

AAA
AA
A
BBB
BB
<b>B</b>
CCC
CC
C
D

# Contentos

## Rating Report

B Stable Outlook

June 2019

### ANALYSTS

Bingyao Song, Qiuyan Wen, Yaxin Wang  
amber@tokeninsight.com

# TI-Contentos Rating Report-EN- 2019.06.21

## 1. Project Brief

Contentos is an underlying public blockchain project designed and built for the digital content industry based on blockchain technology. It is expected to keep everyone eternally recording their own digital tracks by means of creation; to empower each creation and data with the entitlement and due values, create a more equitable, open, healthy and orderly environment for global content production, right confirmation, promotion, delivery, and transaction.

Contentos is independently developing an underlying public blockchain adapted to content industry needs, expecting to reach the transaction confirmation in seconds at zero transaction cost, with the aid of the saBFT (Self-Adaptive BFT) consensus mechanism. The underlying public blockchain of continued development will be more suitable for live streaming rewards, comments, thumbs-up and other high-frequency interaction demands in the content community. At the end of March 2019, Contentos started the public blockchain test and is gradually importing the actual users, in an effort to verify the ecological reward mechanism model and user carrying capacity continuously.

As a decentralized system run by a non-profit foundation, Contentos has set the fundamental objective to serve the public, in hope of maximizing the values for content creators and system participants. Such content system will eventually include the accounting system, content management system, copyright registration, creator certification, thumb up comment & repost, search component and other modules. Focusing on the system requirements, Contentos has built three critical infrastructures:

**Decentralized digital content system:** to construct the decentralized content agreement, benefiting from the distributed storage of blockchain technology. This agreement allows the content creators to distribute profits without access to the centralized platform channel, and directly contact the consumers and advertisers, to achieve free production, storage, promotion and delivery of contents.

**Transaction and financial system:** to create the digital asset wallet for the platform, and issue the official encrypted tokens COS for the purpose of all transactions in the platform ecology, including virtual gift transaction reward, advertising monetization, digital content transaction, intra-ecological payment, and purchase, etc. The Buyer and the Seller may automatically complete the act of purchase and sale through smart contracts, free from the involvement of any third party intermediary.

**Social network:** to build the social network on the content system, link all people via contents, for the delivery and dissemination of contents, introduce content partners by means of reward and gain sharing, and combine with the credit rating system, so that each user is required to be accountable for his/her actions, thereby achieving the well-ordered interconnection in the entire content community.

At present, users' roles in the Contentos ecology may be content producers, content distributors, content consumers, social operators, technical developers, and bookkeepers. All participants may, as any role, get involved in the ecological construction, enjoying equal rights at each node, and each user may undertake more than one role.

Based on the valid identity authentication, copyright protection, and credit rating, it is committed to a digital content blockchain worldwide, by taking advantage of the smart contract running on CVM (Contentos Virtual Machine) and the continuously developed storage mechanism. Contentos has completed the full I/O data

storage system, and will, for fear of storage burden, not link all information, but only the evidence data on the chain.

Contentos wishes to be not merely the public blockchain carrying contents or advertising values but the chain of memories recording everyone's existence.

## 2. Bottlenecks of the Industry and Contentos' Solutions

With the popularity of the mobile Internet and smart devices, qualitative changes have taken place in the production and transmission of text, pictures, music, and video, etc., giving birth to the content industry, a new sector full of promising business opportunities. Represented by Facebook, YouTube, and Twitter, etc., the Internet center platforms with tens or even hundreds of billions of dollars market value have controlled the access, delivery, and dissemination of digital content. Meantime, they gain profits based on user data in a seemingly reasonable way.

The emergence of blockchain technology has enabled people to reexamine the business model of these centralized content platforms. To sum up, the content industry mainly has the following three bottlenecks:

### 2.1 Vicious circle in the entire content industry arising from the irrational distribution of industry revenues

Users will not prefer those contents thereon just because they like a delivery platform, wherefore the most crucial part of the content industry is supposed to be the content creators. At present, there are centralized platforms and channels among the creators, consumers, and advertisers. Such centralized models may lead to two problems:

First, these creators can only stand on the margins of the industry, unable to reach consumers and advertisers directly, and most of

their values created have been extracted by the centralized platforms and payment channels so that the creators do not know their exact values created clearly.

Second, the centralized platforms are naturally making traffic distribution based on revenues, which may, on the one hand, cause the producers to deliberately cater to the platform for the sake of more traffic, and on the other hand, make it more difficult for emerging producers to create new contents in lack of traffic support. These two interact in such a way that the content industry has shown an overall downward and homogeneous trend of content quality. As a result, users cannot really get their own personalized content, but the tailored individualization from the platform.

Contentos' solution: Decentralized traffic and revenue distribution.

Contentos' traffic delivery is decentralized. Distributors, community operators, and normal user distributors, etc. are helping the platform ecosystem to work naturally on their own. Among them, the community operators may describe contents in terms of classification, labeling, and evaluation, etc., and finally form the objective and accurate positioning and evaluation to contents, thanks to a great many operators. Then, AI is used as a foundation to make the personalized matching of contents and users. Distributors may achieve accurate delivery of content by classifying the target audience in a more specialized way. Normal user distributors contribute their traffic and heat to the social classification of contents by thumbs up, comments and reports, etc.

All labor prices in the Contentos ecology are open and transparent. All, ranging from the creator-provided content values, the disseminator-involved labor values, to the advertising or copyright transferred prices, will be calculated by a completely open formula and then written into the blockchain.

## 2.2 Frequent infringement and cyber-violence arising from a useless credit system

Since the comments, thumbs up, sharing and other data on the Internet are not open and transparent, users need not be liable for their false comments or even malicious falsehoods, giving rise to the common occurrence of cyber-violence.

Contentos' solution: Untampered credit system.

With the untampered feature of blockchain, the contents published in Contentos, including all texts, pictures, music and videos; and all interactive behaviors, including comments, thumbs up and repost, etc. will be chain-linked in real time, not to be altered anymore. Contentos will set the credit system to improve the traditional opaque content industry system. A transparent credit system will be employed to record on the chain the user-generated content quality and interactive behaviors etc. Only by positive and honest behaviors can users upgrade the credit rating, and gain more revenues and credibility. As an important parameter of the platform ecosystem, the user's credit rating is deeply related to his revenues. In this way, all users are self-motivated to create a healthy and transparent content creation environment and an orderly evaluation system together.

## 2.3 Frequent infringement acts arising from failure to accurately confirm the rights of digital contents

The massive digital content in the Internet world has suffered from a long-standing issue of right confirmation. All centralized platforms are mutually standalone, plus complex transactions, rendering it extremely difficult to trace the copyright transfer, unclear penalty mechanism, and frequent infringement acts and copyright disputes.

Contentos' solution: Confirmation, transaction and legal attest of nonphysical rights in rem.

Benefiting from the trusted data and untampered features of blockchain, it is aimed at making clear the content copyright owners and track the copyright transfer and realize the copyright registration and original content statement on the chain. Secondary creation and other behaviors will be also recorded on the blockchain.

### 3. Challenges and Opportunities

#### 3.1 Whether the pricing mechanism of smart contract works on the platform

Customized contents have ignited the first dividend outbreak of the content industry on the Internet. The basis for a customization to generate values lies in the fineness of data granularity, so as to precisely make the individual-based smart contract. Thus, the platform has to operate for a certain amount of time before judging whether the Contentos' smart contract mechanism can stand the test of the market in the future.

#### 3.2 New industry ecology of combining the content industry and 5G

With the coming of the 5G era, the content industry will face greater opportunities and challenges. Time will prove whether Contentos can take advantage of 5G's arrival to find the right business model in content creation, promotion, and delivery, thereby gaining a greater influence within the industry. What changes and opportunities the new technology will bring to the content industry deserve industry-wide attention, and the new ecology of future industry development is definitely worth the wait.

### 4. Technical Framework and Token Economy

With the DPoS consensus mechanism, Contentos' underlying public blockchain has introduced the saBFT (Self-Adaptive BFT)

mechanism, in an effort to further boost the server speed. Thanks to the perfect account privilege level and authorization management function, Contentos system provides the JSON RPC-based interface service and supports the front end applications to be accessed by HTTP, HTTPS or Web socket.

### 4.1 Technical architecture

Contentos' technical architecture is divided into three layers: protocol Layer, service layer and application layer. In terms of protocol Layer, Contentos has made improved development with STEEM as the infrastructure, taken example by STEEM + IPFS + interchain for complementation, and increased the side chain properties, thereby achieving the interchain operations to other public blockchains. The service layer employs the blockchain + AI audit to encourage users to carry out content audits. In terms of the application layer, the packaged service layer APIs are adapted to develop the community based on the Contentos content blockchain and package all components and extended functions developed by developers.

Figure 4-1 Technical architecture



Source: Contentos Whitepaper

### 4.2 Consensus mechanism

Contentos has, BFT-based, achieved the intelligent and dynamically adjusted consensus algorithm saBFT. Such an algorithm has three consensus models: linear, real-time and hybrid. Characterized by the component-based design, Contentos consensus model supports the hot swap, able to be customized and configured into the intelligent dynamic selection. Under the intelligent selection mode, the intelligence algorithm will be based upon the network hash rate, bandwidth, transaction volume to be confirmed and other factors, choose the most appropriate consensus model.

**4.3 Token economy**

On June 13, 2018, Contentos has based on Ethereum, issued 10 billion tokens, which, COS for short, are the main units of valuation for production consumption in the Contentos ecosystem.

In principle, COS will not be issued more than initially planned. However, after finishing 35 percent of mining (expected in 12 years), if there are additional needs for ecological development, the foundation will initiate a BP voting decision at that time.

The allocation proportion of tokens at present is shown in the following chart:

**Figure 4-2 Token Allocation**



Source: Contentos, TokenInsight

**Figure 4-3 Utilization of Tokens**

Purpose	Proportion	Description
---------	------------	-------------

(%)

			Institutional investors and advisers;
			Strategic Sale: 9.5%, to unlock 1/6 after listed in the Exchange, followed by 1/6 every six months;
Private placement	30%		Seed Sale: 11.32%, to unlock 1/4 after listed in the Exchange, followed by 1/4 every six months;
			Advisers and others: 9.18%, to release 25% in the 13th month after listed in the Exchange, followed by 25% every six months.
Foundation reservation	10%	–	
Team	15%		To release 25% in the 13th month after listed in the Exchange, followed by 25% every six months, totaling 2.5 years.
Ecological operation rewards (Creation mining)	40%		After the launching of the main net, 35% to be incrementally produced following the blockchain in 12 years (total output is 0.448% in the first year). The remaining 5% will be given to DApp in five years for the cold boot to its users.
Community operation and developer	5%	–	

participation  
rewards

---

Source: Contentos, TokenInsight

Current application scenarios of COS tokens include:

Transactions among users within the ecosystem: including rewards to anchors, creator video subscription, fans-sponsored web celebrity (till now, the PhotoGrid photo community on the chain has achieved the COS sponsored photo creator function, and recorded the transaction data on the chain); further including the purchase of advertising space in the Contentos ecology, and such advertising space includes the advertiser's promotion advertising and the creators' generated contents to be popularized, and nowadays, the head promotion position on the Contentos.io content cluster website will be exposed after the advertisers or creators have paid COS.

Smart contract fuel: The smart contract shall operate with sufficient energy values, which may be acquired by COS.

COS may be locked into Contentos Power (CP): similar to Steem Power in the Steem ecology, users may pledge and convert COS tokens into CP in the future. With more CP and higher weight in comments or thumb up-based UGC, the creators may acquire more ecological rewards. Contentos keeps optimizing the CP functions, and perfecting the economic model behind, to prevent the returning users from gaining too much control power while new users have no say in matters.

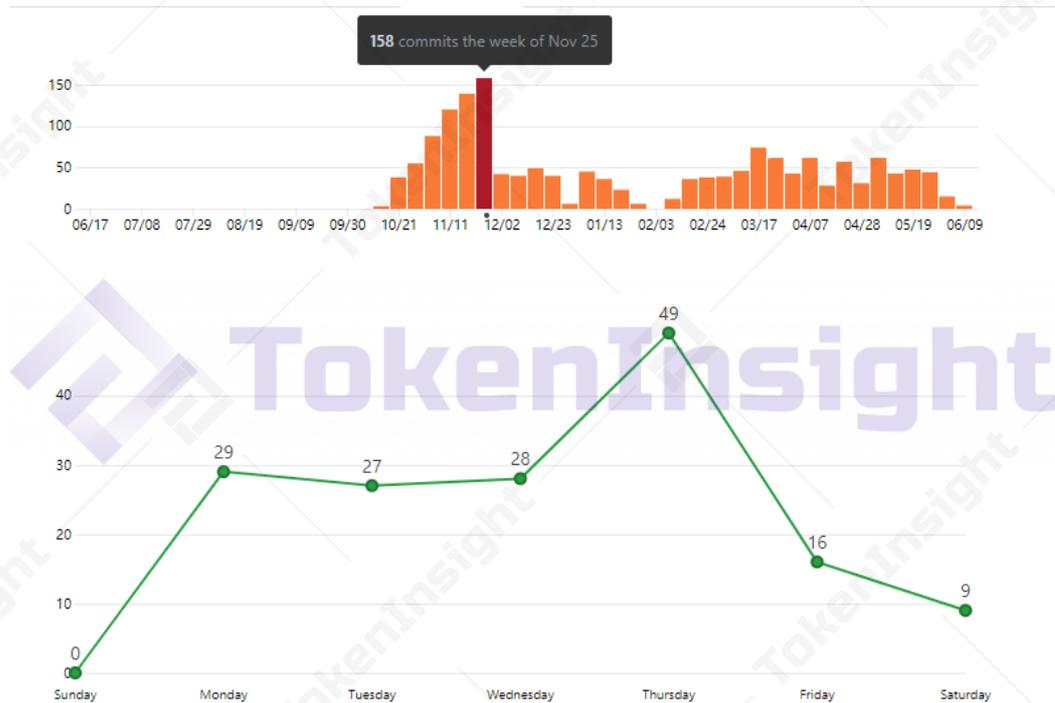
#### 4.4 Codes

Contentos' public blockchain codes are completely accessible to all in GitHub, and the on-chain transaction data of test net may also be used for the real-time monitoring in Contentos blockchain browser,

so that developer community may easily make the suggestions on optimization and safety check.

It can be inspected from the detection of codes in GitHub that the quantity and functions of Contentos project codes comply with the schedule. Since October 2018, Contentos' code submission has maintained at a high level, at a peak of up to 158 times, averaging 48 times weekly. Besides, codes have a high frequency of submission.

**Figure 4-4 Github Code Submission**



Source: Github.com

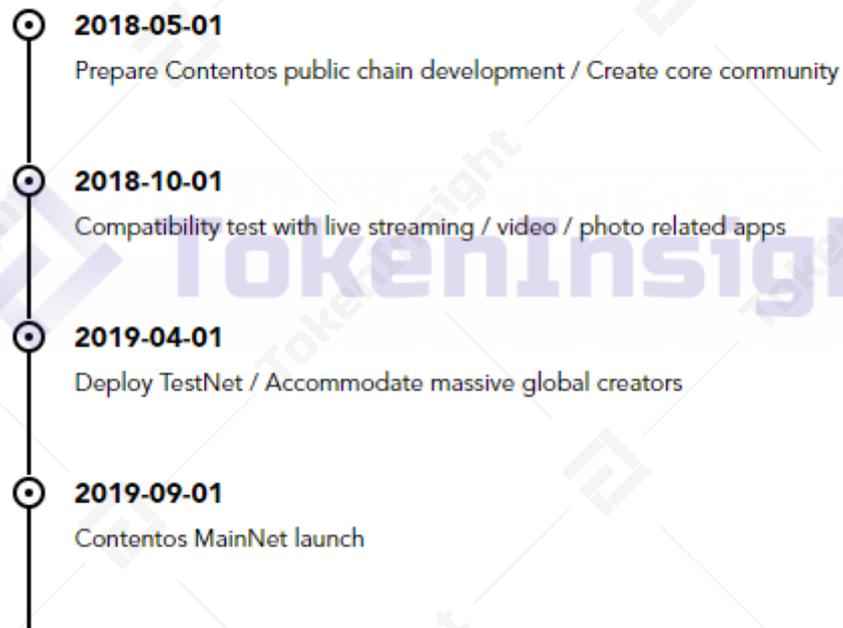
## 5. Project Schedule

Contentos project is progressing well, the test net totals five versions, v0.1 and v0.2 launched in the first half of 2019, and the remaining three are to be released gradually during the second half of the year. In the meantime, Contentos is planning to officially release the public content blockchain in September 2019, which is under test. Contentos has not disclosed any project plans after 2020.

Now, the test net is going well: there have been over 4,000DAU, totaling more than 53,000 created addresses; access to four DApps; daily average TX of over 35,000 on the chain.

**Figure 5-1 Roadmap**

### ROAD MAP



Source: Contentos, TokenInsight

## 6. Team, Partners and Investment Institutions

### 6.1 Team information

So far, Contentos has 45 members, including 25 from the Development Team, 5 from Management Team, 10 from Marketing Team and 5 from other teams. Those developers account for 56% of total members, which is a higher percentage. In addition, there are 4 from Adviser Team. Two advisers are Shao Bo, Co-founder of Matrix Partners China, and Ricky Butler, the early practitioner of the blockchain entertainment industry. Such advisers have brought

support to the technology-based team from finance, investment, entertainment, and content industries, thereby assisting Contentos to integrate and improve its development in the digital content industry. Meantime, Contentos has international operation teams and localized operation experience in 85 countries and territories.

**Figure 6-1 Profiles of Team Members**

Name	Job title	Profile
Mick Tsai	Co-founder	Master's degree from California State University, ever worked as Senior R&D Manager in Trend Micro, and Senior Product Director in Cheetah Mobile for over 5 years. Familiar with the digital content industry, and boasting rich technical R&D experience.
Zac Nien	Senior Product Director	Master's degree from Tsinghua University, ever worked as Senior Engineer in Trend Micro, and Senior Product Manager in Cheetah Mobile, boasting 10 years of IT security experience, plus deep insight into and research on the software programming, website design, Internet of Things and all kinds of apps.
Peter Wei	Vice President of Technology	Ever worked as Software Engineer in HTC and Cheetah Mobile, boasting over 10 years of technical R&D experience. Familiar with various data structures, security protocols, and encryption algorithms, plus deep analysis on IT.

Ava Wen      Asia-Pacific  
General  
Manager

Ever worked as Senior Manager of Strategic Operations in Taiwan market in iQIYI and Cheetah Mobile. Boasting over 10 years of experience in the digital content and entertainment industry, plus professional analysis and research on the market.

---

MBA, Harvard Business School, ever worked as Co-founder of Matrix Partners China, and also Board Members of many firms, including Edove, MeetMindful, ParentLab, and other 4 corporations.

Shao Bo      Adviser

Ever served as Global Vice President of eBay, Founder & CEO of eBay, with rich entrepreneurial, management and investment experience, and chosen as "40 under 40" by Fortune Magazine in 2012.

---

Charles Fan    Adviser

Ph. D in Electrical Engineer, California Institute of Technology, ever worked as CTO in Dell China, Cheetah Mobile, and other transnational corporations for more than 15 years. Currently working as Founder & CTO of MemVerge, which has completed the A round of over USD 20 million financings. Boasting rich technology development experience of big data, deep insight into the distributed ledger technology, security protocol, and encryption algorithm.

Source: Contentos, TokenInsight

### 6.2 Partners

To save the customer acquisition costs and accelerate all its performance tests, Contentos has, at the initial phase of project execution, achieved a strategic cooperation with Cheetah Mobile, and successively introduced the token mechanism and content creation award to LiveMe, Cheez short video, PhotoGrid (photo creation tool community) and other mature Apps, in an effort to transfer the traditional App users into the blockchain world, by means of proper guidance. Meanwhile, Contentos has, through the open platform concept, expanded the cooperation with numerous blockchain projects, such as importing users for the cooperative HyperSnakes blockchain game by the video creation. Recent cooperation projects include the Blockchain Cuties, Unlimited Tower and HyperSnakes on the application layer, SOMESING of content service, and Harmony, Tomochain, Binance Chain, etc. of the underlying technology.

Within two months after the public blockchain test net was launched by the end of March 2019, benefiting from the real users imported by such ecological partners as PhotoGrid, Contentos has created over 53,000 account addresses, issued 46,000 photography works, increased up to 35,000 daily operators, and over 4,000 daily active users on the chain.

**Figure 6-2 Contentos' Partners**

Source: Contentos, TokenInsight

### 6.3 Investment institutions

According to the Contentos’ official announcement, those institutions investing in Contentos include IDG Capital, Matrix Partners China, Binance Labs, LD Capital, Gobi Partners, etc., some of which boast of large capital volumes and are supported by the real economy. Investment institutions are from mainland China, and Europe, etc. In terms of technology, Contentos has maintained a partnership with Binance Labs. In terms of core products, Contentos has a partnership with Matrix Partners China, and Shao Bo, Co-founder of Matrix Partners China, serving as Adviser in Contentos, so that the core products may seek the support of financial resources from an entity company.

**Figure 6-3 List of Contentos’ Investment Institutions**

Name	Profile
IDG Capital	Established in 1992, IDG Capital has, as the earliest foreign investment fund into the Chinese market, become the leader of China’s venture capital industry. IDG Capital has successfully invested in more than 800 companies, including Bilibili, Meituan, iQIYI, Sohu, Baidu, Tencent, 360 and other industry leaders.
Matrix Partners	Established in 2008, Matrix Partners China has specialized in medium and early stage investment, with founders including Zhang Ying, Shao Bo, Xiong Fei, and other well-known industry investors. It has successfully invested in many enterprises, including Liepin, Cheetah Mobile, Didi Chuxing, CorePlayer, and Lianjia Real Estate, etc. Matrix Partners China is managing multiple USD and RMB funds, with a total value of up to RMB 21 billion.

### Binance Labs

As an investment organization subordinate to Binance, one of the largest cryptocurrency transaction platforms, Binance Labs has specialized in the direct investment of startups and blockchain projects. Now, it has incubated 13 blockchain projects, including emerging companies that are developing iGaming, anti-phishing solutions, decentralized oracles, and encryption security solutions, etc.

Source: Contentos, TokenInsight

**Figure 6-4 Contentos' Investors**

Source: Contentos, TokenInsight

The report is based on public sources considered to be reliable, but TokenInsight Inc. does not guarantee the accuracy or completeness of any information contained herein. The report had been prepared for informative purposes only and does not constitute an offer or a recommendation to purchase, hold, or sell any cryptocurrencies (tokens) or to engage in any investment activities. Any opinions or expressions herein reflect a judgment made as of the date of publication, and TokenInsight Inc. reserves the right to withdraw or amend its acknowledgment at any time in its sole discretion. TokenInsight Inc. will periodically or irregularly track the subjects of the reports to determine whether to adjust the acknowledgement and will publish them in a timely manner.

TokenInsight Inc. takes its due diligence to ensure the report provides a true and fair view without potential influences of any third parties. There is no association between TokenInsight Inc. and the subject referred in the report which would harm the objectivity, independence, and impartiality of the report.

Trading and investing in cryptocurrencies (tokens) may involve significant risks including price volatility and illiquidity. Investors should fully aware the potential risks and are not to construe the content of the report as the only information for investment activities. None of the products or TokenInsight Inc, nor any of its authors or employees shall be liable to any party for its direct or indirect losses alleged to have been suffered on account thereof.

All rights reserved to TokenInsight Inc.



**TokenInsight**

## Symbols and Definition of Risk Ratings

- AAA** The technical foundation is extremely solid, the status of operations is extremely stable, the extent of influence on the project by unfavorable changes in the environment or uncertain factors is extremely small, and risk is extremely low.
- AA** The technical foundation is very solid, the status of operations is very stable, the extent of influence on the project by unfavourable changes in the environment or uncertain factors is very small, and risk is very low.
- A** The technical foundation is solid, the status of operations is stable, the extent of influence on the project by unfavourable changes in the environment or uncertain factors is relatively small, and risk is relatively low.
- BBB** Technical feasibility is very good, the status of operations is stable, influence on the project by unfavourable changes in the environment or uncertain factors exists to a certain extent, and risk is controllable.
- BB** Technical feasibility is good, the status of operations is relatively stable, the possibility of influence on the project by unfavourable changes in the environment or uncertain factors exists to a relatively large extent, and risk is basically controllable.
- B** Technical feasibility is moderate, the status of operations is relatively stable, the possibility of influence on the project by unfavourable changes in the environment or uncertain factors exists to a very large extent, and risk is to a definitely limited extent controllable.
- CCC** The technical foundation or idea has certain problems, the application scenarios are limited, the project is susceptible to influence by uncertain factors, both internal and external, and has relatively large risk.
- CC** The technical foundation or idea has considerable problems, and application scenarios are highly limited, which makes for a project that has few internal or external factors to consider in the context of sound development, and carries a very large risk.
- C** The technical foundation or idea has substantial problems, and lacks deliberation upon possible application scenarios. The token has almost no usage value, and the project suffers from extremely large risk.
- D** The project is riddled with problems and carries an extremely high risk of failure.

**To Obtain the Latest Data and Rating Reports in Blockchain Industry**

Website [www.tokeninsight.com](http://www.tokeninsight.com)

Cooperation [bd@tokeninsight.com](mailto:bd@tokeninsight.com)

**Other Contacts**

WeChat Official Account [Tokenin](#)

Official Twitter [TokenInsight](#)

Official Weibo [TokenInsight](#)

Official Telegram <https://t.me/TokenInsightOfficial>

WeChat  
Mini APP



Official  
Twitter

