



REIMAGINING VIDEO FOR WEB3

JULY 2023

# Replay Token (RPLAY) White Paper

## The Future of Video Streaming, powered by Blockchain

Since Replay's introduction in May 2021 the community has grown to tens-of-thousands (participants and viewers) who as of this writing have enjoyed over 3.5+ million hours of video content on *Replay* powered platforms. Dozens of content producers, film distributors, and media companies have partnered with Replay, provided feedback and together we have had a chance to study and test a variety of business models for video delivery. Key functionality has been launched including the Replay Dashboard, Token Gated Content, the V1 Gamification suite including Missions & Activity Badges, and most recently support from cross-chain collectibles.

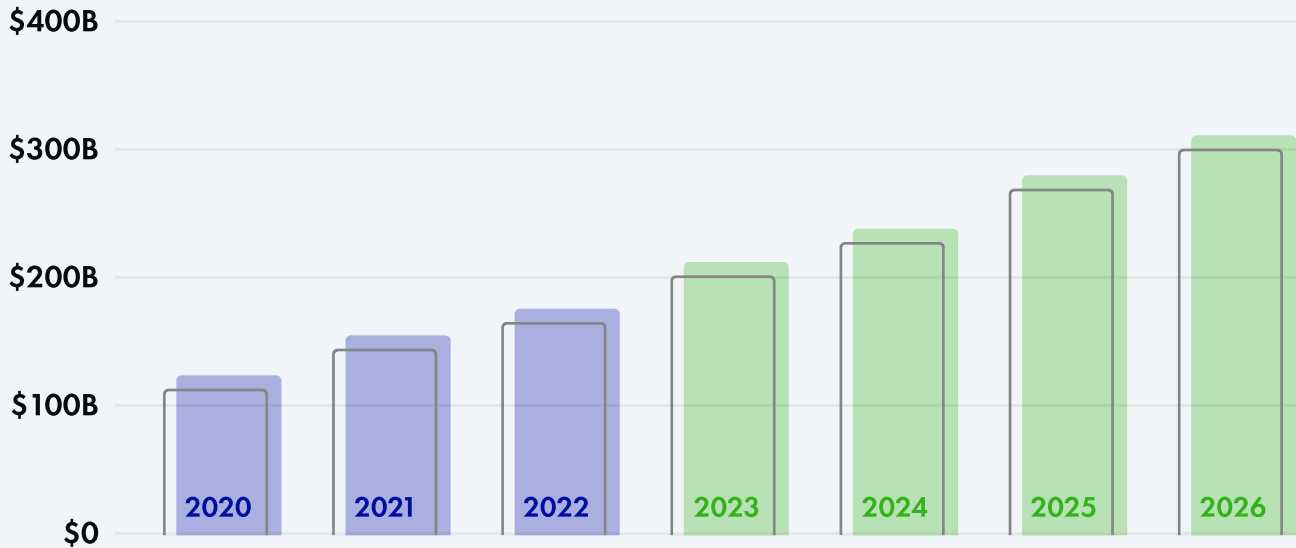
*\* This white paper draft aims to explore a handful of topics and proposals on a path forward towards completely decentralized video streaming and is subject to change over time. The most current version can be found at [www.imaginereplay.org](http://www.imaginereplay.org) and shall supersede any prior versions or drafts.*

[www.imaginereplay.com](http://www.imaginereplay.com)

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# 1. Streaming Video is a \$200 Billion+ market

OTT Video Market (SVOD + AVOD)



- Globally OTT Video is a \$200 Billion Market +
- Growing at 14.3% CAGR
- 1.87 Billion Streaming Consumers in 2026

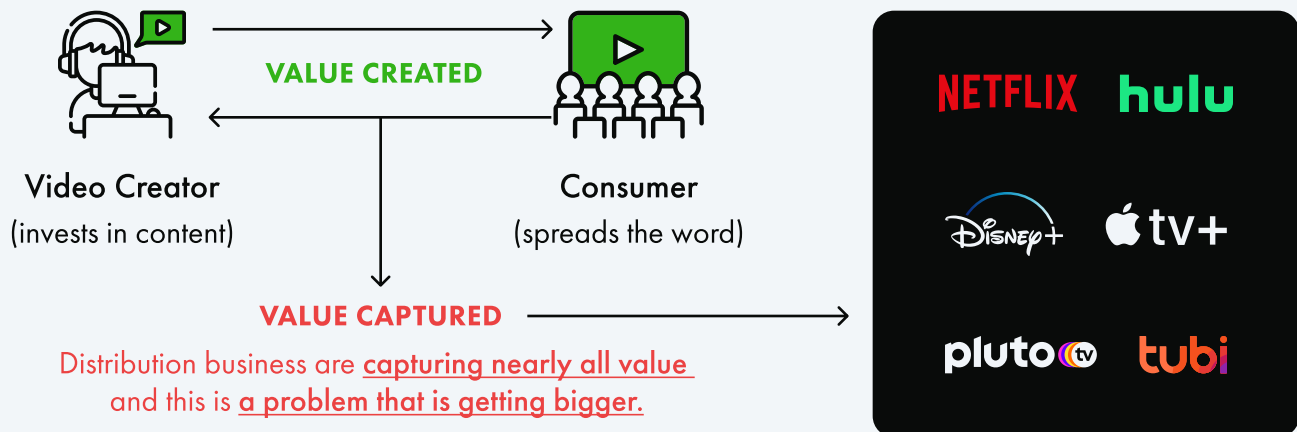
## 2. Abstract: Video Distribution is broken

The Creator Economy continues to gain traction as creators are the life-blood of all major internet platforms, creating video content which drives all the engagement across Youtube, Facebook, Snapchat, TikTok, all social platforms;

Beyond the consumer web there are Over the Top Video Services or "Streaming Services" like Netflix, Hulu, Disney+, Paramount+, Peacock, Pluto TV, Tubi TV and thousands of others servicing every entertainment and infotainment niche. That ecosystem today, however, is lopsided.

### Here is why video ecosystem in Web2 is lopsided

Economic value is created between video creators and their audience.



Much like in the social creator economy, content owners aren't getting treated fairly for their work. Existing content distribution methods are mired with opaque revenue shares and technology fees for content delivery. While many companies (talent agencies and tech platforms) exist to broker/license creator content, they do a universally bad job of tracking revenue appropriately and mostly rely on manual record keeping. The advertising platforms and distribution platforms which license the content come up with proprietary formulas to distribute revenue shares. Often, only minimum payments are paid and distributed - to be shared among a group of creators and content owners.

What we need is a Content Economy, for an [internet that in 2021 was already 82% video and where 92.8% of internet users globally](#) consume digital video every week.

We need an entirely innovative approach that works for Creators and Content Owners; that secures their work and compensates them fairly for their work so that they can continue to invest in creating the content that is entertaining the world.

The proposed solution herein is a decentralized, transparent video distribution and measurement ecosystem based on blockchain technology. The core framework we propose is Replay, a decentralized video streaming platform for the video economy that accurately measures every play and ensures content owners have direct visibility into content consumption, as well as direct control over the business models associated with that consumption. Replay allows content providers to take control of their distribution by building direct relationships with platforms, publishers, brands, and communities that support them while enabling viewers to take control of their playlists and the entire viewing experience.

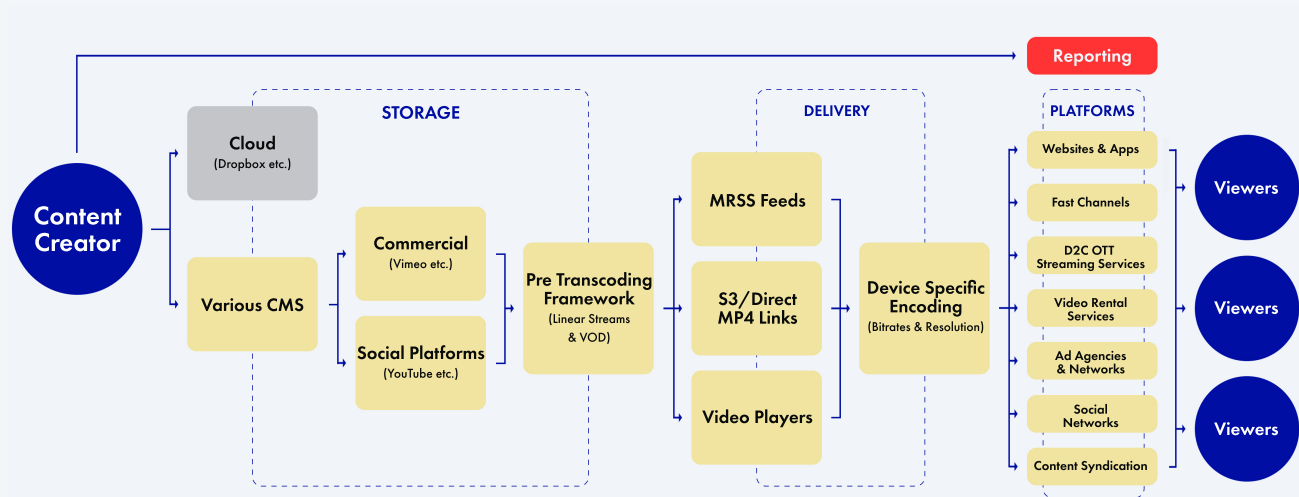
Replay aims to connect content owners, distributors, and consumers in an ecosystem while eliminating the friction and economic costs associated with existing video distribution methods. Replay is an ecosystem that rewards consumers while entertaining them and provides creators and content owners with real-time transparency into the consumption of their content. We view Replay and associated technologies as the future of content distribution across all screens, focused on solving the key challenge of providing transparency for content owners, creating greater economic opportunities for content creators, and ensuring transparent, reliable, and ubiquitous access to content for distributors and consumers worldwide. Most importantly, we view the proposed ecosystem as a framework upon which the next generation of video services can be incubated and operated.

## 2.1 Challenges with Streaming Today

In order to optimize monetization, creators must ensure their content reaches the largest audience possible. This involves delivering their work to various platforms, which often requires dealing with a variety of vendors, formats, specifications, business models, and reporting platforms, or in some cases, the absence of such platforms.

In the race for market share, platforms have made content delivery and discovery very hard.

Here's a look at how the process of delivering content to a given platform works today:



## 2.2 Complex Steps in delivering content

Content owners typically upload their libraries of content into various types of storage solutions, such as:

- Cloud-based storage: Google Drive, Dropbox, or infrastructure companies like Google Cloud and Amazon S3
- CMS platforms / OVPs: Brightcove, JWPlatform, Vimeo
- OTT platforms: Powr.tv, Zype

Before content is ready for digital distribution, several complex processes need to be implemented:

- Pre-transcoding to multiple bitrate profiles (1080p, 720p, 540p, etc.) depending on the target device (desktop, mobile, or CTV environments)
- Incurring costs for additional storage and transcoding fees
- Creating HLS streams for optimized streaming experiences to endpoints

Various confusing delivery mechanisms are used:

- MRSS/JSON feeds: For content stored on CMS or OTT platforms, XML/JSON-based feeds can be generated for various endpoints, containing metadata and streaming content origin information
- S3/direct links: Some content partners provide direct S3 links to MP4 files for delivery, which may not always be optimal
- Embedded video players: These are restrictive and can create barriers for acquiring new endpoints/distributors

### Content can be streamed on several fragmented platforms today:

- Websites & Apps: Websites and mobile apps can feature content (entertainment, news, gaming) using a revenue-sharing model
- FAST channels: Free ad-supported channels showcase content from multiple partners and distribute it on various endpoints as linear "live" channels, typically using a revenue-sharing model, sometimes with a monthly guarantee (MG)
- D2C OTT Streaming apps: Popular streaming platforms acquire content, usually following a revenue-sharing model, sometimes with an MG
- Video Rental Services: TVOD services license premium movies and TV shows, working with content owners on a revenue-sharing or minimum revenue per rental model
- Ad Agencies & Networks: Ad companies often license short clips of content to run campaigns alongside videos, providing an enhanced user experience and a monetization strategy for publishers, usually using a revenue-sharing model
- Social Networks: Content creators often publish their content directly on platforms like Facebook, YouTube, and Instagram for monetization, typically following a revenue-sharing model
- Content Syndication Marketplaces (Taboola, Outbrain): Similar to ad networks, these companies license short clips of content to be syndicated alongside other commercials, creating an effective monetization strategy for publishers, typically using a revenue-sharing model

## 2.3 Key Problems with today's approach to content delivery

1. Partner Selection / Pitching - While the social platforms allow self-uploading of content, most of the rest of the content distribution ecosystem operates on traditional deal making, review of powerpoints, and multiple layers of back and forth involving many middlemen and agents. Deal terms vary vastly by distribution endpoint as does delivery. Content owners are forced to scour the web for information on key decision makers and pitch themselves that way.



2. Specifications - Given the vastness of the ecosystem and rapidly emerging nature of the space, the complexities associated with delivering content to a variety of both hardware and software platforms creates a lack of standard around delivery specifications. This creates a significant barrier, particularly as certain platforms and manufacturers sign preferred vendor deals which limit the vendors that can easily deliver content to them. This necessitates that content providers must work with multiple vendors for content delivery.
3. Revenue Share - While this may seem the easiest and fastest path to a distribution deal there are a couple of key problems. For one, revenue shares are often not transparent percentages and vary greatly by platform. Typically, revenue shares are paid after a variety of other fees are paid and often on proprietary formulas set by individual distributors. As a content provider, you have very little visibility into the fees and fine print as well as the actual usage of your content.
4. Vendor Selection - Further to the previous point. As preferred vendors emerge they leverage their power to enact unfair and unsustainable pricing models.
5. Reporting - Given the nature of the business and the variety of business models with which content owners get paid (Upfront Guarantee, Revenue Share, Transactional Share) AND the fact that once distributors get access they mostly support all of those models across dozens of delivery endpoints there is no unified reporting platform. Content owners are typically delivered spreadsheets which are calculated by various endpoints months or quarters after delivery.
6. Payment - Further to the above point on delayed reporting. Payment is often made months, quarters, or even years after content was actually enjoyed. This gives the distribution platforms the ultimate leverage over content creators and does not allow the creators to reinvest in themselves and their business.

## 2.4 Streaming in Web 2 is Problematic for Key Stakeholders



### Content Providers



**Zero Leverage**  
Over 70% revenue generated goes to distributor



No ability to track viewership



6 months to get paid



No way to connect to their audience



### Content Consumers



**Subscription Fatigue**  
Average of 8 per household, \$114/month



Never compensated for driving value and discovery



No ability to interact or support content providers directly



No feedback loop

### 2.4.1 Problematic for Content Providers

For content owners, the current video streaming landscape presents several challenges that hinder their ability to effectively monetize and manage their content:

1. **Zero leverage:** Traditional streaming platforms often hold a significant amount of power over content owners, dictating terms and conditions, revenue splits, and distribution policies. This imbalance in leverage leaves content owners with limited control over their content and business models.
2. **No ability to track viewership accurately:** Obtaining precise viewership data from distribution platforms is often difficult, as the platforms may provide limited or aggregated information. This lack of accurate data makes it challenging for content owners to track content consumption, understand audience preferences, and make informed decisions about their content strategies.

3. **Long payment cycles:** Content owners frequently experience extended payment cycles, sometimes taking up to six months to receive their earnings. These delays can negatively impact their cash flow, making it difficult to invest in new content and maintain financial stability.
4. **No way to connect with their audience directly:** Traditional platforms act as intermediaries between content owners and their audiences, preventing direct communication and engagement. This lack of direct connection makes it difficult for content owners to build strong, loyal communities and establish meaningful relationships with their viewers.

### 2.4.2 Problematic for Consumers

For consumers, the current video streaming landscape presents several challenges that affect their overall experience and satisfaction:

1. **Subscription fatigue:** With a plethora of subscription-based streaming services available, each offering exclusive content, consumers often feel compelled to subscribe to multiple platforms. This leads to subscription fatigue, where users are overwhelmed by the number of subscriptions they have to manage and pay for, negatively impacting their experience.
2. **No compensation for driving value and discovery:** Consumers contribute to the success and discoverability of content by watching and sharing their favorite shows, movies, and other content. However, they are not rewarded or recognized for their role in driving value and discovery within the streaming ecosystem.
3. **Lack of direct interaction with content providers:** Traditional streaming platforms act as intermediaries between content owners and their audiences, preventing consumers from directly engaging with and supporting their favorite content creators. This lack of interaction hinders the development of stronger connections between consumers and content providers.
4. **No feedback loop:** In the current streaming landscape, there is often no feedback loop for consumers to voice their opinions, preferences, or concerns about the content and services they consume. This absence of a feedback channel can lead to platforms failing to understand and address their users' needs, resulting in suboptimal experiences.

## 3. Introduction to Replay

Replay is the future of TV - a decentralized video tracking & streaming platform that empowers viewers and creators to take control of their video streaming experience, powered by blockchain.

### 3.1 Value Proposition

The Replay system and (RPLAY) is a token of exchange in a secure, trustless, content distribution ecosystem. Replay provides:

- Content Providers: Transparency and visibility into content consumption, visibility into the performance of their content, and the ability to build a direct relationship with their community of fans based for enjoying, sharing, and otherwise engaging with their content.
- Consumers: Transparency into their content consumption behavior, the ability to support content providers they love, the ability to discover new content, and ultimately to tailor their video streaming experience.
- Communities and Brands: The tools they need to build innovative next generation video experiences.

#### 3.1.1 Value for Creators

Replay aims to revolutionize the way content owners interact with distribution platforms and their audience, addressing key pain points and providing several benefits:

1. Increased leverage: Content owners often struggle to negotiate favorable terms with distribution platforms due to a lack of bargaining power. Replay's decentralized ecosystem empowers content owners by creating a more level playing field, ensuring a fair and transparent revenue-sharing model.

2. **Accurate viewership tracking:** In the current landscape, content owners face challenges in obtaining accurate viewership data from distribution platforms. Replay's blockchain-based platform enables real-time, transparent, and verifiable viewership tracking, ensuring content owners have direct visibility into content consumption.
3. **Direct audience connection:** Traditional distribution platforms often act as intermediaries between content owners and their audiences, preventing direct communication and engagement. Replay enables content owners to build and nurture direct relationships with their viewers, fostering a stronger sense of community and loyalty.
4. **Improved content discoverability:** With an ever-growing number of content options available to consumers, it can be challenging for content owners to stand out and attract viewers. Replay's community driven content recommendation system ensures that content is more effectively surfaced to relevant audiences, increasing the chances of discovery and engagement.
5. **Enhanced monetization opportunities:** Replay's innovative ecosystem offers a variety of revenue streams, including content access via Digital Collectibles and advertising. Content owners can experiment with and capitalize on different monetization models to maximize their returns.
6. **Transparent revenue reporting:** The lack of transparency in revenue reporting from traditional platforms can be a significant concern for content owners. Replay's blockchain technology ensures transparent and auditable revenue reports, allowing content owners to accurately track their earnings and make informed decisions about their content strategy.
7. **Community-driven participation:** Replay's decentralized platform offers a model that allows content owners to have a say in the platform's development and direction. This involvement ensures that content creators' interests are represented and that the platform evolves to meet their changing needs.
8. **Greater control over distribution:** Content owners have limited control over the distribution of their content on traditional platforms, often having to adhere to strict guidelines and policies. In the future, Replay's decentralized nature may allow content owners to retain greater control over their content's distribution, enabling them to choose the platforms, publishers,

brands, and communities they want to collaborate with and setting the terms of those partnerships.

By addressing these critical issues, Replay may be well poised to transform the way content owners interact with distribution platforms and their audiences, providing a more equitable, transparent, and empowering environment for creators to thrive in the ever-evolving digital landscape.

### **3.1.2 Value for Consumers**

Replay aims to address the concerns and pain points of consumers in the current video streaming landscape. Here's an expansion of the benefits it brings to consumers::

1. **Reducing subscription fatigue:** With the increasing number of streaming services available, consumers are overwhelmed by the need to subscribe to multiple platforms to access their favorite content. According to a survey by Deloitte, 47% of US consumers are frustrated by the growing number of subscriptions required to watch what they want, and 56% of them are frustrated when content they like is removed from a platform.
2. **Consolidating content:** By bringing together content from various sources into a single platform, Replay may simplify the user experience and minimize the time spent searching for content across multiple services. A study by Parks Associates found that US broadband households subscribe to an average of 3.8 streaming services, highlighting the need for content consolidation.
3. **Cost savings:** Replay's decentralized approach, combined with ad-supported content and a token-based economy, can potentially reduce the overall cost of consuming content for viewers. According to a study by Waterstone Management Group, the average US household spends around \$85 per month on streaming services, and the introduction of a more cost-effective solution would likely be welcomed by consumers.
4. **Personalized content discovery:** With the use of blockchain technology and the potential use of data-driven algorithms using AI, Replay may offer personalized content recommendations that cater to individual preferences, providing a better user experience. A study by PwC showed that 55% of consumers want an easier way to find content tailored to their interests.

5. Empowering viewers through token rewards: By rewarding viewers with tokens for engaging with the platform, Replay gives consumers more control over their viewing experience and incentives to interact with the ecosystem. This model promotes active participation and fosters a sense of community, making the platform more appealing and enjoyable for users.
6. Enhanced privacy, transparency and data security: Blockchain technology enables Replay to provide greater privacy and data security for consumers. In a world where data breaches and misuse of personal information are growing concerns, this feature offers peace of mind for users.
7. Supporting independent creators: Replay's decentralized ecosystem may offer a more equitable and transparent revenue model, allowing independent creators to benefit from their work and reach a broader audience.

In summary, Replay seeks to address potential key pain points faced by consumers in the video streaming industry by offering a consolidated, cost-effective, personalized, and secure platform that empowers users and supports content creators. The use of blockchain technology and a decentralized participation model ensures a transparent and user-centric environment, catering to the growing demand for control and privacy in the digital space.

## 3.2 The RPLAY Token

RPLAY is the cryptographic token that powers the Replay network. RPLAY is issued as a TNT20 token with the platform being built on Theta Subchain.

RPLAY tokens will have a fixed supply of 1,000,000,000 tokens (1 billion).

Token Distribution as follows:

Token Allocation Description (in millions)	%	Total	TGE	3Mo	6Mo	9Mo	End of Y1	End of Y2	End of Y3	End of Y4
Rewards for Community & Ecosystem Growth (4 yr period)	20%	200	0.00	12.50	25.00	37.50	50.00	100.00	150.00	200.00
RPLAY Validators (4-year period)	20%	200	0.00	12.50	25.00	37.50	50.00	100.00	150.00	200.00
Rewards for THETA Validators, Guardians (12 mo vesting)	2%	20	0.00	5.00	10.00	15.00	20.00	20.00	20.00	20.00
Team (Vesting Monthly for 18 Months, 12 Mo Cliff Vesting)	15%	150	0.00	0.00	0.00	0.00	96.00	150.00	150.00	150.00
Advisors (4 year vesting, 1/4th per year)	3%	30	0.00	0.00	0.00	0.00	7.50	15.00	22.50	30.00
Platform Reserve, Marketing & Partnerships	15%	150	150.00	150.00	150.00	150.50	150.00	150.00	150.00	150.00
Private Sale (10% listing, 12 month vesting)	25%	250	25.00	81.25	137.50	193.75	250.00	250.00	250.00	250.00
	100%	1000								
<b>Total Circulating</b>			<b>175.00</b>	<b>261.25</b>	<b>347.50</b>	<b>433.75</b>	<b>623.50</b>	<b>785.00</b>	<b>892.50</b>	<b>1000.00</b>

### RPLAY Validators

RPLAY Validators are integral components of the Replay ecosystem. Validators play a crucial role by setting up Subchain Validator Nodes and being responsible for validating transactions and ensuring the security of the platform. They are rewarded with RPLAY tokens for their active participation and contribution to the consensus process. Moreover, Validators also have the privilege to engage in protocol decisions, enabling them to participate on proposals concerning



platform updates, and content curation. This combined validation and community participation approach ensures the security, decentralization, and active involvement of Validators in shaping the future of Replay.

### **Community & Ecosystem Growth Rewards**

This is the pool for the rewards given to both content contributors and consumers. Content contributors are rewarded when their content is viewed by others.. Higher the quality of content, the more they might be rewarded. Consumers, on the other hand, play a vital role in driving discovery by watching, sharing, rating, reviewing movies and TV shows, and curating content on the streaming service powered by Replay.

### **Platform Reserve, Marketing & Partnerships**

A significant portion of the reward pool is set aside for the platform reserve, ensuring the stability and growth of the platform. Furthermore, strategic marketing partners, including tier 1 movie studios, distribution platforms (such as Pluto TV, Tubi, etc.), Roku/Vizio, TV operators, as well as entities like CoinDesk TV, CoinTelegraph, and potential major strategic content partners in the future may receive a portion of the rewards. This allocation is designed to foster valuable partnerships and expand the platform's reach.

## **3.2.1 Proposed Use Cases - Earning & Spending RPLAY**

A significant portion of the reward pool is set aside for the platform reserve, ensuring the stability and growth of the platform. Furthermore, strategic marketing partners, including tier 1 movie studios, distribution platforms (such as Pluto TV, Tubi, etc.), Roku/Vizio, TV operators, as well as entities like CoinDesk TV, CoinTelegraph, and potential major strategic content partners in the future may receive a portion of the rewards. This allocation is designed to foster valuable partnerships and expand the platform's reach.

ROLES	SPEND RPLAY	RECEIVE RPLAY
Content Creators	<ul style="list-style-type: none"> <li>• For premium/featured placement of content or channels on Replay’s network</li> <li>• Offer token-gated content experiences for the community</li> </ul>	<ul style="list-style-type: none"> <li>• For creating and uploading high-quality content to Replay ecosystem</li> </ul>
Viewers (subject to geographic restrictions)	<ul style="list-style-type: none"> <li>• To subscribe to ad-free premium content from favorite creators</li> <li>• To access premium features or purchase Digital Collectibles on Replay</li> <li>• Donate RPLAY to support content creators</li> </ul>	<ul style="list-style-type: none"> <li>• By watching ads and engaging with sponsored content</li> <li>• Joining watch parties</li> <li>• Providing Ratings, Reviews &amp; Feedback for Content</li> </ul>
Advertisers	<ul style="list-style-type: none"> <li>• To run advertisements on the platform</li> <li>• To gain access to content creators for promotional partnerships and collaborations</li> </ul>	<ul style="list-style-type: none"> <li>• For creating and uploading high-quality content to Replay ecosystem</li> </ul>
Content Creators	<ul style="list-style-type: none"> <li>• To setup Subchain Validator Nodes to support the Replay Protocol &amp; provide security</li> <li>• Offer token-gated content experiences for the community</li> </ul>	<ul style="list-style-type: none"> <li>• By participating in network validation and securing the platform</li> <li>• By participating in protocol decisions of various aspects of the streaming service &amp; protocol</li> </ul>

## **Content Creators**

- Receive RPLAY for creating and uploading high-quality content (movies, tv shows & live channels).
- Receive RPLAY for premium content usage by users.
- Receive RPLAY from supporting viewers..
- Spend RPLAY for premium/featured placement of content or channels
- Spend RPLAY to offer token-gated content experiences for the community.

## **Viewers (subject to geographic restriction)**

- Receive RPLAY by watching ads and engaging with sponsored content.
- Use RPLAY to subscribe to ad-free premium content from their favorite creators.
- Spend RPLAY to access premium features or purchase Digital Collectibles on Replay.
- Donate RPLAY to content creators they want to support.

## **Advertisers & Distributors**

- Spend RPLAY to run advertisements on the platform.
- Gain access to content creators for promotional partnerships and collaborations.

## **Validators**

- Setup Subchain Validator Nodes and earn RPLAY tokens to participate in network validation and secure the platform.

### 3.2.2 Viewer & Creator Rewards

The rewards for viewers and creators come from the Community & Ecosystem allocation. This pool of tokens is designed to reward users who contribute to the platform's growth and engage in various activities. In this case, viewers may be rewarded for watching content, engaging with ads, and participating in platform features.

For creators, the reward rate is adjusted based on the quality of the content they contribute. Higher quality content, as determined by engagement and viewer feedback, can receive a better reward rate. This incentivizes creators to produce better content and provides them with a direct financial incentive to do so.

### 3.2.3 Adjusting Reward Rate for Viewers

To ensure that the reward rate for earning RPLAY utilizing an allocated limited pool of rewards supply, Replay adopts a dynamic reward system. This system can adjust the RPLAY reward rate based on several factors:

#### **Total RPLAY in Circulation**

As the circulating supply of RPLAY approaches the total supply, the reward rate can gradually decrease. This reduction would make it more challenging for users to earn RPLAY, incentivizing them to hold onto their tokens and participate in the platform's features/access.

#### **Active Users**

The number of active users can also impact the reward rate. When there are more active users, the reward rate will be adjusted to reflect the increased demand for RPLAY.

#### **Asset Score**

The asset score is a dynamic measure of the quality and popularity of the content being viewed or contributed. Assets that receive high engagement, positive feedback, and audience interaction can receive a higher reward rate based on their asset score. On the other hand, assets that are watched excessively without significant engagement will experience a decrease in reward rate over time.

## **Device Priority and Geographical Distribution**

Device priority refers to the value placed on users who access the platform from higher-value devices such as mobile or TV. Geographical distribution takes into account the distribution of users across different regions and rewards users in regions where there is more demand for content & advertisers.

## **Rewarding Activities**

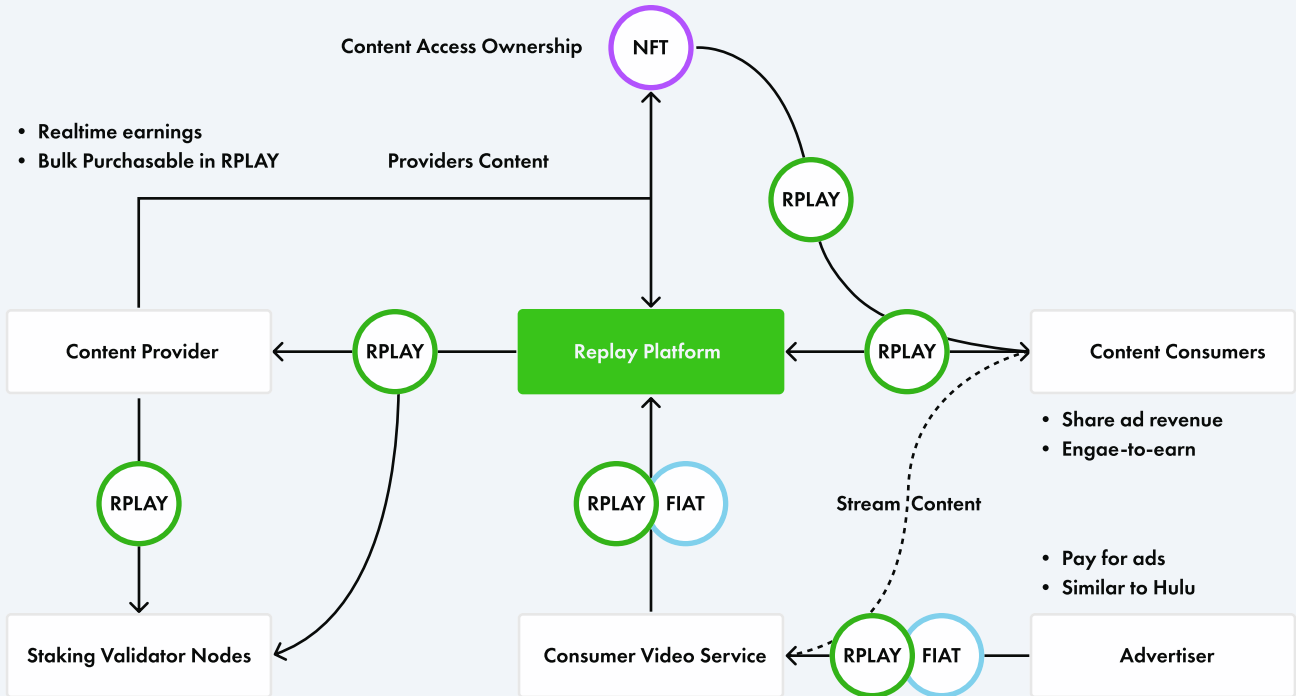
Different activities will also have different reward rates, with more engaging activities being rewarded at a higher rate than others. Examples of reward mechanisms include:

- Referring friends to the platform
- Joining and attending watch parties
- Hosting watch parties and inviting/engaging friends
- Providing feedback on content, such as rating movies and writing reviews
- Sharing content to social media platforms

It's important to note that these are just examples of some mechanisms, and more will be added in the future. Additionally, watching content alone will have the lowest reward rate, while other more engaging activities will reward users at a higher rate. This incentivizes users to actively participate in the platform and contribute to its growth and success.

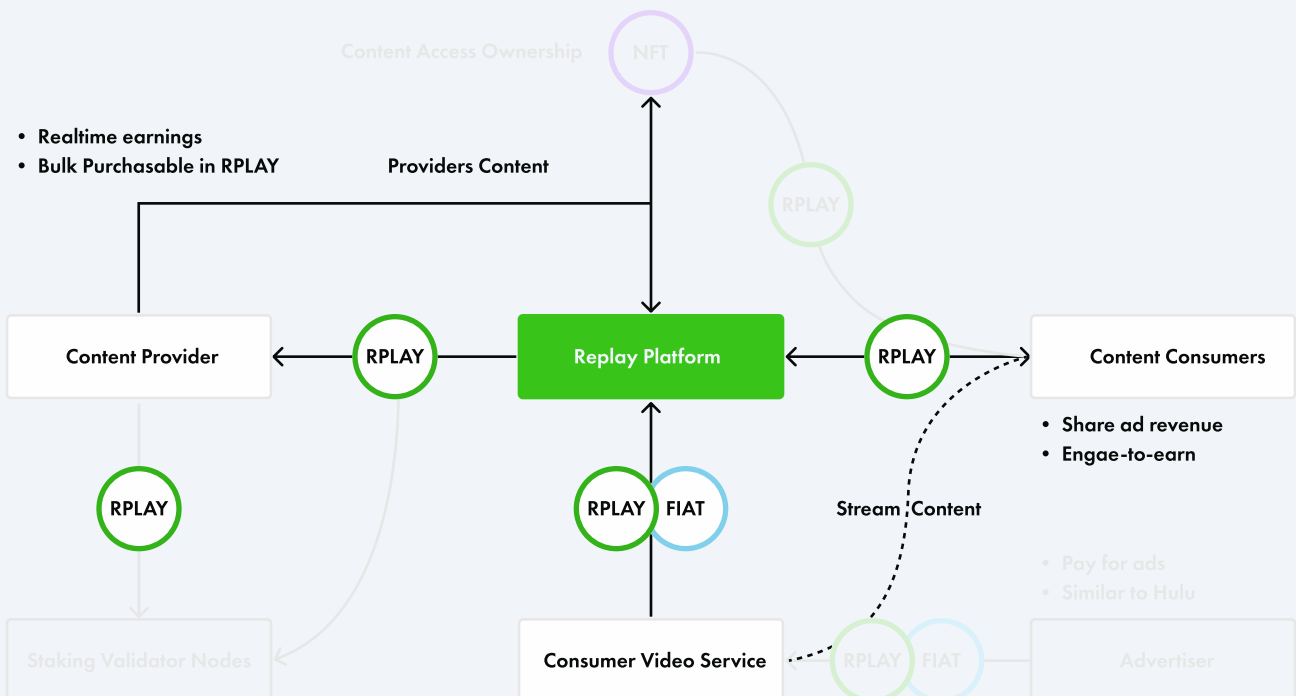
By integrating RPLAY into various aspects of the content creation, viewing, and distribution process, the Replay token ecosystem can foster a thriving and self-sustaining economy that benefits all participants. The dynamic reward system and token value appreciation encourage user engagement and ensure a fair distribution of value across the platform.

### 3.2.4 Token Topology

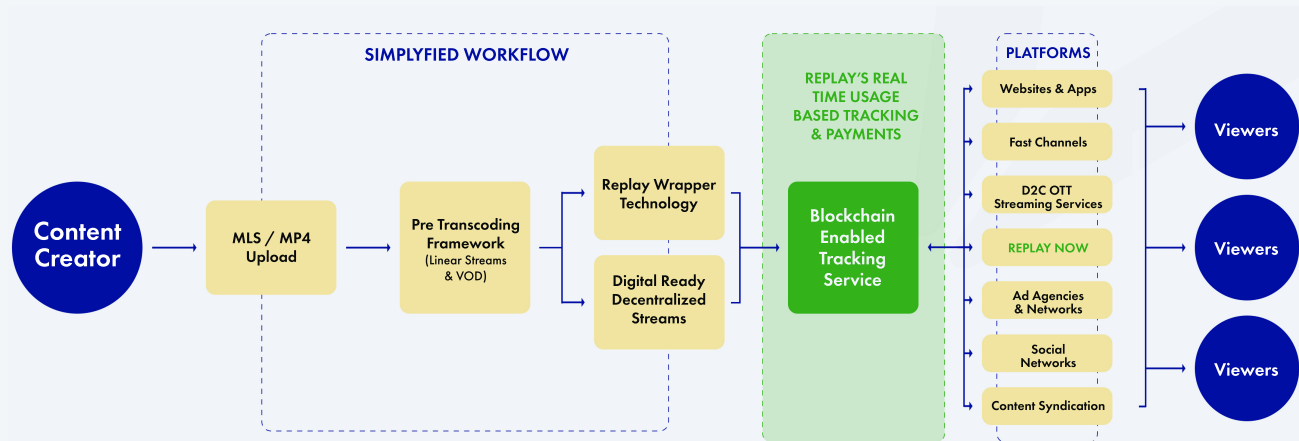


RPLAY enables content access, unlocks exclusive platform features, and drives loyalty. The ecosystem gives creators the ability to unlock new revenue and business models while building community and offers viewers a path to control their viewing experience.

### Content Flow



Content Providers produce or otherwise source their content and provide it to the platform via RAM (Replay Asset Management portal). The Platform operates a consumer video service to distribute the content to all devices.

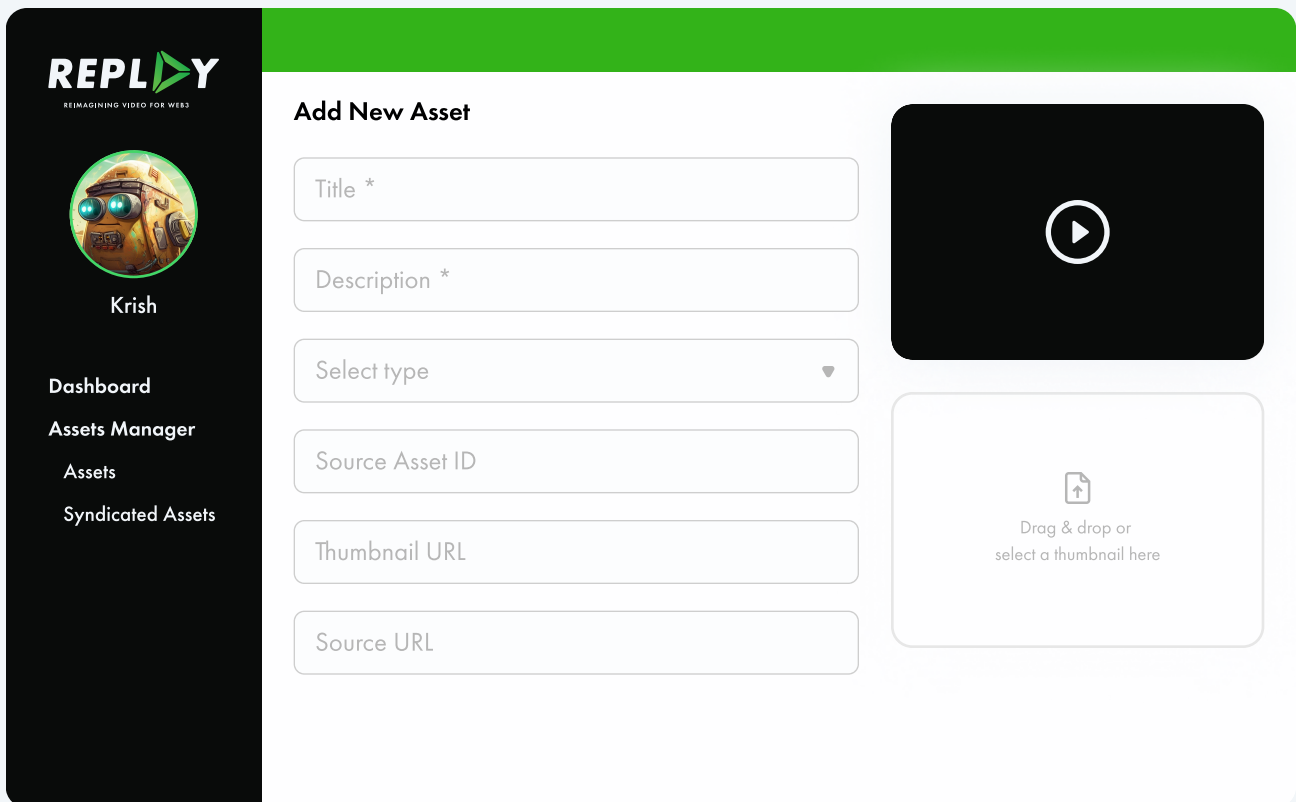


At a high level - a system is proposed where content creators upload assets into Replay's Asset Management System and convert their streams into digital ready blockchain-enabled playback streams. Rights-cleared, licensed content may be uploaded into the platform. Full featured movies, documentaries, tv shows & episodes and live channels are accepted. These streams are trackable on-chain between various platforms/distribution channels and creators.

### Replay Assets Management Portal (RAM):

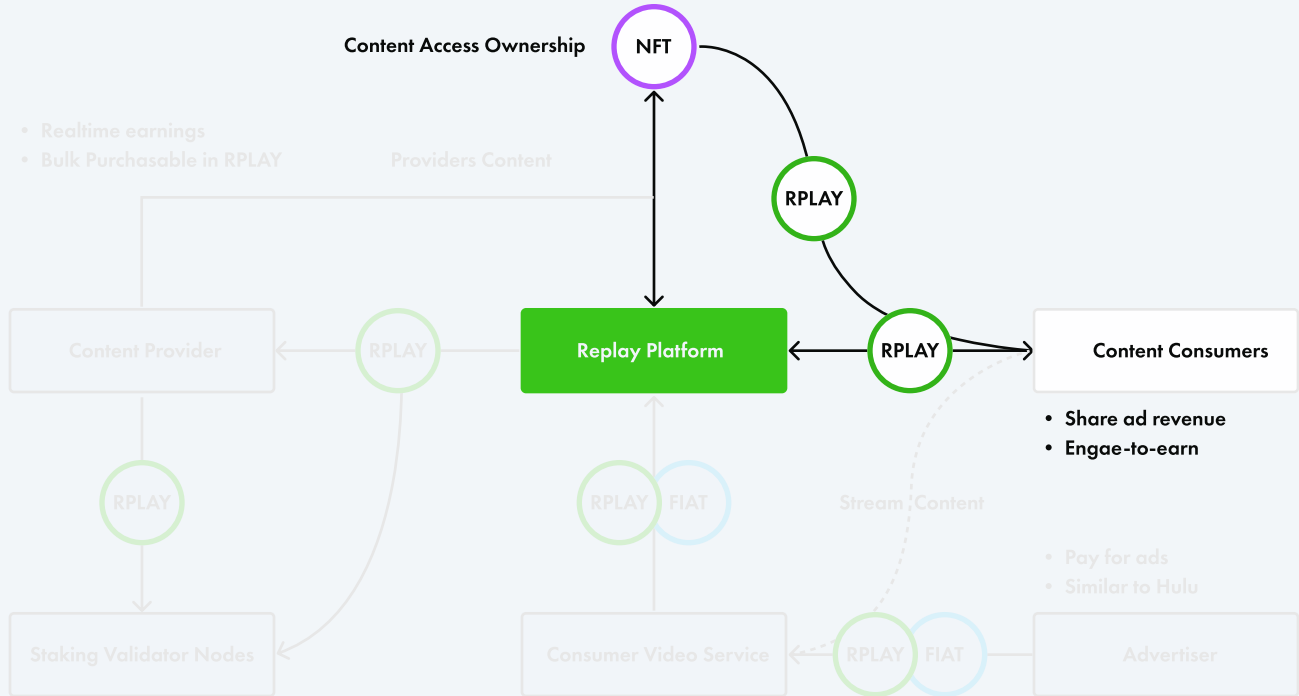
- Content Creators and Providers may upload videos onto the platform via an easy to use portal which then automatically creates unique digital-ready streams that are trackable on the blockchain and made available for access or syndication based on business rules set by the creator.
- Content Distribution is enabled via embeddable stream links ready for distribution with proprietary tracking controls.
- Replay may publish these streams anywhere seamlessly, provided they are authenticated via the Token

- Creators are able to mint Digital Collectibles to allow anyone to support their content and earn special perks such as early & exclusive content access, activity badges, and future content discounts
- Creators can potentially get instantaneous feedback from their respective community of fans as well as real-time data associated with the consumption of their content.
- As content is delivered to users across various endpoints, delivery is measured in real-time, that data is stored on the blockchain, and key stakeholders in the value chain content providers, content consumers, and content sponsors all interact with the RPLAY token in order to facilitate access.



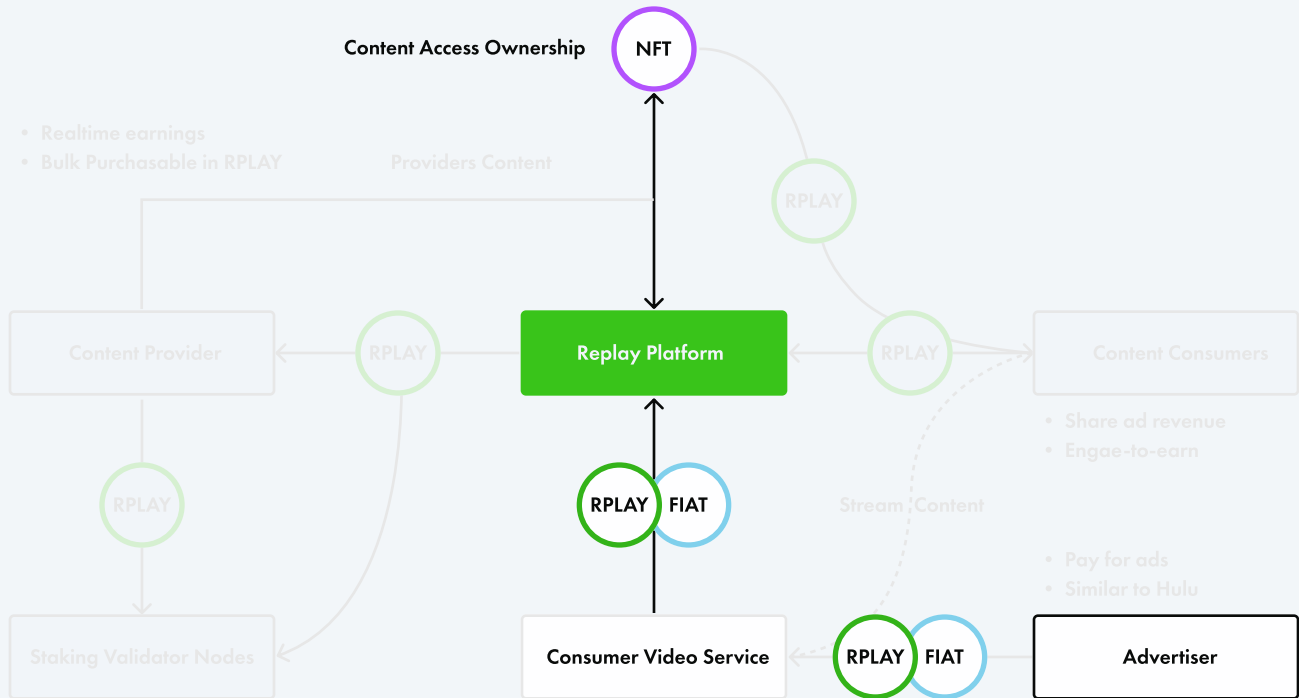


## Content Access & Ownership



The Platform also provides a service in which selected content access ownership is sold to purchasers in the form of Digital Collectibles. These collectibles contain the appropriate metadata to solidify access to the specific content.

## Revenue Flow



Revenue is generated from Digital Collectibles sales (memberships) and Advertising insertions into the playback of the content experience.

### Digital Collectibles Sales:

- Content creators can tokenize their unique content as Digital Collectibles.
- Digital Collectibles sales generate RPLAY revenue for both the creator and the platform.
- The platform may charge a small commission fee for facilitating Digital Collectibles transactions.

### Advertising:

- Advertisers may pay RPLAY to display ads on the platform.
- Viewers can earn RPLAY by engaging with sponsored content or watching ads.
- The platform generates revenue by facilitating ad placements and targeting.

That platform earns a % of advertising and Digital Collectibles sales revenue - splits the rest with content partners.

## 4. Community Driven Video Streaming with RPLAY

A completely decentralized streaming ecosystem means all core elements (including both technical and mission critical business functions) should be fully decentralized.

### 4.1 Decentralizing Video Streaming

In order to create a truly decentralized streaming service, Replay is built as a dApp on the Theta blockchain, decentralizing various aspects of a typical video streaming platform including content delivery, storage, tokenomics, community participation, and more.

The following sections outline the key features of Replay:

#### **Video Consumption Tracking & Rewards Protocol:**

- Theta blockchain (thetatoken.org) is utilized as the underlying infrastructure for Replay.
- Replay-specific smart contracts to handle tokenomics, video consumption tracking, rewards distribution, content ownership, and platform participation.
- Replay Token (RPLAY) with the Theta blockchain, enabling seamless token utilities within the Replay platform.

#### **Decentralized Content Delivery, Storage & Encoding:**

- Video Encoding and Decoding: This refers to the process of converting video content from its original format into a format that can be easily streamed over the internet. Typically, video streaming applications use codecs like H.264 or H.265 to compress and decompress video content.

**We utilize Theta Blockchain Video API for this purpose.**

- Leverage the peer-to-peer network of the Theta decentralized CDN to minimize bandwidth costs and reduce reliance on centralized content delivery services. Video streaming applications use CDNs to ensure that their users can access video content from anywhere in the world without experiencing any buffering or lag.

**We utilize the Theta Blockchain CDN & P2P Streaming for this.**

- Security & Tracking / Measurement & Analytics: Video streaming applications must implement security measures to protect their content from piracy and unauthorized access. Users can contribute storage and compute resources to run and secure the Replay subchain network.

**This is core to the Replay Protocol.**

### **Community:**

To date, Replay has released a variety of Digital Collectibles and deployed functionality to support a varied and expanding set of platform utilities. The core platform features and capabilities are meant to support and demonstrate the community's ability to utilize the token and Digital Collectibles to participate in the user experience.

### **Digital Collectibles & Monetization:**

- Digital Collectibles on the Replay platform are called Playtatoes / Collectibles. They enable unique content ownership, exclusive features, and other revenue-generating opportunities.
- Content creators can mint and sell Digital Collectibles for token gating content access, setting their own pricing and royalty structures.
- Advertising - Running pre or mid roll video commercials within content to generate revenue.
- Cross-chain support for Digital Collectibles across any adopted blockchain can be supported and used to instantiate any of the utility types mentioned above, these include all Digital Collectibles on Theta, Ethereum, Polygon, and more. More information can be found on Replay's Blog.

## Content Acquisition

- The process of acquiring video content that can be streamed on the platform. This may involve purchasing rights to existing content or producing original content.
- Managing the organization, storage, and delivery of video content on the platform. This includes ensuring the content is properly tagged, categorized, and optimized for streaming.
- Content Creators to upload content into the Replay Platform
- **This is all achieved using Replay's Asset Management Portal**

## Content Curation & Programming

- Replay aims to decentralize content curation and programming by implementing a community-driven approach to content discovery and distribution.
- Through the Replay platform, content creators have the ability to directly connect with their audience and bypass traditional gatekeepers in the content distribution process.
- Content curation and programming will be done through decentralized processes, utilizing user-generated ratings, voting, reviews, and other feedback mechanisms to inform platform algorithms and influence content recommendations.
- This approach to content curation and programming will enable a more diverse range of voices and perspectives to be featured on the platform, ensuring that content is not controlled by a small group of centralized decision-makers.
- As part of Replay's commitment to decentralization and community, **Playtaters Digital Collectibles** will be available on the Replay platform. This collection will consist of a limited set of unique collectibles that allow holders to participate in curation and programming of the video service powered by Replay.
- By owning a Playtaters Digital Collectibles, users will gain access to exclusive features and perks related to the curation and programming of the platform. As a result, these holders help shape the future of Replay's video streaming service.

- In addition to the Playtaters Digital Collectibles, Replay will continue to explore new and innovative ways to involve the community in content curation and programming. Our ultimate goal is to create a platform that reflects the values and interests of our users and fosters a thriving, self-sustaining ecosystem.

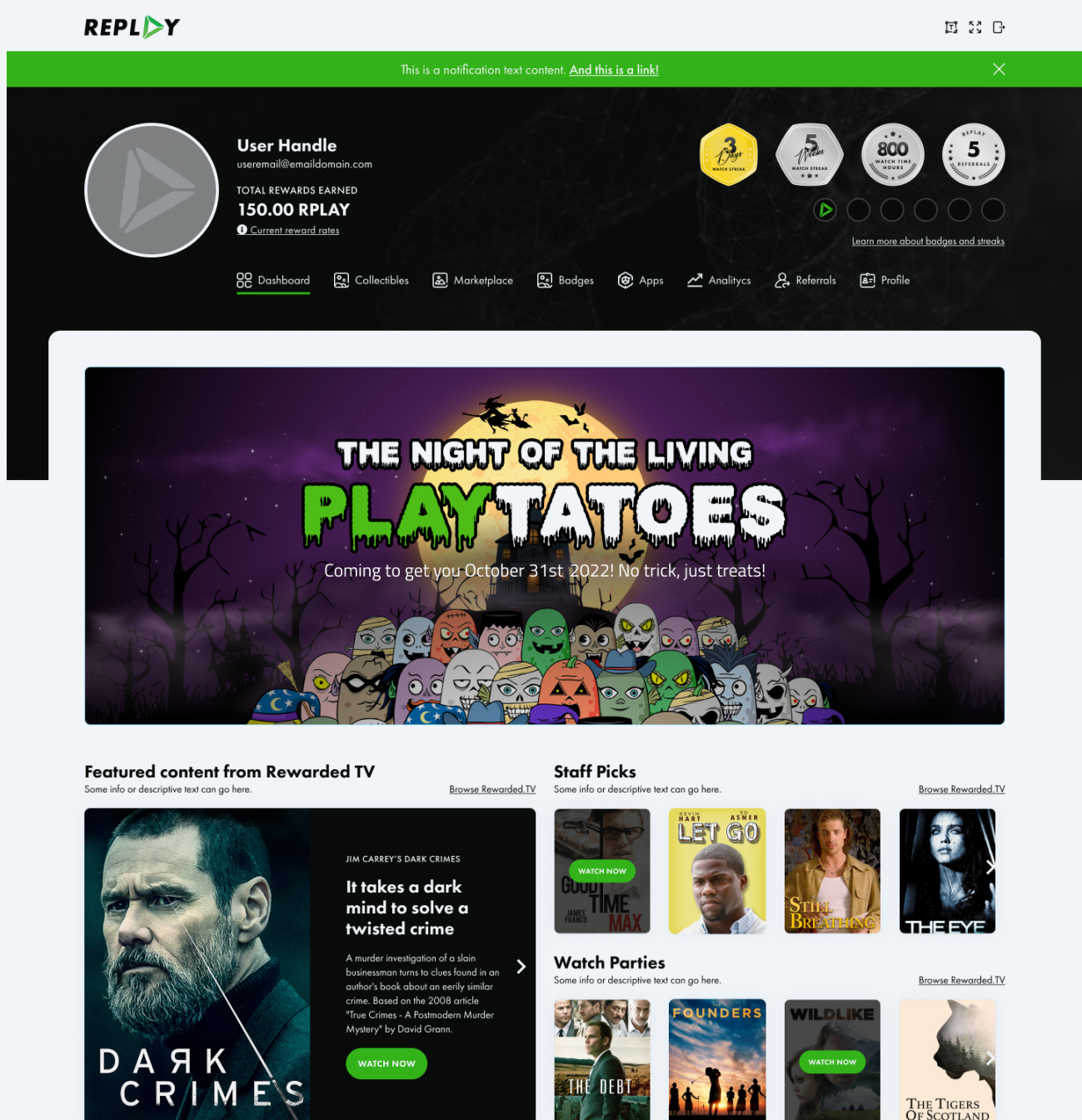
By addressing these key aspects, Replay creates a fully decentralized streaming service that empowers users to take control of their content, rewards, and platform participation. This approach fosters a thriving, self-sustaining ecosystem, where users can interact and contribute to the platform's growth, benefiting both creators and viewers.

## 4.2 Product

Replay provides a roadmap for how to decentralize the rest of the core business functions of a video streaming application to enable a path forward for next generation video developers and experiences by implementing Replay's tracking and Reward solution; building upon decentralized content delivery to include community driven content development, curation, programming, and audience acquisition with the introduction of the Replay Dashboard and Mission Control Center.

### 4.2.1 Replay Dash

Replay Dash is our proposed hub for individual content consumption, a dashboard where Replay content providers, community members, and brands engage with content and Replay protocol enabled video applications.



### 4.2.2 Today's Features

- Home/Content Discovery Portal - Discover Staff & Community Picks or Explore the Library
- Analytics - Check in on what you've been watching or how often your contents been watched, see your RPLAY rewards
- Collectibles - A showcase of all your Digital Collectibles including those issued by Replay as well as those from 3rd Party and Partner Collections. Hidden Boosts are Unlocked and Revealed Here
- Badges - A showcase of all Badges & Activity Milestones earned & unlocked across the Replay platforms for participation including offers from partners and all Replay supported applications
- Apps - Authenticate and Explore Replay Protocol Partner Apps & Experiences
- Referrals - An easy place to check in on your status as a Referrer into the platform
- On-Platform Digital Collectibles Minting - Available for sale Directly on the Dashboard

### 4.2.3 Future/Proposed Features

- Curation / Voting on Platform
- Content Ratings & Reviews - Provide Feedback on What You've Watched & Unlock Platform Features, Benefits, and Rewards
- Watch-Parties - Watch Parties with Chat directly on the Dashboard
- Leaderboards - See what users are topping the charts in every category.
- Token Explorer - Real-Time View of RPLAY Token Usage Information on the Dashboard

The above features form a baseline from which any community can operate key elements of any video streaming application including content management, programming and curation, content development, content monetization, and content distribution.



## 5. The advent of AI

In recent years, AI has seen significant advancements due to a combination of factors such as the availability of large amounts of data, more powerful computing resources, and the development of new machine learning algorithms. These advancements have enabled machines to perform tasks that were once thought to be exclusive to humans, such as recognizing images, understanding speech, and even driving cars.

One of the most significant developments in AI has been the rise of deep learning. Deep learning is a subset of machine learning that uses artificial neural networks to learn from large amounts of data. Deep learning has proven to be highly effective in a wide range of applications, from image and speech recognition to natural language processing and predictive analytics.

While this will have many implications across a wide range of industries, there are specific implications and opportunities at the intersection of AI and Video Streaming.

### 5.1 Potential Integration of AI into RPLAY

Given the rapid advancement of AI interoperability in early 2023, Replay proposes a number of concepts for AI integration into the Replay Dash and Protocol.

**AI-driven content creation:** AI can be used to create and curate content, offering a new way to generate revenue for token holders and content creators. With AI-generated content, Replay can offer a wider range of content that is tailored to specific audiences, allowing for more targeted advertising and more engaged viewers.

**AI-driven content discovery:** Replay can leverage AI to offer personalized content recommendations to viewers, based on their viewing history and preferences. This can improve the user experience, increase engagement, and ultimately drive more revenue for token holders and content creators.

**AI-powered analytics:** By analyzing viewer data with AI, Replay can provide insights into viewing behavior and preferences, which can help content creators and distributors optimize their content and advertising strategies. This can lead to more effective content distribution and increased revenue for all stakeholders.

**Streaming Personas:** Replay streaming personas will bring generative web3 identities to life, using AI to bring more personalization and interactivity to streaming experiences. By leveraging the latest machine learning techniques and integrating with market leading AI platforms, Replay will develop streaming personas which take into account a viewer's watching habits, create personalized and persona-based content recommendations, as well as unlock persona-based perks and challenges.

**AI & The Replay Dash:** Personalized chat experiences will continue to become the norm in UI, as systems embracing AI are better able to respond to a vast range of user inquiries. The Replay Dash will soon feature enhanced chat with AI integrations to provide for more interactivity as well as allow viewers to ask questions in real-time, as well as assist viewers across their viewing experiences. These integrations will include AI integration into Watch Party Chat to create a more interactive experience, and AI-assisted Mission Control to help guide viewers to their next achievements.

## 6. Interoperability & Next Generation Video Experiences

Replay is an open platform and will continue to provide open APIs to 3rd Party Video Distribution Services, Companies, and Startups aiming to build next generation video experiences. By integrating with AI-powered platforms and services, Replay may further enhance its offerings, creating more engaging and personalized experiences for viewers and content creators alike.

Incorporating AI into RPLAY is an exciting development that has the potential to unlock new revenue streams for token holders and enhance the value of the platform for content creators and viewers. As AI technology continues to evolve, Replay is well-positioned to leverage its capabilities and continue to provide cutting-edge streaming services to its users.

### APIs & Docs

For all documentation & API info - please follow: <https://docs.imaginereplay.com>

## 7. References

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# **Thank you for reading!**

**Join us in shaping the future of video streaming through the implementation of blockchain technology.**

If you have any question, ideas or proposals please feel free to reach out to [hello@imaginereplay.com](mailto:hello@imaginereplay.com)