CASTWEET

A Multi-broadcast Platform Based-on Blockchain Incentives
for Everyone

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1. Abstract

Nowadays, the growth of the multi-broadcasting or livestreaming market has moved beyond what anyone could have previously anticipated a few years ago. As the rate of cord-cutting, or the choice of most users to cancel their cable TV subscription, has continued to expand, more and more users are opting to only subscribe and use livestreaming as their main source of entertainment.

In addition to this, the possession of smartphones has become the norm for people of all ages. It has become the norm instead of the exception to see children as young as elementary school with their own smartphone that they use for entertainment and to view on-demand content from Youtube, Netflix, and Twitch. As our portable devices take a greater percentage of our leisure time, live-streaming as the de-facto choice for entertainment will continue to expand.

Beyond just entertainment, e-commerce is making the transition into the live-streaming as well. Consumers, always weary of the over-commercialization and increasingly lack of trust with corporations, are looking more to trusted sources to purchase their items. The live-streaming e-commerce market has been undergoing incredible growth within Asian markets and is primed to expand globally. Live-streamed e-commerce allows anyone from farmers to professional makeup artists to exhibit products and engage directly with their potential customers, creating a greater trust in the products themselves.

However, at the heart of this issue, is how to equitably share the revenue generated from these different platforms. In the current environment, most of the revenue is concentrated within the platform itself and the content creators who provide the viewing options to consumers. However, this unequal share of revenue has left the viewers, who actually generate the revenue by viewing ads, purchasing in-app items,

and subscribing to their favorite channels wholly uncompensated for their actions.

In order to address this, Castweet is creating a revenue model with blockchain-based incentives that shares a portion of the revenue with the viewers themselves. Our goal is to create a platform that viewers prefer over other live-streaming competitors as their participation is both compensated and motivated. With this viewer-centric approach, viewers are motivated to not only view, but also engage, share, and shape the development of the platform. Our goal is to create a system of "if you build it, they will come," where the large viewer base actively motivates content creators to participate and engage on the platform.

At the same time, the revenue model provides creators with a comparable revenue split to traditional platforms in order to motivate adoption and create the streams for the viewers to join. By rewarding the viewers with points in which to support their favored content creators, content creators can generate more overall revenue without requiring their viewers to directly pay with their own money. Besides just providing a platform for entertainment, Castweet aims to support the new class of internet entrepreneurs who use live-streaming for e-commerce to promote and sell products directly to consumers.

Overall, the Castweet project supports and compensates the following groups :

· Viewers who are currently uncompensated for their views while creating the actual revenue for the platform.

· Content creators who generate content for the viewers to join but have a difficulty in monetizing their content effectively across different platforms.

· Live-streaming sellers who are looking for a platform to promote and sell their products with an in-platform payment system and access to stock from established brands.

· Advertisers and established brands who want to reach users within different

demographics and interests across genre types or provide stock to allow internet entrepreneurs to do the selling for the brand.

By developing a decentralized solution that uses blockchain-based incentives to both users and content creators, we believe that our platform can allow a more fair and circulated distribution of rewards while also creating a new model that values the contributions provided by the viewers.

2. Live-Streaming Market

2.1. Project Target (overview)

Our current viewing habits are in an ever-changing dynamic. Users are spending a majority of their leisure time engaging with the content they love across the various genres, whether it be gaming, lifestyle, food, or beauty content. The ability for any viewer to find a broadcast related to whatever niche they happen to be interested in is taken for granted by the billions of monthly viewers. When in the past they had to wait for their desired program to be broadcast, now they can instantly connect to a live-stream or view a VOD their preferred live-streamers database.

With these changes, comes a need to rethink the model of compensation that we use to reward both viewers and content creators. The current markets largely ignore the viewers themselves, mainly focusing on compensating content creators and using the power of their contents to drive the users to the platform itself. However, by reimagining and upending this content creator model, viewers can be motivated to use a platform and then bring in more and more content creators. By using a viewer-centric model, many of the problems with platform growth can be addressed and lead to a favorable and engaging cycle.

In addition, adding blockchain-based incentives can provide the clarity and transparency that many users would like to see. As each transaction is recorded into the blockchain, users can clearly see how their rewards are being dispensed and can create a greater trust in the platform itself.

<Figure 1: Castweet Target Groups>
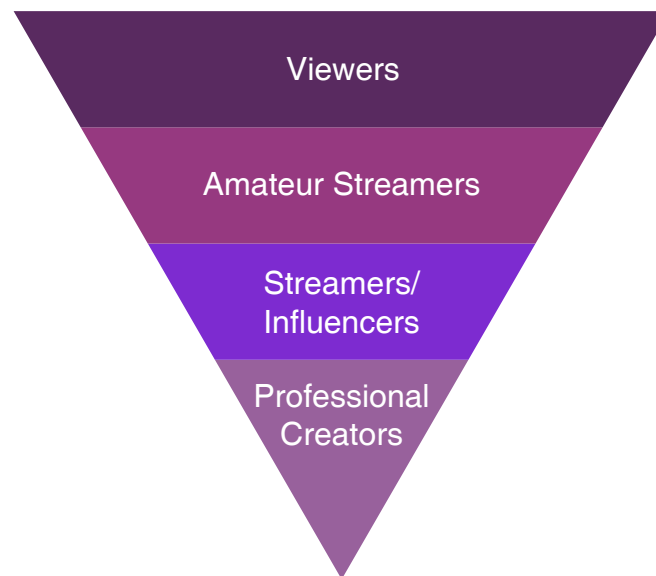
The target groups of the Castweet model can be thought of in this way :

   Addressing the issues of these different groups is vital to creating a thriving and active live-streaming platform that both promote content creators and viewers to engage on the platform. Looking at each group's needs and understanding their motivations for participation are essential for the health of the platform.

   Professional Content Creators are any creators that come from the traditional media industry, whether they are a celebrity, news, company or any type of content you would consider to be of the highest level and quality. These groups are constantly looking for more ways to engage with their fandoms and provide their content and information to the largest amount of viewers. By addressing their needs and promoting viewers to spend more time engaging and sharing the content, their needs can be met.

   The Streamer/Influencer group is the popular content creators broadcasting on the established platforms such as Twitch or Youtube. This group can have anywhere

from tens of thousands to millions of followers and subscribers that engage with their created contents and streams. While many groups are already providing platforms for them to upload and share their content, they could benefit from more income directly from the viewers themselves. By providing viewers with a means to compensate content creators without directly investing their own funds, the streamer/influencer group can improve their overall compensation. Also included within this group are internet entrepreneurs looking to sell their own products directly via live-stream. This group can be supported by providing an in-platform payment system and ability to promote their own streams to maximize their reach.

The Indie or Amateur streamer group is any streamer who currently broadcasts but hasn't quite hit the critical mass to be full-time without another source of income. This group desperately would like to increase their viewer count and seeks more additional revenue sources to allow them to become a full-time streamer. By increasing discoverability and providing automatic monetization, this group can be supported further on the Castweet Platform.

Finally, the viewer groups are completely uncompensated across the various available platforms. By providing blockchain-based incentives to this group, which is our primary target, we believe that we can further their engagement and consumption habits within the platform. Additionally, giving them with a free way to support their preferred content creators motivates further participation within the platform.

2.2. Live-stream Market Status

These days, the number of multi-broadcast users is continuing to expand at rapid pace. According to Statistica, Youtube is generating more than $116 billion dollars in advertising revenue per year within the platform. However, the viewers that are helping support this revenue-generating machine are wholly uncompensated for their value provided on that platform.

<Figure 2: : Youtube Advertising Revenue>
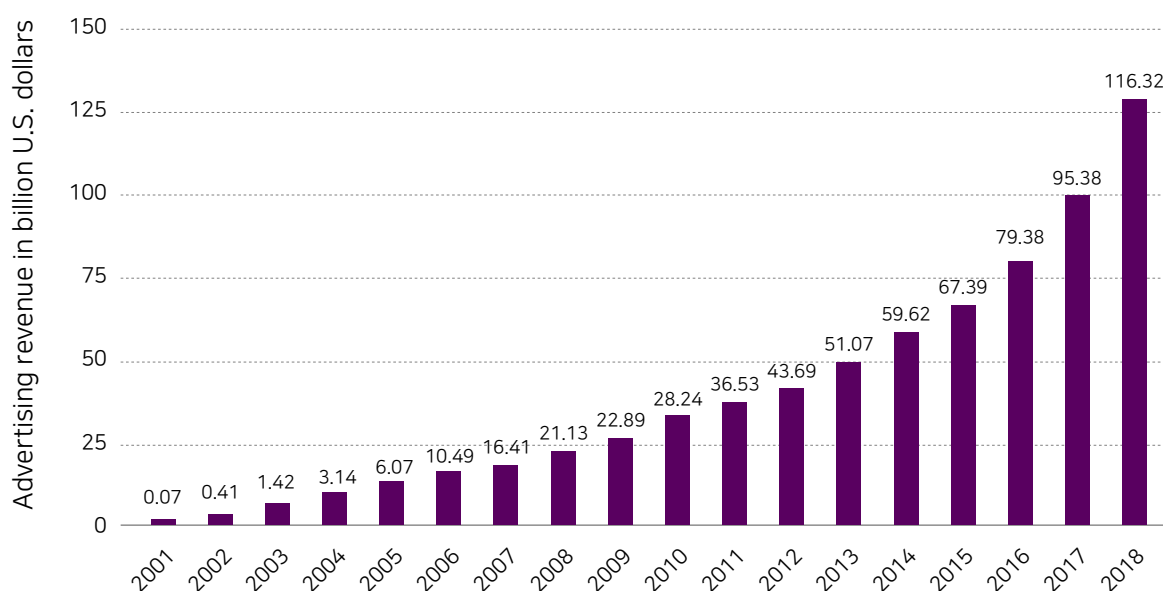
In addition, the imbalance between viewers and creators can readily be seen by looking at the number of creators channels vs. viewers. On Youtube alone, only 1% of channels will ever upload a video and have the ability to earn from their uploaded contents. This shows that the other 99% of the people engaging on the platform, the viewers, are actually generating the value for the platform itself. Also, the Adsense revenue is split with 55% of the advertising revenue going to the creator and 45% taken by the Youtube platform itself. This ratio also ignores the viewers with the platform taking much more revenue than is actually required to maintain the platform itself.

CREATOR & VIEWERS

1%
Creator Channels

99%
Only Viewers

*source : Statistica, 2019.1

ADSENSE REVENUE SPLIT

55%
Creator

45%
Youtube

*source : Investopedia, 2018.10

<Figure 3 : Youtube Creators/Viewers & Revenue Split>
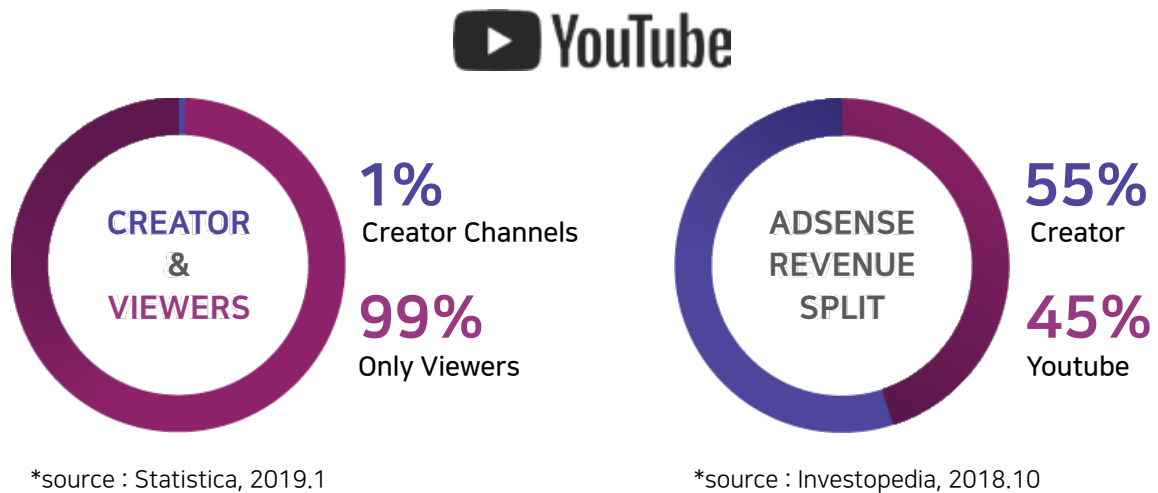
Focusing on the live-streaming market directly, the platform Twitch.tv, which is the largest streaming platform with a major focus on gaming content, has an overwhelming number of active streamers. Partners, or high-tier streamers, had reached over 27,000 by the end of 2017 and their second-tier of monetized streamers, Affiliates, is now more than 150,000 monthly streamers. These streamers often spend long hours each day providing contents in a never-ending cycle of streaming. Due to the need to constantly be streaming and innovating on their content, the amount of hours these streamers spend daily is often more than the average 40 hour work week seen in traditional jobs.

Twitch now has 27K+ Partners and 150K+ Affiliates making money from their videos

Sarah Perez @sarahintampa / 4:00 am KST • February 7, 2018

<Figure 4: Twitch Partners & Affiliates>

In addition to the ever-increasing number of live-streamers active within the platforms, the influence of mega-streamers can also have a profound impact on alternative streaming options. Previously the top streamer on the Twitch platform with 14 million followers, Ninja announced his move in early August 2019 to Mixer, a live-streaming platform owned by Microsoft, and was able reach more than 1 million subscribers within only one week. Similarly, PewDiePie, the top individual creator channel on Youtube, moved his live-streaming exclusively over to DLive due a more favorable compensation model and caused the platform to experience 67% monthly user growth within only one month of joining the platform. These two cases of top end creators show that current streamers are dissatisfied with the current offerings and are flexible on moving to a new platform if the environment is right.

<Figure 5: Large-streamers Effect on Alternative Platforms>

On top of providing viewers with entertainment, live-streaming is rapidly becoming a source for long-established brands, new startups, and entrepreneurs to engage directly with consumers in order to sell products. In 2018, the Chinese platform Taobao Live reported sales of over $14.93 billion dollars in 2018, and was growing at a rate of 400% annually. During these live-streams, the streamer can show off goods and talk directly with the chat to sell their products, creating a greater amount of trust between the buyer and seller. This direct contact with consumers built upon the previous success of traditional broadcast sales, such as QVC in the United States,

while providing the benefits of the latest technology. As more and more consumers have started to distrust overly commercial connections, a direct sales line to consumers will continue to become more important for all products and industries.

The popularity of live-streaming is spread throughout the globe with each target market having their own preferences for viewing and posting contents. Within Korea, a survey of thousands of Korean elementary school students showed that Youtuber had become the top 5 job most desired by current students for the first time. Interestingly, this new addition to the top 10 had removed scientist from the top jobs for the first time since this national survey was started. This shows that the jobs of the future are in a shift, where content creator is becoming a more central and desirable job for the upcoming generation. As this shift continues to further move towards content creators, the live-streaming market will become more competitive and compensation models and alternative choices outside of the top existing platforms will be more in demand.

<Figure 6: Youtuber a Top 10 Job in Korea>

2.3. Issues of the Live–streaming Market

The current status of the live-streaming market has issues facing each section of the market structure. Beyond the fact that viewers are not compensated for their activity and time spent on the platform, there are two main divisions that have inherent limitations for the live-streaming industry as a whole. The live-streaming platforms themselves have issues that are preventing further engagement and growth of the platform as well as issues faced by the content creators who are left dissatisfied with their existing choices. By addressing both of these problems in one platform, Castweet can offer up solutions that improve upon the issues of streaming platforms and help solve problems found by the content creators.

2.3.1. Issues of Streaming Platforms

While the top platforms for streaming, Youtube and Twitch, have a large majority of the active streamers, the streaming platforms themselves are not without issues that affect satisfaction and performance. Some of the main issues seen on these platforms can be seen below :

<u>Users gain no tangible reward for Viewing & Engaging</u>

Live-streaming platforms have become a medium for commercial advertisements, a place for communication, entertainment, and sharing of information. Consequently, there has been a rise in consumer dissatisfaction as well as damages occurred from the use of these platforms. According to the Korea Consumer Agency, out of 500 consumers, 63.8% have answered "experienced dissatisfaction" from the use of live-streaming platforms and 82.4% of such dissatisfaction was caused by "excessive amount of commercial posts."

Further, as seen in the above charts, a case in which a platform provider returning massive profits generated through marketing back to its users is extremely rare. A

monopoly on profits by platform providers is also a prevalent problem in the live-streaming market. Due to an increase in advertisement exposure frequency, platform provider's profit increases. However, ironically, the user's usage environment is becoming increasingly worse.

Centralized Systems and a Lack of Transparent Data Usage

With Facebook's user information leakage incident which lead to the EU to bring GDPR into effect, social media's information leakage is done opposed to a user agreement and beyond agreed limits. Platform providers monopolize user's personal information and monetize it in order to make profits through advertisements and selling of user data. In that process, transparency is inhibited, questioning the platform provider's ethical and legal responsibility. This is a problem caused when centralized services undertakes excessive business activities and allow individual's private information to be shared with companies, regardless of the actual wishes or preference of the users themselves.

Discoverability

Current platforms are incentivized to promote only the top performing streamers on their homepage by their current revenue model. Since large streamers have been proven to be successful at driving engagement, the organization of promoted content on all streaming platforms favors only the largest 1% of streamers while ignoring the other 99% of streamers who could possibly be creating equally as engaging content. This misconception that only proven live-streams should be promoted as left dissatisfaction felt by the streamers who are trying to move from a part-time to full-time streamer and has limited their livelihoods greatly.

In addition, the new class of internet entrepreneurs using live-streaming for sales find it difficult to attract attention to their live-streams. This directly affects their ability to sell and ultimately can "make or break" the success of their business. By

allowing them to promote their own streams and invest directly into the reach of their business, they can improve access to consumers.

<u>Copyright Infringement</u>

Since anyone can simply upload content onto a platform and claim it as their original content, many issues have arisen on the most popular streaming sites related to unlawful use of copyrighted material. Beyond the expected reposting of popular media from traditional broadcast outlets, many users upload content created by other smaller content creators and try to pass that content off as their own creations. The expansion of "freebooting," or repurposing the content that another creator has created as your own, has caused a loss of revenue for original creators and further incentivized this growing phenomenon. As some famous freebooting channels have gained millions of followers without creating any original content, the original creators are left without any share of the earnings, effectively lowering their motivation for further creations and lowering the quality and variety of entertainment options for viewers.

2.3.2. Issues of Live-streaming Content Creators

Beyond problems with the platform themselves, many content creators are highly dissatisfied with the current choices and ability to perform well on the existing platforms. By using their primary concerns as a basis for the streaming platform, the Castweet platform will provide more incentives and better motivations for these streamers to use our platform.

Many streamers in the amateur or indie tier levels feel the current platforms do not help support their ability to grow. As mentioned, most platforms feature on the top streamers on the main page and completely ignore streamers at any of the lower levels, regardless of the quality of the content that they are producing. This creates a negative feedback loop, where producing more content has been no incentive and

further lowers the amount of streams available to users. Especially, streamers in the amateur tier often find it difficult to market their own stream within platform, relying only on networking with more famous streamers or using aggressive social media campaigns to try and build up their following.

<Figure 7: Twitch Discoverability Issue>

Similarly, the need to constantly follow the newest trends or most popular streaming categories has lowered the overall quality of available streams. As one game or social phenomenon becomes popular, streamers of all levels are incentivized to move over to that genre or game. This forces streamers to constantly innovate their content while trying to adjust to the newest fads. At the same time, the streamers themselves can do nothing to promote their stream within that new fad, and lower-level streamers are unable to reach the front page and viewers have no motivation to seek out those streams with a lower number of followers. Without an incentive structure that promotes viewers to search for new and entertaining streams, the growth of an individual stream is left solely on luck and their own marketing skills.

This issue is especially severe in those streamers who are within the indie creator

community that do not generate enough revenue to change their live-streaming from an additional revenue stream to their main occupation. While many inventive and passionate creators have a motivation to create high quality content, the incentive structure favors the lowest common denominator and punishes any unique or original content that is outside the norm. By providing new models and incentivizing a variety of content, some of these issues hurting streamers as a whole can be addressed.

2.4. Castweet's Solutions for Creating Coin Utility

Even among cryptocurrency enthusiasts, most people view cryptocurrency as more of a speculative investment product rather than as a means of exchange. Because of this, 2018 became both the birth and death of utility tokens, cryptocurrencies that promised to provide viable working products in which the coins themselves had both a monetary value and use case within a platform. However, the majority of utility coin ICOs was merely a whitepaper and a dream idea and spent most of their financial backing on marketing a platform that never came to fruition. This caused even most of their ardent supporters to move onto security tokens or to keep their investments within the top 100 coins by market cap.

So what caused this failure and how can we move beyond it to increase the actual adoption and usage of cryptocurrencies? For cryptocurrency and blockchain technology to reach every day users, a blockchain-powered platform needs 3 main characteristics: familiarity to an average person, ability to earn tokens, and a valuable use case. Castweet meets all 3 of these requirements through providing a live-streaming platform that can drive engagement.

Addressing issue one, what is more familiar around the world than broadcasting platforms? Youtube boasts more than 1.5 billion monthly active viewers. Many viewers spend more than 4 hours a day watching their favorite streams, engaging with the live-streamer, and sharing the contents that they enjoy. When you are spending a large portion of your waking hours on a platform, familiarity is to be expected. In this way, the easiest way to reach the average person is to adopt blockchain and cryptocurrency into a live-streaming platform, creating an easy method to onboard new users. While cryptocurrency enthusiasts can get interested in the TPS of a coin, the average person has no interest about the technological superiority of one over another.

For Castweet, we provide a seamless live-streaming experience that a user of any of the current offerings would be familiar. From the UI to basic functionality, an average user can use Castweet and participate as if they had been on the platform for years. Using the established familiarity and adding in cryptocurrency will allow average users to get their first taste of the technology and holdings, without having to go through the daunting task of purchasing off of an exchange.

Concerning issue number 2, there is a growing dissatisfaction among content creators with the current compensation models across broadcasting platforms. As it stands, monetization is not readily and directly available to most content creators on their broadcasting platform of choice. Youtube users are forced to take more brand deals, some content creators have flocked to Patreon to earn from their creations, and, even though Youtube creators can monetize their content, the lion's share of advertising revenue goes to the company.

Castweet's means of solving this issue is to allow all actions, from viewing to sharing, to have a tangible benefit to the user. Each received CTB points can be directly converted into CTT tokens with none of the proceeds being taken by the platform itself. Average users, indie creators, and professional live-streamers can benefit through our direct compensation model that inspires and rewards great content uploaded on the platform. We hope to reimagine what it means to participate on a live-broadcasting platform, turning on its head the notion that content itself does not have a monetary value and helping to empower visual creators and viewers of all kinds.

Finally, issue three resides at the heart of what utility tokens set out to do in the first place: how do you provide utility and a use case for those tokens? The company must create value through the platform itself, using their tokens as a means of both exchange for goods or services and as a reward to those that are actively using the

coins. You can see this dichotomy established in "investment coins" which have high purchase rates but low use rates due to future price speculation. For utility coins, a vibrant ecosystem which promotes the usage of the coins on platform has to be provided in order to ensure their value.

Within the Castweet platform, the ecosystem was created from the ground up to promote the usage of the tokens. Tokens can be used within the platform for digital purchases, our innovative P2P marketing system, tipping creators, or one of the various other functions in our pipeline. While cryptocurrency traditionalists might be motivated to hold tokens for future potential gains, average live-stream viewers can see them as redeemable and directly usable. In this way, the utility of CTT is realized.
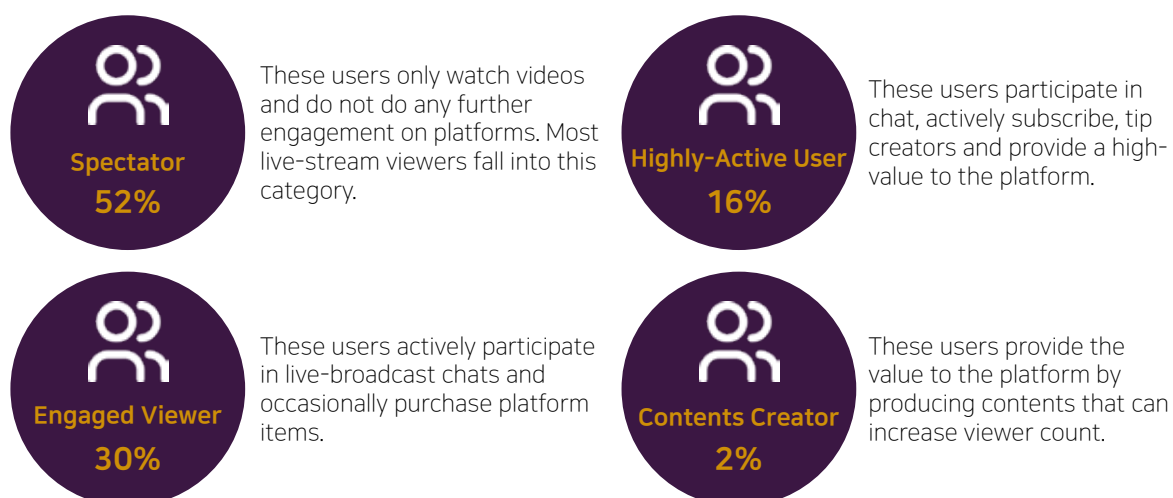
The main goal for the platform: blockchain in the back, live-streaming platform in the front.

3. Ecosystem Summary

The Castweet ecosystem combines live-streamed contents sharing with blockchain technology, thus creating an ecosystem that rewards everyone. Not only will streamers be rewarded, but also the users who participate on the platform. Additionally, the Castweet project provides real use cases based on the actual behavior of current live-stream viewers and creators in order to incentivize the use of the tokens within the platform. By combining the platform use cases itself, with traditional revenue streams in fiat or cryptocurrency from advertisers, the Castweet project can both improve the value of the CTT token while gaining fiat to help fund the project. In this way, a healthy ecosystem can be created that prevent the issue of coin drain and provides sufficient revenue stream for the platform to be maintained.

3.1. Main Target – Users

As our main focus is adding compensation to live-stream viewers, a look at what motivates users to participate and drives their engagement on a platform is essential. Participants on live-streaming platform can be divided into four main groups based on their level of activity and participation within a platform: Spectators, Engaged Viewers, Highly-active users, and the Content Creators.

Spectator
52%
These users only watch videos and do not do any further engagement on platforms. Most live-stream viewers fall into this category.

Highly-Active User
16%
These users participate in chat, actively subscribe, tip creators and provide a high-value to the platform.

Engaged Viewer
30%
These users actively participate in live-broadcast chats and occasionally purchase platform items.

Contents Creator
2%
These users provide the value to the platform by producing contents that can increase viewer count.

<Figure 8: User Participation Rates>

Use Group A: Spectators

Comprising about 52% of the users of live-streaming platforms, these users are merely spectators to the content that they enjoy. They rarely, if ever, do any activity beyond viewing live-streams for entertainment. In the current model, there is no motivation for them to participate more actively on the platform themselves, as current compensation models do not reward them for further engagement.

Use Group B: Engaged viewers

At 30% of the participants on live-streaming platforms, the Engaged viewers take on a more active role within the platform itself. They will often chat during live-streams, share the contents they enjoy with others, and occasionally use their own money to help support their favorite content creators. While their additional activity within the platform increases the engagement of a live-stream and creates a more enjoyable platform environment, their participation is limited by the amount of their own money they would like to use to further support content creators. By providing them with additional ways to earn within the platform, these users can be promoted to engage further and take on a more active role.

Use Group C: Highly-engaged Users

Constituting 16% of all the users within a platform, the highly-engaged users often function as the "Whales" of the live-streaming industry. They actively invest their own money to subscribe to various channels across the platform, can provide tips to creators that can be over $100,000 dollars, and normally actively engage with the chat and community as a whole. These users are highly motivated by the feeling they gain after sharing their support in the chat and can help turn an amateur streamer into a full-time streaming professional. Providing this group with incentives to even further support streamers, and rewarding them for the activity they are already created within our level system can push them to increase their value for the platform as a whole.

Use Group D: Content Creators

Making up the final 2% of all the participants on a live-streaming platform, the content creators themselves provide the viewers with the content that they enjoy viewing. This group can be further divided into different categories based on their level of earning and participation: amateurs streaming just for entertainment, indie or second tier streamers who are working to supplement the income from their traditional jobs, and professional or full-time streamers who derive all of their income from their live-streaming activities. On the current existing streaming platforms, all of the revenue earned from their streams is converted into fiat and used off-platform. However, by providing real use cases for their earnings within the platform and additional motivations to use those earnings, a more beneficial ecosystem can be created within the platform.

3.2 Ecosystem Overview

The main objective of the Castweet Ecosystem is to create a cycle of use within the platform by providing real use cases within the platform for both the viewers and content creators. Many previous blockchain-based incentive ecosystems focused more on the compensation side, providing a way for creators/users to earn, while ignoring the ability to create real use cases for the tokens within the ecosystem itself. By providing users with motivation to use their earned rewards within the platform, the problem of "Token Drain," or excessive amounts of the tokens being withdrawn from the platform to an exchange can be solved.

Additionally, by creating more use cases within the platform, both viewers and creators are also motivated to purchase tokens from the exchange and move them into the platform for use. Compared to other platforms that limit user registration (ie: Steemit) or platforms (ie: Dlive, Gifto) that focus heavily on motivating viewers to purchase tokens to use as tips for their preferred content creators, our system will

allow us to create a more open system while providing adequate rewards and uses to increase user activity.

<Figure 9: Castweet Token Ecosystem>
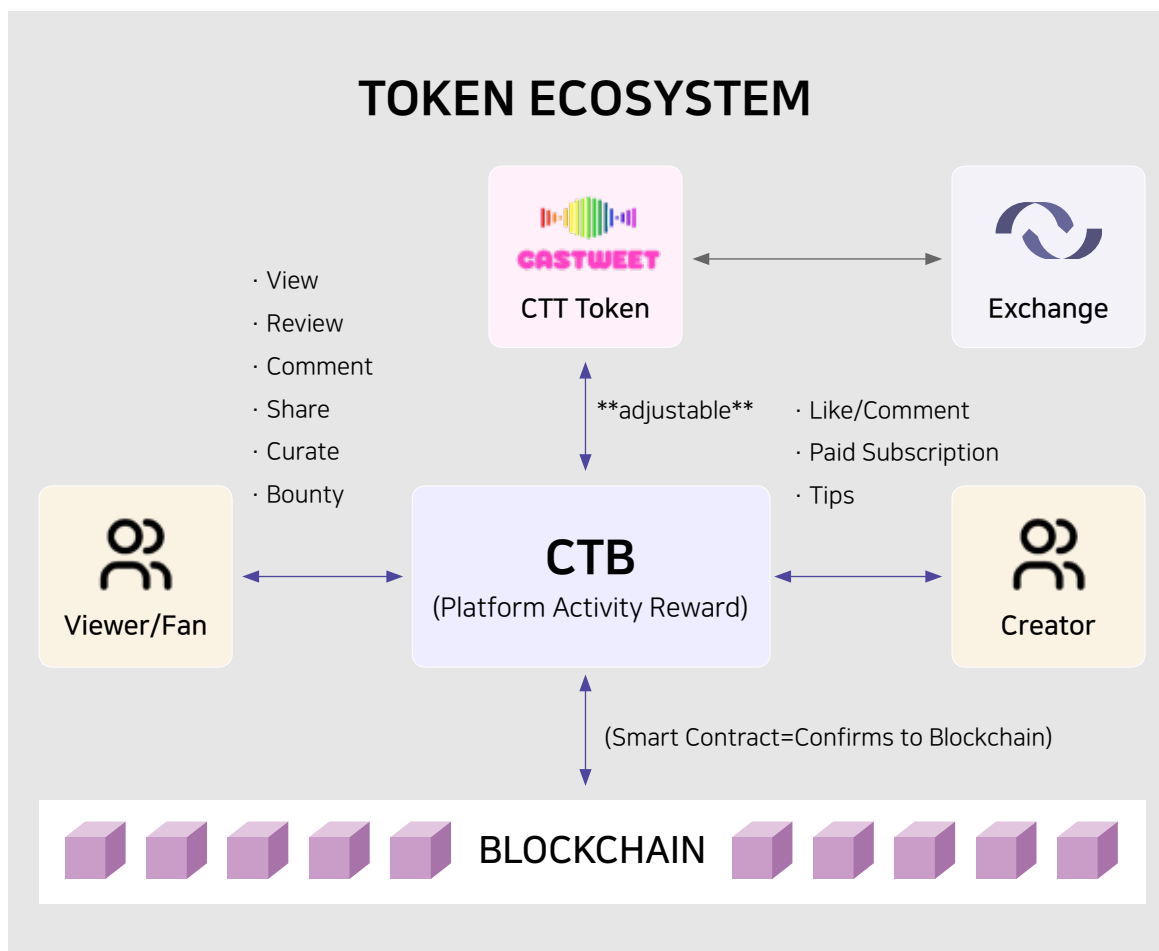
3.2.1. Two Reward Structure: CTB/CTT

Within the platform, there is a dual reward structure utilizing CTB and CTT. As users participate on the platform, they are rewarded with CTB tokens. CTB tokens are the means of exchange and purchase within the platform. These CTB tokens can also be exchanged for CTT token that can be withdrawn and sent to a cryptocurrency exchange to sell on the secondary coin market. Additionally, CTT tokens can be transferred to their in-app wallet and exchanged for CTB tokens in order to be used for purchases for the in-app ecosystem.

CTB / CTT
—

CTB/CTT creates an in-platform Ecosytem that can control abuse and be adjusted

Points earned on Platform by viewing, sharing, commenting, and streaming.

CTB can be exchanged to CTT in-platform. The exchange rate is adjustable

<Figure 10: CTB & CTT Exchange>
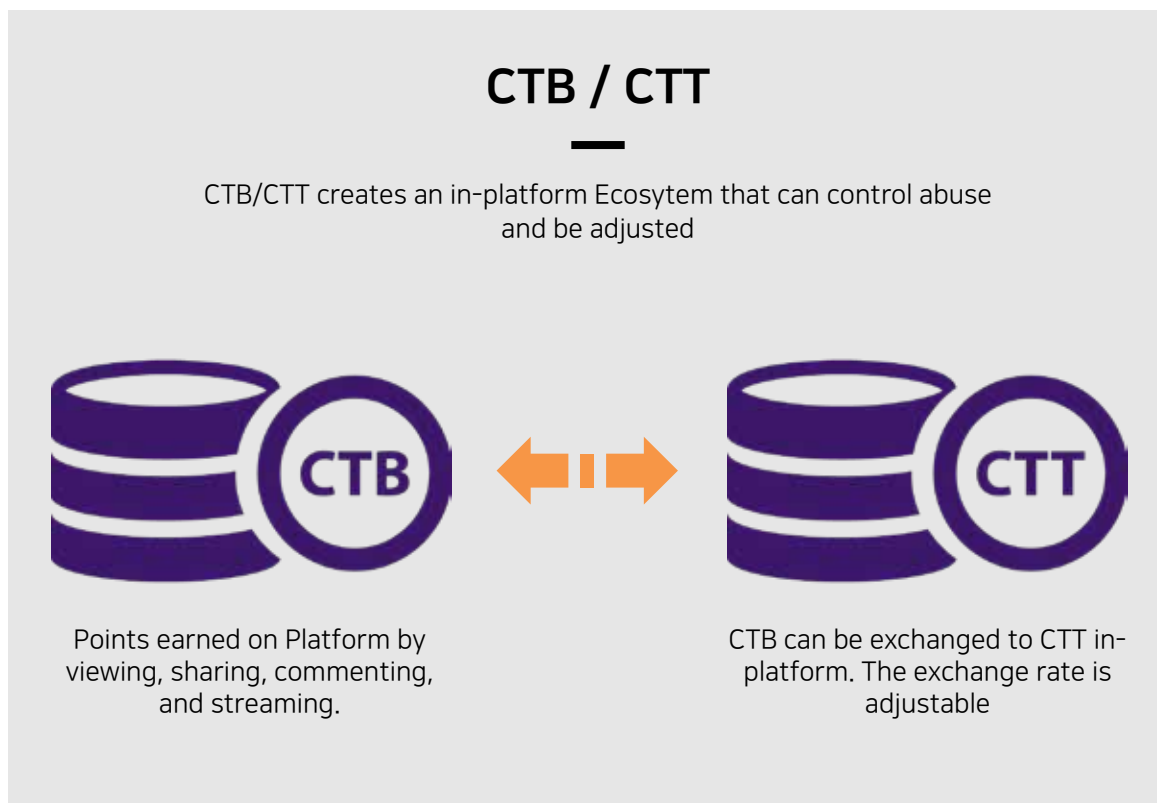
The separation of in-app points (CTB) and the cryptocurrency tokens (CTT) has a variety of advantages that can help create a healthier and active ecosystem including :

1) Abstraction of Coin Value – CTB value is separated from the value of CTT when viewed within the platform. Users are more readily motivated to use the CTB that they earn as it is not connected to the monetary value. As the value of CTT increases, the CTB/CTT exchange rate can be adjusted to maintain the health of the ecosystem.

2) Motivation to purchase Tokens on Cryptocurrency Exchange – Similar to how users purchase in-app currency in games, users will need to purchase CTT tokens and exchange them to CTB within the app to make purchases. This improves the health of the CTT token economy as users will move more tokens into the in-app ecosystem, effectively doing a token buyback for the company itself.

3) Limitation of Exchange/Withdraw based on User Level – Users will be limited on the amount of CTB to CTT that they can exchange or withdraw daily. As their user level increases, their maximum amount they can exchange can be expanded as higher level users are less likely to be abuse accounts taking advantage of the compensation system.

3.2.2. CTB Viewer Gain & Use

As our main objective and differentiation point is to provide viewers with compensation, the following table shows the ways in which users can earn or use CTB tokens within the platform itself as well as some explanation of the motivations

Type	Activity	From	To
Gain CTB	View (time)	Platform	Viewer
	Review	Platform	Viewer
	Comment	Platform	Viewer
	Share	Platform	Viewer
	Curate	Platform	Viewer
	Bounty (participate)	Platform	Viewer
	Daily Quest	Platform	Viewer
	Monthly Quest	Platform	Viewer
Use CTB	Tip	Viewer	Creator/Platform
	Subscription to Creator	Viewer	Creator/Platform
	Purchase Goods	Viewer	Creator/Platform
	Loot Box	Viewer	Platform
	Level Up Booster	Viewer	Platform
	Create Bounty Campaign	Viewer	Platform
	Profile Promotion	Viewer	Platform
	Emoticon Purchase	Viewer	Platform

for these systems :

Some key features of this system are explained below :

1. **Promote more Engagement/Activity of Viewers** - Users are encouraged to participate beyond just viewing the content. By chatting, reviewing, commenting, and sharing contents they can earn additional CTB awards. This can help improve the overall activity on the platform and make it more engaging and entertaining for other users. Additionally, viewers can track their gain of CTB and eventually earn enough CTB by viewing to help support their preferred content creators.

2. **Daily & Monthly Quest System** - Based on gamification systems seen in free-to-play games, users are motivated to accomplish different tasks in order to help level up their account and gain additional CTB rewards. Examples of quest types are: accumulate X hours of view time, spend X hours watching a streamer with less than 100 followers, watch X advertisements, tip X different live-broadcasters, rate X videos etc. These types of quests are meant to meet a variety of the features of the platform such as increasing discoverability, increase advertisement watch time, and improve the circulation of CTB within the platform.

3. **Reward directly to Creator** – In order to promote our viewers to use their CTB within the platform instead of exchanging to CTT and selling on an exchange, users are provided ways to support their favorite creators. By sending CTB in the form of tips or paying a monthly amount of CTB to subscribe to content creators, users are incentivized to use CTB more actively. Also, our expected earning rate would allow users to subscribe to multiple content creators per month so that they can earn the subscription rewards (special emoticons, chat badge for the creator in chat, etc).

4. **In-app purchases** – Users can use their earned or exchanged CTB to purchase special emotions or open loot boxes. These value of these specialized emoticons

are created in ways to promote constant purchase such as limited quantity, special-occasions, collectable and various other mechanisms. Additionally, users can purchase loot boxes similar to those seen in mobile apps or games which would contain random rewards at different rates such as additional emoticions, specialized user badges, and other use exclusive rewards. The mechanics of randomized rewards promote users to purchase multiple items in order to gain their desired reward as each reward is not guaranteed.

5. E-commerce – Users can participate in live-streaming e-commerce to purchase any products directly through the platform. Any earned CTB points can be converted into CTT and then used to make purchases for off-line goods that can be shipped directly to the viewer.

3.2.3. CTB Creator Gain & Use

In order to provide content creators with compensation and motivate them to use the platform, the following table shows the ways in which live-streamers can earn or

Target	Type	Activity	From	To
Creator	Gain CTB	View Count (run time)	Platform	Viewer
		Engagement (Like/comment/share)	Platform	Viewer
		Run Advertising	Platform	Viewer
		Tips from User	Platform	Viewer
		Monthly Subscription from User	Platform	Viewer
		Goods Purchase	Platform	Viewer
	Use CTB	Create Bounty Campaign	Platform	Viewer
		P2P Advertising	Platform	Viewer
		Create Subscriber Emote	Viewer	Creator/Platform
		Useful tools/filters/special effects	Viewer	Creator/Platform
		Open Chat Loot Box	Viewer	Creator/Platform

use CTB tokens within the platform itself :

1. **Provide Revenue through CTB/CTT** – Content creators need to be rewarded for creating the content that entertains the viewers. By providing rewards based on the blockchain, their compensation and earnings can be both tracked and provide them with a means to monetize their creations. Their revenue can be given by the platform based on their view count, engagement by users, and advertising that they run on the channel itself. This allows a reliable and steady amount of earnings based on their channel activity. Additionally, Castweet provides a way for users to tip and give a monthly subscription to their preferred channels.
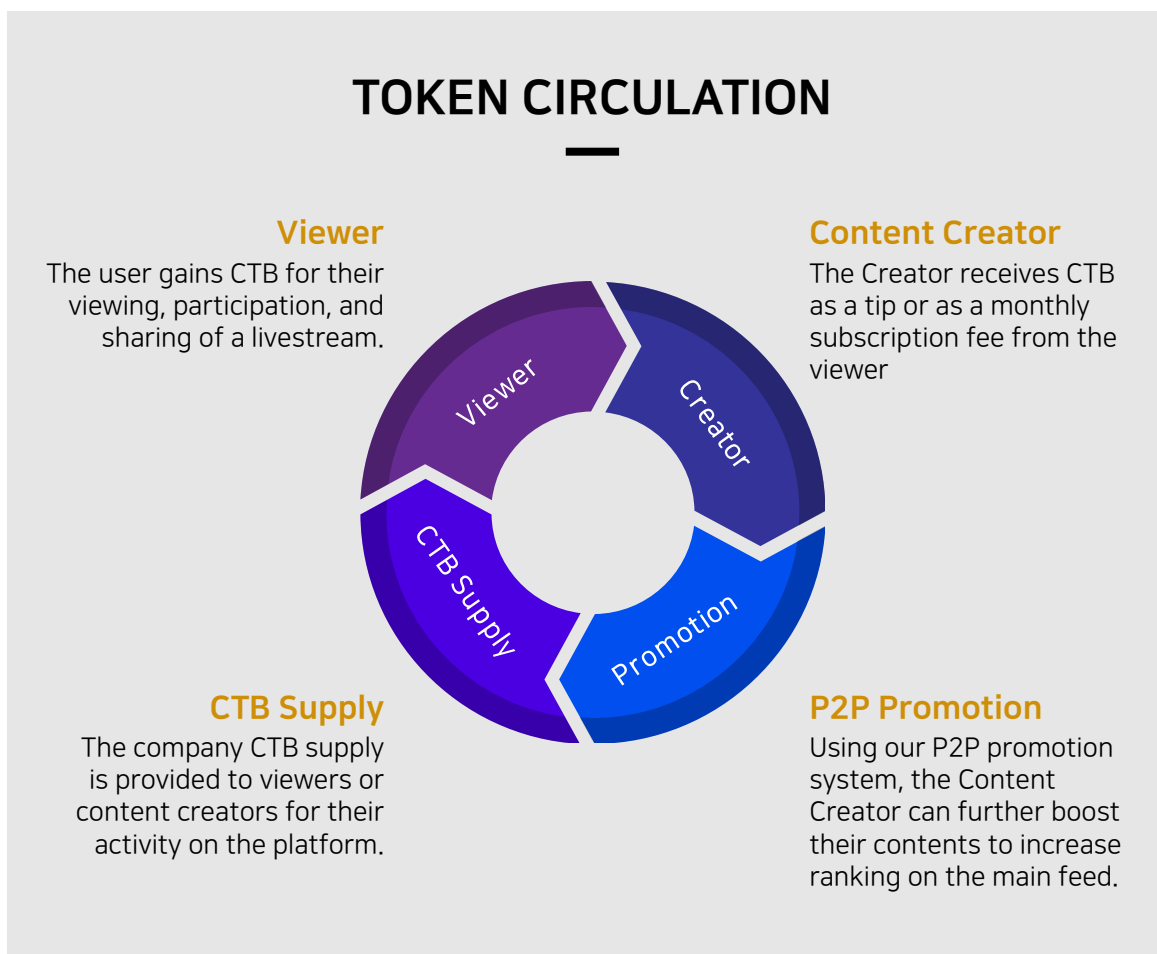
2. **Increase Discoverability** – One of the main goals is to increase the discoverability for new channels or established channels to gain more viewers. By running specialized bounty campaigns or engaging in our P2P advertising system, content creators can boost their channel or incentivize other users to view their content by providing direct rewards. This especially creates a system where lower level streamers can market their channel directly and can increase the value of CTT tokens as the means to pay for the service.

3. **Provide value to their subscribers** – Additionally, by creating subscriber emoticons, purchasing specialized filters to apply to the stream, or by opening a loot box that rewards chat viewers, the content creators is further motivated to user their earned CTB within the platform itself.

3.2.4. In-platform CTB Cycle (2 Example Cases)

The ultimate goal of the Castweet platform is to provide both viewers and users with enough utility and use cases to use their token within the platform. In order to accomplish this, we have created an ecosystem that interlocks, with both users and

creators having use cases to reward each other as well as ways in which the used CTB or CTT will be sent to the platform itself. By creating a flowing system, an active ecosystem can be maintained and motivate users to purchase CTT off an exchange for in-app usage. Below are a few use cases to explain in detail our token flow within the ecosystem.

TOKEN CIRCULATION

Viewer
The user gains CTB for their viewing, participation, and sharing of a livestream.

Content Creator
The Creator receives CTB as a tip or as a monthly subscription fee from the viewer

CTB Supply
The company CTB supply is provided to viewers or content creators for their activity on the platform.

P2P Promotion
Using our P2P promotion system, the Content Creator can further boost their contents to increase ranking on the main feed.

<Figure 11: Token Circulation within the platform>

Example Case 1:

   This user has earned enough CTB through accumulating more than 10 hours of view time so the platform provides the CTB to the user. The User then gives a tip to the Creator with 70% going to the creator and 30% going to the platform itself.

<Figure 12: Use Case 1>
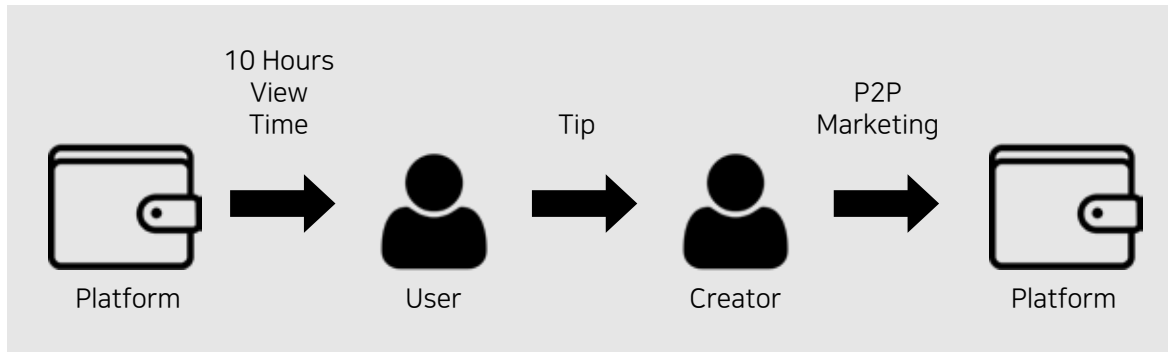
The creator wants to use their tip to run a P2P marketing campaign and the whole original tip amount is back in the platform wallet.

Example Use Case 2:

A new creator wants to be able to build their current following on the platform. Because they do not have enough earned CTB on the platform to run a bounty campaign, they purchase 1000 CTT on a cryptocurrency exchange. After transferring to the in-app wallet, they exchange their CTT to CTB. With this CTB, they create a bounty campaign to motivate users to watch their stream and that amount is sent to the platform wallet. Once a user has viewed the required time, they are rewarded with CTB until the amount of the bounty has been used.

<Figure 13: Use Case 2>
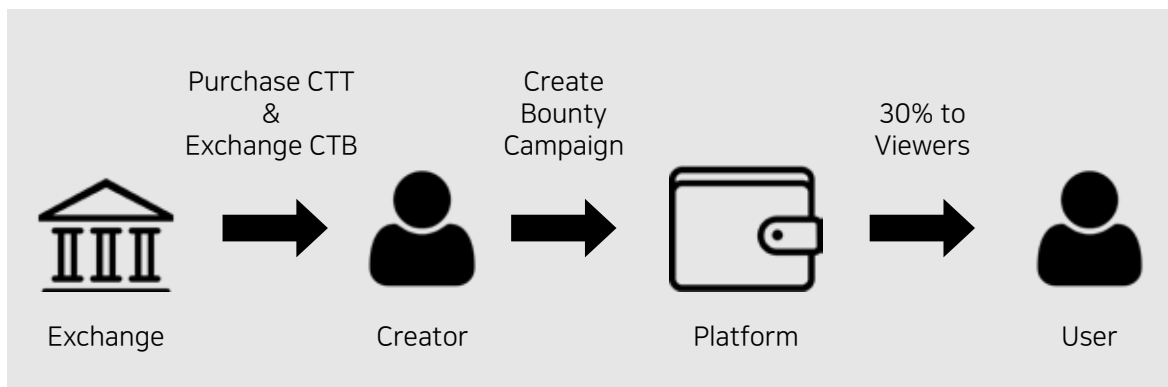
3.3. P2P Marketing System & Bounty Campaigns

To increase discoverability on the platform, there are two innovative marketing solutions that will allow live-streamers to run their own marketing within the platform. Each system users different mechanics but has the same goal of driving engagement and views to the creators content. Below is an explanation of these two unique in-app advertising campaigns :

P2P Marketing System

Castweet has created a user-driven P2P marketing system to solve some of the issues with discoverability with live-streaming platforms. In the platform, content creators or live-streaming sellers will be able to create a P2P marketing campaign in order to feature their stream on a variety of locations within the application itself. They will have the option to set their desired featured location either on the main home screen, under the promoted streams tab, or within their stream genre category (new, gaming, lifestyle, etc.). After choosing the location for their stream, they will set a budget to run the campaign. Within each target location, a bidding system will be implemented in which the highest set budget will be featured in that location. If they have set the highest budget, their campaign will be activated and they will be featured in their P2P location.

This feature allows the platform itself to add an additional revenue stream and promotes new content creators to purchase CTT to use within the platform. Additionally, it should increase discoverability as some locations will be limited by the streamer level so that high-level streamers cannot out-pay lower level streamers. Viewers that opt to view streams promoted in the "New Streamer" category will gain CTB at an increased rate when compared to other streams. Live-streamers focusing on sales will be able to invest in promoting their stream to increase potential sales. By providing a direct P2P marketing system, the goal of discoverability can be improved

while increasing the value of CTT.

Benefits of the P2P Marketing System:
- ● Ability for any streamer to market their stream directly within the platform.
- ● New Streamers will be able to feature their stream in special sections.
- ● Sliding-scale payment based on streamer level to prevent over-bidding by established streamers.
- ● Various locations for streamers to bid on to feature their content.
- ● Providing additional use-cases for CTT within the platform to improve the token economy.

Bounty Campaign

In another marketing system, both creators and users can create a bounty campaign to promote their own or favorite live-streamers broadcast. In this marketing system, users will set a budget for how many new viewers they would like to gain. Additionally, they can set the amount of compensation for each new viewer that watches the minimum required viewing time of 1 hour. Their CTB will be sent to the platform wallet and, if a new viewer watches their stream for the required time, 30% of the CTB paid into the platform will be paid to the user.

This system further creates a way for viewers to both discover new live-streams while also earning them with CTB. For the content creators, it incentivizes them to use CTB in order to promote their stream and gain new views or followers. For the platform, it creates another revenue stream that can help maintain the healthy ecosystem and help fund the platform itself.

Benefits of the bounty campaigns :
- ● Streamers can directly market their stream to new viewers within the platform.
- ● Streamers will be able to create a bounty program just from their viewing/

streaming rewards.

● Preferential featuring for streamers at lower-levels will increase discoverability.

● Viewers will be rewarded for engaging in content they would otherwise ignore.

● Competition between bounty budgets will improve the overall CTT ecosystem and motivate exchange purchases of CTT tokens.

● Abuse prevention system will prevent low level viewers from abusing the compensation model.

3.4. Revenue Streams

The Castweet project goal is to create multiple revenue streams utilizing both the CTT token and fiat. By having advertising revenue that is agnostic to the CTT price, the platform can have more stable revenue and greater access to advertisers that are not willing to purchase CTT or engage with cryptocurrency exchange purchases. In order to accomplish this, our revenue streams are expected to be as follows :

<u>CTT Revenue Streams</u>

1. **In-app purchases** – Users use CTT & CTB to make in-app purchases (emoticons, digital items, P2P marketing etc.). 100% of the purchase amount is returned to the platform wallet.

2. **In-app Product Sales** – Users who make an off-line goods purchase within the platform will be charged a transaction fee to process the payment.

3. **In-app CTB Fee** – Castweet will charge a % fee on some activities done within the platform (bounty campaign, tip creator, etc.)

4. **CTT purchased advertising** – Advertisers will have the option to pay for their advertising campaign with CTT purchased off an exchange and paid into the platform wallet. This will be at a discounted rate to promote the CTT token price to increase.

Fiat Revenue Streams

1. **Traditional Advertising** – After developing a larger user base, CTT will allow traditional advertisers to pay for advertising campaigns in fiat (at an increased rate compared to CTT advertising price). Our platform will feature banner advertising and video advertising (pre-roll, mid-roll, broadcast "ad break").

2. **Online Product Sales** – Companies wishing to promote and sell their products within the platform can create a sales campaign. This campaign will provide a set of stock that live-streamers can sell within the platform. Providing this stock to streamers as an option for sales will be charged a nominal fee.

4. Platform Components

The Castweet platform has four main components that all interact with each other to maintain the platform. At the core, is the main Broadcast System which allows content creators to broadcast their live-streams and viewers to enteract and view content. Interacting with this, the Reward System provides both the viewers and content creators to earn from their engagement. While the Reward System provides compensation for engagement, the User Level System adjusts and controls at what rate the viewers or content creators can gain from this engagement and also provide additional benefits to the users. Lastly, the Abuse Detection System measures user activity to ensure fair compensation and prevent abuse of the overall system to maintain the health of the overall Castweet Ecosystem. Each component and their interaction is essential to the proper functioning of Castweet.

<Figure 15: Castweet User System>
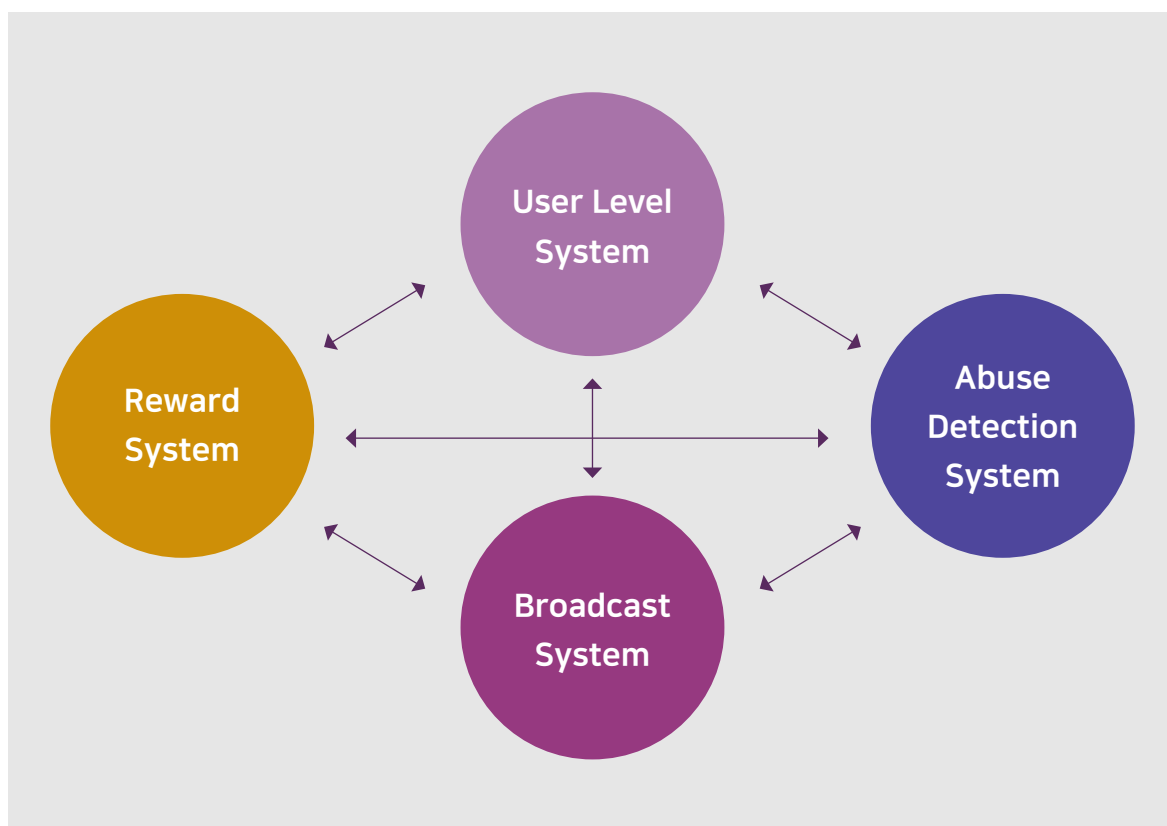
4.1 Castweet Broadcast System

The Castweet creator tool and Castweet user timeline page provide an optimized broadcast environment for a web browser and performance through the Unity 3D engine and Web GL framework. Cross-compiled using the Web GL platform and web assembly, the Castweet platform is designed to make it easy for users to access the platform in any environment where a web browser can operate, regardless of the platform's configuration and hardware, such as a PC, tablet or any mobile device. The Castweet platform, which is composed of rather heavy development engines, is compiled into a simple binary format by using web assembly. Implanting client server and applications of the Castweet platform into a web browser, memory usage is reduced with faster performance.

4.2 User Level System

As users engage more on the platform, they will be able to increase their user level. This conveys additional advantages to both viewers and content creators depending on their level. During the Alpha and Beta test, a fair level system will be created by benchmarking user activity rates and making adjustments to ensure users can level at an acceptable rate while encouraging action. In order to "level up" within the system, users will need to reach milestones related to :

1. Total view/broadcast time
2. Engagement activity (sharing, commenting, rating content, etc.)
3. Completion of Daily/Weekly Viewing Quests
4. Amount of CTB spent within the system
5. Use of "Level-Boost" Items to increase their level gain.
6. Users introduced through Referral codes to expand the platform

Additionally, as a user level increases, various bonuses and advantages to be conferred onto that user. The following are some of the expected advantages for increasing user level :

1. Increase of Daily CTB to CTT Conversion
2. Increase of rate of gain for CTB from activity
3. Additional value to streams watched: a higher level user offers more compensation to content creators for their views than a Level 1 user.
4. Specialized level-based emoticons and user badges
5. Free monthly subscription to a content creator of their choice

Note: The exact requirements for each level and the ways to increase level will be set following Alpha & Beta test benchmarking. This information is subject to be changed or updated

4.3 Abuse Prevention & Detection System

As seen with previous blockchain-based incentive schemes, the importance of detection and prevention of abuse accounts is essential to creating a powerful ecosystem. The Castweet Platform utilizes lessons learned from the first-wave adaptations of blockchain compensation systems (Steemit, Gifto, etc…) and aims to solve some of the issues seen with these platforms. Weaknesses in the development of their ecosystem and prevention systems led to various abuse issues with users finding loopholes in which to maximize their gain while damaging the ecosystem developed on the platform.

The key features of the system are as follows :

Real-user activity benchmarking - During Alpha and Beta tests, normal user activity will be measured according to activity (average viewing time, comment amount, engagement). This data will be used to create a benchmark of normal usage rates. After setting the rates of normal platform usage, accounts that greatly surpass average usage will be suspended/banned after account review.

CTB & CTT Exchange System - Ability to adjust the CTB to CTT exchange ratio to maintain fair bonuses as well as keeping the ecosystem healthy.

User Level System - Low level users will have a limited ability to convert CTB to CTT and have limitations on daily withdrawal amounts. This prevents issues about creating multiple accounts in an effort to maximize their rewards. As user level increases, their value to broadcasters is also increased.

4.4 Castweet Wallet

Castweet will also create a multi-functional cryptocurrency wallet d-App that will allow users to manage their CTB and CTT. Users can connect their Castweet account to the associated Castweet wallet d-App and can convert their earned CTB into CTT depending on their user level. Additionally, users can use the d-App to send and receive CTT tokens between any valid CTT wallet address. This functionality will allow users to make payments for purchased items or e-commerce goods directly within the platform to facilitate a smooth, instant, and at a low-cost. After benchmarking CTB gains during the alpha/beta test, the Castweet wallet will allow us to adjust the appropriate exchange rate for the tokens as well as limit withdraw based on user level to prevent abuse of the platform.
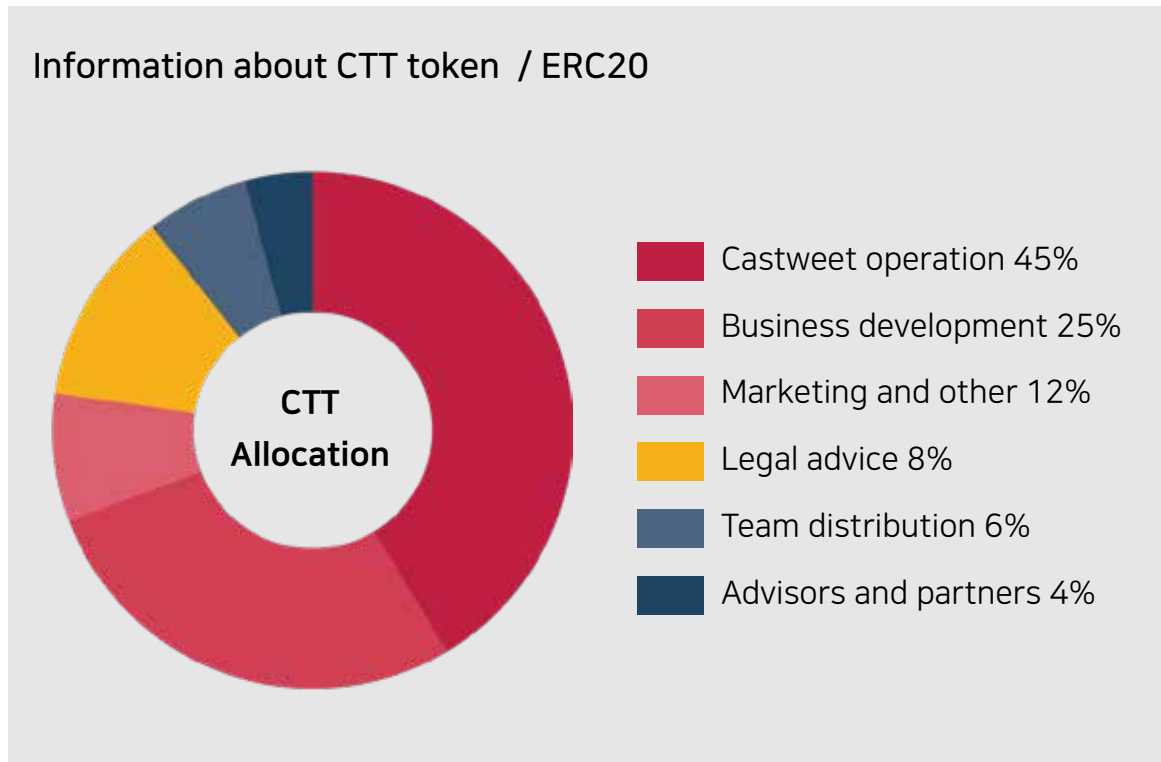
4.5 Future Blockchain Development Initiatives

Our initial priority is the development of the CTT Platform and creating an effective blockchain ecosystem with our CTT token. After the main platform is developed, future blockchain initiatives are planned to further integrate and expand the functionality of the platform. These are future blockchain features planned to implement within the CTT Platform System :

1. CTT Network 2.0 – Development of a decentralized network of node creation and P2P sharing to lower the overall server costs of the platform. In addition, the development of a CDIS/RNN neural network can expand upon the platform and improve functionality.

2. Blockchain-tracked Data Usage - Creating a blockchain-based mechanism that tracks the user activity and records it into the blockchain. This will allow user data to be tracked more transparently and users can see how their data is being transferred to third party partners.

3. Content Analysis and Copyright Detection - As the platform grows, the demands of controlling unlicensed and copyright abuse are expected to become more important. To aid in this, we aim to create a copyright detection system based on the blockchain. This system would analyze and hash the contents of creations and write it into the blockchain. If a user tried to rebroadcast previously uploaded content, it would be rejected, thus allowing the copyright to be tracked across the platform.

5. Token Distribution

Information about CTT token / ERC20

CTT
Allocation

- Castweet operation 45%
- Business development 25%
- Marketing and other 12%
- Legal advice 8%
- Team distribution 6%
- Advisors and partners 4%

<Figure 15: Castweet User System>

6. Roadmap

2019.3Q	Design Prototypes & Early White Papers Development of a smart contract for CTT token release CTT-Token listing on Crypto Exchange Ecosystem partnership continuation
2019.4Q	Ecosystem Partnership continuation Continue the development of the CTT platform Development of underlying architecture completion
2020.1Q	CTT platform incentive and related system completion Ecosystem partnership continuation
2020.2Q	iOS Mobile App alpha version launch Android Mobile App alpha Version launch Development of CTT Vietnam version
2020.3Q	Addition of platform wallet and payment system continue the development of the CTT platform Development of the CTT platform Thai version
2020.4Q	iOS Mobile App Beta version launch Android mobile app beta version launch
2021.1Q	CTT platform Launch

<Figure 17 : Loadmap>

   Certain items in the above roadmap may be completed before expected, meaning other schedules may consequently be carried on earlier. On the other hand, the tasks found more difficult than expected may take longer. This roadmap will be adjusted quarterly, and we will establish new goals as we complete certain objectives and intended plans.

7. Notice and Disclaimer

This whitepaper may be amended from time to time without notice. This whitepaper is intended to provide general information and is not meant to be exhaustive, comprehensive, or authoritative. Castweet accepts no liability in relation to the Whitepaper, or any reliance on the Whitepaper, and does not warrant the accuracy or completeness of the Whitepaper

Castweet tokens may only be purchased pursuant to the Castweet Token Sale - Terms of Sale.

The risks described below, and or other additional risks presently regarded to be immaterial actually materialize the commercial viability of the Castweet project and/ or the Castweet Ecosystem may be materially and adversely affected. These risks could result in the failure of the Token sale, the destruction of the Tokens and/ or termination of the development or operation of the Castweet project and/or Castweet Ecosystem.

Risks associated with the development and operation of the Castweet project and/ or the Castweet Ecosystem:

The Castweet project and/or the Castweet Ecosystem are still under development and may undergo significant changes before they are released or implemented. While Castweet intends for the tokes and the Castweet Ecosystem to function as described in the Whitepaper, Castweet may have to make changes to various features of specifications of the tokens or the Castweet Ecosystem.

The Castweet ecosystem may fail to be adequately developed or maintained or may encounter difficulties during development or operation, including financial, resourcing

and technical difficulties. This may create the risk that the tokens or the Castweet Ecosystem may not meet your expectations at the time of the Payment and may negatively impact the Castweet Ecosystem and the Tokens, and the potential utility of the tokens.

Since the Services involve the use, purchase or sale of broadcasted videos, this is applicable to intellectual property laws and may create the risk of infringing other person's intellectual property rights. This may negatively impact the Castweet Ecosystem and the Tokens, and the utility of the Tokens.

Risks arising from no governance rights: The Tokens confer no governance rights of any kind with respect to the Castweet project, the Castweet Ecosystem and/or Castweet. Accordingly, all decisions involving the Castweet project, the Castweet Ecosystem and/or Castweet will be made by Castweet at its sole discretion, including decisions to discontinue the Castweet's products or services, the Castweet project and/or the Castweet Ecosystem, or to sell or liquidate Castweet. These decisions could adversely affect the Castweet project and/or the Castweet Ecosystem and the utility of the Tokens that you own, including the Tokens utility for obtaining the services.

Risk of failure, abandonment or delay of the Castweet project: The creation of the Tokens and the development of the Castweet project and/or the Castweet Ecosystem may fail, be abandoned or delayed for a number of reasons, including lack of interest from the public, lack of funding, or lack of commercial success or prospects (e.g. caused by competing projects).

Risks associated with the Ethereum blockchain: The Tokens, the Token Sale and/or the Castweet Ecosystem are based on the Ethereum blockchain which is still in development stage and unproven. Any malfunction, flaws, breakdown or

abandonment of the Ethereum blockchain may have a material adverse effect on the Tokens, the Token Sale and/or the Castweet Ecosystem. Furthermore, developments in cryptographic technologies and techniques or changes in the consensus protocol or algorithms could present risks to the Tokens, the Token sale and/or the Castweet Ecosystem, including the utility of the Tokens for obtaining the Services, by rendering ineffective the cryptographic consensus mechanism that underpins the Ethereum blockchain.

Risk of Ethereum mining attacks: As with other cryptocurrencies, the Ethereum blockchain is susceptible to mining attacks, including double-spend attacks, majority mining power attacks, "selfish-mining" attacks, and race condition attacks. Any successful attacks present a risk to the Tokens, the Token Sale, and/or the Castweet Ecosystem, including proper execution and sequencing of transactions involving the tokens.

Risk of theft: The Ethereum blockchain may be exposed to attacks by hackers or other individuals that could result in the theft or loss of ETH, or the tokens, impacting the ability to develop the Castweet Ecosystem.

Regulatory risks: It is possible that certain jurisdictions will apply existing regulations on, or introduce new regulations addressing, blockchain technology, which may be contrary to the Token and/or the Castweet Ecosystem and which may, inter alia, result in substantial modifications of the Castweet Ecosystem and/or the Castweet project, including termination and the loss of Tokens.

Risk associated with other applications: The Castweet project may give rise to other alternative projects promoted by unaffiliated third parties, under which the Tokens will have no intrinsic value.

Risk or loss of private key: The Tokens may be accessed with a combination of private key and password. The private key is encrypted with a password. Loss of requisite private key(s) associated with your digital wallet or vault storing the Tokens will result in loss of such Tokens which will be unrecoverable and permanently lost.

Risks of hacking and security weakness: The tokens, the Token Sale, the Castweet Ecosystem (if and when developed) and Castweet may be targeted by hackers or malicious groups of organizations which may attempt to interfere with the Castweet Ecosystem or the Tokens and/or the Token Sale or steal the Tokens in various ways, including malware attacks, distributed denial of service, consensus-based attacks, Sybil attacks, phishing, smurfing and hacking. Furthermore, there is a risk that a third party or a member of Castweet may intentionally or unintentionally introduce weakness into the core infrastructure of the Castweet Ecosystem, which could negatively affect the Castweet Ecosystem, the Tokens and/or the Token Sale, including the utility of the Tokens for obtaining Services.

Risks associated with taxation: The tax treatment and accounting of the Tokens is uncertain and may vary amongst jurisdictions. You must seek independent tax advice in connection with purchasing the Tokens, which may result in adverse tax consequences to you.

Risks associated with volatility of ETH/BTC: The value of ETH/BTC may fluctuate significantly over a short period of time as a result of various factors including market dynamics, regulatory changes, technical advancements, and economic and political factors. Due to such volatility, Castweet may not be able to fund the development of the Castweet Ecosystem, or may not be able to maintain the Castweet Ecosystem in the manner that is intended.

Technology risks: The Tokens are intended to represent a new capability on

emerging technology that is not fully proven in use. As the technology matures, new capabilities may dramatically after the usefulness of the Tokens or the ability to use or sell them. The functionality of the Tokens is complex, will require enhancements and product support over time, and full functionality may take longer than expected. The full functionality of the Tokens is not yet complete and no assurance can be provided of such completion.

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