PrimeRating

Fundamental Report - Metaverse

Prime Rating Report V1.1

Protocol: Illuvium
Category: Gaming
Version: 1
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Previous Report: N/A

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Reviewed by: Verto
Season/competition: N/A

Scorecard

1. Value Proposition	Points
a) Novelty of the solution	12 / 15
b) Target market size	12 / 15
c) Product-market fit	8 / 15
Total Points - Value Proposition	**32 / 45**
2. Competitive moat	**Points**
a) Integrations & partnerships	2 / 10
b) Intellectual property	5 / 10
c) Infrastructure - security	8 / 10
d) Infrastructure - fees and ancillary infrastructure	9 / 10
e) Treasury management	1 / 10
Total Points - Value Proposition	**25 / 50**
3. Tokeneconomics	**Points**
a) Genesis token distribution	11 / 15
b) Purpose of the token	9 / 10
c) Ongoing token issuance / inflation	8 / 10
d) Value capture	9 / 10
e) Token liquidity	5 / 5
f) Extrinsic productivity	0 / 5
Total Points - Tokenomics	**42 / 55**

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4. Team	Points
a) Credibility and reputation	8 / 10
b) Relevant experience	12 / 15
c) Thought leadership and public presence	8 / 10
d) Ability to foster a community and coordinate resources	13 / 15
Total Points - Team	**41 / 50**
5. Governance	**Points**
a) Extent of governance capabilities	6 / 10
b) Active governance contributors	4 / 5
c) Governance infrastructure	8 / 5
d) Robustness of the governance process	4 / 10
Total Points - Governance	**22 / 30**
Total	**162 / 230**

1. Value Proposition

The "Value Proposition" section assesses the value a protocol delivers to its users. The rating is based on the size of the problem a protocol addresses and the product/market fit of the protocol's solution.

a) Novelty of the solution (15 points)

This score evaluates the novelty (uniqueness) of the protocol. Has the protocol introduced any innovations that help solve users' problems, either technical or organisational? Or has it just forked someone else's code?

Answer: lluvium has created a [DAO centric model](#) in combination with a core team that develops the game. So while we can't assess the game and associated code prior to launch, the organisational model is novel and can be examined.

DeFi protocol Synthetix is widely credited with a number of innovations regarding DAO organisation and bootstrapping users, it was founded by Kain Warwick. Given the founder of Illuvium, Kieran Warwick, is Kain's brother, it's no surprise to see some evolution on Synthetix's innovations.

To summarise it simply, Illuvium's governance consists of a council of 5 members who are elected by ILV holders. Quadratic voting is used during the election to reduce plutocracy. The community can change the number of seats and time 'in office' among other things relating to the council. Council members then receive an NFT which is used to vote on proposals, requiring a simple majority to pass. Overseeing all of this is an 'executioner DAO' made up of founding team members, which can act in an emergency to take executive action and prevent malicious acts.

There is also the use of 'Serverless Architecture' which is aimed at helping Illuvium scale to 100's millions of players. Serverless architecture doesn't mean servers aren't involved! It does however mean Illuvium themselves don't have to build and maintain them. According to the developers this setup is really well suited for the auto battler style of gaming, and will enable scaling of player count with the team's ambitions. Another unique advantage of the setup is that players are not divided by region, which normally limits play to geographical zones like Europe or North America. Instead, all Illuvium players will cohabit the same world and are able to play against one another. Serverless architecture does however add dependency on AWS, for better or worse.

Score: 12

b) Target market size (15 points)

The target market size evaluates the current and future size of the problem a protocol aims to solve. While the term Metaverse is all-encompassing, what is the target market size for the relevant sector? For example, NFT games are trying to disrupt the traditional gaming industry, which is reported to be worth roughly $175 billion.

Answer: Indeed the gaming industry is worth around $176bn in 2021, according to NewZoo. It's predicted to climb from there to $269bn by 2025. Meanwhile crypto specific gaming now makes up 55% of all blockchain transactions according to dAPPRadar. Game related interactions overtook DeFi back in August and haven't looked back since, that is with Axie Infinity as pretty much the only blockbuster game, and a handful of rudimentary competitors. Look at any metrics - Discord members, subscribers to NFT game streamers, or even the size of funding rounds - and it's clear this sector is growing extremely quickly.

Illuvium touts itself as the first 'AAA quality' blockchain game, which if it lives up to could be a very powerful narrative. When that is combined with the pace and potential size of crypto gaming as it starts to challenge the traditional sector, it's clear the TAM is massive. The potential risk is that NFT gaming studios like Illuvium don't capture market share quickly enough, and are outworked or outspent by traditional studios, who already have the ability to create quality games, and just need to integrate a crypto element.

Score: 12

c) Product-market fit (15 points)

Product-market fit evaluates the degree to which a protocol satisfies market demand in their specific sector. How many users does a protocol have? What is the trading or transaction volume on a platform? Is there growth on both the buy and sell side of the market? Is the protocol targeting the right product segment at all?

Answer: Currently Illuvium doesn't have a working product, so by definition cannot be judged on PMF. What can be assessed is the traction they have gained as a proxy for PMF. As far as building a community, they have 245k Discord members and 244k Twitter followers. This is in comparison with the most popular NFT game today, Axie Infinity, which has 800k in Discord and 797k on Twitter.

Illuvium's overarching strategy has been to brand itself as the first AAA quality game using blockchain tech. The idea being, build a game that people want to play, and the fact you can own your in-game assets and make money from them is just a bonus. The variety of gameplay and asset leaks that take place in the Discord seem to back up the AAA claims, and they certainly have the funding to execute. The risk comes from proven traditional gaming studios who can deliver the quality but have to learn how to integrate crypto. It remains to be seen which approach happens fastest. Overall though, they have a clear strategy, which has attracted a sizable following and continue to deliver on

the runup to launch.

Score: 8

2. Competitive moat

The "Competitiveness" section looks at a protocol's competitive moat in the space and its unforkable assets. This includes integrations and partnerships, intellectual property, the underlying infrastructure being used, and treasury management.

a) Integrations & partnerships (10 points)

Due to crypto's open-source nature, the code of most protocols can easily be forked. This score represents one piece of unforkable value. Some indicators are the number of applications built on top of the protocol (vertical integration) and other entities integrating the protocol's services (horizontal integration).

Answer: There are no instances of direct integration, not surprising given Illuvium is still yet to launch. They do use flash pools to try and distribute ILV among other relevant Metaverse communities, which helps strengthen and align the wider group of token holders. There will also be Illuvium characters/likeness used in other games, as detailed in the next section. Otherwise, it remains to be seen how much of what's built will be open sourced.

Score: 2

b) Intellectual property (10 points)

Intellectual property is and will continue to be a crucial part of the metaverse. This score considers if a project, for example, developed a unique IP that creates a sustainable competitive moat around it or, as an alternative, secured IP through agreements with outside parties,

Answer: So far there are a few examples of Illuvium sharing IP across the gaming space. For example, they partnered with Warena to explore cross-metaverse compatibility for NFTs. Similarly the team-up with Death Road sees Illuvium characters turned into vehicular form, with a revenue share agreement and the Illuvium treasury receiving 25% of sales from these special skins. Finally, Illuvium is setting up a HQ in Wilder World via the 'Illuvium Towers'.

Overall the team and community seem very open to sharing their IP, but the collaborations to-date are small-scale and remain within the crypto community.

Score: 5

c) Infrastructure - security (10 points)

Metaverse projects make all kinds of choices when it comes to infrastructure. Some build their own solutions, whether Ethereum side-chains or a new blockchain entirely, and some deploy to an existing sidechain or a level 1 blockchain. These decisions have significant trade-offs across security, maintenance, ease of use, costs and scalability, etc. This score assesses specifically the security of the chosen infrastructure solution.

Answer: The Illuvium game itself is being built on Immutable X (IMX), a layer 2 chain secured by Ethereum. Immutable X uses a volition model, meaning users can choose between a Validium ZK-proof or ZK-Rollups for their transactions, balancing between cost vs trusting a data availability committee. Immutable X has been live for under a year, but has $117m in value currently on-chain. Overall it has high security with very few compromises, but hasn't been stress tested in terms of time or value locked yet.

Score: 8

d) Infrastructure - fees and ancillary infrastructure (10 points)

The section above assessed specifically the security of the chosen infrastructure solution. This score, however, looks at the other side of the scalability trilemma - fees and the ancillary infrastructure like bridges, wallets, etc.

Answer: Minting and trading on IMX is actually free for users, as the protocol subsidises gas costs (earning instead through a 2% cut on primary marketplace transactions and trades). Bridging is also straightforward and can be done conveniently through their marketplace, but that is currently the only way to bridge assets.

Score: 9

e) Treasury management (10 points)

Treasury management refers to the project's management of its assets and balance sheet. How diversified is its treasury? If diversified, are the assets productive? For example, does the project own its liquidity? Are there procedures and plans in place for managing the treasury?

Answer: Illuvium's treasury contains a mere $4.94bn in assets at the time of writing, $4.9bn of which are $ILV tokens. The remainder is made up of $33m in stablecoins (coming from private investment rounds and the public sale) held roughly 50/50 in USDT and USDC. Treasury holdings are deliberately not staked in the reward contracts, to avoid diluting other holders while rewards are given in-kind (currently ILV or sILV). That said, the treasury will receive revenue distribution once the game goes live, based on the tokens staked. That is how they plan to fund the team in perpetuity.

While the DAO is apparently responsible for treasury management, there is little to no discussion and certainly no public plans to manage the assets. The stablecoin reserve is estimated to provide 3 years of runway and that seems to have reduced any urgency around the subject.

Score: 1

3. Token Economics

The "Token Economics" section assesses the function of a protocol's token. This includes the token distribution, its functionality, the ability of the token to incentivise desired behaviours and value capture potential.

a) Genesis token distribution (15 points)

Token distribution can be an indicator of a healthy protocol and, if done well, can improve coordination and alignment among different stakeholders. Was the initial distribution fair and balanced? Are the tokens distributed widely or is the ownership concentrated?

Answer: The initial distribution of ILV can be found here, and demonstrates a reasonable distribution of tokens, especially when compared to the oft-cited Messari diagram for L1 blockchains. With 35% going to team and investors, both are well below the 50% threshold for a majority. The investor portion is fairly high at 20% but is balanced by a generous public sale for a further 10% of supply. With the treasury at 15% and not being staked, there is ample opportunity for all holders to earn more ILV from the 30% set aside for rewards. Once the game launches 10% has been set aside to be earned through play, again a fair chance for fans and investors alike to build ownership.

Another positive move from the team was giving the ability to claim rewards in sILV in a 1:1 ratio with ILV, to be used in game. This method aligns early holders as they can use the tokens to upgrade and level up when the game launches.

In terms of lockups and vesting, investors and the team were both on a 12 month lockup followed by a 12 month vesting period. This is relatively short for a project in crypto, but not detrimentally so. In an unorthodox twist however, the core team actually extended their vesting over a further 2 years to signal their belief in what they are building and further reduce token supply in the medium term.

Score: 11

b) Purpose of the token (10 points)

This score evaluates the purpose of a token in the project's ecosystem. For example, does it provide utility? Does it have governance rights attached to it or a built-in value capture mechanism?

Answer: $ILV is used as a governance token, but it is also designed to receive revenue distribution. "Any kind of revenue generated through sales or in-game revenue is distributed back to holders of staked ILV. The same max supply of 10 Million ILV will be used for this purpose regardless of how many games the DAO develops. Revenue distribution is paid out in the form of unlocked ILV…multiple times a week without a fixed schedule. Before paying out revenue distribution, the vault converts ETH spent in-game into ILV by buying it off the market" - taken from the Discord.

Because ILV can be traded 1:1 for synthetic ILV or sILV, which is used to purchase items like skins and enhancements, it also has added utility by proxy.

The one minor negative, is that the token governance is used only to elect a council, rather than influence changes directly. The council then decides which way to vote on proposals, leaving ILV holders as an electorate rather than governors themselves.

Score: 9

c) Ongoing token issuance / inflation (10 points)

Most tokens have built-in inflation. This section evaluates the purpose of that inflation. Is it justifiable? Does it help improve the coordination and alignment of incentives for the protocol? Does it incentivise positive-sum behaviour? Are the benefits flowing to all relevant stakeholders or just select groups?

Answer: Only 10% of future issuance is set aside for rewards related to playing the game, which is quite low compared to the 30% going to token stakers just for staking! At today's prices though this is still $700m and should be plenty to incentivise the different planned aspects and add-ons to the game.

The primary alignment comes later, once the game is launched, from the dynamic of sILV being deflationary. "The process of claiming sILV rewards burns the equivalent amount of ILV. Any sILV spent is used to buy Fuel, which is consumed in-game, effectively reducing the supply of ILV as it never enters circulation." So ILV holders are incentivised to stake to receive revenue, and as they do so, the supply of ILV reduces as the game economy turns over.

Score: 8

d) Value capture (10 points)

The ability to accrue value and consequently distribute it to stakeholders can be an effective coordination mechanism and deliver long-term benefits to a project.

Answer: As discussed above the token has an effective value capture and distribution mechanism. Revenue is directly tied to the success of the game. More users, levelling up and trading/battling their way through the game, leads to greater revenue generation all of which goes back to ILV stakers. Self-sufficiency is dependent on the portion directed to the treasury being enough to continue funding the core team, however. In theory there is no difference between theory and practice, this score represents the value capture as it stands 'on paper' today, and could change rapidly if the game fails to gain traction after launch.

Score: 9

e) Token liquidity (5 points)

Is the token widely available and is there sufficient liquidity to facilitate all protocol functionalities?

Answer: $ILV has DEX liquidity on Sushiswap that is nothing short of incredible for an app token. With $370m currently in the pool, ILV has depth that even outstrips crypto mediums-of-exchange like USDC and DAI! The token is also listed on Binance as the only Tier-1 exchange, with HitBTC and Gate.io also having ILV on their books. Overall, it is very easy

to get hold of $ILV in a centralised or decentralised manner.

Score: 5

f) Extrinsic productivity (5 points)

Can the token be used outside of the project's ecosystem? For example, can it be used as collateral elsewhere, be staked for yield or rewards, etc.

Answer: There are currently no extrinsic use cases for ILV. All staking and LP'ing is done in-house for ILV rewards.

Score: 0

4. Team

The "Team" section describes the quality of the team behind the protocol. The current version of Prime Rating favours teams that are publicly identifiable. In the case of an anon team, the track record of the specific anons involved can be taken into account.

a) Credibility and reputation (10 points)

Are the identities of the core team public? In the case of anon team members, do they have a track record or reputation in the crypto space?

Answer: Illuvium is a family affair, with 3 brothers Kieran, Aaron and Grant Warwick coming together to co-found the project. All three are now public, after it was announced just before Christmas 2021 that talented art director 'von neumann' was in fact Grant. The company is listed on LinkedIn and reports 74 team members with a public profile at the time of writing. As for the wider team's reputation,

Being related to a fourth brother, Kain, who founded Synthetix back in 2018 gives an extra level of credibility.

Score: 8

b) Relevant experience? (15 points)

Does the team have a track record of execution? Have individual team members built a product or a business before? Does the team have the necessary skills? For example, if a project is making a game, do they have a game developer?

Answer: The core team have all been involved with various businesses before, with Kieran previously chairman for a food delivery app. Their experience doesn't directly translate to crypto, that is a new field for them, but they have brother Kain's wisdom to lean on there.

The company has employed executives from Twitch, Sony and Riot Games to name a few, giving them industry relevant experience in abundance.

The development team is at least 18-strong, and has continued to grow as Illuvium scales its ambitions. There is a mixture of game, front-end, software and blockchain developers, all of which are required for a game like this.

Score: 12

c) Thought leadership and public presence (10 points)

To what extent do the protocol contributors participate in the public debate around the metaverse? Are the team members giving presentations, sharing their thoughts and opinions, and do they help raise the industry's collective intelligence?

Answer: Kieran is certainly active (and vocal!) on Twitter and has made multiple podcast appearances. He often shares thoughts on other gaming projects and tokenomic designs, which are valuable conversations for the NFT gaming space. Aaron and Kieran were both interviewed for well-known online news sites in Australia, and Kieran often attends crypto panels to discuss NFT gaming.

Score: 8

d) Ability to foster a community and coordinate resources (15 points)

How effective is the team at attracting and coordinating resources for the benefit of the protocol? Do they manage the community well, fostering a welcoming and positive environment? Does the community represent the project well externally?

Answer: With a 200k-strong Discord server and 250k followers on Twitter, Illuvium has undoubtedly been able to foster a community. They are also passionate, staying engaged with all the leaked images and game updates, something that is reflected in the positive interactions on social media.

The Illuvium team has done a great job of managing a DAO structure while building a core team that can move quickly and deliver on their ambitious roadmap. This is an achievement that cannot be understated. Being able to bring a community along on a development journey, while sharing economic upside and still delivering is extremely tough. Illuvium is one of the few projects in crypto that is managing to do so successfully, especially at scale. The risk is that constant delays and a propensity to leak everything about the game leads to apathy by the launch date.

Score: 13

5. Governance

The "Governance" section evaluates all aspects of the protocol's governance, from infrastructure to processes and distribution of governance power.

a) Extent of governance capabilities (10 points)

Distributed governance should allow token holders to participate in the governance process. How much influence does the current governance process have when everything works as intended? What parts of the protocol does governance touch? Who can put forward a vote, and are there any limits or requirements (number of tokens, only the team can queue votes up, etc.)?

Answer: The governance structure used by Illuvium allows ILV holders to vote periodically on who will represent them on the Illuvinati Council. The voting process is quadratically scaled to prevent outsize influence from whales. Token holders can also vote on the parameters relating to the council itself, things like epoch length and number of council seats. ILV tokens don't give any *direct* influence over the protocol or direction of the project however.

The proposal process is fairly informal to begin with and has few barriers to entry. As per the announcement in Discord, potential proposals should take place in the relevant server channels. From there, a temperature check determines community support and successful ideas are moved to the proposal channel. It then takes 20 upvotes for a proposal to be drafted, at which point it will be reviewed by the council at their bi-weekly meeting. At this stage only appointed team members can submit the draft to snapshot for the council to cast their votes.

Overseeing all of this is the executioner DAO or eDAO. Made up of the core team members and founders, the eDAO can take executive action to avoid deliberately malicious proposals passing. They can also, as in this recent example (printing sILV to drain an LP pool), take action to protect the protocol/token holders bypassing governance in order to act quickly.

In summary, ILV holders have the ability to indirectly influence most parts of Illuvium, but the core team retains control and the right to veto/override anything that comes through the governance process.

Score: 6

b) Active governance contributors (5 points)

Governance is time-consuming, and governance apathy is a common problem in most democratic systems, including crypto. Therefore, it's essential to have a sufficient number of community members allocate resources to the governance process of the protocol. How many individuals participate in the debate around the protocol? How active are voters? Is delegation enabled?

Answer: The Discord has a whole category dedicated to the governance process, discussion and outcomes. This fosters decent engagement and transparency. Interestingly the Illuvinati Council members tend to be a diverse mix of crypto celebs and popular Illuvium community members, which offers a nice blend of views, which they tend to share on Twitter. The nature of having 5 seats on the council doesn't really limit governance as most of the discussion takes place in the wider community and the council simply votes, it also ensures active voting. The only negative in Illuvium's setup is not having somewhere like a Discourse forum to host long form debate and iterate proposals.

Score: 4

c) Governance infrastructure robustness (10 points)

Robust infrastructure relates to how well the technology, software, and models used by the protocol's governance withstand actual use cases. Does the protocol have a reliable voting mechanism? How robust is the governance

process, and does it facilitate good governance? Are the votes binding, or do they function solely as signals to the team?

Answer: The current setup has proven reliability, having been in place for almost a year, and having every proposal successfully meet quorum. Snapshot itself is widely used and reliable. The governance process is subject to ongoing improvement but again, the community seems engaged and satisfied with the current process. Having the dedicated governance section in Discord is conducive to healthy, transparent debate and leads to relevant proposals.

As shown by the example above relating to the emergency sILV print, the eDAO model has now been stress tested and worked as intended. sILV holders who were in the affected pool will be made whole, and Illuvium's reputation benefits from the actions taken by the team.

It could be argued that the eDAO having the ability to act without consensus, and the council votes acting as a signal, mean there is still room for abuse of the system. This is true and is reflected in the score.

Score: 8

d) Process and ease of use (5 points)

This score is based on the documentation and process for governance. More specifically, how easy it is to participate in governance. Does the protocol have a formal governance process? Is sufficient documentation available? Is there a basic framework to establish social consensus? Are there channels dedicated to governance debate?

Answer: The proposal process could be clearer, as it currently relies on finding a specific Discord announcement to get started. From that point onward however, everything is documented, shared transparently and open to anyone in the community.

The drawback of the current structure is that the community might form a consensus that isn't reflected by council members. With only 5 votes being cast, there is low resolution as the deciding vote is likely to come from a single person. A larger council could increase resolution but might slow down the process.

Score: 4

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