Carmentis Tokenomics Overview (Daft Version as of December 2nd 2025)

Token Name: CMTS (Carmentis Token)
Total Supply: 1,000,000,000 CMTS

The purpose of this paper is to explain the way Carmentis Proof keeping token economy works

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Executive summary :

The **CMTS token economy** is designed to ensure that **Carmentis** remains a trustless, neutral, and censorship-resistant third party for securely managing proofs and critical data in multiparty transactions.

The CMTS utility token, as the core utility of the Carmentis platform, serves several key functions:

- **Pay for transaction fees** on the platform every time a service operator anchors a data integrity proof on the blockchain (e.g., document verification, payment).
- **Reward node validators** who participate into the blockchain, guaranteeing that your proof are safe and kept in the long term through staking
- **Reward investors** through token holding staking rewards
- **Encourage early adoption :** Whether you are an application developer, a service operator, source of truth (oracle) or a service user, Carmentis will develop grants and bounty programs to maximise quality of service, adoption and usage
- **Guaranty Liquidity** on crypto asset network and exchanges
- **Governance**: Main CMTS holders will have decision rights in key platform evolutions, promoting a decentralised governance model where stakeholders shape Carmentis's future.
- **Foster long term ecosystem development** according to governance decisions

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1. **Abstract**

Carmentis is a blockchain-based data integrity solution that digitally fingerprints data sources and securely records them on a private, permissioned ledger (micro-blockchain) as authenticated proof of origin, providing verifiable data integrity proof for all parties in transactions.

Whether it be digital records, videos, files, social media posts, communications or payment records, Carmentis definitively proves the existence of the data in its original form and cannot be tampered with or altered after the fact.

Service operating companies pay transaction fees (in CMTS) to use the platform, while Carmentis validator nodes earn these fees through a Proof-of-Stake (PoS) distribution model. Validators must stake CMTS to operate.

Each ledger record is anchored in the blockchain, either publicly or privately. Public records are openly verifiable, while private records are accessible only by authorised parties, with privacy ensured through end-to-end encryption.

Carmentis open infrastructure connects multiple sources of truth called **oracles** to certify the existence and authenticity of original data (ID bank records,...) that can be used by operating companies in their data workflow.

2. **Packaging Data**

An operating company begins by first determining what type of information they wish to permanently record in its exact state on the blockchain and the data that needs to be proved to a third party. To perform this task, it can use the **Workspace** provided by Carmentis or another workspace developed by a third party in the network.   It also can aggregate external sources of data coming from trusted oracles (ID, certificated,...) to include into the record.

Nearly any type of information or data that can be converted to a file or a database record can be permanently memorialised into a proof by the Carmentis platform.

The process starts with uploading the file or data payload into the platform. The file contents (byte data) are then run through a multi-signature cryptographic function, which requires the input of two public keys—one from each end user (cf wallet) and the other from the company hosting the transaction (cf operator server)

The Carmentis platform facilitates the transaction through its user wallet, SDK or its server version called **operator server**. In return, the operating company pays a usage fee, which may be structured as a per-use transaction fee denominated in CMTS or as an ongoing subscription fee with a certain number of transactions permitted.
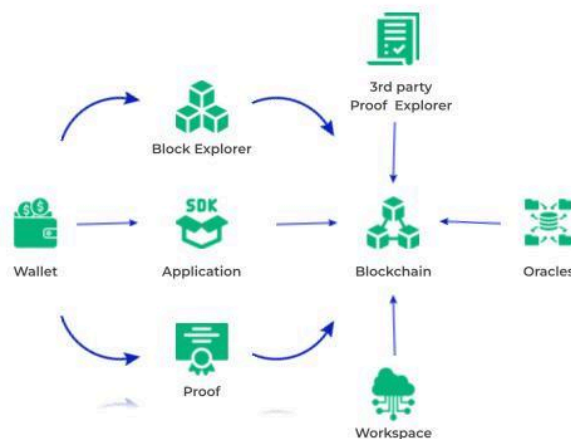
Wallet: Store participant keys & proof to interact with blockchain & application

Workspace: Build your data flow and deploy it on the blockchain and in your application

API & SDK: Integrate proof management into you application

Blockchain: Anchor all you need in a tamper proof verifiable fashion

Proof explorer: Show proof to third parties on your terms

Oracles: Use third parties sources of truth in your workflow like ID, Bank credentials, Certificate,......

Recording

The encrypted file is then recorded by a Carmentis validation node onto its discrete micro-blockchain. These micro-blockchains are private and permissioned such that even Carmentis is unable to view or access the contents of each chain. The operating company can require that the end user pay a transaction fee to record each transaction or can offer its services on any pay or fee structure it sees feasible

Examples of the type of data or information that can be recorded on Carmentis include but are not limited to:

✅ Identification Documents

✅ Banking and financial services documents and information

✅ Certificates of Authenticity or Proof of Origin

✅ Logistics and shipping documents

✅ Property titles and deeds

Oracle : A network of partners providing sources of truth is available and will be extended to us external certification like identity, bank records, proof of delivery in various scenarios. Oracles have the opportunity to price their services in CMTS eventually with a dynamic pricing link to their operating currency.

3. <u>Verifying Data</u>

All data recorded through Carmentis can be queried and verified to ensure **accuracy, compliance, and transparency**, serving as a **proof-of-record** for the end user and/or company provided you have the right access keys.

An end user of a company-sponsored micro-blockchain can request to view the data and ask that the company provide a **cryptographic verification record** to prove the originality of the data or file and the sequence of events without requiring company approval.

When a company validator has written a proof to the Carmentis public contract, the source data can be verified against a publicly recorded hash. This is done by comparing the output values of the cryptographic function with the one recorded on-chain at some point prior and the one generated by the file or data in question using the input public keys. Carmentis will then visualise the result, letting the end user know if a comparison file matches the original source file.

There is no fee to query on-chain data. A Proof explorer is available from Carmentis or can be developed by a third party to guarantee non censorship.

API / SDK /Operator server integration

Integration for Businesses and Developers: Businesses and their developers can seamlessly integrate **Carmentis's on-chain probative data hub** into their existing business workflows using the Carmentis **API**, **SDK or its operator server version**. This integration enables companies to incorporate blockchain-backed verification, proofkeeping, and data authenticity services directly within their operational pipeline.

To ensure compatibility and ease of use, **Carmentis specifies the required standards and format** for any data submitted via the API. This includes clear guidelines on acceptable data structures, formatting requirements, and security protocols. Businesses can submit data to be stored on-chain and later verify it through straightforward API queries that retrieve on-chain proof results.

Access Requirements: Access to the Carmentis API is available to all but synchronising your replication node for your specific needs is recommended, ensuring that businesses can scale their usage based on need.

This setup allows businesses to leverage Carmentis's blockchain capabilities within their own systems, enhancing data security, transparency, and traceability while maintaining control over their data verification processes.

4**. Token Acquisition**

Participants in the **Carmentis ecosystem** start by acquiring **CMTS tokens**, which can be obtained in two main ways:

1. **Primary Offering**: CMTS tokens are first made available through Carmentis's initial token sale rounds, where participants can purchase tokens directly at a fixed price set for each specific sale round from Carmentis SAS. This structure provides early participants with an opportunity to acquire tokens at a stable price before they enter the open market.
2. **Ecosystem participant rewards** (Service User, clients, developers, marketers) Early participants to the Carmentis ecosystem will be granted tokens to reward their efforts according to token allocation.
3. **Secondary Market**: After the initial token sales, CMTS tokens will also be available on various centralised exchanges and decentralised ecosystems in wrapped versions, where they can be bought and sold at a variable market price. This price is determined by supply and demand dynamics on the exchange, meaning it fluctuates based on market conditions at the time of purchase.
4. **Liquidity and Conversion to stablecoins :** Carmentis SAS will operate bridges with ERC 20 environment to guarantee liquidity on main decentralised exchanges until other companies specialised in Blockchain interoperability takes the lead to avoid risk in an environment it doesn't have control on.
5. **CMTS Listing :** At this stage, Carmentis does not guarantee listing on any centralised exchange or that tokens will have liquidity and/or be tradable but has clear intention to list CMTS on exchanges in the next 12 to 24 months

5. Token utility

Once acquired, CMTS tokens are used to access and pay for services within the Carmentis ecosystem, such as proofkeeping, staking, or other ecosystem activities.

Both **Carmentis and the companies** that operate on the platform have flexibility in managing their CMTS tokens:

Transaction Fees

Operating companies or end users can transact on a pay-per-use basis. An example fee may include anchoring data on the blockchain, pay for KYC to an oracle for the end user. The fees do not require any monthly obligation or a minimum number of transactions. The protocol will charge a fee in CMTS tokens to service operators and these collected fees will be redistributed to validation nodes and Oracle service providers

Pricing : Carmentis anchoring Pricing is determined by an auction process in the memory pool that fixes the price in CMTS. Price is dependent on the size of the record and the Gas Price P. P will adjust according to the network capacity target @50% similar to Ethereum EIP 1559. The minimum P value per transaction will be fixed at 0.001.

Network capacity for the testnet will be 1000 microblock (Proof/ data record) anchoring per Block every 5 seconds. Which leads to 6,3 million blocks per year and potentially 6,3 billions transactions per year.

Those figures are subject to change according to governance decisions in the best interest of stake holders in the ecosystem when usage and technical capacity grow.

Formula for microblock pricing:
$$P*(1+ \text{size in Kbytes})$$
in CMNTS

Enterprise Fees (Pay for me / Gaz station)

Carmentis protocol will allow distribution company partners and Carmentis SAS itself to handle all the complexity of the token economy on behalf of their operating client

and paying transaction while maintaining client sovereignty on their service. This option will be available natively through the concept of PayForMe/ Gaz station.

Validator Staking : 100 000 000 tokens

Validators must stake a minimum of 1,000,000 CMTS to run validation nodes and earn rewards based on performance, promoting reliability and security. First validators will have purchased those tokens in private sales rounds. To encourage network decentralisation and a long term convincing number of nodes, staking more than 1 000 000 tokens on a node doesn't get you more reward.

The Carmentis platform will run a validator node grant program designed to reward long-term commitment by providing CMTS token holders with incentives based on the duration of their staking period.

Validator staking distribution rule:

- 4 tokens CMTS per block for the first 2 years
- 2 CMTS tokens per block for the next 2 years
- 1 CMTS tokens per block until we reach the 100 000 000 token limit

The total rewards are capped at **100,000,000 tokens**.

Validator rewards are based on their uptime and performance, meaning that the most reliable and high-performing validators receive the highest rewards.

This system encourages consistent participation and optimal performance, which helps keep the network secure and efficient. Validators are incentivized through transaction fees and protocol rewards, ensuring that they are properly compensated for their role in maintaining the network.

Validators are incentivized to perform reliably and accurately, ensuring that the Carmentis network remains secure, efficient, and trusted by its users.

8. **Token Holder Staking Rewards : 100,000,000 tokens**

APY Bonus Multiplier

0% — 2% — 4% — 6% — 8%

0 — 13 — 26 — 39 — 52

Lock Duration (Weeks)
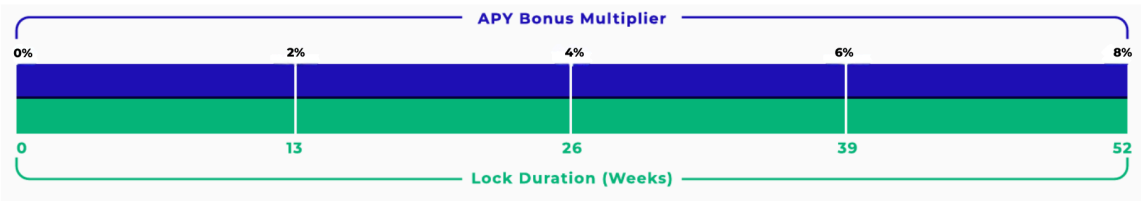
CMTS holders can stake tokens for rewards, which vary based on pool duration participation. If holders withdraw their tokens before their committed duration time they lose their reward. Once the staking reserve is empty the staking program ends.

Staggered Staking Model:

- **2% APY** for 3 months staking.
- **4% APY** for 6 months staking.
- **6% APY** for 9 months staking.
- **8% APY** for 12 months staking.

The total rewards are capped at **100,000,000 tokens**.

9. Liquidity Pool Staking : 70 000 000 Tokens (57% CEX and 43% DEX)

DEX liquidity

Post-token sale, CMTS is expected to be available in a wrapped version on ERC 20 decentralised exchanges through Carmentis SAS operated bridges. In order to encourage third-party liquidity providers to fund the DEX liquidity pool, Carmentis will offer LP staking rewards for all participants.

Carmentis will create a staking contract that rewards liquidity providers when LP shares generated from the DEX pool are deposited into the CMTS staking contract. CMTS is paid into the staking pool and earned by LP miners based on their pro rata share in the staking pool.

However, once sufficient liquidity is reached and third party are taking the lead, Carmentis SAS doesn't intend to maintain Cross chain bridges to avoid liabilities on other ecosystems.

CEX Liquidity

In addition to DEX liquidity, **4% of the total CMTS token supply** is dedicated to supporting **CEX liquidity**. This allocation will ensure that there is sufficient liquidity on centralized exchanges, facilitating smoother transactions and reducing price volatility on major trading platforms.

By maintaining a dedicated supply for CEX liquidity, Carmentis can attract a broader range of investors and increase market accessibility, making it easier for users who prefer centralized exchanges to participate in the ecosystem.

The combination of incentivized DEX liquidity and CEX liquidity allocation helps maintain balanced and accessible trading options across both types of exchanges, supporting the token's market stability and fostering widespread adoption.

This system gives participants multiple ways to access CMTS tokens, ensures flexibility for platform users, and provides Carmentis with mechanisms to maintain a balanced and sustainable token economy.

10. <u>Bug bounty, Airdrops and Gamification 35 000 000 Tokens</u>

Carmentis will leverage airdrops and gamification to build the developers and users community and drive early adoption and engagement. These mechanisms are designed to incentivize platform interaction, reward early users, and encourage long-term participation in the Carmentis ecosystem.

- **Bug Bounty Program**: Carmentis will implement a Bug Bounty Program to encourage developers and community members to identify and report vulnerabilities or bugs within the platform. This program will reward participants who help improve the security and functionality of the Carmentis ecosystem, ensuring that contributors are fairly compensated for enhancing platform resilience. By dedicating funds to this program, Carmentis promotes a secure, high-quality environment that benefits all users and stakeholders.

- **Early User Airdrops**: A portion of CMTS tokens will be distributed to early users to encourage onboarding and engagement with the platform's features. This will help kickstart activity and ensure that users are incentivized to explore the platform demo applications.

  Example : **"Sign-to-Earn" Program**: enabling users to earn CMTS tokens for completing specific demo application tasks, such as signing documents, verifying transactions, or utilising key services like proofkeeping.

- **Gamification :** Lottery games that display Carmentis key benefit in managing probative multiparty transactional workflow will be deployed to foster platform awareness and usage. Those games have great viral effects and can be performed in a very differentiating way for Carmentis benefit.

This program familiarises users with Carmentis's functionality, leading to increased adoption and a stronger, more engaged community.

11. Growth, Clients and Marketing : 65 000 000 tokens

Operating companies who build applications on the Carmentis platform will be eligible for rewards from the **Growth and Marketing budget** token budget. This incentivizes clients and developers who contribute to the ecosystem, promoting innovation and increasing platform utility, without relying on the general airdrop allocation.

Carmentis wants to have one partner per vertical business (Logistics, Banks, Payment, Trade finance, Trust, Luxury, Media) where it has compelling use cases.

12. Supply reserve for ecosystem expansion : 100 000 000 tokens

The Carmentis platform reserves the right to **introduce new supply** to the secondary market by selling some of its CMTS holdings as needed. This approach enables Carmentis to support market liquidity while also funding ongoing operations and development. However, these actions are managed strategically to avoid creating undue volatility in the market.

13. Governance and Voting

The Carmentis platform's governance structure is designed to give CMTS token holders the ability to influence key platform decisions and contribute to its development.

Governance Model:

Carmentis governance will initially be managed by founding team and large investors with more than 10 000 000 tokens (1 vote per 10M tokens or more), with large stakeholders playing a significant role. Token holders with substantial CMTS holdings will have a say in governance matters. As the platform grows, smaller token holders will also be able to participate in governance decisions, allowing for a broader, more decentralised voting system.

Token Utility:

CMTS tokens serve a crucial role in the Carmentis ecosystem, enabling users to pay for transaction fees and incentivizing validators through staking. The token's utility ensures that it plays an integral part in the platform's security, scalability, and overall functionality.

Governance rollout will proceed in three phases:

- **Phase 1**: Board-managed proposals, with large token holders voting. Proposal-making will be performed by the Carmentis board. Large token holders with at least a 1% stake in the total CMTS supply.
- **Phase 2**: Proposal-making will be opened up to community members who hold 100,000 CMTS or more. Veto power by 2/3rd of the board. Execution of the proposals is split between the board's elected parties and the party designated by the proposal maker
- **Phase 3**: Full decentralization with open proposal and voting. Anyone can vote. A special council shall be set up to review proposals to ensure they do not violate any governance rules.

14. <u>Token Sales</u>

Carmentis will create 1,000,000,000 (1 billion) CMTS tokens at the token generation event as its initial supply. Carmentis will publish the token contract address upon minting. These tokens will be sold according to the following structure

Token Allocation:

- **Seed**: 60,000,000 CMTS at 0.01€ (sold out).
- **Private**: 100,000,000 CMTS (Sale starts Q1 2025)
- **Public**: 100,000,000 CMTS (Sale scheduled Q4 2025/ Q12026)

A token sale is a dynamic process. Please note that while Carmentis makes every effort to update this document, the above is subject to change at any time and this published version may have incorrect values. Please inquire with the team to confirm any figures

15. <u>Token Distribution</u>

Distribution Breakdown:

- Seed Sale: 6%

- Private Sale: 10%
- Public Sale: 10%
- Team & Advisors: 13%
- Operations & Dev: 14%
- Marketing & Growth: 6,5%
- Airdrops: 3.5%
- Staking Rewards: 10%
- Ecosystem Grants: 10%
- Node Rewards: 10%
- Exchange Liquidity & MM: 7%

16. **Token Vesting**

Token vesting schedules are established to ensure a controlled release of tokens into circulation over 30 months.

Token Vesting

Seed Sale	• 10% unlocked on day 2 • 3 mo. lockup • 9 mo. linear vesting thereafter
Private Sale	• 10% unlocked on day 2 • 3 mo. lockup • 6 mo. linear vesting thereafter
Public Sale	• 20% unlocked on day 2 • 3 mo. lockup • 4 mo. linear vesting thereafter
Team & Advisors	• 12 mo. lockup • 18 mo. linear vesting thereafter
Operations & Dev	• 3 mo. lockup • 18 mo. linear vesting thereafter
Marketing & Growth	• 1 mo. lockup • 12 mo. linear vesting thereafter

Airdrops	• Unlocked as needed • Not to exceed 10M tokens/ month
Staking Rewards	• Unlocked as per actual earnings • Not to exceed 10M tokens/ month
Ecosystem Grants	• Unlocked as per DAO vote
Node Rewards	• Unlocked as per actual earnings • Not to exceed 10M tokens/ month
Exchange Liq. & MM	• 50% unlocked at DEX listing • 25% unlocked at CEX listing • 25% unlocked for MM after 14 days