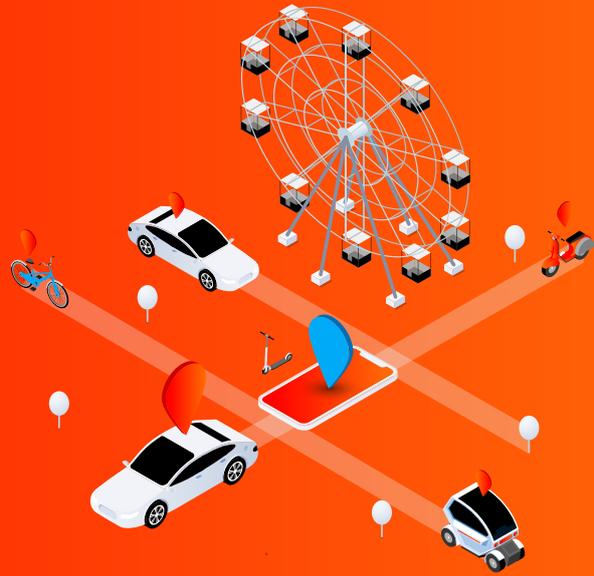




THE POWER OF BLOCKCHAIN FOR MOBILITY

CDK TOKEN WHITE PAPER





This White paper describes the CDK token, not why it was made this way nor how it precisely works.

These questions and many more are extensively answered in a nearly 100-page long Yellow Paper, available on demand against the signature of NDA. Indeed, that document is detailed enough that competition would be thrilled to have their hand on it.



CONTENT

1. LEGAL DISCLAIMER	5
2. WHO IS CDK AG?	6
2.1 Team	6
2.2 Current partners	8
3. PRESENTATION	9
3.1 Originality – Problem solved	9
3.2 SWOT	10
3.3 Tokens stakeholders	10
4. CDK TRANSACTION	12
4.1 overview	12
4.2 details	12
5. IPFS	14
6. NFT DESCRIPTION	14



7. TOKENOMICS	15
7.1 Technical aspects	15
7.2 Monetary flows	16
7.3 Governance and vCDK	18
7.4 Grants program	23
7.5 Tokens distribution	23
7.7 Costs of operations and monetary outflows	24
8. ROADMAP	26
9. VERTICALS & USE CASES	27
9.1 Mobility: CodeNekt	27
9.1.1 CodeNekt's Business Plan	28
9.1.2 CodeNekt's uses cases	32
9.1.3 Fidelity program	34
9.2 Transport	35
9.3 Real estate	35
APPENDIX	36



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All information, opinions, forecasts, estimations, prices, values, trends, statistics and data mentioned within this document are indicative and subject to market conditions that might change in the future. All case studies are described for explanatory and illustrative purposes only”.

The Blockchain technology and crypto-assets carry significant risks for users, including the possible loss of all value allocated in crypto-assets. Such risks arise from the novelty of this technology, the regulatory uncertainty, the possibility of hacking, the high volatility and the information asymmetry characterizing the crypto market. Users should not purchase crypto assets with funds they cannot afford to lose. Furthermore, the user is strongly encouraged to seek financial and legal advice regarding the use of crypto-assets and the use of our services”.



2. WHO IS CDK AG?

2.1 TEAM



FRANCIS HACHEM
FOUNDER AND CEO

Francis Hachem has been an entrepreneur for 18 years and has created several IT companies including a service company with nearly 50 employees and more than € 3M in turnover. He has also supported several Startup projects in recent years.



JÉRÔME TERMES
CTO ADVISOR

After a career in major accounts (IBM, Airbus, Air France, Orange) and software publishers such as R&D, Jérôme Termes has been a technical advisor to many entrepreneurs and startups, particularly in the automotive industry.



**ANNE-EMMANUELLE
NETTERSHEIM**
CMO

Combining artistic direction and communication management, Nettersheim has forged her career for 12 years in these two professions. Her cross-functional skills provide the team with a 360-degree view to best lead the marketing of the company.



GHISLAIN MONCHARMONT
COO / CFO

With a background in economics, finance has become Ghislain's specialty. He has helped many companies in their financial strategy. He quickly became interested in the blockchain and crypto space and was able to bring his expertise by helping to structure the projects of startups, in particular their tokenomics.



MISHAEL STANLEY
TOKENOMICS ADVISOR, P2E
MODELING, GAME ECONOMIES

A graduate of Ecole Polytechnique in Renewable Energy Science and Technology, PHD in Materials Science and Doctor of Philosophy, Mishaël quickly became passionate about Web3. With 6 years experience in Blockchain and web3 (NFTs, DeFi, Metaverse), he advises native web3 projects on building sustainable tokens and game economies (P2E Modeling).



CHRISTOPHE TURCRY
AUTOMOTIVE ADVISOR

An engineer from ENSTA, Christophe Turcry has 15 years of experience in the automotive sector in industrial, design, and marketing functions. He was notably responsible for the marketing coordination related to the development of Citroën brand services in France and for export.



ENZO VITURAT
COMMUNITY MANAGER

Web developer and marketing manager in the past, Enzo Viturat entered the crypto sphere and is passionate about NFTs. He is currently CodeNekt's community manager and is scouring social networks to make this project known to the world.



JEAN-LAURENT TARI
BLOCKCHAIN
TECHNOLOGY EXPERT

A consultant for large companies since 1995, both in the industrial and financial sectors, Tari has developed skills in finance for the last 20 years and in cryptocurrency technologies since 2014. He is also a blockchain advisor for companies needing to enter the crypto space.



YANN WAHLI
FINANCIAL ADVISOR

A financial advisor in Switzerland for the past 8 years, Yann Wahli has a bachelor's degree in Management and a master's degree in Finance from the universities of Lausanne and Geneva. He developed a passion in 2014 for cryptocurrencies, which in his opinion, will take on enormous importance in the financial system of tomorrow.



JÉRÔME LEFESVRE
FINANCIAL CONSULTANT

With a master's from Paris Dauphine, Lefesvre founded Transfinance, a financial market intermediary, then acquired experience with large financial companies like La Compagnie Financière Edmond de Rothschild and C.A. Indosuez. He is still Transfinance's manager and works as a business provider for Dôm Finance, an asset management company. In addition, he is a lecturer at the University of Nice for Master 2 Banking Management and International Finance.

2.2 CURRENT PARTNERS

Algorand™

Fast, secure, and reliable layer-1 blockchain to serve as support for smart contracts.

accubits

Artificial intelligence & blockchain development

onfido

Online identity verification service.

STORM

*Cryptocurrency & Blockchain
 All-in-one solution provider*

**FRANCE
 AUTOTECH**

French of mobility startups.

Pôle Véhicule du Futur*
Solutions pour véhicules & mobilités du futur

*Automotive, land transport
 and mobility network.*

cap-digital
Paris Region

*French competitiveness and digital
 transformation cluster.*

**next
 move**
collaboration is the driver

*One of the largest French
 communities of trade in
 product and service
 innovation in the field of mobility.*

**CARBON
 CONNECT**

*The first AI-verified, blockchain-
 enabled, global, regulated,
 institutional-grade, end to end carbon
 offset manufacturer and forestry
 analytics provider.*

TECWEC
oOo SYSTEM

*TECWEC System is specialized in the
 integration of low-level software such
 as OS, Bios, firmware, and drivers.
 17 years of R&D has enabled the
 company to develop AcidOS, a new
 Operating System that can answer
 modern IT challenges.*

NS
 Nomadic Solutions

*Nomadic solutions has operated
 in geolocation and mobile data
 transmissions since 2003. Its founders
 have served since 1997, the infancy of
 these technologies.*



3. PRESENTATION

CDK token was born from a need for traceability in the automotive sector, initiated by the startup CodeNekt (www.codenekt.com). It then appeared a certain potential for scalability insofar as this need concerns many sectors.

CDK is an essential token for monitoring, securing, transparency and traceability of data. It applies to the mobility, transport, construction and all other sectors requiring traceability. CDK allows the creation of NFTs representing physical assets. Each NFT is enriched with verified data relating to the asset it represents.



3.1 ORIGINALITY – PROBLEM SOLVED

Most tokens exist for one of three reasons: price speculation, store of value, or utility within the crypto world. CDK falls outside that scope: it is used as a means of securing sensitive information and to create a flow from the outside world to the crypto world.

For once, companies from the physical world enter the crypto space by offering real services and not just to invest in them, another chance for prosperity for the whole crypto world. Furthermore, the CDK ecosystem is original in many other ways, by leveraging cutting-edge mechanisms and technologies: decentralized governance (through quadratic ranked voting and voting power delegation), decentralized justice, zero-knowledge proof judgments, game theory and schelling point, profitable charity, eco-responsibility, game of chance routines, decentralized acquisition of legitimacy, quadratic finance, algorithmically controlled inflation, deflation through tokens burning, auctioned and Proof of Personhood ICO, secured initial funding, uncommon NFT usage, etc.

More importantly, the team at the origin of this project has felt devoted to the cryptos philosophy for many years, and deeply understands and shares all the implications. We are all about decentralization, and this has been the guiding principle in our mind while developing each solution presented in this document. We are convinced that this project, part of a larger cryptos universe, will participate in highlighting humans' qualities while keeping the darker aspects at bay.

3.2 SWOT

S STRENGTHS

Security expertise
Network of influence
Experienced team
Low cost usage

W WEAKNESSES

Lobbying needs
High deployment costs in the long run
Different regulatory contexts depending on the country

O OPPORTUNITIES

Universal and potentially global need
many possible niches to specialize
Only an independent and neutral actor
can be legitimate to collect all the data
and defend the interests of the end user
No such actor exists yet

T THREATS

Competition may rise on markets not yet covered

3.3 TOKENS STAKEHOLDERS

CDK AG has designed a reward mechanism to incentivize token stakeholders to keep their stake for longer periods of time while not limiting them in their capacity to unstake their CDK and sell them if they see fit.

Rewards will be distributed on a progressive scale, from 0% when CDK tokens have just been staked to 100% when they have been staked for more than 180 days, as shown below:

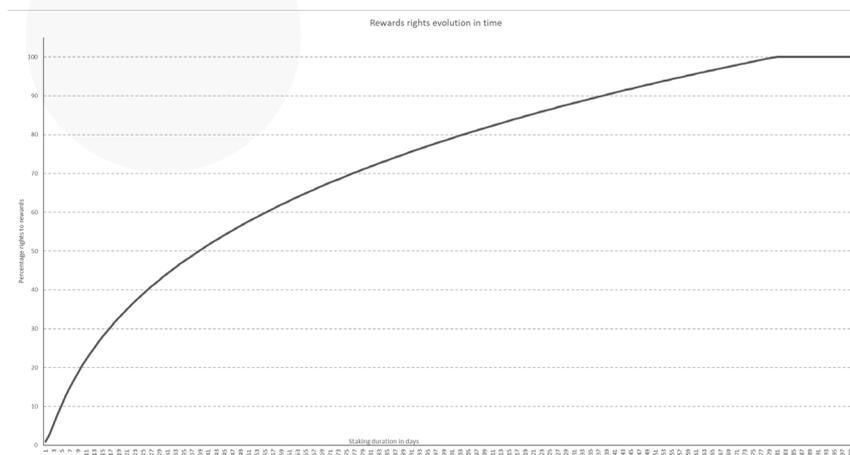
This curve is the graphic representation of this equation, where « r » stands for the percentage of rewards that can be claimed, « c » for the number of CDK tokens staked, and « d » for the number of days they have been staked.

$$r = c * 33 \ln\left(\frac{d}{3}\right)^2$$

Description of the actual process:

- There are several means to add to the monetary flow, and these are described [later on](#). What is important here is the fact that throughout each day, monetary value is accumulated into a holding account through a specific smart contract. Everything that goes into that account is set to be distributed to stakeholders.
- Once per day, the total amount of available rewards is checked and calculations are made to know how much is due to each holder, following the above-described process.
- It is very unlikely that all the stakeholders will be eligible for 100% of the rewards. The difference will therefore stay in the holding account to be distributed the next day.
- The rest will be sent to a repository account from which each holder can claim his rightful share from time to time.

CDK GRANT'S WALLET WILL BE ABLE TO CLAIM REWARDS THAT REMAIN UNCLAIMED FOR OVER 1 YEAR





4. CDK TRANSACTION

4.1 OVERVIEW

The CDK token will be used to register information on the Algorand blockchain and possibly other blockchains. Some of that information can be public, but most of it will be encrypted to be protected from prying eyes.

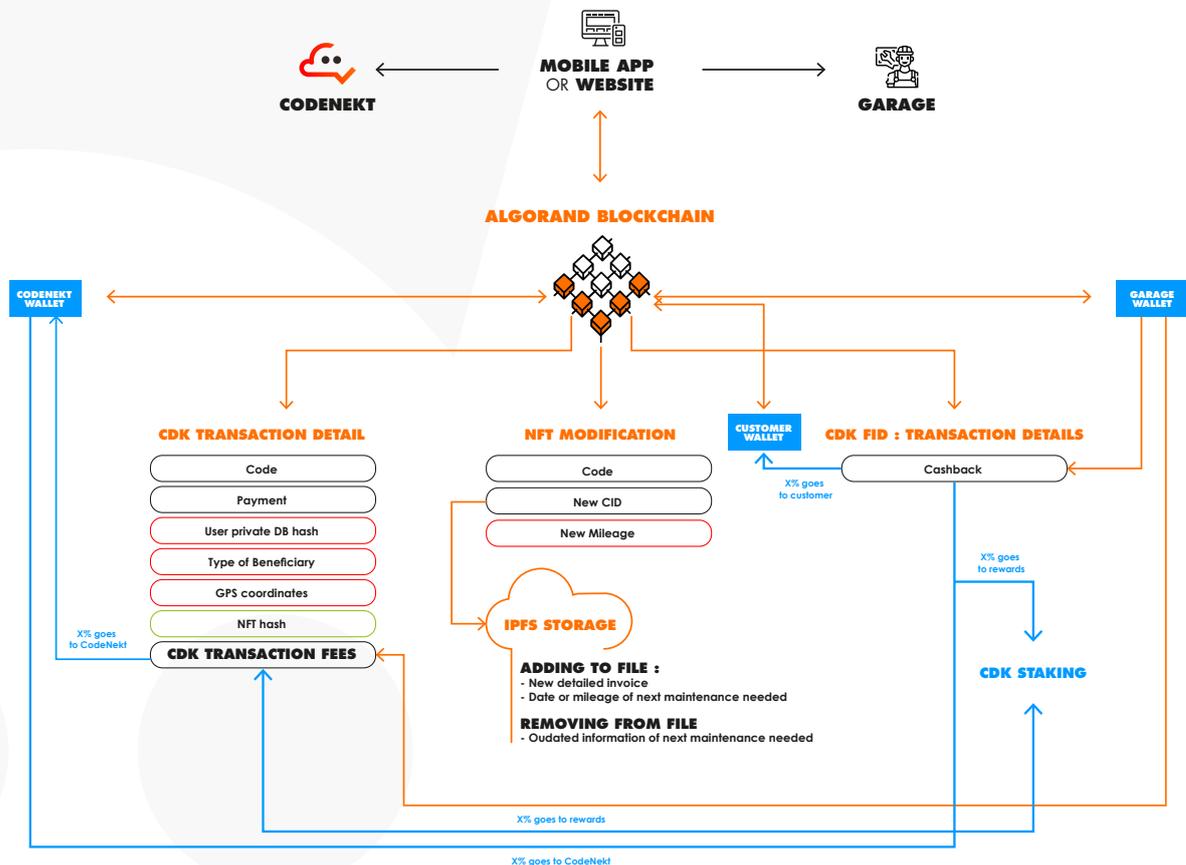


4.2 DETAILS

As an example transaction detail, here what will happen with a garage using CodeNekt (the first use case described in section [9.1.2 - CodeNekt's uses cases](#)):

A garage affiliated to CodeNekt uses the CodeNekt application to manage its billing and fidelity cashback.

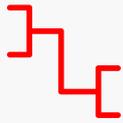
A first transaction is registered on the Algorand blockchain to store general information, including the vehicle's NFT hash to link the transaction to the NFT and not only to the user.



Next, the vehicle's NFT is modified, including a CID link to a new file stored on IPFS. The previous files are not deleted and can serve as a reference and a proof that the modification is legit and does not erase relevant information. It also registers the new mileage, expressed in kilometers. This mileage cannot be less than the previous registration.

Finally, the amount of cashback the Garage wants to give its customer is sent as fidelity tokens. This smart contract will send a share of this to the customer's wallet, another to CodeNekt's, and a third as reward to CDK stakeholders.

Insurances, police, states, parking lots, public transport companies, carpooling services, vehicle rental agencies, taxis, vehicle sharing, and delivery services are some of the numerous entities that will love using CodeNekt's tools.



5. IPFS

[IPFS](#)² is a peer-to-peer hypermedia protocol designed to preserve and grow humanity's knowledge by making the web upgradeable, resilient, and more open.

The CDK ecosystem will store most data on IPFS, and will host at least three different nodes run by and CDK AG, who will make sure they are hosted through different providers, so all necessary files will always be available.



6. NFT DESCRIPTION

The creation of an NFT aims transforming a physical asset into a digital asset that can easily be manipulated while guarantying the information relative to it is correct. All modifications will be recorded onto the Algorand blockchain and only the creator of the NFT can make any change to it. At first, only CodeNekt (as the first partner) will create NFTs, though it is probable that car manufacturers will want their share of this, as will other third parties. Until then, it means that a garage or states will have to use either CodeNekt's application or CodeNekt's APIs to modify NFTs, since they won't be the NFTs creators themselves.

Some information contained within the NFT may be interesting for someone to make statistical calculations.

When a CodeNekt user, owner of a car, wants to sell it, he'll use CodeNekt for several purposes:

- Have access to the NFT and all the information it contains. This has great value, for it is a guarantee that the information is reliable (mileage, detailed maintenance, past garage bills, vehicle not stolen or wrecked, etc.)

- Obtain the right price for the vehicle. That price depends on many factors (on top of the obvious, the maintenance history and general condition, where it is being sold, the time of year, etc.), and CodeNekt is well placed to both possess this information and make use of it optimally.
- Find potential buyers that would be interested in this particular vehicle.
- Offer the buyer a warranty through an insurance partner. This insurance will be able to propose such a warranty thanks to CodeNekt's knowledge of the vehicle being sold.

These services have a cost, paid by the seller when the NFT is transferred to the buyer. See the [NFT fees chapter](#) for more information about this topic.



7. TOKENOMICS

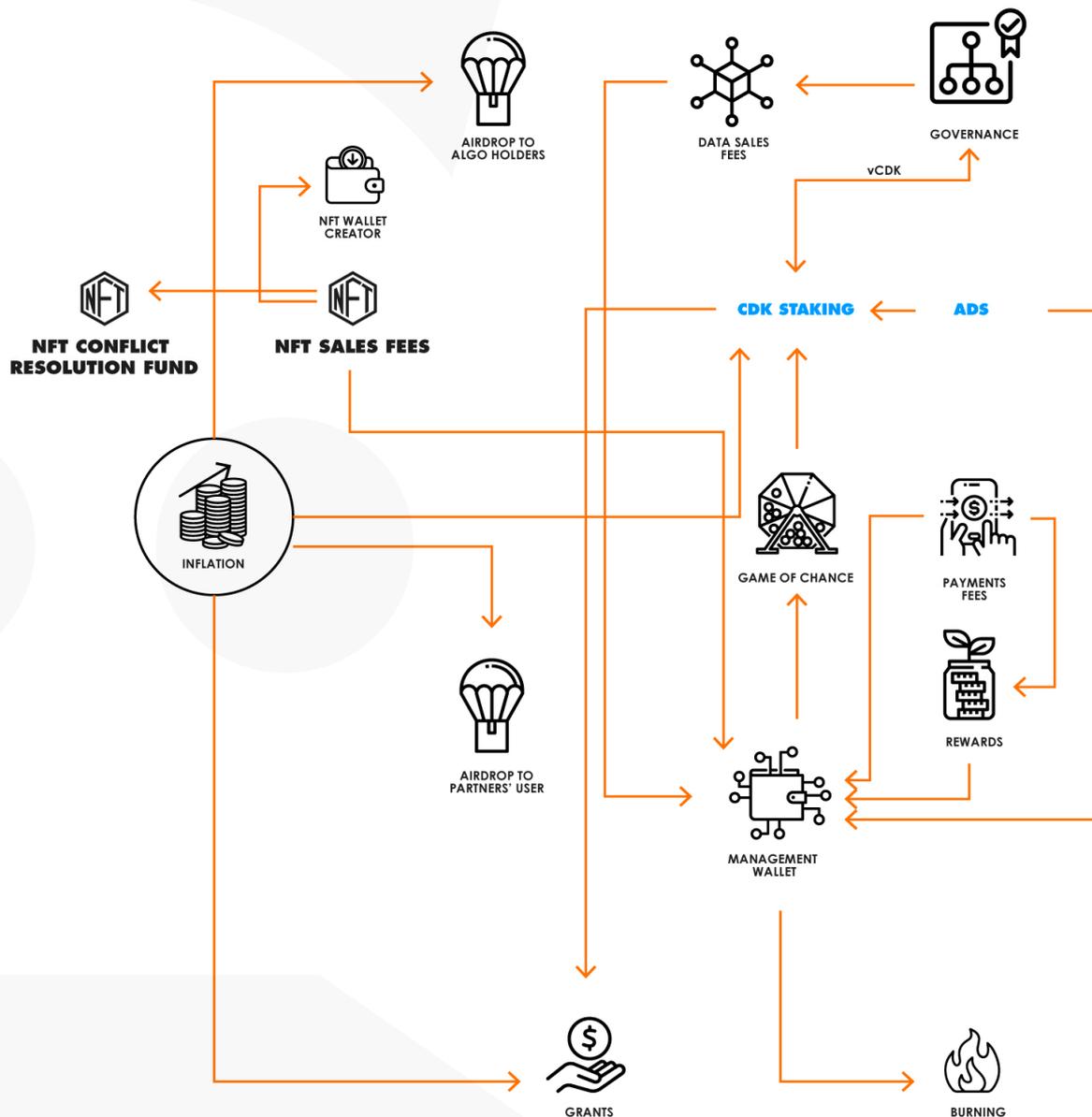
7.1 TECHNICAL ASPECTS

The CDK token is built over the Algorand blockchain, which is a fast, secure, and less expensive solution. These tokens depend on [Agorand Standard Assets](#)³ and the blockchain's ability to support more complex [smart contracts](#)⁴.

CDK AG and its partners must be ready for the arrival of several hundreds of millions of users within a few years. With each user originating several transactions per day, this could mean over 12,000 transactions per second for the Algorand blockchain to handle. So, to avoid the saturation of the Algorand blockchain, CDK will compile several compatible transactions into its database before choosing the best time to upload the information to the blockchain.

7.2 MONETARY FLOWS

CDK is a complex ecosystem with many interactions. It has been designed to be technically and economically sustainable:



INFLATION & DEFLATION:

It is well known in the crypto world that inflation of the monetary mass is bad in the long run. Nonetheless, it may have some positive effects in the short term, and therefore many have resorted to making use of it, often combining this effect with some deflationary mechanisms. Instead, we will attempt to follow Nobel prize winner [Milton Friedman](#)⁵'s [monetarist policy](#)⁶ and his [k-percent rule](#)⁷, adapted to the crypto world. Milton Friedman hadn't heard of cryptos and the possibility to obtain precise and impartial metrics about their usage and their monetary mass. Since this information can now easily be accessible, we'll adapt the k-percent rule to follow the token usage: if it gets largely accepted and used, demand will increase, and the circulating supply shall increase too. On the contrary, if demand decreases, a deflationary mechanism will start, through the periodic burning of tokens.

Tokens generated through inflation will be distributed through Algorand and CDK users airdrops, a game of chance for CDK stake holders, a grants wallet, and the Management Wallet. Deflation will happen if and when the ecosystem is slowing down and will be handled through tokens burning from the Management Wallet.

NFT FEES

When an NFT is created to represent an asset the company in charge of that asset's management evaluates its market value and saves the information into the NFT. From that point on, any exchange on this NFT will require the payment of fees proportional to the market value of the said asset. See the [NFT description chapter](#) for more detailed information about this process. Anyhow, 18% of those fees are paid to the NFT creator (vehicle manufacturer, police, state, CodeNekt...), 5% to a fund dedicated to the NFT conflict management (see [NFT conflict resolution](#)), 39% to the Management Wallet, 18% to CDK AG, and 20% to CodeNekt, the original creator of the ecosystem.

PAYMENTS

When payments for services are made through the CDK token by using any company's application (CodeNekt's or any other's), a transaction fee is paid both to the Management Wallet and to that company, 50% each.

DATA SALES

Companies' activities, as well as third parties' generate a lot of data, most of which ends up either in these companies' databases, on the blockchain, or on [IPFS](#). They can do some statistical analysis based on this data and sell some of it to their clients. But outside this scope, other actors may want to access the public data. In this context, CDK AG is responsible for managing projects of this nature, controlled through governance voting.

STAKING

Staking is the way to earn rewards as well as to gain decision power (see [the governance chapter](#)) for the token holders: when NFTs are sold, fees are paid; when payments are made through the CDK token, a percentage is deducted; the only beneficiaries of the inflation game of chance are stake holders; a part of the revenue coming from the sale of data also go to stake holders; and staking CDK gives access to the election process.

Note: unclaimed rewards go to the grants fund after 1 year.

The [Tokens stakeholders chapter](#) describes how to obtain these rewards.

MANAGEMENT WALLET

The Management Wallet receives CDK tokens from several sources. They will be used to manage the deflation process. 50% of the incoming tokens will be reserved for deflation through burning, and the rest will feed the Game of Chance. If, at some point, the deflation reserves exceeds 20% of the circulation supply, the extra tokens will be redirected to the Game of Chance

7.3 GOVERNANCE AND VCDK

➤ **To make sure our decentralized governance system functions properly, we worked on the decentralized acquisition of legitimacy, by meeting certain criteria:**

- A clear set of rules were defined
- A sense of fairness and equity is addressed through a quadratic voting mechanism
- The process, well thought and discussed at length, addresses all the foreseeable risks and traps
- Participation is encouraged through several methods: quadratic voting, quadratic finance and ideas racing, representatives' elections, bounties, etc.
- Empowerment is attained by incentivizing voters to stake and lock some CDK for their vote to have more weight. This way, people voting for an outcome that ends up not having the desired results get sanctioned by the market, unable to sell off their locked tokens, while people having voted against that apparently bad proposal, would be able to bail out faster.
- Consequently, trust in the system grows, and, hopefully, performance should be the logical result.

➤ **CDK AG lays down the rules**, who does what, how, when, etc. CDK AG proposes what will be voted on and in which context, how to organize an election or a referendum, how to submit new ideas and how to fund them, how to set bounties, etc.

CDK AG is the creator and issuer of CDK Token. The company manages the CDK tokenomics, and it is responsible for the project's future development. CDK AG will organize elections and referendums reserved for vCDK token holders and review ideas and proposals coming from the community. CDK AG shall be obliged to consider the community's opinion when deciding about the future development of the CDK ecosystem. Please note that CDK AG shall have no legal obligation to abide by the will of the token holders' community and shall be entitled to assume any decision it may deem to be in the best interest of the project.

Since the CDK ecosystem concerns three types of entities (companies working with CDK as well as future third parties; users and customers of these companies; and the tokens holders), each of these entities must be able to weigh in the decision process, and that is why, inspired by the [middle-ages European governance system](#)⁸, we decided to create a tripartite election system. Three separate election processes are organized to end up with a winning vote for each of the three "estates". These votes are then added up and winning proposition appears.

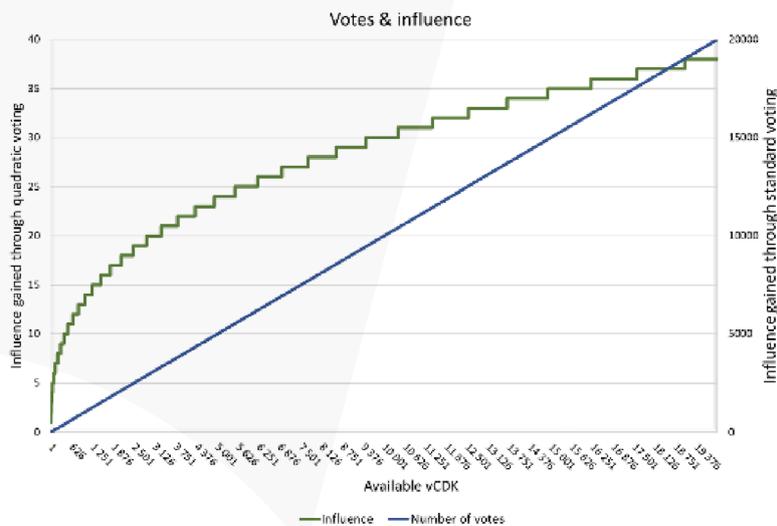
Furthermore, when an election offers more than two choices, a [ranked voting](#)² system is implemented, so that the consensual choice comes through more easily.

Whatever the case, each estate gets the possibility to veto the result of an election. This is necessary to stop two estates to collude to benefit from the other's weakness, something that happened quite often during the middle-ages, nobility, and clergy combining their efforts to maintain the little ones under their control. To use a veto, an estate organizes a separate election and voters must agree at a majority of two-thirds for the veto to be used.

➤ **CDK AG was also created** to manage the development of the token through the hiring of professionals and participate in the good health of the whole ecosystem. To attain these goals, an [ICO is organized](#). CDK AG will manage the funds obtained this way, and, if needed, will lend some money to companies actively participating in the ecosystem's growth.

➤ **Quadratic voting:** the election process requires the use of a governance token: vCDK that token holders will be able to gain by staking them.

To allow people with the highest stakes and/or the best commitment to have more voting power while ensuring that the voting process also takes into account the little man, governance will not be handled through the standard $1 \text{ vCDK} = 1 \text{ vote}$, but through a quadratic voting system. Put simply, quadratic voting is a means for voters to evaluate the marginal gain they get with each additional influence "point" they want, knowing that the cost is growing each time. As you can see here, someone with 20000 vCDK can only have 38 times more influence over the result of the election than someone with only 1 vCDK.



This means that for each election, voters must choose how strong their feelings toward the results are to establish the correct quantity of vCDK to spend for that particular election.

➤ **Earning vCDK:** CDK owners who want to have a say in the token governance can stake them. By doing so, they will earn voting CDK (vCDK). Unfortunately, quadratic voting, implemented as described above, has a flaw: nothing is stopping CDK owners to spread their staking onto several – possibly many – accounts as to increase their influence power at a lesser vCDK cost. Usually, this behavior can be stopped through KYC or some physical or technical restriction, but these solutions are not possible to implement here. Another solution is the use of proof of personhood or [proof of humanity](#)¹⁰. Unfortunately, for the moment, this approach is not technically available to the CDK project, although there is reasonable hope it will be usable in the near future, in which case the following method will probably be replaced by a simpler system based on proof of personhood.

For now, the vCDK earning mechanism will be subject to an algorithm greatly limiting the risks of such behavior, without eliminating it.

➤ **Voting responsibility:** Quality voting is important to the stability of the ecosystem. To incentivize people to either take time to understand all the implications of their choices or to delegate their voting power to more motivated people, each participant can stake their own CDK to increase their voting power. There is no hard limitation concerning the increase of that voting power, but it rapidly becomes very costly: $C=v^x$, where « **C** » represents the number of CDK to be staked, « **v** » the voting power used for that particular election, and « **x** » the increase of voting power desired. This process allows concerned people to increase their voting power at the cost of stopping themselves from selling the election-staked CDK for some time.

➤ **Voting power delegation:** Stakeholders can delegate their voting power to a representative who will, hopefully, vote accordingly to their represented voters' interests. Several mechanisms are put into place to ensure this is most often the case.

➤ **Election organization and DAO:** CDK AG is responsible for organizing elections. After a subject has been agreed upon through an election, there is a delay before it actually takes effect. By default, this delay is fixed at 90 days. But CDK AG or the initiators of the project can choose a different value, anywhere between 10 and 180 days. That gives some time to people who don't agree with the results of the election to sell the CDK tokens. It also limits most of the market manipulation through the election process by ill-intentioned whales.

➤ **Quadratic finance:** much like quadratic voting, it is a method for giving more power to the decentralized little man than to the few very wealthy, by nature centralized. The goal here is mainly to allow the financing of what could be presented as public goods while avoiding the [tragedy of the commons](#)¹¹: mostly risk of overusing or misallocating CDK AG's or the Foundation's funds, or risk of freeriding.

To summarize this otherwise complex subject, the idea is to separate funding into three phases:

1. Sponsors set up a grant to fund a specific project. In our case, CDK AG would be the most likely or, at least, the most frequent sponsor.
2. A quadratic funding session is organized, during which private investors (CDK holders here) invest some money to fund the project.
3. The grant set up by the sponsors is then used to increase the project funding proportionally to both the total amount of money bound by private investors and the number of them. The more of them there are, that is, the more decentralized the private funding is, the more the grant will participate in the funding of the project.

➤ **Ideas racing:** to emulate creativity and increase motivation through participation, we will implement ideas races. On a regular basis, CDK AG will organize races extending over varying periods of time, during which individuals or organizations will be able to expose their ideas of development and try to get funding for them. When organizing such races, CDK AG will allocate sums of money to be used as grants as described above with the quadratic finance.

➤ **Bounties:** they will be defined and funded to accomplish specific tasks. These and the amount of the rewards paid will be defined either by CDK AG or through an election process.

➤ **Decentralized NFT conflicts resolution:**

- A vehicle can only be represented by a single NFT because it guarantees the uniqueness of the pertaining information. But, in some rare cases, the legitimate owner of a vehicle can be in a situation where the corresponding NFT is owned by someone else. These conflicts must be resolved by humans, yet decentrally.

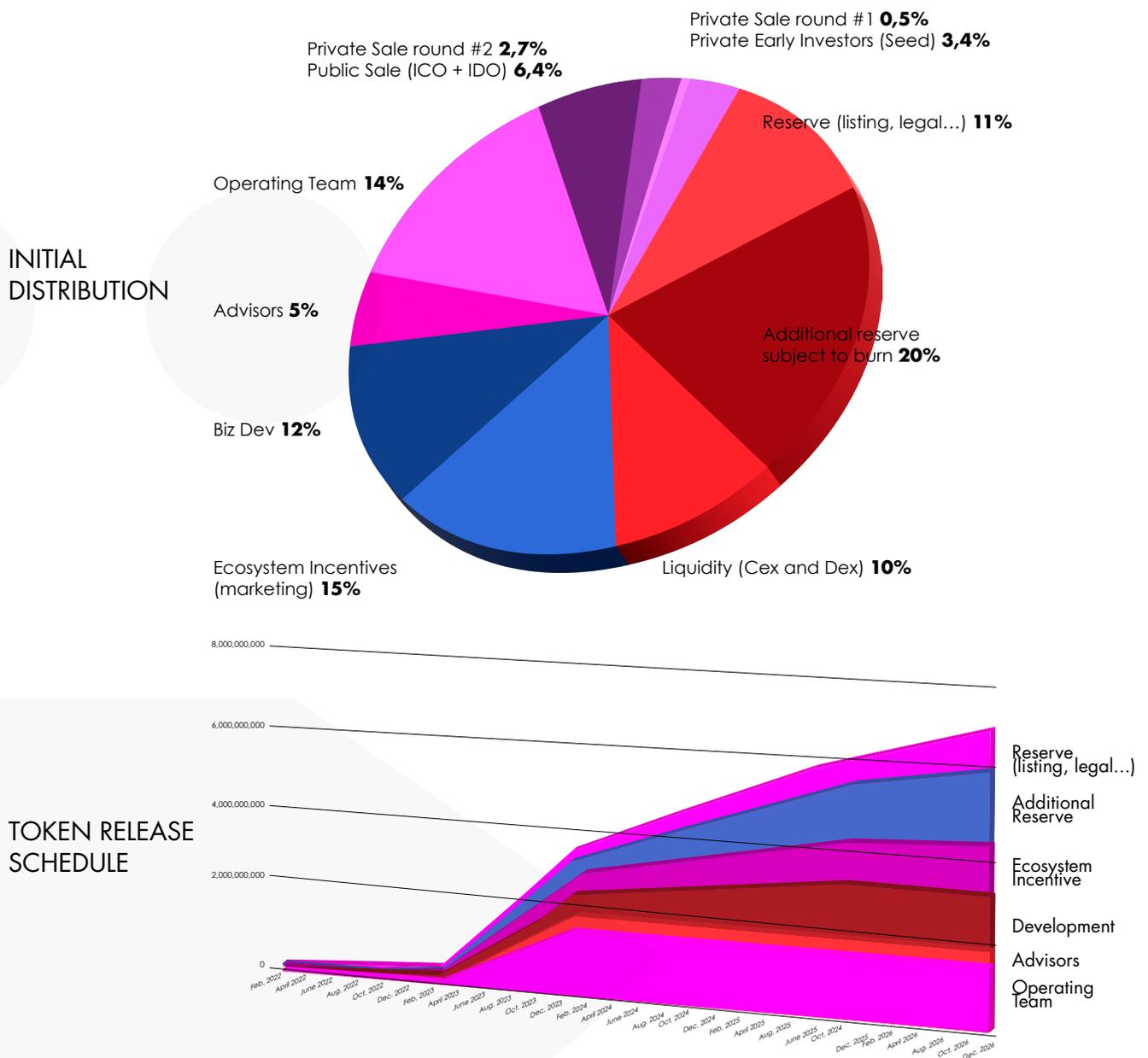
- Conflict resolution jury: people can offer their services to help in resolving these issues. Up to 500 individuals or groups can constitute an independent jury board. When a conflict is declared, three members of the jury board are randomly selected to become jurors. The jury's ruling must be unanimous. If the jurors cannot all agree, two more judges are then appointed to the team and the ruling depends on the majority of three.
- Experts panel: documents produced by CodeNekt users may come from all over the world, in any language. Experts from companies who will get paid for their service, like [OnFido](#)¹² will review the documents, extract the necessary information, and encrypt the confidential parts so jurors can use a [zero-knowledge proof](#)¹³ mechanism to make sure the information is correct without actually having access to it.
- Costs and funding: The NFT conflict resolution fund exists to finance this procedure. They can require the help of CDK AG for translation or legal purposes. These proceeds and the jurors' and experts' retribution for their work are paid by the NFT conflict resolution fund.
- Jurors' selection: a jury board member must have CDK tokens staked to apply for the job. The higher the stake, the higher the chance of being selected. Stake holders can also delegate their stake to help increasing the chance of a specific jury board member to be selected. This allows some stake holders (who, by definition, have an interest to see conflict resolution go swiftly) to weigh in the selection of jury board members they think are good at the task. Alternatively, some jury board members can get elected through a standard vCDK election organized by CDK AG. Jury board members are appointed for six-months periods and must manage all files presented to them, unless they decide to resign from their position.
- Ensuring quality judgments: jurors' stake will be locked in case of a bad judgment. The duration of the locking period increases exponentially with each bad judgment and decreases with each good one. The quality of a judgment is evaluated thanks to the [schelling point](#)¹⁴ effect taught by the [Game theory](#)¹⁵. In the event the decision is not unanimous, a second round is organized with five jurors. At the end of this second round, a majority decision is made, and jurors having expressed a minority decision are considered to have produced a bad judgment.
- NFT correction: once the situation has been cleared and judges agree about what the information should show, and in the event said information must be modified, they use their private keys to validate the changes to be made. It can either be a seizure of an NFT to send to its rightful owner or a modification of some of the fields contained by the NFT. At the judge's discretion, this conflict resolution service can be free or charged to the rightful owner of the NFT: NFT tampering must not be incentivized, so people trying to go around the system to avoid paying NFT fees should pay the cost of it.
- If the plaintiff or a minority judge is dissatisfied with the result of the procedure, it is possible to appeal.

7.4 GRANTS PROGRAM

The grant fund can be fed through two separate processes: Inflation and unclaimed staking rewards.

Grants can be awarded in several manners: a lump sum subject to contractual conditions, a development award for completed programs, a list of bounties for specific tasks, and a [quadratic funding¹⁶](#) mechanism.

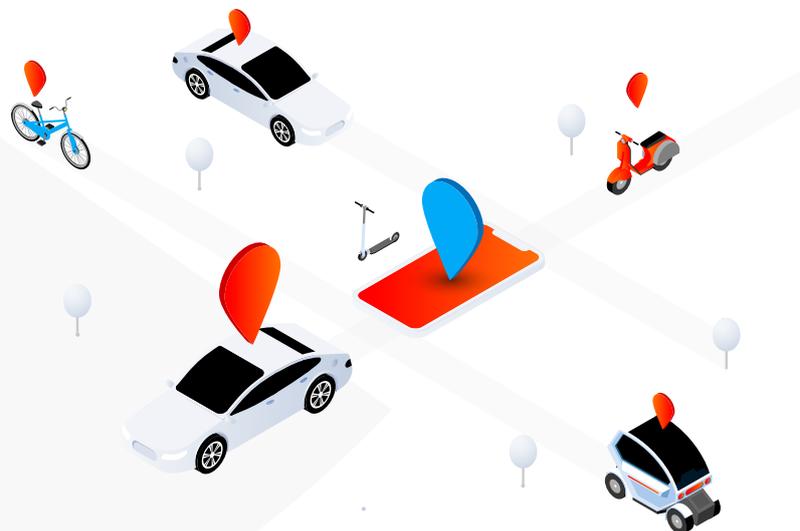
7.5 TOKENS DISTRIBUTION



7.7 COSTS OF OPERATIONS AND MONETARY OUTFLOWS

- Most costs concern salaries and compensations for CDK AG's employees: developers, lawyers, accountants, financial experts, project managers, computer and security experts, etc.
- CDK AG will also delegate some of its workload onto external service providers
- Some hardware and software need to be acquired
- Since most of the work can be done remotely, there is probably not much need for real estate renting
- Marketing and communication need to be provided for
- If CDK AG received enough funding from the ICO, it is planned to make 0% loans to CodeNekt and potential third parties to help them develop their commercial activities that, in turn, will participate in the CDK ecosystem's growth

The above costs cannot be precisely planned, because it all depends on the results of the ICO: if enough money is raised, we'll move fast and have a greater chance of success. If, on the contrary, we fail at raising enough money, then we'll move at a slow, cheaper pace, and do our best.





TOKEN SUPPLY

The Company will hold in custody and will mint a total supply of 10,000,000,000 which will be issued throughout the life of the project

ICO

We have planned ICO pools to sell 13% of the available tokens, which therefore represent a \$3,600,790 value. The tokens allocation will be divided into two halves:

Private rounds will bear a cliff duration of 12 months and a vesting period of 12 months

A game of chance will add some fun to this process: every time someone buys some tokens, there is a chance that a random yet proportional number of additional free tokens will be added to the lot. This will be true for both halves of the ICO.



8. ROADMAP

Q4 2022

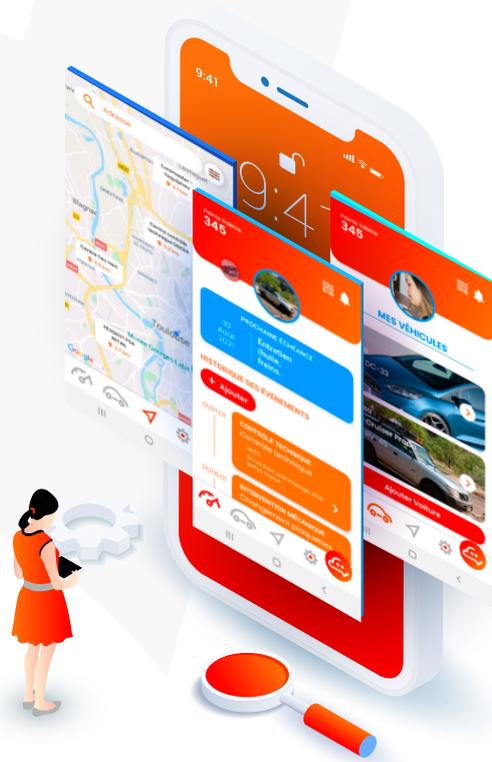
- Private Sale Round 2
- Closing with private funds
- Partnerships in mobility
- Landing page
- Whitepaper V2

Q1 / Q2 / Q3 2023

- Development of the NFT generation interface
- AI driving behavior
- Carbon footprint algorithm
- R&D IOT device for driving data collection

Q4 2023 / Q1 2024

- ICO pools / IDO
- Exchange listing (DEX or CEX)
- Staking pools



9. VERTICALS & USE CASES

CodeNekt's responsibility in the CDK token development is that of an initiator. The goal of this project is to build an ecosystem that, initially, fulfills CodeNekt's needs, but that will rapidly mature to prove very useful to other companies needing some of the tools offered either by the CDK token itself or by the NFTs' uses. Some discussions have already started about companies working in real estate, rail or plane transportation, or specific mobility needs like that of motor home owners for example.

This ecosystem aims at becoming the basic toolset for numerous actors, much like the road system is to car drivers, truckers, cyclists, etc.

9.1 MOBILITY: CODENEKT

CodeNekt centralizes vehicles and drivers' data within one application to ease the user's experience by notifying him of legal and technical deadlines, automating processes, and serving as a trusted tier between actors of the vehicle ecosystem. The CDK token is used as a tool for the CodeNekt company to securely store this information into the Algorand blockchain and add some otherwise very costly services.

9.1.1 CODENECT'S BUSINESS PLAN

Even though the project is much larger than the CodeNekt company, at first, it is CodeNekt's commercial success that will be the most important to the project's own success. The market is global, but it is in France that CodeNekt started the adventure. The company is based in Paris, the nerve center of its partnerships. The company was founded in July 2019.

➤ **Opportunities**

The automotive market is increasingly fond of mobile applications and services: connected and autonomous vehicles, car-sharing and carpooling services, payment for urban parking, payment for private parking, free floating, etc.

Customized consumption formulas are multiplying (long and short term rental, vehicle-sharing, etc.). At the same time:

- The need for the safety of the vehicle and its passengers is increasingly important (autonomous vehicle)
 - Public authorities and insurance companies are dematerializing their services (registration card, driving license, fines, accident reports, vehicles end-of-life, recycling, etc.)
 - It is more than urgent to deal with the carbon footprint generated by mobility
- In this context, new business opportunities arise around digital offers and tools allowing both:
- Secure mobility,
 - Smoother and easier movements,
 - Mutualized and facilitated management of vehicle data or related to it.

CodeNekt's mission is to be the first essential trusted third party in the management and security of the customer journey in their mobility.

➤ **Market and key figures**

- Over 1 billion private vehicles worldwide
- Over 1.2 billion motorists
- Over 230 million used cars sold every year
- In France alone, if we looked at the insurance companies as the only players and the number of letters sent to customers as our sole figure, the savings generated by the digitization of administrative documents fall between \$2.5 and more than \$10 per customer, every year. This doesn't take into account the cost of logistics. Based on a conservative \$2.5, for France alone with 40 million private cars, the savings represent a market of at least \$90 million for CodeNekt per year.
- A similar figure can be extrapolated about the global market that is 25 times larger.
- Several hundred dollars spent each year to repair and maintain each vehicle
- Average annual cost of maintaining a car for an individual: between \$6,000 to \$12,000 depending on the car, the mileage traveled and the country.

➤ **Development plan**

In 2020, CodeNekt obtained a grant from the BPI, then raised funds of 100 K € from business angels.

The funds thus raised enabled CodeNekt to carry out a feasibility study as well as to develop the first version, released in September 2021. The goal with this first version is to reach 10,000 users for the mobile application by the end of 2021. *Detailed roadmap is presented [later on cdktoken.io](https://cdktoken.io)*

➤ **Products and services**

Now is the time for dematerialization for several reasons:

- Time saving
- Eco-responsibility
- Instantaneity
- Automation of follow-ups

CodeNekt is the only application that meets these 4 criteria at the same time.

The application centralizes all contracts, and from an identifier on the car, whether it is the license plate, a QR Code unique to each vehicle, or other, depending on the service, it allows the reading of all information related to contracts and therefore to the vehicle concerned.

The services related to the project are numerous and constitute as many opportunities:

- Registration management
- Service contracts (financing, insurance, warranty extensions, maintenance contracts)
- Rewards and fidelity
- Parking, fuel / energy, tolls
- Maintenance and repair
- Cleaning
- On-board services / accompanied driving / autonomous vehicle
- Leasing or rental
- Relations with public authorities / security
- Professional uses (fleet management, transport, taxi, driving school, etc.)
- Vehicle end of life / recycling
- Management of the mobility path

➤ **Positioning**

The major players in this market offer some tools for their services but are also awaiting proposals for more open systems.

There is a possibility of federating the service for independent actors in open tools.

Finally, there is also an opening thanks to the recent dematerialization of vehicle registration documents to support the development of the service through independent management.

In this market, CodeNekt is positioned as much as an IT service provider, as a software provider and manager of data management and exchange platforms.

The start of the project will be based on an open approach aimed at developing a few targeted services that will allow the company to implement its model step by step.

Some of short-term needs of the market:

- Centralization of auto contracts
- The certain identification of the owner and the driver
- Assistance to automotive professionals and associated services in the management of their customers' data
- Centralized and unique updating of data useful for these services
- Fidelity programs
- The possibility for the user to manage the updating and dissemination of his data.
- The clear identification of the vehicles and their characteristics through the creation of NFTs.

Secondly, CodeNekt will offer connectivity and data mining solutions in order to feed statistics for all players in the automotive sector, but also for institutions, design offices, etc. Most of these services will be tokenized in order to allow them to be operated on the blockchain in order to deploy innovative services on this technology.

➤ **Target market**

The target market is users of mobility, without exception. The application, adopted by all insurers, will become the preferred way to manage one's insurance. Also adopted by the states administrations for the management of Technical Control, Eco-tax and other taxes to come, it will be the easiest way to handle these payments. Even actors of the mobility ecosystem will need to use CodeNekt's technology.

The price will be significantly lower than the cost of paper per driver currently generated by insurers alone.

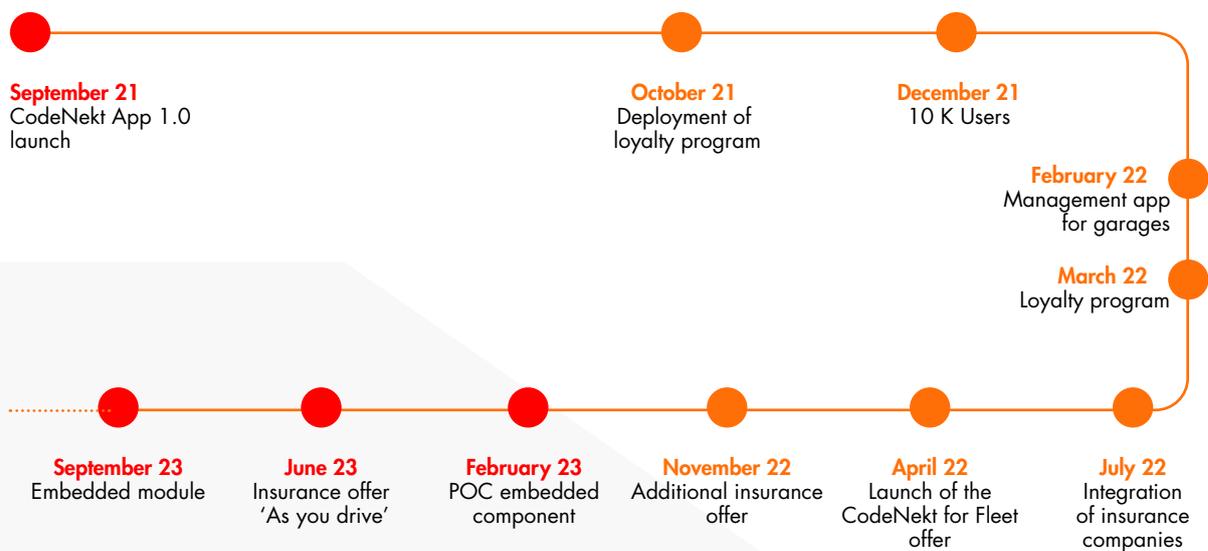
➤ **Competition**

All of the existing apps are dedicated to a specific area: apps from manufacturers for the management of certain information, insurance apps for the management of the insurance contract, etc.

To date, there is no app that aims to centralize all the data in a transversal manner.

	Manufacturers	Insurances	Connected devices	Loyalty	Applications	CODENEKT
Car data	●		●		●	✓
Driver informations			●	●		✓
Loyalty program				●		✓
Cost optimization					●	✓
Deadline notifications	●	●			●	✓
Subscription management						✓
Anti-theft		●				✓
Tracking						✓

➤ Roadmap



9.1.2 CODENEXT'S USES CASES

➤ **CodeNekt customers**

CodeNekt customers see, from their mobile app or the Web site, some precise information about their travels:

- How much they cost, in details (purchase, renting, fueling, maintenance, parking, etc.)
- How much time they spend travelling
- What is their carbon footprint
- How these information compare to other customers, especially those who have similar travel habits
- Suggestions about how to modify their travels to lower their cost, duration, and carbon footprint
- The list of all relevant documents about their vehicles

In addition to these information, they also have access to unique functionalities, given by the CDK token:

- utilization of some services (parking, garage, vehicle renting, taxis, etc.)
- Obtain some rewards for their fidelity to CodeNekt's partners through a loyalty program
- Alleviate their carbon footprint through some carbon credits through Carbon Connect, Tree Cycle, or other similar projects
- Locate their vehicles through their last known GPS location
- Agenda management
- How their data is stored and used



IMPORTANT

Private information about users will be kept private. For CodeNekt's business model to work, users must trust the company with their data. This is a strong incentive for CodeNekt to take all necessary steps to protect sensitive data, including encrypting it and keeping the decryption codes offline.

CodeNekt's business model is based on the fact that it acts as a trusted third party for all professional players, but also and above all for users.

➤ **Smart charity**

CodeNekt will organize the constitution of a charity fund, fed from monetary flows coming into the CDK ecosystem, and that will serve to offer a financial help to future new drivers to pay for the driving lessons and license, then will incite other actors to participate in this charity hub. Driving schools could offer a percentage off their service fee, car manufacturers a rebate on car purchased through their dealers, insurances another rebate to CodeNekt users, gas stations a few cents per gallon for some time, etc. This can work because all actors have an interest in having new customers, and CodeNekt can make that happen.

The net result of this will be an important increase of the network effect: CodeNekt users will preferably choose companies that participate in this scheme, and companies will flock to partner with CodeNekt to have access to a high number of potential new customers.

➤ **Eco responsibility**

Some CodeNekt users may feel more or less guilty about their use of gas-powered vehicles, or might just want to alleviate their impact on the total CO² emissions. Even though the CodeNekt app allows users to optimize their travels considering their carbon footprint, some may want to go further and buy some carbon “credits” through one of CodeNekt’s partners, like Carbon Connect or Tree Cycle. These services allow people to spend some money to pay for planting trees.

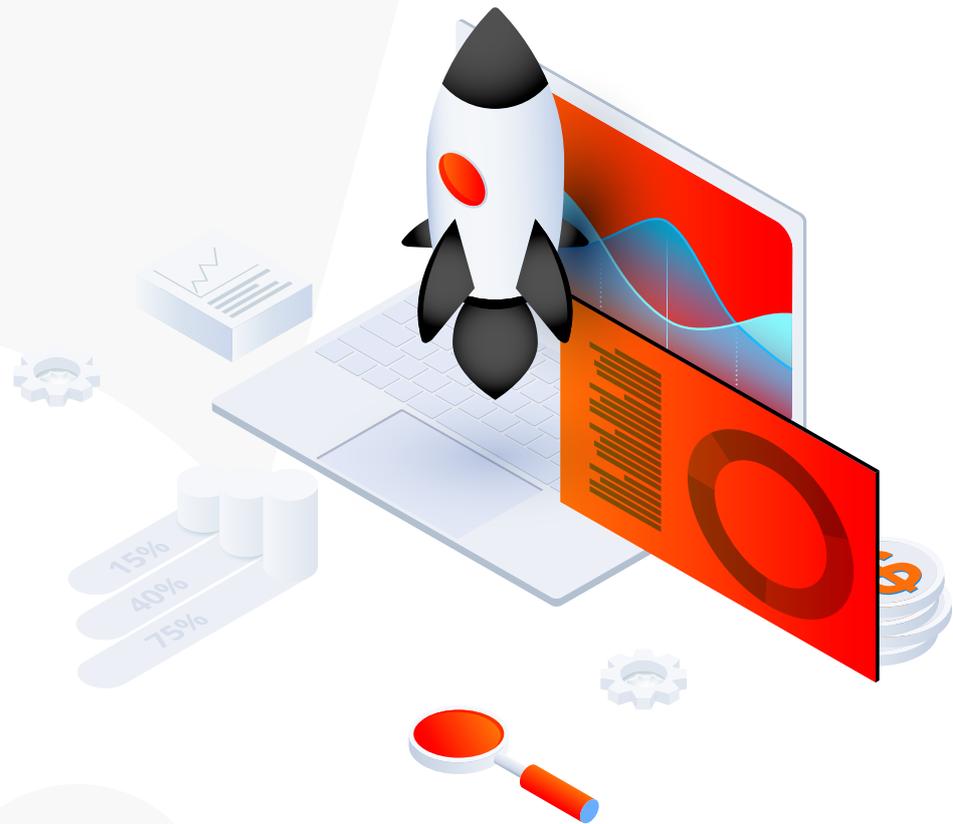
Even though CDK holders do not have a carbon footprint to alleviate in regard of their blockchain activity, they may feel to need to also use this kind of services to mitigate their CO₂ emissions coming from other sources.

In both cases, money sent by users is stored in a special eco-fund and, from time to time, services from those partners will be paid for.

This will be done under CDK AG’s control and will be totally benevolent, for all parties involved.

➤ **CodeNekt’s partners, affiliates, and third parties**

CodeNekt’s partners can benefit from increased fidelity by their customers, especially thanks to CodeNekt’s agenda management reminding customers of their deadlines and appointments. They will also have access to two levels of statistical data (concerning their customers and concerning the competition’s customers, or world wide data.)



9.1.3 FIDELITY PROGRAM

The way CodeNekt has set up its loyalty program is virtuous. Above all, the goal is to allow motorists to consider that their vehicle is no longer a cost center. The smart use of their preferred means of transportation must enable them to earn some money. Several services are set up for this.

CodeNekt's fidelity program is managed through the Fidly app, which, in turn, is based on a tokenized solution. CodeNekt plans on co-developing tools and services around the fidelity concept:

- CodeNekt's partners can offer their customers some special offers through CDK tokens to invite them to come back
- CodeNekt offers some CDK tokens to its customers to motivate them to use the application and share it with their friends
- Some more CDK tokens are offered to stakeholders if they become users

- CodeNekt will place this money to earn rewards and share them with users and stake holders

The Fidly app is being integrated in the CodeNekt application so users don't have to switch between them both.

9.2 TRANSPORT

All transport industries have similar needs. In addition, some needs are critical due to an obvious security objective. Here are the verticals that can use CDK and the NFT concept:

- Air transport
- Maritime transport
- Land transportation
- Space

9.3 REAL ESTATE

This industry needs a lot of transparency because it must respond to economic issues, but also security, societal and environmental issues.

Here again, the need for traceability is important. Verifications of certifications, licenses, agreements are mandatory. The promoters engage their responsibility and must ensure the confirmation of the documents of their subcontractors, which they declare in turn.

Here, the NFT could represent a real estate asset, and the information stored on the blockchain and IPFS would include the architectural plans, surface area, address, detailed bills from contractors, land register reference information, rent contracts, lease and purchase prices, etc.

Naturally, a lot of this data can be used for statistical calculation as well as for communicating with local or global partners.

Once this kind of service has picked up pace, a link could be created with platforms such as Air B&B or Booking to automatically manage rent ads based on market conditions.

CDK AG can naturally bring its expertise to help such companies to implement their solutions using the CDK ecosystem.

As we described earlier in this White Paper, the CDK token has multiple uses in multiple sectors. We will shine internationally. We're only just starting.

APPENDIX

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APRIL 2022

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