unchained

Blockchain-based premium VOD platform & community-powered retail marketplace
endorsed by Major Studios with the largest licensed catalogue of premium movies,
TV series and documentaries, including crypto-collectibles, fandom content,
and user curation

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1 FOREWORD

This Whitepaper describes the short, mid and long term vision of Unchained as we see it today. It lays down the path that Unchained plans to take in the vision, the product and the ecosystem it wants to build and foster. It has to be understood as such, and not as a strict product specification or a precise inmutable roadmap. Some of the concepts, features, mechanisms and terms described and used in this document could evolve, be refined, change or disappear, while new ones might appear.

Unchained relies on many innovations and new models and technologies such as **decentralized organisations**, **consensus mechanisms**, **distributed ledger technologies**, **non-fungible tokens**, **token-curated registries** and **curation markets**. Most of these domains are still in their growth phase, while others are in their infancy or even in a totally experimental phase. All are in **permanent and fast evolution**, and Unchained will follow and adapt organically to their latest advances, with the aim to lead in key areas central to Unchained's ecosystem.

While Unchained's approach to these novel concepts and technologies is bullish, the foundations of Unchained rely on **highly proven technologies, business practices and market intelligence** where the Unchained team has *significant and solid expertise and knowledge*, making real the business success of the project, regardless of the speed of evolution of the more avant-garde domains.

Unchained does not merely plan to start a company, it seeks to build and nurture an ecosystem where the community and its participants are motivated to build out additional features, content sales methods and push the envelope, for everyone's benefit. Our role is to **identify, attract and retain** the most innovative ecosystem participants: developers, content owners, curators, and SuperDistributors. From there, we are looking forward to spark a culture and a movement.

2 GLOSSARY

AVOD: Advertising-supported Video on Demand (similar to YouTube or Facebook)

Circle: A club-like, membership-based community where fans can interact with their favorite content and titles. When a user buys a title, they become part of the Circle for that specific title (ex. "The Batman Circle") and get instant access to a community of like-minded fans who can share exclusive content and VAM related to the title.

Collectible: A class of digital content that can be collected for their intrinsic value and/or rareness. For example: a movie with exclusive VAM attached.

Content Owner: The major studios, mini-majors, independents, original content producers. TV channels

Curator: User who contributes to the Unchained ecosystem by filtering, selecting and organising titles and content for the other users to enjoy, while being rewarded in status and/or tokens for his/her work.

Decentralized App: A Decentralized Application or dApp is an application that is run by many users on a decentralized network with consensus protocols. The code is open-source and autonomously managed, records and data are stored using blockchain, providing incentivized interactions and avoiding any single point of failure. dApps use cryptographic tokens to reward users having an active and positive participation in the network.

Developer: Contributor to the ecosystem on the technical and product side. The developer can respond to a request for feature or can propose new features and functionalities and is being rewarded in tokens.

DRM: Digital Rights Management

ERC20: ERC20 is a technical standard used for smart contracts on the Ethereum blockchain for implementing tokens [1]. ERC stands for Ethereum Request for Comment, and 20 is the number that was assigned to this request.

ERC721: ERC721 tokens can be used in any exchange, but their value is a result of the uniqueness and rareness associated with each token.

EST: Electronic sell-through is a method of media distribution whereby consumers pay a one-time fee to download a media file for storage on a hard drive or in the Cloud. Although EST is often described as a transaction that grants "ownership"status to the consumer, it' only a long term license managed by the right holder. The content may become unusable after a certain period and may not be viewable using competing platforms.

Minimum Guarantees: Amount of money that a distributor guarantees to pay a content owner from which it is licensing content, regardless of whether it will generate revenues out of it or not. This minimum guarantee is defined ahead in the licensing agreement for every applicable year and must be paid in advance at the beginning of each year.

NFT: A non-fungible token (NFT) is a special type of cryptographic token which represents something unique; non-fungible tokens are thus not interchangeable. This is in contrast to cryptocurrencies like Bitcoin, and many network or utility tokens that are fungible in nature.

OTT: Over The Top is a term used to refer to content providers that distribute streaming media as a standalone product directly to consumers over the Internet, bypassing telecommunications, multichannel television, and broadcast television platforms that traditionally act as a controller or distributor of such content.

PVOD: Premium Video on Demand, often described as an early rental/TVOD, released usually a few weeks to 1 to 2 months from the theatrical release of the movie in the territory.

Revenue Share: Percentage of each transaction or subscription that the service operator agrees to pay the Content Owner for each title licensed. Revenue share amounts due are usually deducted from the minimum guarantees already paid in the current year for the same title or Content Owner.

SuperDistributor: User who curates and distributes titles via their own personal store in Unchained (the Unstore). The SuperDistributor is at the center of the Unchained ecosystem as they are responsible for using the Unchained Tools (massive catalogue, fully managed video platform, content enrichment, collectibles, etc.) to foster a community of fans that get access to and buy the titles.

SVOD: Subscription Video on Demand, consumers pay a set, often recurring, amount of money to watch as much content, as many times as wanted over a certain period of time. Typically a monthly subscription.

TVOD: Transactional Video On Demand, consumers pay a set amount of money to watch a single movie typically for 24 or 48 hours. Equivalent to digital rental.

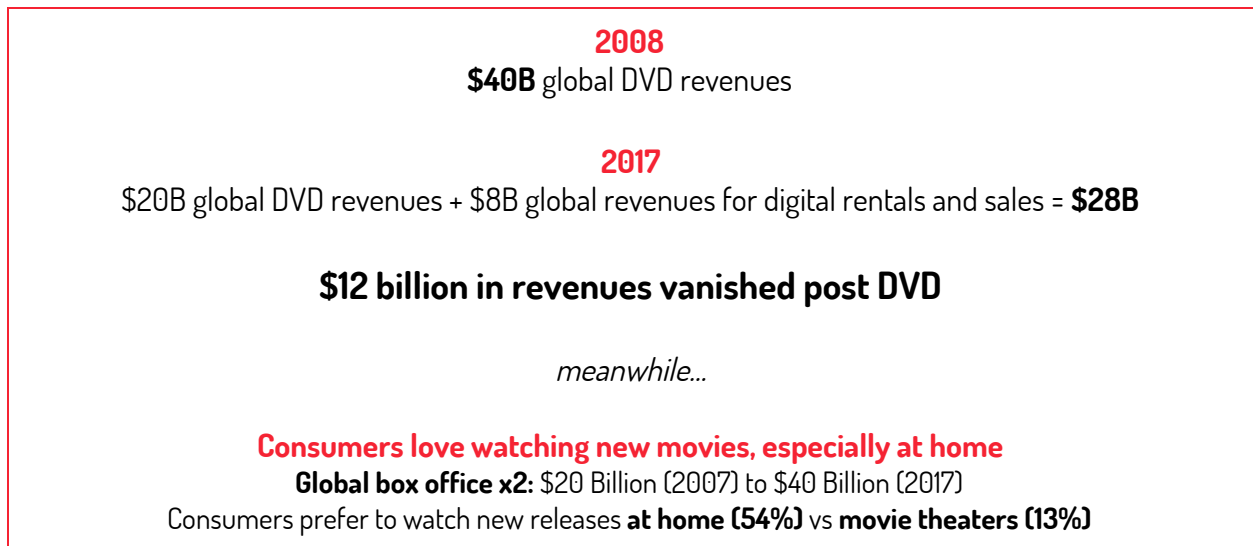**UNC:** UNCoin, the Unchained ecosystem's Utility Token, used on the Unchained platform, which acts as a financial incentive to maintain the integrity of the system and allows the Developers, Contributors and Studios to be rewarded by Unchained.

Unstore: Digital video store. Easy to set up and fully customizable, it is the base on which the SuperDistributor can operate.

VAM: Value Added Material

VOD: Video On Demand

3 THE PREMIUM VIDEO CONTENT MARKET HAS BEEN CHAINED

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2008
$40B global DVD revenues

2017
$20B global DVD revenues + $8B global revenues for digital rentals and sales = **$28B**

$12 billion in revenues vanished post DVD

meanwhile...

Consumers love watching new movies, especially at home
Global box office x2: $20 Billion (2007) to $40 Billion (2017)
Consumers prefer to watch new releases **at home (54%)** vs **movie theaters (13%)**

</div>

3.1 $12B IN LOST REVENUES, WHERE DID THEY GO?

A portion of the lost revenues went to the more gratifying and increasingly popular SVOD services such as Netflix, that took the lion share of this segment by surprise. But this obvious trend hides a deeper and overlooked reality.

The transition from DVD to digital has been marked by customer frustration with their experience when buying or renting titles from the main digital stores (iTunes, Amazon Video, Google Play or their cable operator), what can be summarized as the premium video content market. This frustration revolves around several key takeaways.

First, in terms of the shopping experience itself, consumers have **less choice** when buying or renting digital titles. It's estimated that there are more than 100,000 titles available worldwide in DVD and Blu-ray formats. The digital stores offer 10 times less, largely due to the high cost of digital encoding/conversion and the prioritization of newer releases vs so-called "library/back catalogue" titles. When buying or renting physical formats, consumers were often guided by knowledgeable video store clerks. The experience at the digital stores is one of **painful content discovery** and consumers can often feel lost in an ocean of content, where categories created by "smart" algorithms have replaced the human touch.

Furthermore, consumers are offered what amounts to a **broken product**. For the most part, premium video content is **chained** in highly centralized walled gardens. Indeed, when you buy a digital title through iTunes, you are only able to view it using iTunes. The studios tried to change this unpopular **"chaining"** of bought films or TV

series with industry-wide interoperability solutions, such as UltraViolet in a number of countries over the last years and more recently with Movies Anywhere in the US. Both tentatives were flawed in their conception or implementation and failed, the first being deprecated and the former not reaching any level of mass market awareness and usage.

Lastly, all of the premium digital stores offer the same mostly unexciting shopping experience. There have been scarce efforts to enhance it with iTunes Extras, and Amazon X-Ray which are definitely a plus but are far from sufficient. When most digital experiences in the age of the Internet feature meaningful connectedness and advanced features where users can do more than passively consume, digital viewing of films and TV series seems almost quaint in its stunted nature.

This widespread frustration has had a profound effect on revenues as consumers spend significantly less on premium video content. At the peak of the DVD market in 2008 global DVD revenues totaled **$40 Billion**. A decade later DVDs still account for **$20 Billion** but the successor to DVDs in the form of digital sales and rentals only represents **$8 Billion**. The **missing $12 Billion** have been partially transferred to more attractive experiences such as video games and SVOD, even though services like Netflix typically carry older movies (3-10 years after theatrical release).

The backdrop to this misalignment between digital services features and customer frustration at how to access and enjoy premium content resounds with opportunity. The global **theatrical box office has doubled** in the last decade - growing from **$20 Billion** to **$40 Billion**, even though consumers **massively prefer to watch new releases at home (54%) vs movie theaters (13%)**.

3.2 A MARKET WITH SKY-HIGH BARRIERS TO ENTRY

SVOD services are mainly based not on recent movies (they reach those platforms 3 to 10 years after their theatrical release), but on securing exclusive titles, mainly TV Series, either from specific licensing deals or from original productions. A territory cannot accommodate more than 2 or 3 general-purpose SVOD players like Netflix.

By contrast, transactional online premium video content (EST and TVOD, ie "buy" and "rent") demands wide distribution and diversity, as there is no exclusivity, and the latest movies are accessible as soon as 2 to 3 months after their theatrical release. It is however a **very complex and costly business to launch and sustain** to profits. The barriers to entry in the setup of an online video store include steep upfront costs and heavy operational expenses. The final barrier to success is the difficulty to markedly differentiate in terms of content selection, coupled with the need for a significant level of marketing expenses.

Online video distribution is entering its second decade and although it's become the leading medium for younger generations (Pew Research found that *61% of US teenagers watch television via streaming services*) the **competition in digital EST still remains scarce**. Outside the main premium video stores - iTunes, Amazon Video, Google Play, cable/telco options - there are few if any alternatives. This is firstly the result of upfront setup costs that range from **$2M to $10M**.

These costs can be broken down as follows: first the major studios and large independents demand steep minimum guarantees for access to their content libraries. The studios use these guarantees to gauge the solidity

of their counterparts and also to keep out new entrants. Gaining and sustaining the attention of the content owners requires time and effort, particularly to get to the finish line, which entails negotiating and signing a contract with each of them.

The minimum guarantees paid to content owners buy **access and rights**, not the encoded and ready-to-stream subtitled files. The preparation costs to serve video across devices and countries make up the bulk of significant yearly technology and operational costs that need to be accounted for. These costs comprise the purchase or rental of a video platform, a back office and a digital storefront. The heaviest costs are the processing and encoding of the files, as well as multiple DRM (Digital Rights Management) solutions across all devices, as well as storage and server costs.

Major content owners such as the large studios do not make it easy to pick and choose from their catalogues to allow new entrants in the premium video space to focus on select untapped niches. This makes market differentiation a particularly difficult endeavor.

Once the minimum guarantees and operational costs are factored into the online distribution business plan, marketing expenses need to be added to attract paying customers. Online customers, precisely due to the poor experience they encounter, have very little brand loyalty. This fickle nature increases the average acquisition cost per customer, which in turn affects the level of required marketing expenses.

The premium video content market is a particularly cutthroat environment with a break even point at 5-7 years post-launch, at best. This tough environment might explain why there aren't more digital stores and why there's so little differentiation. It's a clear sign of a market ripe for opportunity, with the appropriate approach.

3.3 WHAT WAS LOST IN THE TRANSITION FROM DVD TO DIGITAL RENT/BUY FOR CONSUMERS

The transition from DVDs to streaming video rhymes with efficiency and always-on accessibility for most consumers. Yet a number of key features specifically linked to physical formats have either wholly disappeared or are pale versions in the full-on digital age.

	DVD	Laptop	Link
Choice	100K 4/5	Limited (20K) 2/5	"Unlimited" 1M cleared titles year 2
Portability	Full 5/5	Limited 2/5	Full 5/5
VAM	Full 5/5	Limited 2/5	Unlimited
Collectible	Yes	No	Yes
Ownership	Resell: **Yes** Loan: **Yes** Gifting: **Yes**	Resell: **No** Loan: **No** Gifting: **Impossible to difficult**	Resell: **Yes** Loan: **Yes** Gifting: **Yes**

- **Choice**

Most large digital VOD stores choose to restrict distribution - for example, iTunes only carries its popular TV series digital box sets in a handful of territories.
This lack of consumer choice remains detrimental to making the digital medium a true successor to DVDs.

- **Portability**

The walled garden nature of the digital stores may seem logical from the store operator perspective but it clearly doesn't from the consumer side of the equation. Consumers who happily paid $14.99 for a new release DVD they could bring to their friend's house to co-view are understandably less inclined to pay the same price for walled-in digital versions.

- **Value Added Material**

For true cinema and TV enthusiasts one of the early justifications to switch to DVD resided in the availability of DVD extras/bonus material - dubbed Value Added Material (VAM) by the studios. Granted iTunes Extras and Comcast's Enhanced Extras bridge some of the gap but a large number of these valuable extras remain unavailable in digital formats.

- **Collectible**

Special/limited editions with specific VAM and/or special key art were routinely released in DVDs. Surprisingly, the digital space hasn't fully taken advantage of the medium's versatility and potential. There are few if any digital collectibles in the VOD realm.

- **Ownership**

Physical copies of a film or TV series on DVD or Blu-ray Discs - just as VHS, LaserDisc and VCD before them - allowed consumers to enjoy them fully. This entailed the ability to lend, resell, gift. These abilities are difficult, if not outright impossible, with digital versions.

4 UNCHAINING ENTERTAINMENT

We envision Unchained as an ecosystem with an organic and progressive growth, with a bottom-up approach. The ecosystem will gradually become more complete, rich and sophisticated, thanks to the compound element built into the network effect.

> Though crypto networks are often compared to private firms, a better analogy is to compare them to cities. [...] Unlike firms, cities and crypto networks are organized from the bottom up rather than the top down. [...] The growth of firms tends to slow down as they get larger, but the growth of cities tends to speed up even as the population increases because of network effects.

Taylor Pearson in Why the 'Worst' Crypto Networks Will be the Biggest

Just like a city, an ecosystem needs an initial spark, a reason to exist in the first place. It also needs local resources and optimal conditions to exploit those resources, which can attract the first pioneers to settle. If the

pioneers manage to generate wealth and carry on positive interactions, they will in turn attract more people, who themselves will contribute to the development and growth of the initial settlement..

Unchained achieves this growth scenario primarily through premium, and diverse content, a state of the art technology, fluid value creation, a multi-layered distribution model and curation, and a degree of freedom and opportunities that are new in the premium content world.

We put the **SuperDistributor** front and center of the ecosystem, as the pioneer of this new structure and the hero that will change the models.

4.1 THE SUPERDISTRIBUTOR, HERO OF THE UNCHAINED ECOSYSTEM

The somewhat rocky transition from DVDs to digital distribution has opened the premium video content market to a possible reshuffling of the cards. Consumer frustration and the relatively stunted nature of the product offering means sizable opportunities are at hand.
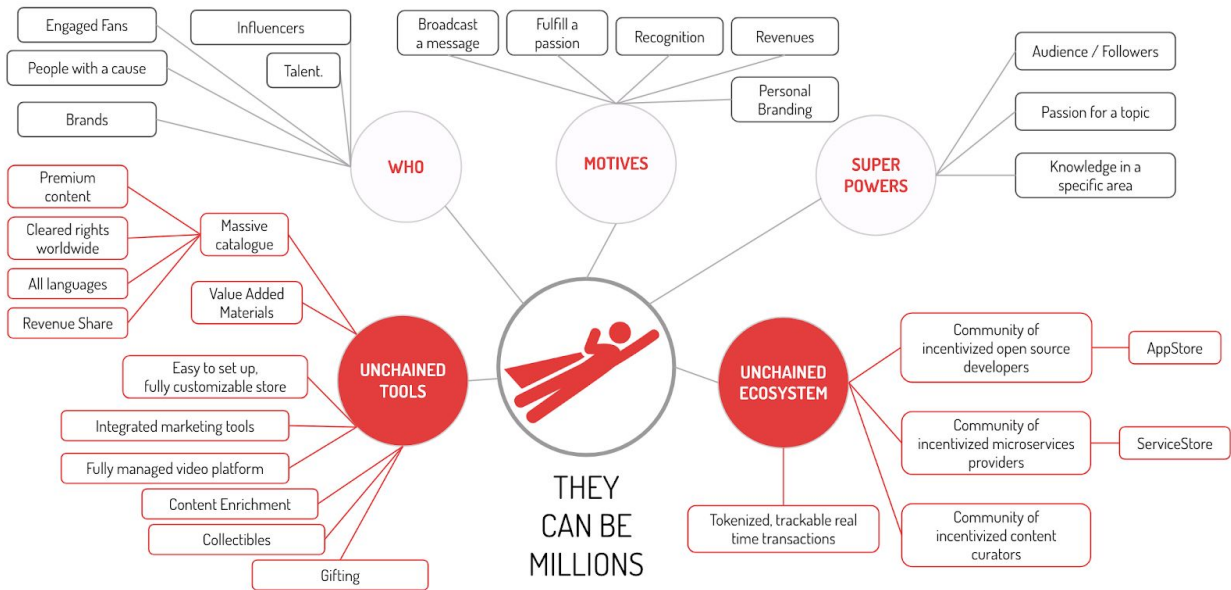
4.1.1 DECENTRALIZED DISTRIBUTION

Unchained's thesis is that in order to seize these opportunities and inject compounded growth into the model, the focus should be put on a **decentralized distribution model**, in a stepped approach.

The decentralized model is built around the concept of **SuperDistributors**, who are the driving force of the Unchained ecosystem. We can think of the Superdistributor as if every movie and TV series fan could open a Blockbuster rental store in the 80's with unlimited inventory, unlimited marketing resources and a worldwide audience... the high school kid so passionate about Cinéma or TV shows that you always followed his/her advice...

These SuperDistributors operate, with assets, tools and key elements provided by Unchained, their very own premium video content digital store, the **Unstores**. Our SuperDistributors are responsible for what is their core expertise: **content selection, promotion and engagement with their audience**, while all the complex and expensive aspects are provided and managed by Unchained.

4.1.2 THEY CAN BE MILLIONS

By unleashing and harnessing the wisdom of individuals driven by passion or other incentives, the market can be swayed towards a more human-centric model. This will be beneficial to the entire value chain, from creators to consumers.

Those who we imagine becoming SuperDistributors are already active: they're the 21st century version of the **knowledgeable video store clerks** whose recommendations opened audiences' minds to new films, TV series or documentaries. They're the **Fandom** Game of Thrones admins whose tireless efforts do wonders to introduce new fans to the intricacies of the GoT's complex universe. They're the IMDB and Rotten Tomatoes **contributors**, Facebook, Instagram and Twitter active users, whose reviews and comments guide their dozens, hundreds or thousands of followers towards or away from a particular title. They're the **collectible superfans** who gather their collection at Sci-Fi conventions and are looking for additional avenues to generate revenue. These dozens, hundreds or thousands of followers multiplied by the hundreds of thousands or **millions of active users** can potentially reach billions of people.

4.1.3 SPANNING FROM ENGAGED FANS TO TALENT

SuperDistributors, by the very nature of the decentralized distribution model, hail from a diverse set of backgrounds. The main 'personas' they encompass are:

- **Engaged fans**
The very first digital message boards (BBS and Usenet) saw fans of specific film or TV series genres congregate and exchange ideas, fan fiction and more. Decades into the massification of digital lives, engaged fans number in the millions and many of them are the real asset behind successful properties such as Wikia/Fandom, IMDB or more specific sites. Adding a SuperDistributor dimension to their online and offline lives seems like a logical pursuit for these passionate souls.

- **Influencers**
Successful digital personalities, much like brands, take advantage of each incremental development to better serve their audience. Just like the 'mommy blogger' movement yielded additional revenues for e-commerce platforms (Amazon Associates is the perfect example), Unstores help influencers play their cultural referral and recommendation role to the fullest.

- **People with a cause**
Causes, charities and NGOs have for the most part successfully transitioned to digital and use a multitude of channels to recruit and retain members/donors and raise funds. A cause-centric Unstore is able to generate additional funds through the revenue share offered to SuperDistributors by Unchained.

- **Talent**

Prominent actors, directors, series showrunners have developed millions of followers across the digital platform universe, where they interact with fans. Dwayne Johnson's millions of Twitter and Instagram followers are given a window into his world and thinking so personal and impactful that adding an Unstore to his set of tools is the logical next step. Johnson and his colleagues are for the most part prominent supporters of good causes and charities. Operating an Unstore filled with their curated playlist of premium video content would give their fans yet another window into their world AND through the revenue split Unchained provides, give the charities and causes with additional revenues, Tom's or RED brand style.

- **Brands**

Each successive digital platform has seen brands flock to it to use the novelty effect and thereby harness new and rejuvenated audiences. Branded Unstores would help brands go to the next step in their branded content strategy, which agencies and strategists recommend be as a broad as possible. Given the current balkanization of the media landscape it's now imperative for brands to become their own media properties. Becoming a SuperDistributor allows brands to actively participate in this mutation by curating and promoting their very own Unstore, where premium video content curation echoes the brand's specific values and ideas universe.

4.1.4 SUPERDISTRIBUTORS' MOTIVATIONS

As diverse as the profiles and backgrounds of the SuperDistributors can be, so can be their motivations and aspirations.

- **Fulfill their passion**

SuperDistributors are passionate individuals or organizations that need an outlet to share their passion with the world. Unstores provide this outlet by allowing them to share curated lists of films, TV series, documentaries related to their passion or cause.

- **Broadcast a message**

It is said that in this digitized world "**You Are What You Share**" and that the curated list is the first cultural signifier. A curated Unstore and a SuperDistributor status therefore logically helps broadcast a particular message and push a specific cultural agenda,

- **Gain or enhance recognition**

SuperDistributors are by nature gregarious online and offline, adding an Unstore contributes to enhance recognition within their specific community. For someone looking to forge his/her digital personality in a new cultural genre/group, SuperDistribution is a powerful tool.

- **Revenues**

Most driven individuals spend time and effort expressing their passion as an outlet to their daily lives. Unchained provides the first comprehensive mechanism to keep doing that and at the same time generate revenues, which can become an interesting side "gig" (think the occasional Uber driver) and help passionate SuperDistributors strike out on their own and change their lives.

4.1.5 SUPERDISTRIBUTORS' SUPERPOWERS

The SuperDistributors are equipped with their innate capabilities, but are armed with the full range of Unchained's tools to launch and operate their own Unstores.

- **Audience/followers**

SuperDistributors' key superpower is their ability to identify, nurture and address their audience and followers. Successful connectors in the offline and online worlds make perfect SuperDistributors.

- **Passion for a topic**

Demonstrating true passion for a subject, film genre or content universe cannot be faked and followers recognize authenticity instantly. SuperDistributors are inherently passionate about their chosen niche.

- **Knowledge in specific areas**

Logically linked to the above, passion must be complemented with actual knowledge and expertise in the niche, genre or topic that SuperDistributors choose to build their Unstore around.

4.1.6 WHAT UNCHAINED BRINGS TO PASSION-DRIVEN SUPERDISTRIBUTORS

For the first time, access to unparalleled content & tools, without any necessary upfront investment to secure content rights and access to the key technology stacks.

Unchained's role in building the ecosystem around the SuperDistributors is to offer everything they need to start their Unstores and start selling premium video content to their audience and followers.

Unchained provides the essential elements for success:

- **Massive content catalogue (200,000 titles at launch, 1M in year 2)**

Unchained is negotiating the exploitation and commercialization rights of the top studios' catalogues. At present, 2 of these studios have entered into advanced negotiations with Unchained. The goal is to assemble the **largest rights catalogue in the world for premium video content.** This will include new film releases, TV series, documentaries, cleared for worldwide commercialization, and in languages.

- **Value Added Materials**

In addition to the titles themselves, Unchained makes available to SuperDistributors a catalogue of related Value Added Materials (VAM): behind the scenes featurettes with cast and crew interviews, specific mini-documentaries on the productions, director commentaries, etc.

Thanks to the depth of the available catalogue, SuperDistributors are able to curate and select their Unstore offering from this catalogue and target their specific niches.
The basis of the deal between Unchained and the SuperDistributors is a revenue share split, which is commensurate with industry practices.

4.1.7 UNCHAINED'S TOOLS FOR SUPERDISTRIBUTORS

The millions of potential SuperDistributors have awesome powers of recommendation and curation, as well as an audience, but they cannot leverage them in the video space today because **there are no tools at their disposal**.

The Unchained ecosystem's "raison d'être" is to specifically address this void and provide SuperDistributors with the following key ingredients to express their passion: **content**, **technology**, **tools**, **amazing features**, a **vibrant and self-sustaining ecosystem**, and a **monetary reward**.

In addition to an unparalleled content catalogue, Unchained brings to SuperDistributors all the necessary tools to make their Unstores successful, and allow the ecosystem to thrive.

- **State-of-the-art fully-managed video platform**

Unchained will provide a video platform developed by Grey Juice Lab, whose teams service world-class telecom and cable partners that total more than 350M customers.

- **Unstore builder**

Once the SuperDistributor finalizes his/her selection of films and tv series he/she wants to sell, the actual digital store needs to be built. Unchained provides a store builder, with the same ease and fun as building a board on Pinterest, and with optional advanced functionalities much like in a web publishing environment like Squarespace or Wix. The store builder tool includes customizable templates to choose from, in addition to a selection of plugins and widgets. The store builder allows the SuperDistributor to tailor his/her store to fit with his/her selection. The store builder is augmented with further services (design, etc) offered by Unchained microservices providers.

- **Integrated analytics and marketing tools**

Unchained does not believe in the "build it and they will come" approach. This is why SuperDistributors are given access to real-time analytics and marketing tools to supercharge the promotion of their store to their current follower/fan base and to expand it.
The first level is the access to the rest of the Unchained community of curators, contributors and buyers/renters. The second level is a complete set of digital outreach solutions, including social media, search marketing tools and all the tools that the community of developers can build for them.

- **Content Enrichment**

Seeking to push the envelope for its ecosystem participants, Unchained innovates with providing tools to enrich the titles put up for sale and rental - a concept summed up as Content Enrichment. Unchained believes in enabling the community to enrich content along multiple layers and curate the enrichments of other participants. As such, links to any enrichment can be shared or promoted by users. Unchained is committed to nurture further innovations such as token-based community curation, to allow to promote **qualitative enrichment** while eliminating clutter.

- **Collectibles**

In addition to enrichment, Unchained fosters the development/creation, curation and sale of collectibles, using cryptocollectibles as a template. Cryptocollectibles rely on blockchain-provided unique IDs, which categorizes

them as scarce and therefore with a market value prone to appreciation. These collectibles could range from the pairing of a specific title with added content owner-provided Value Added Materials, to fan-generated companion digital art and fan fiction.

- **Openness, Flexibility and Permanence**

Unchained is open source and based on a public blockchain. The rights that a user acquires to a specific title, VAM or collectibles are stored permanently on the public blockchain, and can be accessed, unlocked or transferred only by the user (or by the Content Owners in some cases). A community of developers keeps Unchained up and running. Owing to the openness of the Unchained ecosystem, all content bought and rented can be played on any environment or player that is compatible with Unchained, all the while remaining DRM compliant.

There are massive, untapped opportunities as far as consumers' ability to do more with their digital titles: collecting, reselling, renting, loaning, gifting.

- **Gifting - Everyone loves to give and receive**

At the peak of the market, 25% of the DVD purchased were gifts, reaching 50% during the holiday season.

Unchained makes it possible again in the digital realm. We want the experience to catch up with intrinsically digital features, such as a focus on mobile first, instant gratification, personalized unwrapping, gift tracking, and more.

- **Circles**

Circles are membership-like clubs where fans can interact with their favorite content and titles. When a user buys a title, they become part of the Circle for that specific title (ex. "The Wonder Woman Circle") and get instant access to a community of like-minded fans who share content and VAM related to the title.

4.1.8 THE POWER OF THE UNCHAINED ECOSYSTEM

In addition to tools to support their onboarding and continued access to a world-class catalog of cleared films, TV series and documentaries, Unchained provides its SuperDistributors a thriving ecosystem.

The development of Unchained's ecosystem rests on the following elements:

- **Tokenized, trackable real-time transactions**

The Unchained ecosystem is powered by tokens that:
- support marketplace dynamics
- Act as a financial incentive to maintain integrity in the ecosystem and allow for active participation of Unchained users thanks to UNC (UNCoin)

- **Community of incentivized open source developers - AppStore**

Developers are rewarded by the community and by Unchained with UNCoin for their contributions, and are able to set their own payment structure, either as a commission on the transactions when their tools are used, or a specific price (one-time, per usage, subscription) for the tools they provide to the Unchained ecosystem.

- **Community of incentivized microservices providers - ServiceStore**

The video industry's value chain is made up of a series of key steps, each of which can be broken into microservices, such as the translation and subtitling of specific films or TV series. Unchained's tokenized ecosystem enables providers of translation/subtitling services to be paid. The coding and design of the individual

Unstores also creates opportunities for entrepreneurs as film curators and enthusiasts interested in opening their Unstore need help, much like Wordpress sites are designed by professionals for small businesses.

- **Community of incentivized content curators**

The curation of films and TV series acts as the core of Unchained's ecosystem. It's the spark that helps build the community, around content validation and enrichment. Curators are an essential element of any community. The information they generate (opinions, ideas, overlooked information, new ways to look at a story), is directly useful for Unchained participants, to better grasp the nature of a specific film and gain further outlooks. Unchained's tokenized approach allows curators to be compensated for their time and efforts, a significant innovation that guarantees the attractiveness of the ecosystem.

4.2 AN UNPARALLELED CONTENT LIBRARY

EST rights correspond largely to DVD rights: it is the first commercialisation window after theatrical release for movies (therefore very attractive for its freshness). These rights come without exclusivities or blackouts, unlike the chaos and the maze of rights that govern SVOD and AVOD. Most of the premium video content that has been or is being distributed in the world (theatrical, TV or streaming platforms) was usually published on DVD. Consequently, the most recent content – often never published on DVD because of the shrinking market – is usually **available in EST**. This makes EST the licensing category that covers the broadest and deepest catalogue that exist in the market. **There are millions of titles available to be licensed for EST.**

Going further, the deep catalogues from major studios or large broadcasters have **never been digitized or published** because of the lack of interest from major platforms to license them and the incapacity of the Content Owners to find a way to reach the appropriate audiences in large enough numbers to justify the initial investment in the preparation of the video materials and their localisation in the main languages. **Hundreds of thousands of titles, perhaps even more, are currently dormant because of inefficient market dynamics**, but this could easily change if those costs would be offset by a newly found market and a passionate community that is willing to help or is incentivised in making those contents ready for the market.

There is a trove of **content that is currently not properly exploited**, distributed or just not licensed at all, and until today, with centralized video stores, there was no possible return of investment in such a diversity of catalogues and volume of titles,

Unchained is able to change this precisely because **SuperDistributors change the distribution paradigm**, **by reaching every possible audience**, for every imaginable title ever filmed, in any genre. It is made possible by the capacity of Grey Juice Lab to reach the first batch of Content Owners for the first million of titles that most matter, combined with the power of the ecosystem to localise and curate content quickly, qualitatively and at very low cost, and with the incentives and mechanics enabled by tokenization. Additionally, any Content Owner, even the smallest producer in the smallest country, is able to tap into the ContentStore and publish his titles by themselves.

Thus, Users and SuperDistributors are able to access any possible genre of content (movies, TV series, documentaries, TV shows, lifestyle, children, sports, education), from any country, that can be localised with the appropriate subtitles and metadata to any language that the community wishes.

4.3 CONSUMER DATA MARKETPLACE

Video services produce an immense amount of data from each user, as they are able to track every single interaction between the user and the content and platform. Such information is highly valuable as it can identify quite accurately the interests, profile, and personality of the user.

Vertically integrated premium content operators such as Netflix, Amazon or Hulu, who source content and distribute it, capture every possible datapoint about their users and the interactions with the content. Netflix alone registers 550 billion events per day, although not all of them user-related (2015 figures), The operators have full control of consumer behavior understanding, and use them in any possible way that suits them (influence user's navigation and consumption, focused promotions, etc. or just blatantly selling the data to third parties) to ultimately generate more revenues.

Users have no say in those services, as they have no choice but to automatically relinquish the control and use of the data they produce for the exclusive benefit of the platform, and despite paying a subscription to the platform – a profitable double-dipping.

Unchained strongly believes that the **rights of every stakeholder must be fully respected**. As much as there is no discussion and total enforcement about the rights of Warner Bros. over the Batman titles, the same should be done for the personal data that a user provides or generates in the ecosystem.

In the Unchained ecosystem, every **single event is captured and available in near real-time,** such as:
- Content-related transactions (sales, rentals,...)
- Granular in-video viewing
- Interactions with content: comments, likes, recommendations, ratings
- Mode of consumption (device, connectivity)
- Content generated/curated/enriched
- Chain of ownership of content
- Etc.

All this data is stored in **private containers that are owned and controlled exclusively by the user who produced it.** Users have a **granular and permanent control over what can be done with their data**: what information can be shared, with whom, for what purpose, for how long, what data must be anonymized or not. Most importantly the user can **set a reward in tokens (UNCoin) in exchange of the data** shared.

This open data model puts the users totally in control of their information and **enables an entire Consumer Data Marketplace** to exist: any company or stakeholder can buy access to the users' data and tap in it from the Permissioned Blockchain (UCPB). The user remains the owner of his/her data and only allow companies to get access to it in exchange for a reward. It brings a never-seen-before level of data granularity to the studios and content producers and open new ways to design, produce, launch and promote content for targeted audiences. Brands and other types of companies can engage in traditional or new ways to buy data or build around it. We can also anticipate agents providing services (see 4.9) or developers providing tools on the buyer, seller or trade side.

4.4 CONTENT ON STEROIDS: CIRCLES AND SPHERES

Today, when a consumer buys a movie or a TV series box set, their experience ends once they watched the content and the occasional extras (such as deleted scenes) that have been thrown in by a few online stores. In a world where users are addicted to rich and diverse digital experiences and ongoing instant gratifications (Instagram, games, a Netflix subscription with a constant updated stream of new content to watch and discover), the experience of a bare bones video purchase at $15 per title is unsurprisingly perceived by many **as lacking value for money** and is definitely a dull, thrilless experience. No wonder consumers are less than ever attracted by it.

Simultaneously, almost any title (movie, TV, documentary, etc.) has a flow of stories, news, information, updates, materials, discussions, events and gatherings, happening around it, more or less abundantly depending on the title. Fandom or Wattpad are clear examples of this. Popular titles have attracted, unsurprisingly, a large, active and engaged fanbase (Game of Thrones, Transformers, Harry Potter,...). This holds equally true for older or more obscure titles and genres (French nouvelle vague or pre-war Russian cinema), where a much smaller but no less passionate audience is active and engaged, although active on more confidential websites and discussion groups. These niches remain more difficult to find, as are their very existence for the newcomer. The reality is that any title is an opportunity for its audience **to bond culturally around the central or peripheral topics** touched by the title, which inevitably spark many forms of engagement. Capturing and leveraging this engagement and the passion behind it is **a key driver for Unchained.**

- **Circles**

Circles are the result of the recognition of these bonding opportunities. **A Circle combines the purchase of a title with the ever-evolving universe that gravitates around it**. When user buys a title through Unchained, they become part of this title's Circle, much like a lifetime membership to the club revolving around this title. The Circle brings into a single place, a constantly updated feed of everything relevant to a specific title:

- Rich extended metadata (in the style of IMDB / Rotten Tomatoes)
- Augmented content (see 5.1.6 Content Enrichment)
- Additional materials (videos, music, photos, text)
- News relevant to the title or the topics related to it
- Fandom discussions
- Merchandise
- Events and gatherings
- Related activities (the Da Vinci Code Paris visit)
- ...

A Circle member can therefore have a rich and evolving experience related to the title he/she purchased, allowing them to go further and engage with like-minded members or participate to the **curation** of the circle.

As **every Circle is linked to a title**, its content is necessarily very specific to this title, and implementing general rules and algorithms can only be disappointing and frustrating for the users. The content curation of each Circle is therefore delegated to the Unchained community (see 5.7 Community Content Curation), who maintains a

high level of quality and filter signal from noise, thanks to the token-based incentives built into the curation markets (see 5.7.2 Token-Curated Registries).

- **Pre-release**

A new Circle can be created by a Content Owner as soon as they desire, even long before a title is available for distribution. For example, the Circle of the next Batman can be created by Warner Bros. as soon as the project is greenlighted. All the news, updates, pictures, videos, discussions related to the casting, writing or production of the movie are published in the corresponding Circle. As some information might be available for free if users just follow the Circle, users can **pre-purchase the title** and therefore get access to the whole Circle with all of the interesting information and content related to the making of the movie are accessible.

- **In-Circle Purchases**

In-Circle Purchases allow members to purchase digital goods, get specific content, unlock features, etc. The functionality allows Content Owners or Circle curators to apply it to any item they consider relevant.

- **Spheres**

Spheres are collections of Circles, which unlock additional content and features related to the specific universe around the title (Star Wars, Harry Potter, Star Trek, etc.). Being a member of the "Harry Potter and the Half-Blood Prince" Circle gives users access to content related specific to this title, but owning all the 8 Harry Potter movies unlocks the Sphere related to the entire saga of Harry Potter with additional content and features that cannot be found on the Circle of each individual title.

Spheres can also be built around anything in Unchained: a director (all of Kubrick's movies and relevant materials), an actor or any member of the cast (eg a Director of VFX), a topic (climate change-related documentaries and content), or any combination that the community comes up with and is upvoted and validated by curation.

- **SuperCircles**

SuperCircles are the VIP, subscription-based extension of a Circle that enable even more content and features:
○ Access to additional, exclusive content
○ Privileged access to the cast or distributor of the title
○ Invitations to exclusive events
○ Eligibility to participate
○ Discounts on related titles and merchandise
○ The exclusive Badge "VIP" on their public profile
○ Ability to customize their user profile with Circle's themes

SuperCircles are **accessible via a monthly or yearly subscription**, and to qualify, the user must first to become part of the Circle by purchasing the title, then pay a monthly subscription
SuperCircles can be **scarce**, the management of their scarcity and their price can be set by the Content Owners, SuperCircle curators and/or by the market dynamics.

Upper tiers levels of Circles (eg Silver, Gold, Platinum,...) can be created, managed and curated by the community, with their specific admission criteria and price, with even more exclusive content and privileges and criterias for eligibility.

4.5 COLLECTIBLES AND VALUABLE SCARCITY

Humans have an ingrained instinct to engage with collectibles, and the universe of movies and TV series are particularly fertile for such behaviours. The elements of this particular universe become highly powerful cultural signifiers that shape our society and the way we look at the world. We want to own a piece of them because we understand their power and its fascination on the crowds, and the more unique the piece is, the more we feel that our bond to the signifier is stronger and closer.

> The use of [collectibles] is so ancient that the desires to explore, collect, make, display, appraise, carefully store, and trade collectibles are human universals – to some extent instincts. This constellation of human desires might be called the collecting instinct.

Nick Szabo in Shelling Out: The Origins of Money

One of the top reasons for consumers to buy DVDs was to showcase them in their house to their friends as a symbol of power, status, knowledge, culture. The hat that Harrison Ford wore in the first Indiana Jones (and signed by the actor) is an object of desire, admiration and awe for fans and is valued at $5,000. At Comic-Con (and pretty much anywhere), fans fight - **and pay** - to get a selfie with a character or the actor, and even more to get their autograph. For many, these mementos become prized possessions. A rare first edition of a Beatles album, a movie ticket stub for the premiere of Star Wars in 1977, the list is endless.

This is the very reason of the success of DVD. His inventor and chief promoter, Warren Lieberfarb from Warner Bros., was convinced that movies could become collectibles while in the mid 90's all we had was mostly a Blockbuster Rental store or clunky Pay-Per-View experience on cable.

Unsurprisingly, there is no difference in behaviour or value for digital collectibles. This category might well become even more valuable in the future than its physical counterpart. One of the foundations of owning a collectible is the **ability to display it**. We increasingly interact via our digital personas where we can easily craft and exhibit identity, power, possessions and values through, among other things, the collectibles we own.

Unchained offers its users a huge range of digital collectibles by tapping into the materials of Content Owners for most movies and TV series: artwork, photos, exclusive or never before published scenes, memorabilia, talent pieces. Items based on specific titles or characters are created by approved artists exclusively for Unchained, and offered on the Unchained market.

The release of **limited special editions of movies and TV series,** in some cases exclusive to Unchained, is part of the licensing agreements between Unchained and the Content Owners. Some of those editions are "**Studio Originals**" (produced and packaged directly by the studios/Content Owners), while others are "**Studio Certified**" (assembled, packaged and curated by the community, and approved and certified by the studios/Content Owners). For titles licensed by Content Owners that give more, or full, flexibility in the usage of their titles, the community have more, or total freedom, to edit, alter and mash-up the titles and create very unique pieces.

Scarcity, when applied intelligently, can create **optimal points of eustress** in the ecosystem. That in turn can generate higher user engagement, increased trades and higher value for all parties. The **number of "copies"** available in the market for a specific collectible, its **initial price**, and the **moment and duration of availability**, are key parameters that can be **adjusted for each item** and each use case to maximize the desired output.

Every collectible is represented by a **non-fungible ERC721-type token** in the public blockchain, guaranteeing its owner **permanence, accessibility, security and provable ownership**, as well as the ability to access their collectibles independently of Unchained. **NFTs can also be intertwined and combined among them** (ie the Harry Potter box set 20th year special edition number 912, the original Chinese artwork poster belonging to the limited special edition of Harry Potter copy n. 1,000, and exclusive deleted scenes from the last Harry Potter), by using recent standards such as **ERC998 types (Composable Non-Fungible Token Standard).**

This opens up a whole area of possibilities that allow for those rare or unique assets to be used cross-platform in other environments (and vice-versa), with games, music, books, city guides or any other application developed outside Unchained.

4.6 AUGMENTED CONTENT: COMMUNITY ENRICHMENT

Movies, TV series or documentaries become much more interesting if they are watched with someone next to you who gives you context, explanations, additional information, hints, as long as they are valuable, and they enhance the experience without interfering. And even better if you could choose what kind of additional information you want: expert, historic, technical, fun, geek, the list can be long.

Unchained enables the community to enrich any title from the library on multiple layers (within the limits permitted by each Content Owner):

- Hashtag a specific scene (eg "#CarChase","#Mustang1967","#Cameo")
- Geotagging (eg. link a scene to a point on Google Maps): Content becomes location-aware
- Comments (text, audio, image or video) linked to a specific point in the movie, to an entire scene or to the entire movie, synced with the video (eg. a movie critic, a CGI expert, an actor, a fan)
- Cross-linking between titles available in Unchained (landing page, a specific scene, a Value Added Material, or pages created by the users)
- External links
- Value Added Materials provided by the Content Owners
- etc.

Token-based community curation allows the community to **promote qualitative enrichment while eliminating clutter.**

This multi-dimensional curated enrichment opens up new ways to **rediscover and enjoy content** in refreshing ways and from different perspectives. It also allows to **build new narratives and content constructs** from each of the elements that have been added to the content, by linking or integrating them to other elements inside or outside Unchained.

4.7 COMMUNITY CONTENT CURATION AND TOKEN-CURATED REGISTRIES

4.7.1 THE CONTENT DISCOVERY PROBLEM

One of the biggest problems that has emerged from the exponential amount of available content remains the **selection and curation** of this content.

Netflix is notoriously bad at content discovery, despite having developed arguably the best content curation algorithms on the market.

Unchained takes the opposite route: we welcome the human element back into the curation process: each **content** and **augmented content** piece can be **curated by the community, not by an algorithm**.

The blockchain basis of Unchained allows us to enable such a curation, thanks to **Token Curated Registries** (TCRs). These protocols power the choice and promotion of the best content enrichment, as generated and elected by users and fans.

4.7.2 TOKEN-CURATED REGISTRIES (TCR)

A TCR is basically a registry of listings generated by token holders. In Unchained, the listings can consist of titles, content, VAMs, etc.

A token-curated registry uses an **intrinsic token** to assign curation rights proportional to the relative token weight of token holders. Therefore the token used for building and curating this registry is *issued for this specific registry* and can be exchanged both ways with UNC.

By linking a token gain or loss to the proposals and choices made by users, we **empower creators, users and curators,** while increasing the relevance of each piece of content. Each contributor (or player in game theory terms) has an **economic incentive to achieve a high-quality, high-relevance list.** That powers the whole Unchained ecosystem as every piece of content becomes "peer-reviewed", and has to be approved by the community. Content curation is reaching a higher precision and relevance for the appropriate audience, and the contributors are rewarded for their work in status and/or tokens.

Unchained harnesses the power and wisdom of the crowd by giving communities tools to select and promote the best content while rewarding contributors.

How does it work?

TCRs are the playgrounds of 3 types of players:
1. The Consumers (in our case, the Unchained users)
2. The Candidates (in our case, the specific title, augmented content, VAM, etc. supported by any Contributor)
3. The Token Holders (in our case, any user who bought tokens to take part in this registry)

Unchained users desire high-quality lists so that they can passively consume the highly-curated quality content. Contributors desire their Candidates to be included in such lists so that they can have the attention and consideration of the Unchained users. Token Holders want to increase the demand of tokens in order to increase the price of the tokens they hold.

Let's look at an example. Francis Coppola's classic The Conversation (1974) was just released on Unchained in a new digitally remastered 4K version. Paramount Pictures, the Content Owner, has provided the subtitles for the languages in the largest markets (French, German, Spanish, Portuguese, Japanese and a few others) but many others are not provided, such as Thai. The community is at work generating the subtitles in Thai. But which version will become the official Thai subtitles for The Conversation ? That is up to the users to decide.

How?
1. Unchained users buy the specific token issued for that translation (ex: Token TC039485U4Y), and thus become Token Holders
2. Contributors make a small deposit in the ad-hoc token (they "stake" their tokens) for their Candidates to be considered as part of the registry (ex: Candidate Thai_sub_0234)
3. If the Candidate is declared as "good" by the community, the Contributors keep their tokens
4. If the Candidate is declared as "not good" by the community, it is actually being challenged by the Token Holders. If its application is finally rejected by the Token Holders, the deposit gets divided between the winning group Token Holders voters as a reward for their curation process
5. Token Holders start voting on the best version among the "good" Candidates. They do so by staking a portion of their tokens. In this case, a holder proposes to switch Thai_sub_0234 to the first place in the Ordered TCR. If this action is voted favorably by a majority of the Token Holders, Thai_sub_0234 ends up in the first place of the Ordered TCR, and thus becomes the best Thai subtitled version for The Conversation remastered version, and the official Thai subtitle for this movie
6. The Contributor responsible for that winning subtitle gets rewarded in tokens.
7. The Unchained Thai-speaking users can enjoy a high-quality subtitle in their mother tongue, generated and curated by the community; and The Content Owner doesn't have to spend money for creating the Thai Version

In this case, we're considering a type of TCR based on a "winner-takes-all" economic incentive. When considering for example the best Indiana Jones VAMs, or just doing a list of the top 10 best Game Of Thrones episodes, a finite Ordered TCR can be used, and Candidates will all be rewarded by being included in this registry, as if the registry is popular, this content will have a higher chance of being consumed, driving up the popularity of the registry and thus increasing the perceived value of the intrinsic token.

4.7.3 INTRINSIC INCENTIVES

Contributors will not support a Candidate to the registry if they believe that this Candidate will be rejected, as they would lose their staked tokens and thus incur a financial loss.

Token Holders have a financial incentive to challenge and reject every Candidate to the registry, as they would receive their proportional share of the tokens staked by the Contributor to support his/her Candidate. But at the same time, they have a stronger economic incentive to increase the value of their own token, and if the list is empty, the Unchained users will not be interested in this list, and no Candidate would apply, creating a negative feedback loop resulting in the depreciation of the token. As Contributors applying for their Candidate to be part of a registry drive the basis of the demand for the registry's specific token and put an upward pressure on token price, it is in the Token Holders best interest to curate a high-quality list and not reject every Candidate.

4.8 AN ECOSYSTEM FOR CONTENT OWNERS: THE CONTENT STORE

Content Owners of premium video content in any genres and languages and from any parts of the world, either Major Studios or small independents, are able to make available on the **Unchained ContentStore** all their catalogues for instantaneous worldwide direct to consumer distribution. They are immediately extending their content reach through the decentralized video content management and distribution of Unchained.

They benefit from:

- **Real time reporting, analytics and payment**
  - Transparent, exhaustive and real-time reporting and analytics (inexistent with the existing global retailers)
  - Real-time payments (versus 90 to 120 days today)

- **Second Hand Sales and Collectibles**
  - Limited, special editions
  - Collectibles
  - Awake Dormant Catalogues
  - Community-enriched metadata that better promote the content

- **Distribution + Licensing**
  - Instant worldwide distribution (versus negotiating with dozens or hundreds of platforms, agents and distributors)
  - Constant real-time and full control on the licensing parameters of every title, in any territory, at any time (versus re-negotiating licensing agreements with all the parties)

- **Targeting + Engagement**
  - SuperDistribution accurately targeted to the most receptive audiences
  - Direct access to consumers, influencers and the fan base (disseminate new promotional materials for upcoming movies and series, engage as VIPs, etc.) through the Circles
  - Unique testing and real time market research platform they can tap in at anytime to gauge appetite for new content or versions, re-release or soon to come, what to make next, etc.

4.9 AN ECOSYSTEM FOR MICROSERVICES PROVIDERS: THE SERVICESTORE

Behind the scenes of an end-user video experience there is a whole world that is relentlessly working day and night to make the clock tick and trains arrive on time. In a large multi-territory online video store, there are hundreds of people on payroll, plus dozens, sometimes hundreds of service providers.

In an ecosystem progressively decentralized such as Unchained, a number of those tasks can be delegated to the community, in different areas, such as:

- **Assistance**
  - To SuperDistributors, to set-up their Unstores, enhance them, operate them, increase or analyse their audience
  - To Content Owners, to onboard their rights and catalogues on Unchained, manage them, analyse and make business decisions
- **Content preparation**: metadata and subtitles creation, preparation and enrichment in all languages
- **Quality Control** of the video files, the metadata and localisation
- And many others, governance permitting

Unchained ServiceStore opens the marketplace of microservices to anyone who is able to participate and offer their time and skills to perform any of those tasks.. Token-based curation markets allow this kind of crowdsourcing to be remunerated, for the benefit of all, with micropayments and status levels, and at a later stage, with more sophisticated models of governance.

4.10 AN ECOSYSTEM FOR DEVELOPERS: THE APPSTORE

Unchained is conceived with the community of developers in mind by laying very early the **foundations of an open source model**. Our aim is to attract developers to participate in the building and evolving the fabric and the **core of the Unchained ecosystem and the products and tools** necessary for the all the stakeholders to operate within the ecosystem.

Unchained has the potential to become a massive decentralized universe for content, from production to distribution, in all formats and for all screens, and the community of developers should be at the core of it and reap the benefits such a network can generate in the future.

Besides participating in developing the ecosystem itself, developers can also focus on the specific needs of those communities of the ecosystem:

- **End users**: provide them with the best player and the best features to maximize the enjoyment of the content they want to watch and engage with
- **SuperDistributors:** offer them tools to better select, curate and monetize the content they offer, and better understand, engage, grow and serve their audience
- **Content Owners**: manage their catalogues, their data, their payments, their sales analysis and simplify their workflows to publish their content into Unchained

The Unchained AppStore gives the ecosystem a one-stop-shop for all their Unchained software needs, and allows developers to make their products available to the Unchained ecosystem with diverse revenues models: free, commission-based, one-time payment, in-app payments, subscription.

4.11 A MULTI-DIMENSIONAL SOCIAL NETWORK

Movies, series or documentaries are an essential fabric of any culture. It is therefore natural and almost irresistible for people to connect, bond, engage, discuss, or take action around a specific title. It remains surprising how premium digital platforms like Netflix, iTunes or Amazon Video provide access to the content but do not offer any community interaction at all. At the other end of the spectrum, large social networks (Facebook, Twitter) or the more community focused sites (Fandom, Wattpad) have not engaged in providing premium content.

Unchained unifies these two areas by **blending the largest catalogue of premium video content**, super-distribution, curation and content enrichment, with **a deep social component** to allow participants to engage, interact and transact within the same ecosystem. Users can follow almost anything they choose to: a Circle or SuperCircle, a Sphere, a SuperDistributor, a specific curator, a rare collectible availability, a price change, the release of an upcoming title, another user, etc.

Each user has a public **profile page**, customizable at their will with widgets, avatars, badges, lists, skins, collectibles that they can use from their own library of content, from the Circles or SuperCircles they are member of, or by specifically purchasing them to affirm their identity.
Users can find all the notifications and the stream of updates related to everything they follow in Unchained on their **personal feed**,
Developers are able to provide plugins that could open up new possibilities to the profile pages and the personal feed.

Incentives to engage in the community and the social network is mainly fueled by the status and online recognition that each member can extract from its participation, which is the essential fuel of most content curation communities. But those soft incentives are also accompanied by harder and more tangible ones in the form of tokens of value that allow those who earn it for their activities and actions to obtain monetary compensation.

5 BUILDING UNCHAINED

5.1 LICENSING THE PREMIUM CONTENT

Unchained is backed by the team behind Grey Juice Lab, an established player and a global provider of premium content to telecom and cable operators around the world. Grey Juice Lab brings a wealth of knowledge and experience, including content deals with all major US studios and 300 major content providers from 75 countries in all continents and languages, representing more than 1 million titles between movies, TV series, documentaries, and other premium formats.

1+ MILLION TITLES FROM 300+ CONTENT PARTNERS WORLDWIDE ALL GENRES

Grey Juice Lab licensing agreements extended to Unchained

Content licensing remains a tedious and often complex process that in most cases involves significant resources and time to reach an agreement. It involves detailed person to person discussions, a dense legal component, combined with financial aspects. Licensing also involved detailed technical elements regarding platform, security, workflows, video formats, localisation, etc. The more premium the content, the more manual, long and complex the licensing process is.

Content licensing being our core business for 20 years, we understand the need to proceed by steps. It's not a matter of technology, but how media companies operate today. We will start with the "Analog Era", where we will not disrupt the way Content Owners operate, and steadily but progressively educate them and move them towards the Digital Era, when Content Owners will be prepared and ready to manage all by themselves the process directly on the platform.

We expect smaller, independent Content Owners to move quickly to the Digital Era, while it will take many years for the Major Studios and other large media groups to get there. Regardless, those considerations are invisible to most of the Stakeholders of Unchained and most importantly to the end users.

5.1.1 LICENSING STEP 1: THE ANALOG ERA

Unchained engages with each one of the Content Owners, negotiates the rights and contracts as the licensing entity. To complete this meticulous and tedious process efficiently, we are leveraging on the agreements and relationships we currently have at Grey Juice Lab with hundreds of Content Owners around the world, from the Major Studios to the local and regional distributors, built over a period of 10 years of experience in the VOD content aggregation business.

The rights negotiated by Unchained with the Major Studios and the rest of Content Owners are focused on EST and TVOD for distribution in all territories worldwide on a blockchain-based platform and payments in cryptocurrencies.

Once the rights are negotiated and signed by Unchained, we codify the agreements in our systems. At this stage, given the complexity of licensing contracts, their variance from one case to another and the immaturity of how Smart Contracts are coded and managed on most of the blockchain protocols, a large part of the rights management will be done off-chain to begin with.

Unchained is planning to **reach a catalogue of 200,000 licensed titles in all genres at launch**, and 1 million titles at the end of year 2. The encoding and ingestion of the catalogues into the video platform will be done progressively depending on available funds and customer growth.

5.1.2 LICENSING STEP 2: THE DIGITAL ERA

Our vision is to evolve Unchained towards a decentralized ecosystem as soon as this is possible. This evolution will be the fruit of two parallel and but complex external forces:

- The education and maturation of the Content Owners, who will gain sufficient understanding and practice on how decentralized licensing can work. We are dedicating specific resources to assist and accompany them.
- The evolution and maturation of blockchain technologies and protocols that will allow the easier and more natural implementation on "smarter" Smart Contracts, which in turn will allow on-chain implementation, management and exploitation of those licensing rights. We will collaborate with the blockchain protocol teams that prove to go into that direction with sufficient expertise, resources and dedication.

Those two forces will progressively converge, and we will start assisting Content Owners to decentralise licensing agreements and rights management in such a way that Content Owners will be able to license their rights by themselves on the blockchain, with the rules and parameters they choose, and for the rest of the stakeholders to use them, without any need of a central authority or human intervention from Unchained.

5.2 THE VIDEO TECHNOLOGY ARCHITECTURE

Unchained's services are based on a core platform combining performance and scalability. The core video platform provides an easy and quick one-stop-shop for SuperDistributors to easily promote, sell and stream directly to the end users the contents they select from Unchained.

The platform allows both the SuperDistributors and the Content Owners to analyze their performance in real-time and adjust their strategy on the spot.
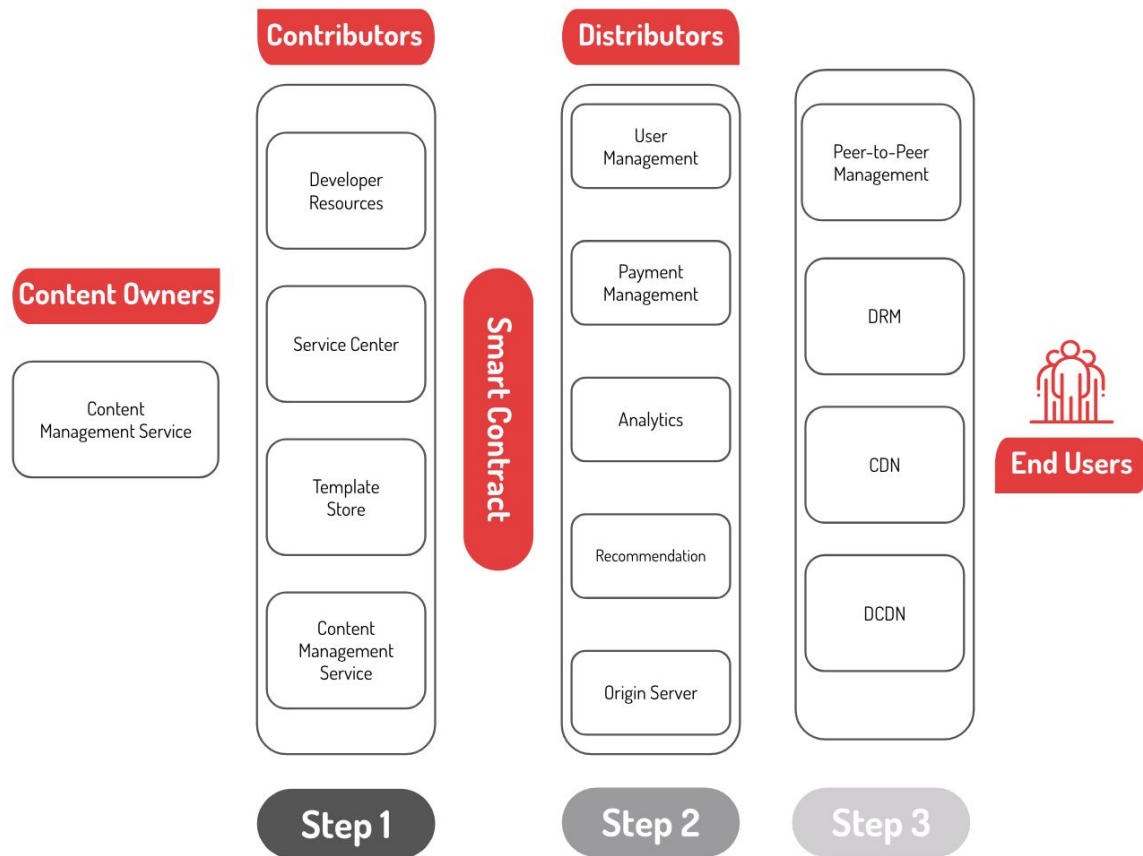
Diagram 1

The Unchained platform is based on the latest technology that has been developed by the industry for the delivery of premium VoD across the Internet. This has several advantages: it can accelerate the time to market as many building blocks are already available, lower the risk and investment cost, leverage all the existing business and security infrastructure (DRM) and also scale the delivery of the content at minimum cost. In order to build the ecosystem, we will use a Cloud based architecture with an SOA (Service Oriented Architecture) to have the maximum flexibility in terms of platform evolution. The Unchained platform is built on a legacy Cloud VOD platform, to which a Blockchain system has been added. This architecture creates the possibility to consume the content as well as the right to access the content being provided by the DRM system.

The Unchained platform is adapted to all modes of consumption: streaming or download. Download is popular when users do not have internet connection (plane) or enough bandwidth available at consumption time (commute) or when they cannot use the data quota for consuming video (Mobile).

The Unchained platform is composed of several modules, described in Diagram 1.

Other modules are present as well :

Ingestion and Asset Management: attached to industry-leading products (Aspera, Signiant, etc.).

Cloud Transcoding: combines cloud scalability, open-source flexibility (FFMPEG), and the best cloud transcoding servers on the market (Harmonic, Elemental, etc.) for high quality transcoding.

Streaming and Downloading: Origin Servers serve browsers, mobile applications, game consoles, Smart TVs and hybrid/OTT set-top boxes. Origin Servers serve protected content with leading Digital Right Management (DRM) systems, via third-party partners.
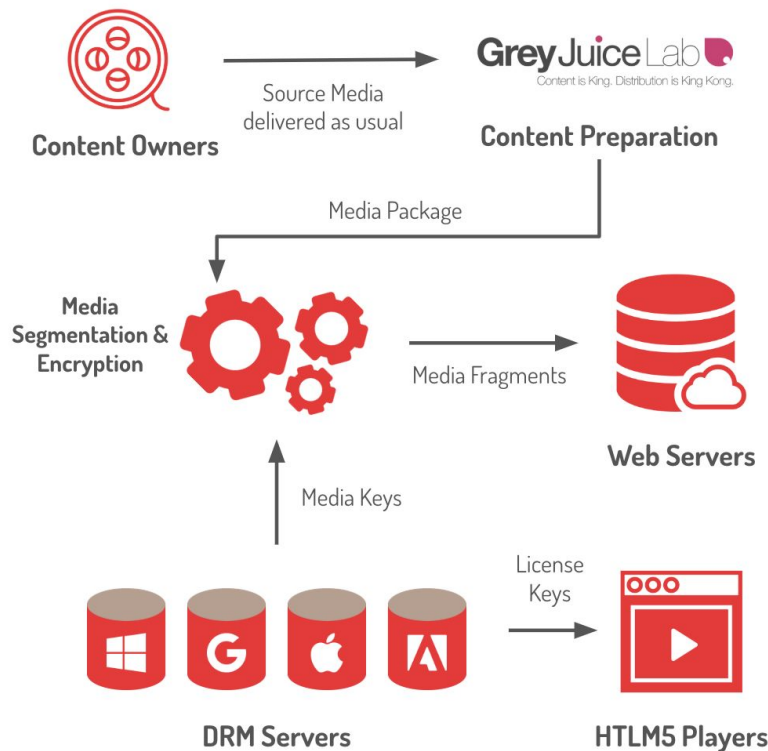
Analytics/Recommendation: providing the best analysis tools to drive sales. We analyze content performance, user behavior, general payment data, and provide tips and tools to help distributors to optimize their Unstore.

Payment Management: End Users are in control of their payment means (UNCoin, credit/debit card, Paypal, etc.) and what they bought at each step of the way.

CDN, Peer-to-Peer and DCDN: we use a multi-CDN approach to provide the best user experience. In select cases (tentpole releases, successful content), we use a Peer-to-Peer approach to off-load our CDN with two goals: maximize this user experience and user management. Gradually, Unchained will be capable to use its own DCDN by using each user application as a node.

A key element of the Unchained VD architecture is that the Origin server can be used with Multiple CDN, allowing to select the best CDN for its technical and commercial performances.

As we want to limit the CDN cost, we also use state-of-the-art P2P technologies that show today a reduction of 1/3 of the CDN cost.

In download mode, the Unchained platform assesses what is the best resolution and file size the user should use based on the device used and the available bandwidth for instant download. In case a background download is requested (such as overnight), higher resolution could be downloaded as the time to download is typically much longer than the instant one. On the DRM side, the rights must be available for this type of usage. On the back end side, one of the ABR profiles is loaded to the device.

5.3 BLOCKCHAIN TECHNOLOGY ARCHITECTURE

5.3.1 BLOCKCHAIN TECHNOLOGY CHOICES

Why is the Unchained ecosystem based on the blockchain?

First of all, to ensure a greater **transparency and traceability** in the distribution and consumption of content. Content owners have always struggled to get a clear handle hold on their real sales and consumption numbers, and then how to actually get paid from the distributors for every sales made. By using a blockchain-based technology to back our data processing, analysis and resulting transactions, we're allowing the content owners to accurately measure in real time the consumption of each of their titles, detect the current and future hits for each type and category of content, and get paid for this actual consumption. By using a shared distributed version of the same transactions ledger, Unchained ensures trust and a consensus between every stakeholder, and virtually solves the traceability of content and its use through a notoriously previously complex supply and distribution chain that was practically impossible to verify and audit. Thanks to the use of ERC721-style of unique identifier for each title, content owners can individually track the chain of ownership of each of their titles.

Second, a public blockchain is required to register the ownership of rare or valuable digital goods (such as the digital collectibles made available by the Content Owners and the special limited editions) in **an immutable and publicly verifiable database**, which needs to stay easily accessible at all time. It enables as well the cross-operability with other compatible NFTs for further applications external to Unchained.

Finally, by streamlining the supply and distribution chain and **cutting most of the middlemen**, Unchained allows for a better revenue split from content sales and rentals. Content Owners keep their usual revenue share, while the rest of the stakeholders get a better share of the revenues. Thus, every stakeholder gets a "fairer" share of the revenues, and can easily audit the **incorruptible distributed transactions ledger** to verify in real time transactions, splits, sources of income and revenues generated.

5.3.2 HYBRID BLOCKCHAIN ARCHITECTURE – MIXING PUBLIC AND PRIVATE

As Unchained seeks to be the go-to platform for premium content, we need to build a very robust Blockchain architecture from the ground up. Using a mainstream protocol like Ethereum to build our Decentralized App (DApp) is not, as of today, a viable solution as the speed of the network (as measured in Transactions Per Second, or tps) is not sufficient by far to sustain the data creation and recording of such an ecosystem. Additionally, the cost of each transaction on Ethereum as it stands today makes its use prohibitive for an application like Unchained. But not all the data created will need to be recorded into a public Blockchain.

This is why we designed a hybrid architecture in order to give the ecosystem all the benefits of using a blockchain-based framework (transparency, traceability, security, lower distribution costs), without compromising the **flexibility and scalability** of the platform.

The first layer is formed by our Core Permissioned Blockchain based on Hyperledger Fabric. **The Unchained Core Permissioned Blockchain (UCPB)** is shared and maintained by the most important stakeholders of the ecosystem which are rewarded in the UNCoin (**UNC**) token for that work (principally the Content Owners, but big SuperDistributors and Developers can also participate), The UCPB is accessible by invitation only. The Hyperledger layer allows for quick processing and storage of users' interaction data, which are basically every action taken by the Unchained platform users, and the retrieving and analysis of that data by the concerned stakeholders.

The second layer is a public blockchain used to register content management and microtransactions among users. We're currently considering the different alternatives, as a lot of projects are still in their infancy, but as of today the most promising candidate seems to be **QTUM**, which is leading the pack for its hybrid Bitcoin and Ethereum technology. That public layer allows for any financial transaction occurring in the ecosystem to be cleared and added to the public ledger, enabling the parties to pay and receive their respective dues in UNCoin (UNC).

The interoperability between the two blockchains is done through Smart Contracts in Solidity and the security of these interchain transactions is achieved through the bonding of UNC from major stakeholders in the ecosystem. Minimal global consensus layers and relay chains such as Polkadot can also be used to transfer value and data between the two blockchains.

5.3.3 UNCHAINED CORE PERMISSIONED BLOCKCHAIN

Hyperledger Fabric is an open-source, standardized and enterprise-grade distributed ledger blockchain framework developed by the Linux Foundation in partnership with IBM. Although currently clocked at 3,500 tps, the next versions of Hyperledger Fabric should scale up to 100,000 tps with a sub-second latency.

It works as a framework based on permissioned membership: each of the nodes has to be invited and vetted to be part of the UCPB, so we expect a high level of trust among the nodes, which incentives are completely aligned with Unchained objectives. One of the standard consensus mechanisms for Hyperledger Fabric is the Kafka orderer, which is primarily a distributed, horizontally-scalable, fault-tolerant commit log. The main advantage of this mechanism is its speed, but it should be mentioned that although it is fault-tolerant (it is composed of multiple virtual nodes forming a "Kafka cluster", making the Kafka orderer tolerant to the failure of single node thanks to its decentralization), it is not a Byzantine-Fault-Tolerant consensus mechanism. This is why the vetting process and incentives alignment of the nodes will be crucial for the system to save it from bad behavior from the nodes.

The UPCB participants, after enrolling through a trusted **Membership Service Provider** (MSP), are responsible for two components of the ledger subsystem: the world state and the transaction log, and are rewarded in **UNC** for their work.

Its main advantages are clear for the Unchained ecosystem:

- **Performance and scalability**

Hyperledger Fabric is built on a **modular architecture** that separates transaction processing into three phases: distributed logic processing and agreement ("chaincode"), transaction ordering, and transaction validation and commitment. This separation confers several advantages: fewer levels of trust and verification are required across node types, and network scalability and performance are optimized.

- **Data partitioning**

The need for privacy of certain data elements can be achieved through the use of Channels that allows for data (including the number of transactions) to go to only the parties that need to know.

- **Data-rich queries**

Each transaction or relevant interaction with the platform results in a set of asset key-value pairs. Using LevelDB and CouchDB, any stakeholder can perform complex, data-rich queries on the JSON content. This JSON format helps minimize the work required to produce reports and perform audit functions.

- **Strong security**

Hyperledger Fabric provides modified and unmodified PKCS11 for key generation, which supports cases like identity management that need more protection.

5.3.4 PERMISSIONLESS PUBLIC BLOCKCHAIN

We've been evaluating the best protocol to be used for the main public blockchain supporting Unchained. The criteria are the following:

- Smart contracts native support
- Easy Decentralized App (DApp) building
- High scalability (high number of tps)
- Highly decentralized
- Low cost of transaction
- Strong community
- State of the project

As of September 2018, our preference goes to **QTUM**, in particular because it uses UTXO (unspent transaction output) that can utilize the Simple Payment Verification (SPV) protocol. The SPV protocol operates with light clients that can be used on mobile devices to verify transactions without needing to run a full node, which in our case would allow users to buy titles from their smartphone without having to sync the latest blocks.

The SPV feature comes from the fact that QTUM is a hybrid of Bitcoin and Ethereum technology. QTUM uses an upgraded Bitcoin's blockchain that includes Segwit and the Decentralized Governance Protocol (DGP), as well as Ethereum's smart contracts Virtual Machine (EVM). The EVM is able to live on top of the Bitcoin blockchain through QTUM's Account Abstraction Layer (AAL). Also, QTUM recently launched its DApp development platform on Amazon Web Services (AWS), fostering the convenience of building DApps on top of its framework.

Thanks to the underlying public blockchain, Unchained plan to become the first mainstream DApp for premium content, allowing seamless interaction with the content and the creation of a whole marketplace and ecosystem powered by its community.
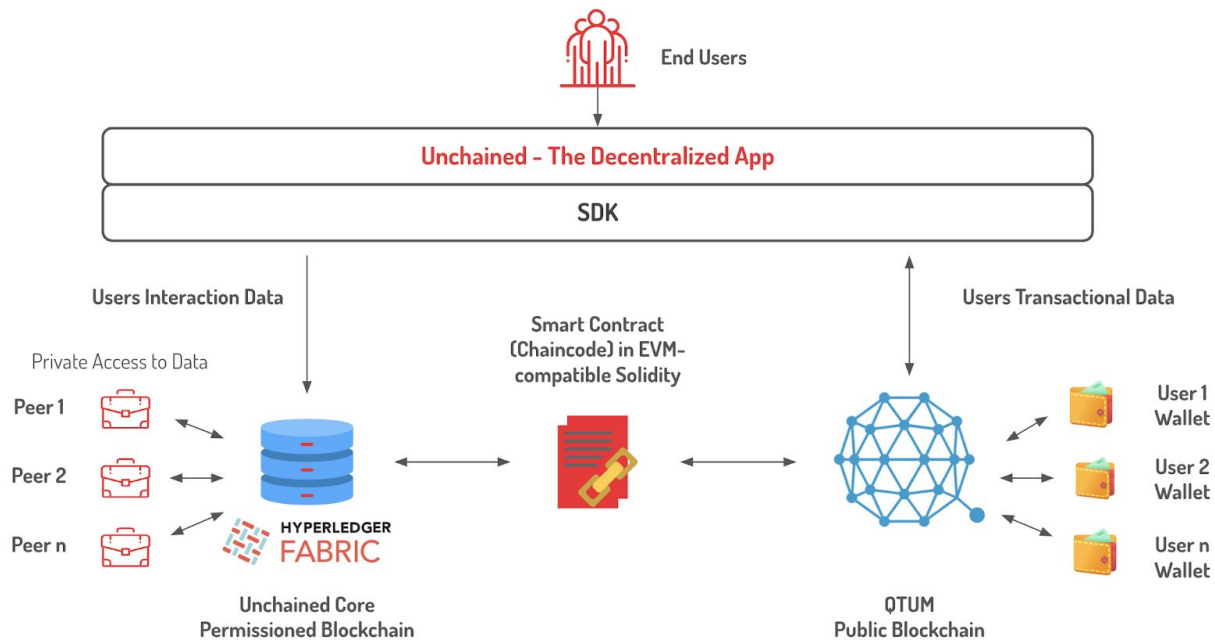
The overall system lays upon strong cryptoeconomic incentives to take part in the network to ensure its security and durability. This is achieved through the use of the UNCoin (UNC) token.

5.4 TOKEN ECONOMICS – THE UNCOIN TOKEN

UNCoin (UNC) is a **Utility Token**, used on the Unchained platform, that can be used to buy, rent, sell and lend the content, and is necessary for all the interactions inside the Unchained ecosystem.

To consume content on the Unchained platform, users just need to deposit fiat currency in their wallet. They can then decide to exchange the currency for UNC or keep it in fiat. **The content pricing is denominated in the user's local currency**.

The Studios and Content Owners will also be able to collect revenues from their share of sales and rentals without worrying about the exchange rate risk factor. They will be in fact able to request their share in USD, EUR, CNY, JPY & GBP in near-real-time, and Unchained will just transfer them their respective revenues in fiat. But they can also decide to keep a wallet in UNC to be able to pay for services and marketing in Unchained, and participate into the growth and development of the ecosystem.

UNC also is used for more **advanced transactions between the ecosystem participants to foster high quality participation** within the network in order to improve its inherent quality and security. Any third party participant can earn UNC by interacting with the network in a way that is beneficial for the greatest number of ecosystem participants. As such, SuperDistributors, Developers, Curators and microservices providers can be rewarded in UNC for their work in helping building the ecosystem. This type of reward encourages them to use active participation in the network as their potential economic gains are vastly superior to that of a passive participation.

The total amount of UNC is fixed from the beginning, but a 15% Inflation Reserve is defined. A synthetic token inflation target of about 3% yearly will be implemented by releasing a quantity RT (Released Tokens) every week up until the end of the Inflation Reserve:

$$RT = TTI \times \left[(1.03 + \varepsilon)^{1/52} - 1 \right]$$

With TTI = Total Tokens Issued and ε = variable based on the observed participation rate in the ecosystem

As our goal is to ensure a **high quality and secure ecosystem**, we need to target an optimal participation rate within the network. So we use ε as a way to act on the inflation rate in order to approximate our target participation rate:
○ If the observed participation rate is too low, we can algorithmically compute a positive ε and boost the participation rate by increasing the inflation within the ecosystem (thus incentivizing users to participate actively in order to not incur inflation-related dilution)
○ If the observed participation rate is higher than necessary for the long term growth of the ecosystem, a negative ε can be computed, which will reduce the inflation and thus disincentivize users to participate in building and sustaining the ecosystem

Thus the inflation serves 2 main goals:
1. Allows Unchained to reward its most prolific Contributors, Developers, and Curators and give them more network ownership
2. Acts as a deterrent for a passive participation strategy in the ecosystem, as every UNC holder is economically incentivized to participate actively and do useful work in the network, or get diluted

Users can be rewarded with UNC when they:
1. Secure the system by staking their existing UNC when needed
2. Contribute meaningfully to the ecosystem
3. Share their resources (storage and bandwidth) by becoming a DCDN in the P2P network
4. Bring new users to the ecosystem
5. etc.

UNC acts as a **strong financial incentive to maintain the integrity of the community**: core stakeholders need to own and stake UNC to be able to take part into the UCPB (Unchained Core Permissioned Blockchain). UNC also enables any participant in the ecosystem (Developers, Content Owners, SuperDistributors, etc.) to be paid by Unchained.

Incentives are therefore aligned between the UCPB nodes (mainly the service providers) and the overall Unchained ecosystem (service users), and the service providers are far less likely to perform malicious acts within the ecosystem. For regular users wanting to support the system, they will have the ability to buy UNC, although that doesn't necessarily translate into getting access to the UCPB.

In an organic next step, UNC holders can control access to development funds based on milestones achieved through UNC-based governance and can vote on upcoming developments and features.

5.5 BUSINESS MODEL

Two main types of transactions occur inside the Unchained ecosystem:

- **Content-related trading**:
  - Buying, re-selling and renting titles
  - Buying and selling collectibles
  - Buying digital goods (avatars, skins, etc.)
  - Subscriptions to SuperCircles

- **Ecosystem related transactions**
  - App purchases or subscriptions
  - Microservices purchases or subscriptions

First-Time and Second-Hand Sale transactions can be done in fiat and UNC. All the other transactions in the ecosystem are done in UNC.
Unchained keeps a 10% commission on all these transactions (except for the first sale, where it keeps 15%),

- **Title-related transactions**

The splits for title transactions are as follows:

First-Time Sale

- Unchained 15.0%
- SuperDistributor 15.0%
- Content Owners 70.0%

Second-Hand Sale

- Unchained 10.0%
- Content Owners 30.0%
- Current Owner 60.0%

Rental of a New Release

- Unchained 10.0%
- Owner of the Title 20.0%
- Content Owners 70.0%
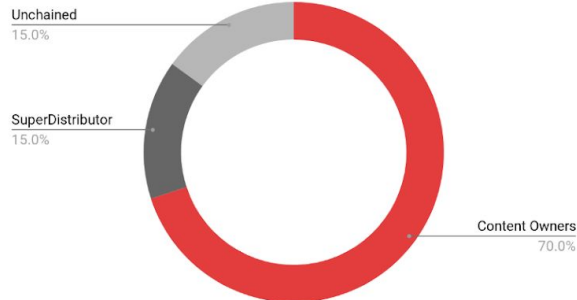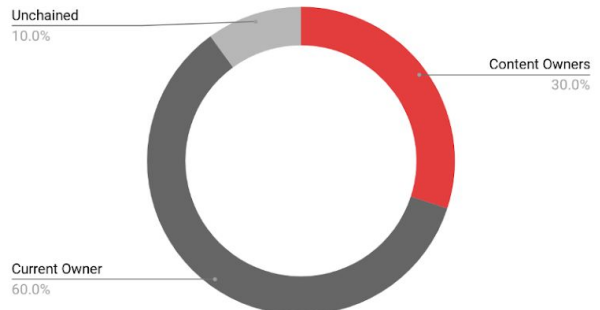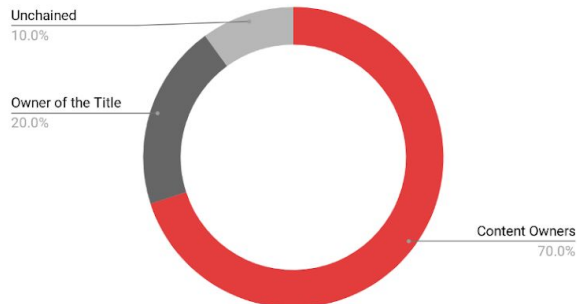
Rental of a Library Title

- Unchained 10.0%
- Owner of the Title 40.0%
- Content Owners 50.0%
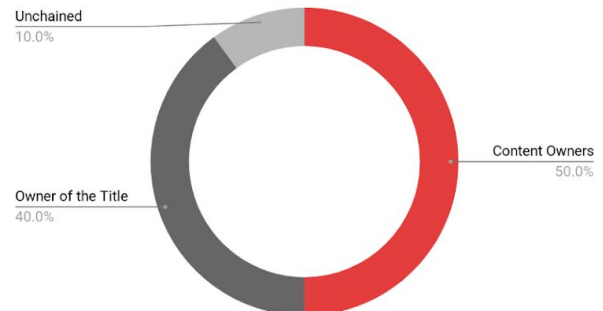
The **First-Sale of a title** is always originated at the Unstore operated by a SuperDistributor, while a **Resale** or a **Rental** can be transacted directly between 2 users,

- **Other transactions**

For all other transactions, splits can be defined on a case by case basis by the parties to the transactions. As many interested parties as desired can be included.

- **Incentivizing the communities**

SuperDistributors can decide that a percentage of their sales will be forwarded to the curators of the Circle of the title transacted. This will contribute to financing the time and effort on the part of the curators.

Developers can also establish a model by which, if a user or a SuperDistributor uses a specific video player, client, app or software in their Unstore , a percentage of sales or purchased generated goes to them.

- **Pricing**

Content Owners, mainly the major studios and larger content providers, usually define a minimum price for each title (both sale and rental) based on the territory and the recency (time since theatrical release) and a revenue share for each transaction (see above). Those two parameters are always known to the seller, who then can decide his final retail price depending on the margin they want to make or how aggressive they want to be with the price of a title.

Pricing for other transactions and digital goods can be more flexible or totally up to the community and the market dynamics.

- **Costs**

Initially, the main costs of Unchained are:
○ Platform and service development
○ Content rights negotiation
○ Content encoding, metadata, localisation, preparation and ingestion in the platform
○ Operational costs (infrastructure)
○ Marketing and community building costs

Once the service is deployed and stabilized, and a number of areas are decentralized, most of the above costs will be drastically reduced.

- **Revenues**

The revenues generated are directly proportional to the number of SuperDistributors that become active in each country, and the number of regular customers that each SuperDistributor is able to generate.

The conditions to entry in each country are:
○ Content rights available: from day one, all content rights are negotiated worldwide
○ Content localized for the specific languages in each country: most of the localized versions are provided by the content owners, and for those missing, either Grey Juice Lab will undertake the localisation at the beginning or the community of Curators and microservices will take care of it
○ Payment processor for users to be able to buy (and sell) UNC in their country against their local currency with payment methods easily available to them

Unchained is planning to be available **in 180 countries after 2 years** (similar as Netflix).
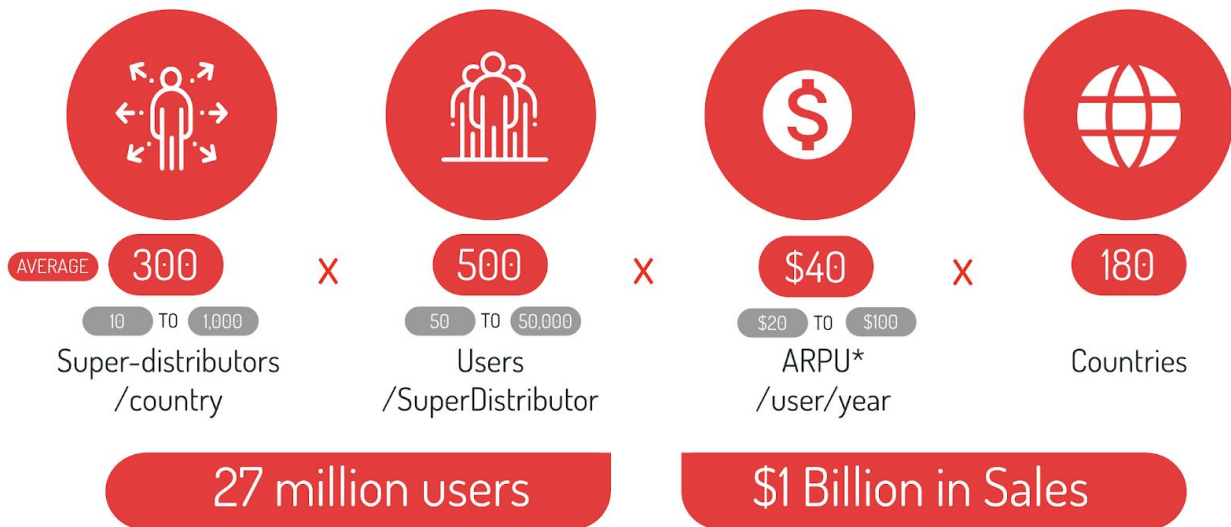
Although there can be thousands of SuperDistributors in each country, each with hundreds and up to dozens of thousands of customers, Unchained is very conservatively planning for an average of **300 SuperDistributors** per country and **500 regular customers for each**.

The average revenue per user is based on the average revenues of EST and TVOD per year worldwide in 2017, which is $40.

Thanks to the compound model fueled by the SuperDistributors, these numbers allow Unchained to reach **27 million customers** and generate $1 billion in sales. A very conservative projection places this point at 5 years from launch.

These sales figures **do not include** collectibles, subscriptions, resale, digital goods and intra ecosystem transactions, who are more difficult to anticipate but will nonetheless be significative and would add on top of the previous figure.

YEAR 5 TARGET

AVERAGE **300**	x	**500**	x	**$40**	x	**180**
10 TO 1,000		50 TO 50,000		$20 TO $100		
Super-distributors /country		Users /SuperDistributor		ARPU* /user/year		Countries

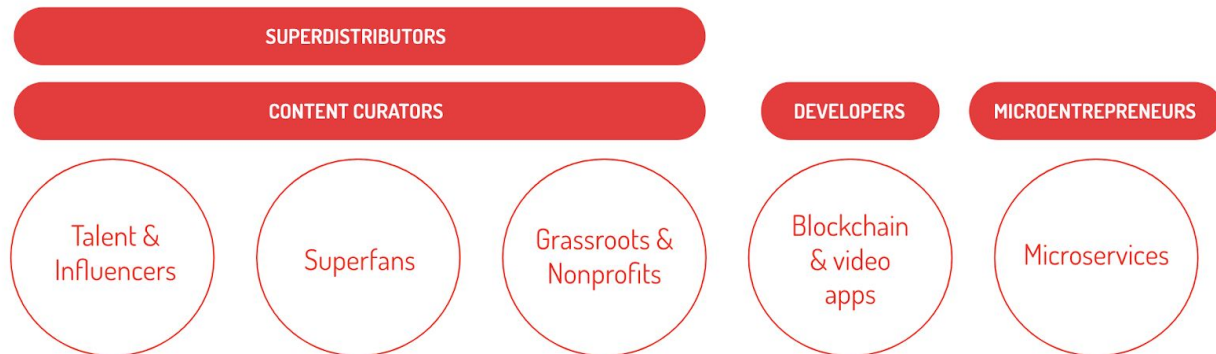| 27 million users	$1 Billion in Sales

* $40 = Worldwide average TVOD ($15) + EST ($25) spending per user in 2017 *(source: Statista)*

5.6 GO-TO-MARKET STRATEGY

5.6.1 GROWING TO 27 MILLION CUSTOMERS BY FOCUSING ON THE COMMUNITY

Identify, engage and nurture clusters of *early adopters* and build active communities.

5.6.2 TALENTS, DIGITAL INFLUENCERS, GRASSROOTS & NON-PROFITS

- **Talents will be able to curate & sell to their fan base, in possible support of their favorite charities**

Current: movie releases routinely use actors & directors to boost digital word-of-mouth with social media promotion - Dwayne Johnson is one of the most effective examples of this now standard tactic.

Unchained: ability to promote content to the next level.

Possible example: by launching his own Unstore Dwayne Johnson will be able to curate a list of his favorite movies/TV series and encourage his fans to purchase them by touting that a % of each purchase will be donated to his favorite cause/charity.

- **Unstores will be used to recruit and retain grassroots organization members**

Current: Large grassroots organizations such as WWF offer their members and supporters affinity credit cards that automatically donate a portion of charges incurred to them. Smaller organizations do not have access to these affinity cards.

Unchained: given the power of the visual medium to convey arguments and ideas, carefully curated Unstores will help organizations stand out. A WWF Unstore featuring wildlife documentaries will serve as an excellent membership recruiting tool and position it as a forward-thinking group. The thousands of grassroots organizations across the world will have access to Unchained's library and tools.

5.6.3 SUPERFANS

- **Superfans will be able to generate revenue from their passion**

Current: superfans of a movie universe or a TV series have an impressive array of tools to share their passion. The most active are administrators of Wikia/Fandom pages that reach millions of their fellow fans. These passionate critics/contributors are rarely compensated for their work. There are few or no links between these fan contributions and the content it revolves around.

Unchained: By putting our content library and community building tools in the hands of these Superfans, we will allow them to **pair their contributions (text, fan art, etc) with the actual content**.

Fans will therefore be able to purchase the content in an editorialized context, outside the "plain vanilla" context of the main digital stores.

Most importantly, a Superfan-operated Unstore will give their followers access to the *community-powered augmented content*. Additionally, this will yield them as-of-yet untapped revenue.

5.6.4 DEVELOPERS AND MICROSERVICES

- **Unchained is an ideal ecosystem for developers**

Current: there's a huge interest from developers in the Blockchain space to participate in a true direct to consumer dApp (distributed application). The reality is that there too few open software toolkits.
Video's popularity is inversely correlated with the number of available ecosystems/environments where developers can apply their talents to push the envelope.

Unchained: our Blockchain-powered video ecosystem is ideal for enthusiastic developers we can recruit in the alpha release phase.

- **Token-based curation markets will allow crowdsourcing to be remunerated, for the benefit of all**

Current: Enhanced metadata - content tagging, subtitling - is a must-have for next generation video platforms. In addition to the prohibitive cost to cover all languages, the process would also long and complex for most content owners.

Unchained: Crowdsourcing the process is the answer - Viki-Rakuten has done this very successfully with subtitling of its Asian TV series.
Token-based curation markets are the perfect model to remunerate microservices.

5.7 THE NEXT FRONTIER

Unchained is conceived as a constant work in progress in its evolutionary path. The foundations of the project and the entire ecosystem allow for a number of evolutions and additions to the initial business models and mechanisms.

5.7.1 PROGRESSIVE DECENTRALIZATION

Unchained is envisioned and aimed to evolve into a decentralized ecosystem. Decentralization is a balance between benefits to be gained and a price to pay. In the case of Unchained, absolute, maximal decentralisation is not the goal nor necessary, but sufficient decentralization can bring a wealth of benefits to the ecosystem Unchained aimes to create, justified by the following motivations:

- **Serving users and the communities**

Companies, by design, are primarily accountable to their shareholders and, occasionally, to their employees, more rarely to their clients and users. These, although vital during the initial phases, quickly become secondary and neglected when the company grows large and powerful enough The same users who fueled growth and success become hostages and often victims of their co-creation, while extracting less and less value and recognition from their loyalty and money spent. Size and power are inversely proportional to user care and satisfaction.

Ecosystems (ie forests, oceans, cities) are accountable to each one of its parts (ie to each community, and to each member of each community). The richer the ecosystem, the more each part participates to the value created. The larger and stronger an ecosystem grows, the more its parts benefit from each other and from the ecosystem itself. Value and wealth are constantly redistributed among every single piece of the ecosystem, the better the ecosystem the more equitable the redistribution.

Unchained is built on the concept of an ecosystem, with the conviction that if designed in order to be accountable to the ecosystem and the communities who compose it, and make the communities of users, SuperDistributors, Content Owners, Curators, developers, etc. happy and motivated, a virtuous circle is engaged that will create value and wealth while it grows.

The most appropriate path to reach this goal is decentralization.

- **Removing critical points of failure**

Centralized content licensing (the licensing contracts), access control to the content (**Digital Rights Management / DRM**) and the **Content Distribution Network (CDN)** that stores and streams video files to users, these all represent significant points of failure. Failure can occur due to a number of unexpected events: human error, legal or business mismanagement, or technical issues. With the reliance on centralized systems, users cannot fully trust that they really own what they've acquired or produced, or that they will always be able to access it. They are forced to depend on a central service provider, as in today's traditional services. Such incidents can trigger a cascade of negative events for the consumers and the ecosystem participants, resulting in the loss of ownership and access of content that has been legally and properly acquired, which can represent a significant value to their owners.

For **content licensing**, as it was described at 6.1 LICENSING THE PREMIUM CONTENT, there will be a progressive evolution from the centralized "Analog age" of today to the decentralized "Digital age" of tomorrow.

For **DRM**, methods to implement decentralized DRMs already exist and only need to be validated and approved by the major studios.

For CDN, distributed CDN (DCDN) via peer-to-peer networks are already a standard in the industry. Those DCDNs are operated by private companies. To rely on a truly **decentralized CDN**, Unchained will work with existing solutions (a number of which are already operational, but their use and scalability has to be proven) and will also consider implementing its own solution.

- **Transparency and cross-operability**

Public distributed ledgers allow for transactions and tokens to be immutable and verifiable. This creates trust and openness. It comes with a number of benefits in the case of Unchained:

- A user who invested in a rare collectible can easily prove it's ownership, not fear losing it and be able to trade it at any time as long as someone is willing to do the same
- All transactions are immediate and trackable, two key aspects for Content Owners
- Content purchased or produced is not dependent on a walled-garden system or corporation, and can be accessed easily with transparent rules and mechanisms

- **Removing unnecessary middlemen**

The content and video industry is notorious for the quantity and intricacy of middlemen involved in the value chain in all aspects, production, licensing, preparation, distribution. It inflates costs, reduces margins, increases times to market, and increases user frustration. The result is an inefficient industry, expensive to operate, that misses a lot of opportunities and leaves value creation untapped.

Decentralisation, at the right level, renders the market fluid, removes friction, and restores value to the parties that matter: those who produce the content, those who consume the content, and those in the middle who bring real, useful value either side.

- **Empowering the active community**

Unchained's goal is to empower all the communities to engage in the ecosystem with trust, fully and openly; SuperDistributors, developers, curators, Content Owners, service providers. Those communities are willing to invest time, efforts and even money if they perceive that there is value to be created from their contributions, and that they are the only masters of it, without the risk of a central authority or corporation unexpectedly deciding to change the rules and rip them off their investments.

For the developers' community, as Vitalik Buterin put it:

> One simple litmus test for whether or not a blockchain project is truly decentralized: can a third party independently make a client for it, and do everything that the "official" client can?
>
> Vitalik Buterin on Twitter

At Unchained, this will be the case very quickly from launch date, via the AppStore, As soon as the platform is stabilized, it will progressively become Open Source and any core or peripheral feature could be built by the community of developers.

- **Getting there**

Entertainment in general, and content licensing in particular, sit in very traditional and sometimes old fashioned industries. At the same time, concepts, mechanisms, technology and real field implementations of decentralized systems, in particular higher level application ecosystems are today still in the very early stages. It is therefore necessary to start operating with a relative degree of centralization to provide the initial spark and boost to the ecosystem. We will build, launch and deploy the first Unchained dApps and features and functionalities, assist the first batch of SuperDistributors, all the while planning progressive steps to achieve decentralisation.

5.7.2 FUTURE FEATURES

- **AVOD and SVOD**

Ad-supported VOD's stellar growth (such as YouTube) and the popularity of subscription-based services such as Netflix make them the next segments to consider. Although it would be complex so far to consider the major studios for such rights, many smaller Content Owners will be eager to provide AVOD and SOD rights to Unchained, additionally to TVOD and EST, and discussions are already occurring. The goal is to empower SuperDistributors to curate their very own AVOD and SVOD offerings to their audiences.

- **Movie Theaters**

Unchained's ecosystem can be extended from the pure digital to the physical realm by allowing like-minded and connected members of a Circle to book their own theater showing of their favorite film or TV episode, in a mode similar to OpenTable. Catalogues can be extended to theatrical rights, and on the distribution side, relationships will need to be built with digital cinema owners and content delivery integrations with the digital cinemas infrastructure.
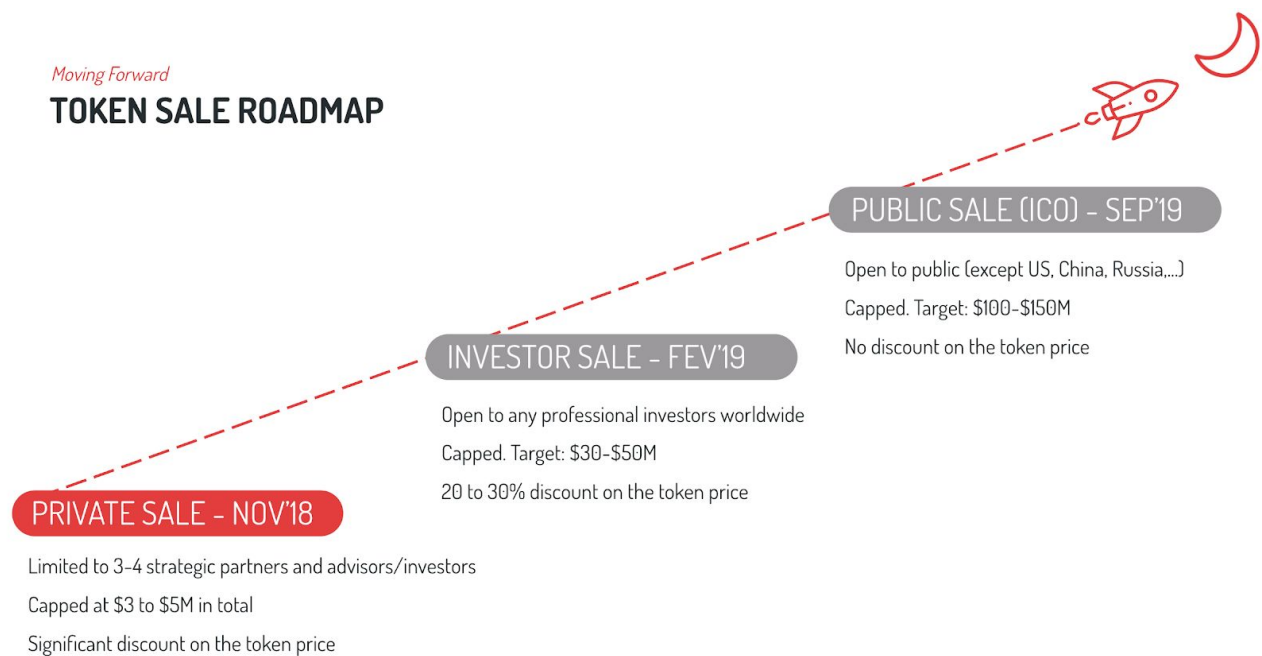
- **Content Production**

With a potential of millions of users, Unchained will have a built-in audience for original productions of movies, TV series, or documentaries, to be financed via our tokens as well as traditional sources.

5.8 MOVING FORWARD

5.8.1 FINANCING VIA TOKEN SALE

Companies, as centralized entities, are by design accruing value in their shares and are primarily accountable to their shareholders. Unchained is aiming to build an ecosystem that will be progressively decentralized, where the value is captured by the network effect in the tokens that operate the community. For this reason, financing of Unchained will be done via a token sale rather than equity.

The preparation, development, launch and deployment of Unchained will require significant funding that will be achieved via 3 distinct token sale events as described below.

Moving Forward
TOKEN SALE ROADMAP

PUBLIC SALE (ICO) – SEP'19

Open to public (except US, China, Russia,...)
Capped. Target: $100-$150M
No discount on the token price

INVESTOR SALE – FEV'19

Open to any professional investors worldwide
Capped. Target: $30-$50M
20 to 30% discount on the token price

PRIVATE SALE – NOV'18

Limited to 3-4 strategic partners and advisors/investors
Capped at $3 to $5M in total
Significant discount on the token price

5.8.2 PROJECT ROADMAP

We planned the following milestones:

SEP 18
Select token sale advisors
Finalize incorporation of the new legal entity
Prepare the private token sale with strategic partners and investors

NOV 18
Finalize the Private token sale
Initiate signing of licensing agreements worldwide
Hire extended team
Start developing the platform
Initiate the Investors token sale

FEB 19
Finalize the Investor token sale
Start encoding and preparing the content

JUN 19
Alpha version of the platform
Initiate the content ingestion

SEP 19
Beta version of the service
Limited live testing
Public token sale (ICO)

DEC 19
Commercial launch of the service

6 TEAM AND BACKGROUND

Unchained is the logical next step for serial founder Mihai Crasneanu, Founder & CEO of Unchained, and in particular for Grey Juice Lab, the company he founded in 2007 and where he is the majority shareholder.

Grey Juice Lab offers a customized end-to-end content solution to Telecom, Cable and OTT operators worldwide for their Streaming/VOD services

Grey Juice Lab's assets are key to Unchained's foundations.

- **VOD licensing agreements** in place with all the Major Studios and 300+ Content Owners worldwide that account for the majority of premium content in all genres (movies, TV series, documentaries, lifestyle, short form)
- **Video processing and preparation** with capacity to localise content and metadata in most languages and territories
- Manages the VOD services of **dozen of telecom and cable companies worldwide** (Telefonica, Millicom, Altice, Telkom Indonesia, and many more) reaching 350 million devices
- Active relationships with hundreds of other telecom and cable operators in the world
- An expert team of 40 content and video professionals in 7 offices around the world

Crasneanu has assembled a team of content & streaming execs with 20+ years experience each dealing with the largest content owners & VOD platforms worldwide.

Grey Juice Lab, majority owned by Mihai Crasneanu, Founder & CEO of Unchained

Grey Juice Lab
Content is King. Distribution is King Kong.

CONTENT FROM ALL MAJOR STUDIOS

300+ CONTENT PROVIDERS IN ALL GENRES

TITLES WE CAN LICENSE 1+MILLION

350 MILLION SCREENS REACHED

CUSTOMERS IN ALL CONTINENTS (ALMOST – WE HAVEN'T MADE IT TO ANTARCTICA…YET)

6.1 CORE UNCHAINED TEAM

Mihai Crasneanu
CEO, Los Angeles, USA

Founder, CEO and main shareholder of **Grey Juice Lab** (since 2007), a worldwide VOD aggregator of premium video content. Mihai is also the founder and CEO of **Glowria** (2001-2007), the largest online DVD rental and VOD service in France and 3 other companies in the video content space.

Cyprien Grau
CPO, Mexico City, MX

Co-founder & COO at **Decidata** (since 2016), a tech company focused on video analytics and AI-powered advertising. A trained quantitative economist, Cyprien was previously Blockchain System Designer at **Democracy.Earth**, Trader at **Scotiabank** (CA) and Product Strategist at **Yellow Pages** France.

Frederic Guarino
CSO, Montréal, Canada

Film & TV producer since 2010, Frédéric has worked at the crossroads of media, content and technology in diverse roles: artists' agent, entrepreneur/intrapreneur, co-head of an ad agency lab, producer. He was a digital exec at **Hemisphere** advertising (2007-2009), **Lagardère**'s D2C mobile content business **Cellfish** (2004-2006), among others.

Ludovic Bostral
CTO, Paris, France

Streaming video expert since 2007, Ludovic was co-founder and CTO at **Afrostream, a YCombinator company batch S15** (2013-2017), a SVOD service for African movies and TV series. Ludovic was previously Technical leader at **M6 Web**, where he built a 0 to 50M views/month catchup TV service.

6.2 KEY MANAGERS IN THE CONTENT TEAM (GREY JUICE LAB)

Ainhoa del Coso

Head of Licensing and Acquisitions, Barcelona, Spain
In charge of worldwide content acquisition and licensing at **Grey Juice Lab** (since 2012), Ainhoa was previously head of Content Acquisitions and Business Affairs at **Teuve / ONO**, largest cable operator in Spain (2002-2010)

Cristina Clavera

Head of Content, Barcelona, Spain
Responsible for content sourcing and content curation and programming at **Grey Juice Lab** since 2013, Cristina was previously TV Rights Manager at **BBC Worldwide** (2003-2010)

Balbinder Sandhu

CFO, Barcelona, Spain
At **Grey Juice Lab** since 2012. Balbinder was previously Director of Finance at **Teuve / ONO**, the largest cable operator in Spain, acquired by Vodafone (2006-2010). He was also the former Head of Financial Planning at **Colt Telecom** (2004-2006), a major telecom operator. Balbinder started as Senior Auditor at **PwC** and Corporate Finance Manager at **Deloitte** (1992-2000)

Damian Craimowicz

Content Marketing, Buenos Aires, Argentina
At **Grey Juice Lab** since 2013, in charge of all VOD services in Latin America and Content Marketing worldwide. Damian was previously Head of Mass Market Video Products, and Manager for the Retail Segment at **Telecom Argentina.**

7 CONTACT

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