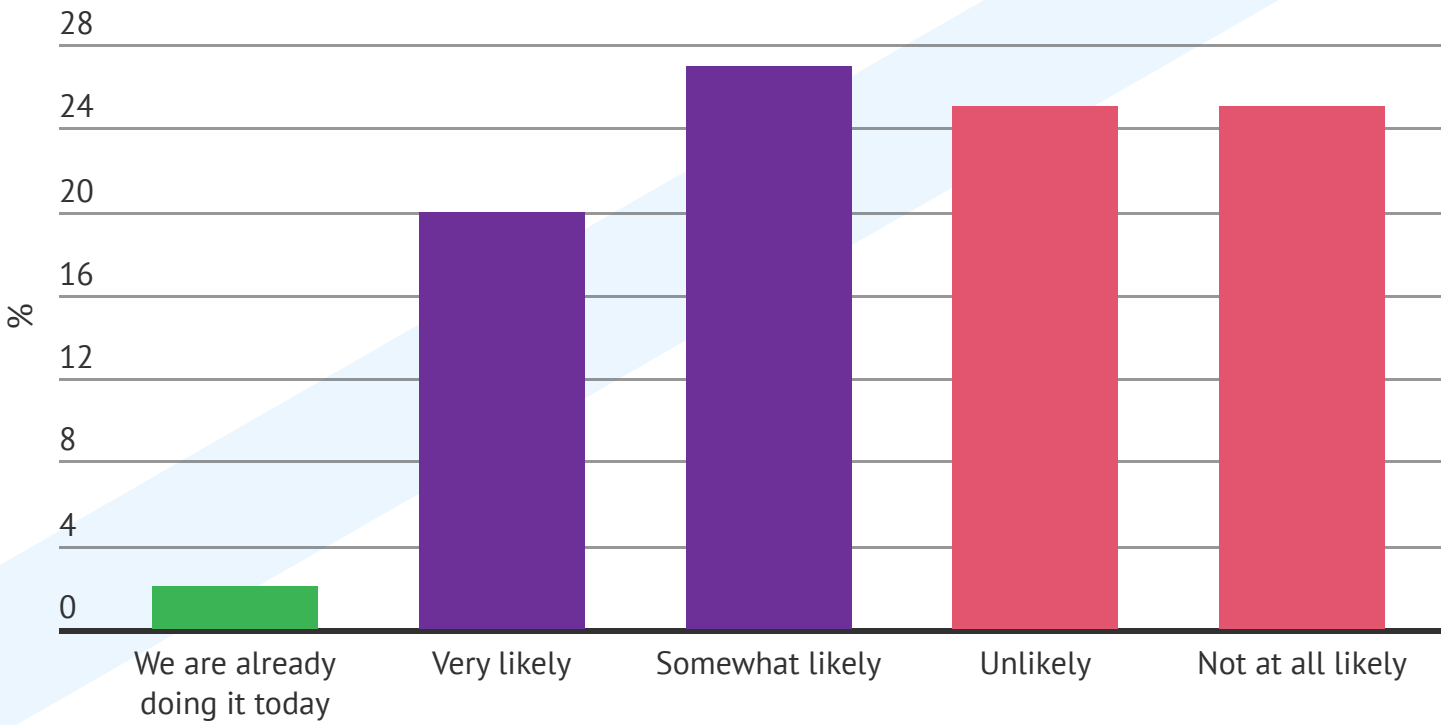
Blockchain Adoption Tracker

Blockchain Adoption Tracker

% of companies that have adopted it

According to IABM data, blockchain adoption in broadcast and media is at **a very early stage**; **only 2%** of respondents said that they have already deployed some sort of blockchain technology.

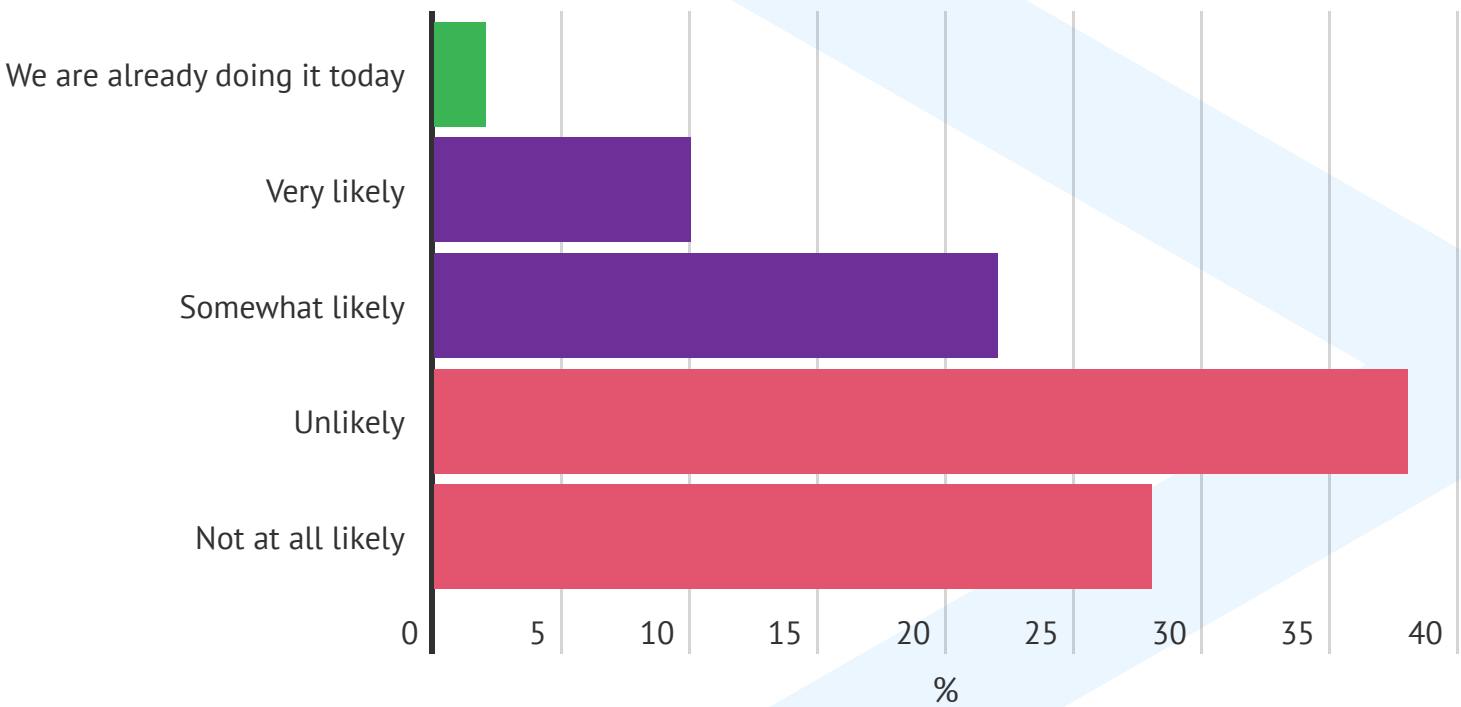
Nearly 50% of respondents are very likely or somewhat likely to adopt blockchain technology. However, another half (50%) remains unlikely to deploy blockchain.

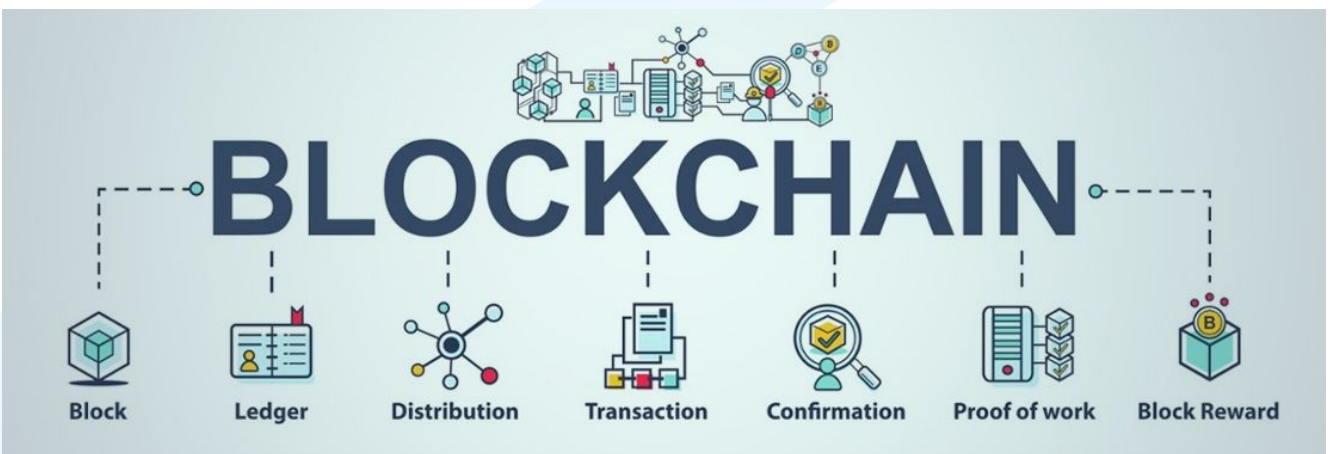


Blockchain Adoption Tracker

Historic Adoption of Blockchain

IBC 2017 | NAB 2018 | IBC 2018 | NAB 2019 | IBC 2019





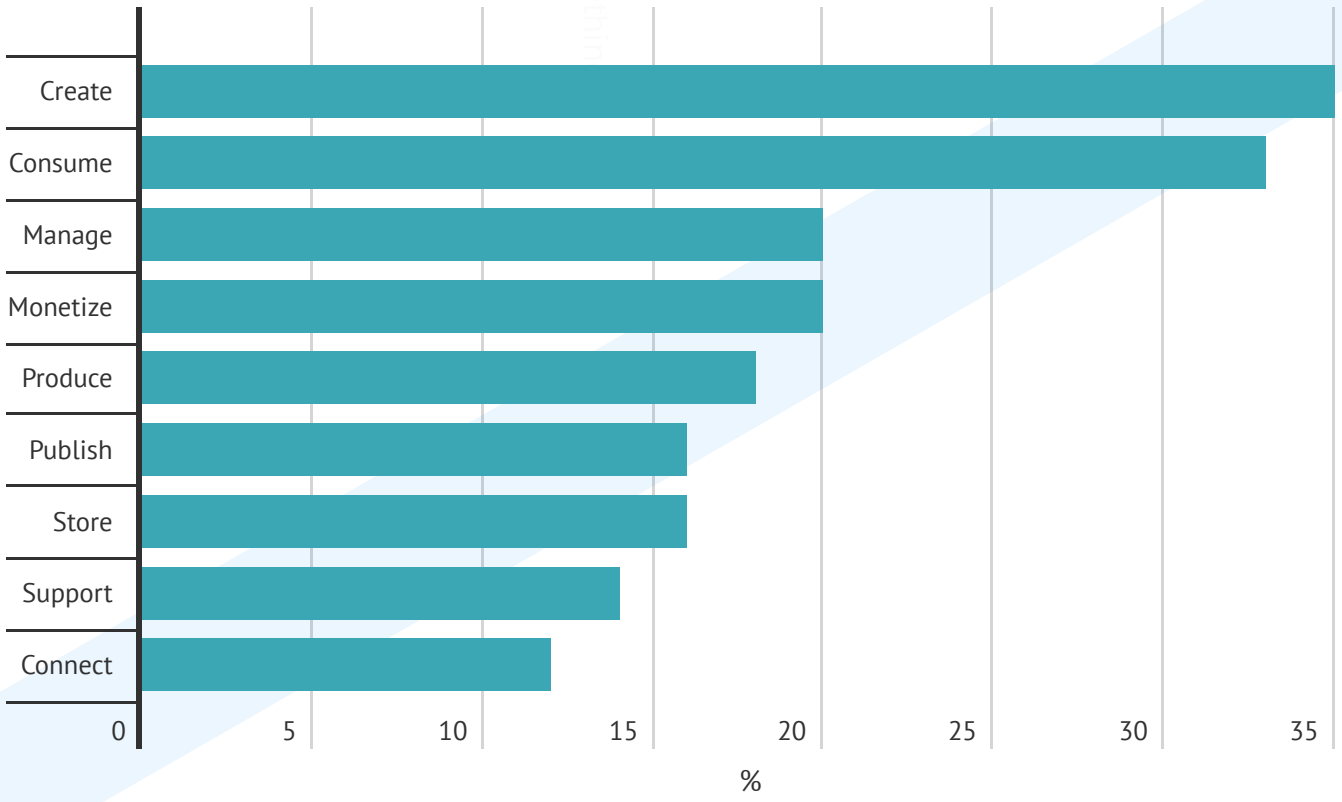
Source: IABM, V-Soft Consulting

Blockchain Adoption Tracker

The fact that 50% of respondents feel unlikely to deploy blockchain technology is slightly contradictory to the active presence of blockchain start-ups at IBC 2019, where these technology vendors were introducing several pilot projects with broadcasters and media companies. As in most other industries, the **early-adopters** of blockchain are **start-ups**. **Most initiatives** have focused on **advertising** and **rights management**.

From a Content Chain perspective, **Manage** and **Publish** are the **most popular** for likely deployment of blockchain – at 35% and 33% respectively. Create and Produce share the third place with 20%.

Blockchain Adoption by Content Chain Segment



Source: IABM

Blockchain Adoption by Content Chain Segment

Blockchain in Content Creation & Management

Creating Content

At the beginning of the content supply-chain, blockchain technology is mostly being explored as a **"validator"** to streamline **metadata management** and as a platform to source **user-generated content**.

In creation and production, blockchain can be used to vet content sourced from **users** or **social media**. As they leverage user-generated content for audience engagement, news broadcasters are increasingly threatened by **fake news**. In another possible model, users/viewers could vote on trustworthy information. These votes could then be added to the blockchain's ledger – which is immutable – to have a record on what is trustworthy and what is not.

CASE - Orange, Telecom Operator

In April 2019, Orange, a French telco, entered a deal with **safe.press** to start using blockchain to **check** the authenticity of its **press releases** – these can be altered when published by various news outlets. The new blockchain-powered platform - developed by a French start-up Block Expert - saves each news item in its blockchain ledger allowing Orange to check the authenticity and source of the content in real-time.

orange™

safe.press

> *Orange is making this initiative to contribute to the fight against fake news that has become a major affliction of our time. This solution perfectly fits alongside our key watchwords: trust, security and innovation*
>
> *Beatrice Mandine, Executive Director of Communications & Brand, Orange*

Source: IABM, tokenpost.com

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Blockchain in Content Creation & Management

Creating Content

CASE - Dentsu, Advertising Agency

In April 2020, Dentsu, a Japanese advertising firm, started a blockchain trial to **reward secondary content creators** for manga animation titles. In the project, Dentsu collaborates with Kadowkawa ASCII Research Labs to establish a Proof of Concept (POC) to reward independent content creators. Given Japan's history of user-generated content around anime and manga characters, Dentsu's pilot project deploys blockchain to **monetize** these secondary and tertiary content creators' for their work, while providing a share of the **revenue** to the **original owner**. This means that fans can create their own content based on their favorite characters, which would otherwise be a copyright violation.

In 2019, the Ministry of Economy, Trade and Industry of Japan launched a similar program providing half a million US$ to support companies deploying blockchain to manage creation of local, Japanese content.

> *We want to incorporate the activities of fans that have not been converted into monetary value into the legitimate content market*
>
> *Junichi Suzuki, Head of Blockchain, Dentsu*

Source: IABM, Nikkei, blockchain.news

Blockchain in Content Creation & Management

Managing Content

Most companies dealing with fake news have so far relied on **machine learning** and natural language processing algorithms to spot it. These technologies can also **augment blockchain-based solutions** in this area by, for example, assisting voters in understanding if a piece of news is trustworthy or not.

In **content management**, blockchain can help in **metadata management**, when **combined with ML**. While ML can increasingly help with automating metadata creation, blockchain could help with tidying everything up and avoiding metadata duplication through its immutable ledger. More specifically, digital asset management specialists are looking at using blockchain to provide an **immutable record for metadata management** workflows. For example, changes to metadata could trigger alerts to interested parties and create records in the ledger to verify (or validate) who did what to ensure that the metadata is correct.

CASE - Hyland Software, Content Service Provider

In February 2020, a US-based content services provider, Hyland Software, acquired a blockchain start-up called Learning Machine, a pioneer in using distributed ledger blockchain technology to authenticate content. Learning Machine enables end-users to create and share blockchain-secured digital records, verify transactions, import recipient data and manage users' entire credentializing lifecycle.

Source: IABM, Siliconangle, tokenpost.com

> *The use of digital credentializing has become an increasingly urgent need as governments, educational institutions and organizations seek to combat fraud, mitigate risk and relieve administrative burdens associated with the exchange of content*
>
> *Bill Priemer, CEO, Hyland Software*

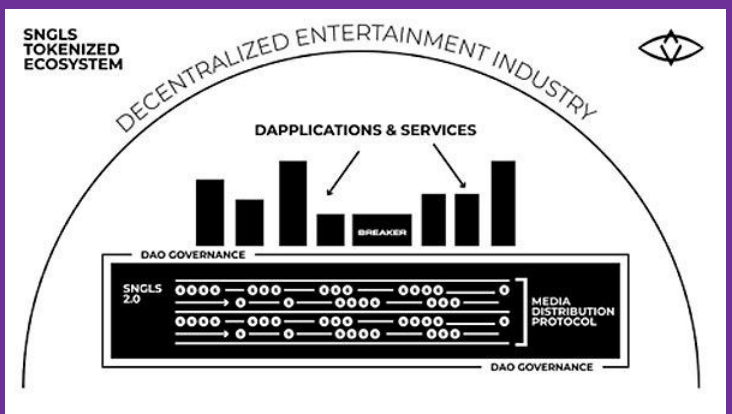
Blockchain in Content Distribution

Monetizing Content

One of the most important features of blockchain is **decentralization**, which could enable content owners to **bypass intermediaries** and **sell their content direct-to-consumers**. In the video business, aggregators such as Pay-TV companies could be bypassed by content owners. So, the role of blockchain in direct-to-consumer models is about making **micro payments** efficient. For example, Flixxo and DECENT are blockchain startups providing blockchain-based distribution services to small content creators, who can share their content on the platform with niche audiences - providing content owners new ways to fund and monetize their content.

CASE - SingularDTV, Content Production and Distribution Platform

In November 2019, SingularDTV - a content production and distribution platform built on the Ethereum blockchain - launched a decentralized, autonomous organization called SNGLS DAO, which is designed to govern the world's first Media Distribution Protocol based on the blockchain technology. The new solution aims to help content creators like Netflix, YouTube and Spotify in resisting censorship and data and revenue obfuscation by giving them control over their IP and the money generated during the distribution.



Source: IABM, SingularDTV, prnewswire.com

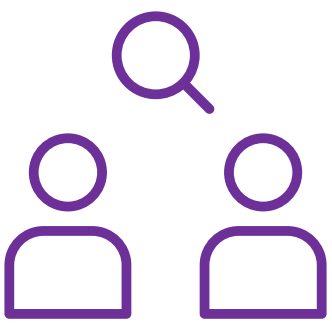
Blockchain in Content Distribution

Monetizing Content

With regard to efficiency and transparency, it is worth mentioning the concept of "**smart contract**", which came into the spotlight with the introduction of Ethereum, Bitcoin's most important competitor. Smart contracts **automatically enforce the terms of a relationship** through code stored in the blockchain, without relying on third-parties (like law enforcement agencies) to do so.

Despite their attractiveness, detractors of smart contracts have pointed to their insufficient reliability as a cause of concern – in 2016, $50m were stolen from the Decentralized Autonomous Organization, an organization heavily reliant on smart contracts, through a cyber-attack. After that, an important initiative was the launch of **AdChain** by MetaX and the Data Marketing Association (DMA) in 2017. Adchain is an **open protocol** which enables users to track who views a certain media asset and which actions he/she takes after having viewed it.

Smart contracts represent a potential tool to enable enforcement (and automation) in **rights management**. For example, a content licensor could monitor its licences via smart contracts that automatically enforce some of the contract terms such as geographical exclusivity or termination dates.



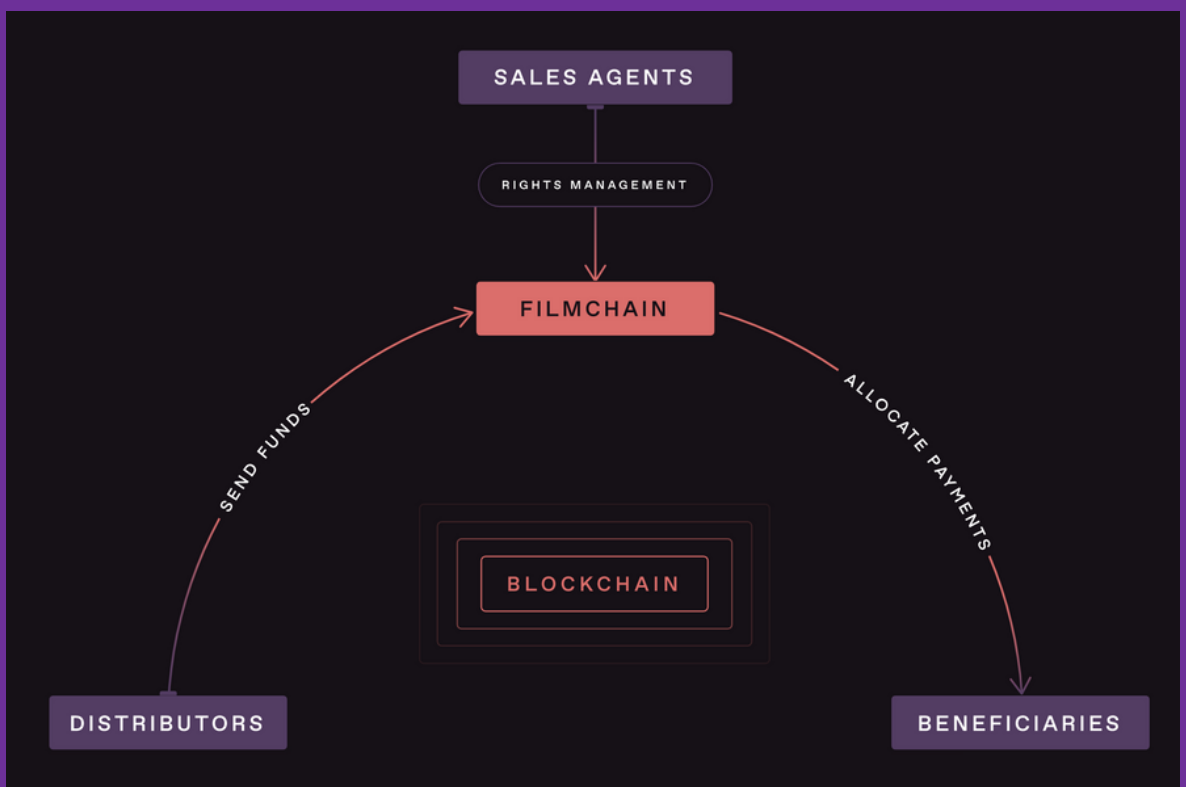
Blockchain in Content Distribution

Monetizing Content

CASE - FilmChain, Smart Contracts Platform

FilmChain – established in 2018 – is a smart contracts platform, which uses the Ethereum blockchain to automatically create and execute payment schedules of license fees and royalties. At the same time, content creators – like its existing clients including Film Fund Hamburg, Eurimages Council of Europe and Bulgarian Film Centre – can get real-time data about different territories and distribution channels, which show to be most responsive to their content.

FilmChain



Source: IABM, filmchain.co

Blockchain in Content Distribution

Monetizing Content

Advertising is one of the most important areas of blockchain investment for broadcast and media companies, to whom blockchain can be used as an **enabler of trust** within **a private network of advertising buyers and sellers**, allowing them to pool their data together and boost advertising monetization through more effective targeting. This helps media companies in competing with digital behemoths such as Google and Facebook.

In advertising, blockchain can enable a private network of advertising buyers and sellers to **pool their data together** – without actually sharing it. For example, Comcast Cable Advertising, Viacom and Charter have set up a major blockchain project, **Blockgraph**, which aims at offering the partners the ability to **connect with broadcast inventory suppliers** and **share** user behavior **data** without actually handing it over.

Another important milestone for blockchain adoption in advertising was the creation of **AdLedger Consortium** by IBM, MadHive, Integral Ad Science, and TEGNA in 2017. As a non-profit R&D consortium, it aims at implementing **global technical standards** and solutions for the digital media. For example, its members include Publics Media, Meredith, Salon Media, groupM and Omnicom Group.

VIACOMCBS

COMCAST

Charter COMMUNICATIONS

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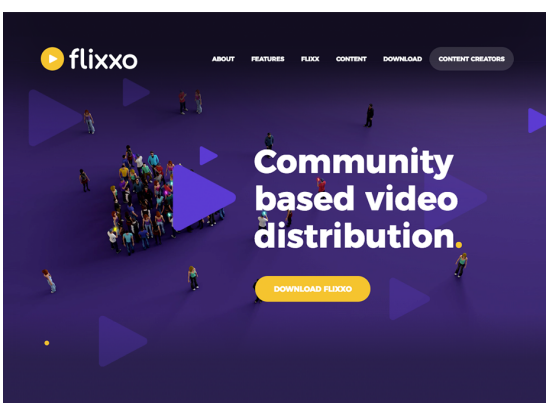
Blockchain in Content Distribution

Distributing Content

Blockchain can be used by content owners to **track assets**. In terms of music rights, Blokur offers artists a rights management platform, through which they can be paid fairly when their songs are used by third-parties. According to the company, its customers include Universal, Warner and BMG.

In 2018, Arqiva announced that it was teaming up with blockchain start-up JAAK to work on a rights database powered by blockchain. At NAB 2019, PBS announced that it was working with Eluvio and GrayMeta on a platform that relies on blockchain to enable PBS stations to optimize the use of their resources in a new initiative. Renard Jenkins, vice president PBS Operations, Engineering & Distribution, said that the services that could rely on this platform include transcoding, datamining and excess resource sharing. ImageRights International, in turn, provides blockchain technology to link photographers' images to the registration number which is given to them by the US Copyright Office.

Flixxo, Treeti and LiveTree have also launched related content delivery platforms, which provide content creators with real-time analytics based on blockchain transaction data.



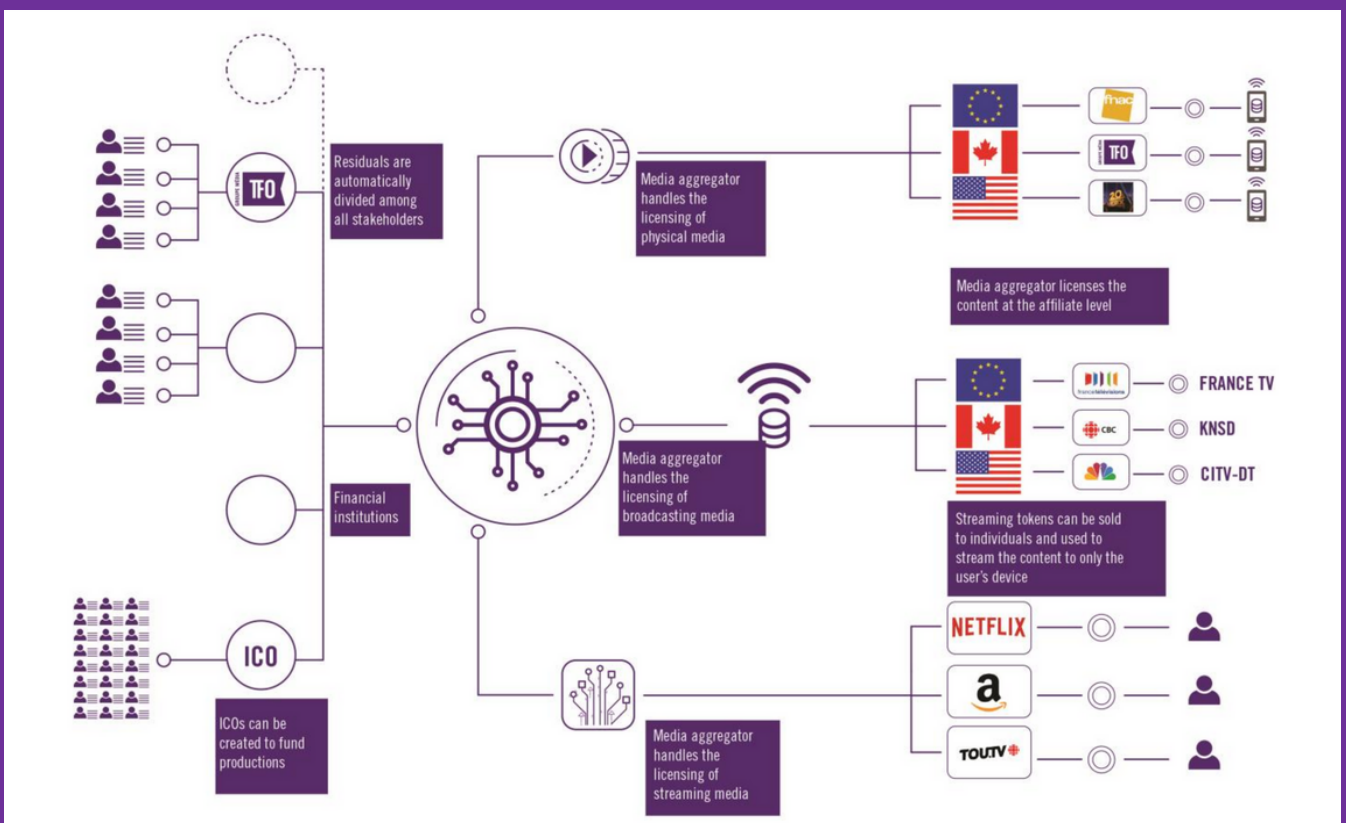
Blockchain in Content Distribution

Distributing Content

CASE - Groupe Média TFO, Public Service Broadcaster

In 2018, a Canadian government-funded public media organization called Groupe Média TFO launched a pilot project on blockchain-powered smart contracts. According to Eric Minoli, COO at Groupe Média TFO, the next step would be to expand the project into several iterative pilot programs using actual productions, which could then all be on the blockchain.

Blockchain Prototype by TFO



Source: IABM, IBC365

Blockchain in Content Distribution

Distributing Content

At the end of the Content Chain, blockchain has mainly been leveraged in trials to streamline resources and protect content.

At NAB 2019, IBM Aspera showcased a new layer of cloud transfer security achieved through blockchain. In this solution, blockchain enables media organizations to establish a network of partners to augment the security of their digital assets and avoid content leakages.

Blockchain could also be leveraged to optimize resources such as bandwidth in an automated way – telcos are looking at this as they launch their 5G networks – through smart contracts.

Like content management and production, these use cases are still at an early, experimental stage of development.