



**Cyc'lock**

# Whitepaper

Network of connected bicycle garages,  
accessible via an application,  
secured by the



V 2.2 / 7<sup>th</sup> september 2022



# Cyc'lock



**[www.cyclock.co](http://www.cyclock.co)**



**[twitter.com/CycLockOfficial](https://twitter.com/CycLockOfficial)**



**[linkedin.com/company/cyc-lock-bordeaux](https://linkedin.com/company/cyc-lock-bordeaux)**

The information contained in this document should not be construed as financial advice or advice of any kind.

This document is subject to change.

All of the elements contained in this document are subject to continuous review in terms of technical, legal and tax studies.

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# 1 Introduction

1.1 Abstract

1.2 The market

1.3 Cyc'lock model

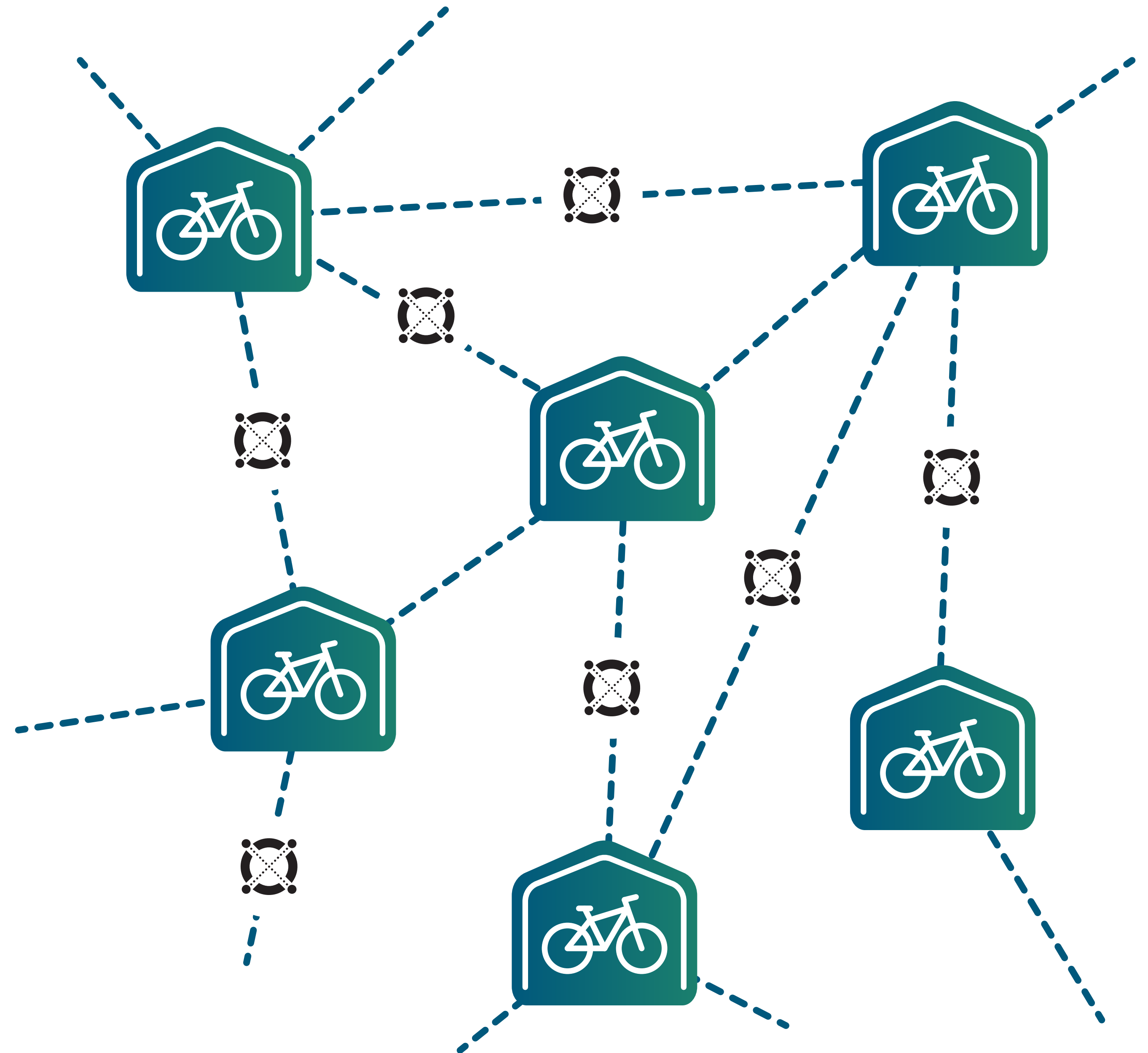
1.4 Increase in value





# 1.1 Abstract

Create the first **network of connected bicycle garages** accessible via an application secured by the Elrond blockchain, the first green blockchain in Europe.



Cyc'lock



elrond

## An IoT company:

Cyc'lock's ambition is to develop over the years different services through IoT; the first project concerns bicycle parking.

The objective is to promote soft mobility in France and then on a European scale, by creating and making accessible closed parking spaces for bicycles using a connected locking system.

Once the parking spaces are connected, we make them accessible to cyclists via our application for smartphones.

Today, the problem of **theft** and **damage** is the second biggest obstacle to the use of bicycles in the city, with too few secure solutions available. The consequence:



1 bicycle stolen every minute in France.



1 cyclist out of 2 who will be a victim during his life and many of them abandoning this means of transport.

**To create this parking network, we offer companies and administrations two different products:**

**1**

If they already own one or more garages, we equip them with our connected locking system to integrate existing garages into the network.

**2**

And if they don't already have garages, we will offer them our own model composed of individual and connected boxes.



The cyclist will then be able to access the network of bike garages using his or her smartphone, for a monthly fee.



# The Cyc'lock integrative network:

In order to build a real connected network, in which numerous parking spaces are made available to cyclists, it is necessary to create **a network adapted to the demand in a metropolis.**



In order to offer users secure parking at the end of most of their journeys, the need for garages in the hypercenters is high: **1 every 100m** and in the suburbs **1 every 200m.**



To build this network, we integrate parking spaces installed by communities, companies, residences, developers and we add garages installed by us.





## Better understand usage:

1

**The more users we have, the more we know about the use of bikes in the city.**

Blockchain technology allows us to store the numerous data collected while guaranteeing their security and the anonymity of users.

Thanks to these figures, we can more intelligently install future locations where there is a need.

2

In addition, many government agencies are looking for data from the field on various topics addressed by the company.

**Thus, the network is constantly being improved.**



## 1.2 The market

# The current parking context:

Currently, different parking solutions exist, but they do not fit into a network strategy.

Cyclists are forced to use multiple access methods (key, badge, code, etc.) for each of their parking points.

Moreover, there is no guarantee that they will find a safe place to park their bike before they arrive.





# In France:

30 million regular bicycle users and about 60% of those wishing to use bicycles on a daily basis give up because of the **lack of facilities and the associated safety**.

The current modal share of cycling is estimated at 4% of trips, and is expected to rise to **9% by 2024 and 12% by 2030**.

In addition to a **117% increase in bicycle sales** in France from 2019 to 2020, the number of electric bicycles represents about 20% of the market and is expected to increase to **11 million units** sold in Europe by 2025.



The health crisis has had a strong positive impact on the increase in the number of cyclists in major cities.

This is not enough, and there are many needs to transform today's cities into smart and bikeable cities.

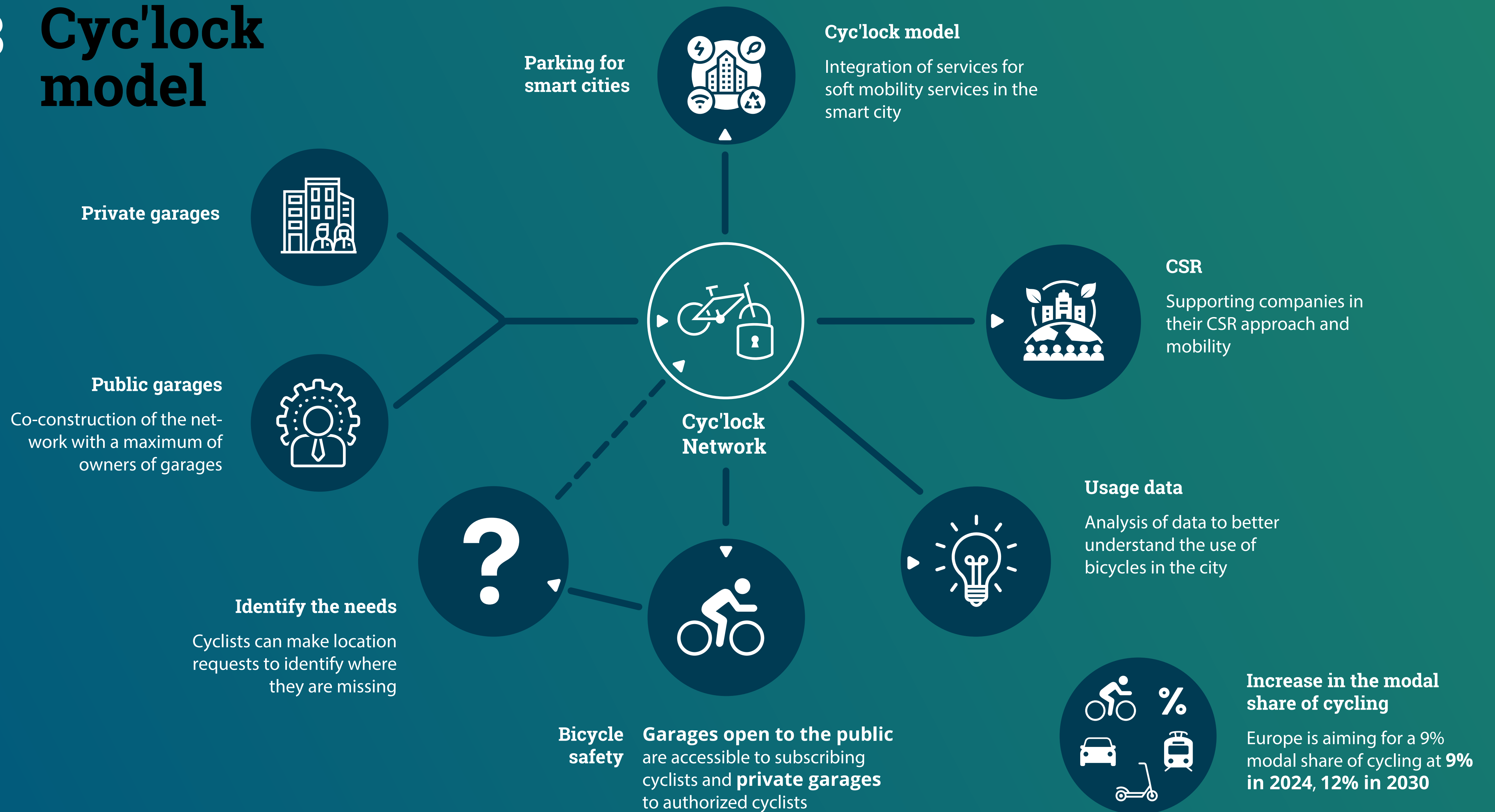
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In addition, the **legislative framework** imposes on certain actors the provision of parking spaces dedicated to bicycles:

Article 41 (III, IV and VII.) of Law No. 2015-992 on the energy transition for green growth of August 17, 2015 takes up the principle of parking in buildings for residential and office use. But in addition to these "housing complexes and tertiary buildings", which were included in the bill, the LTCEV will extend the obligation to provide secure bicycle parking to industrial buildings, those housing a public service, shopping centers and cinemas (see full text p. 42).



# 1.3 Cyc'lock model





## 1.4 Increase in value

Through its economic model, Cyc'lock has the possibility to grow in two ways:

1

by completing a network started within a **metropolis**

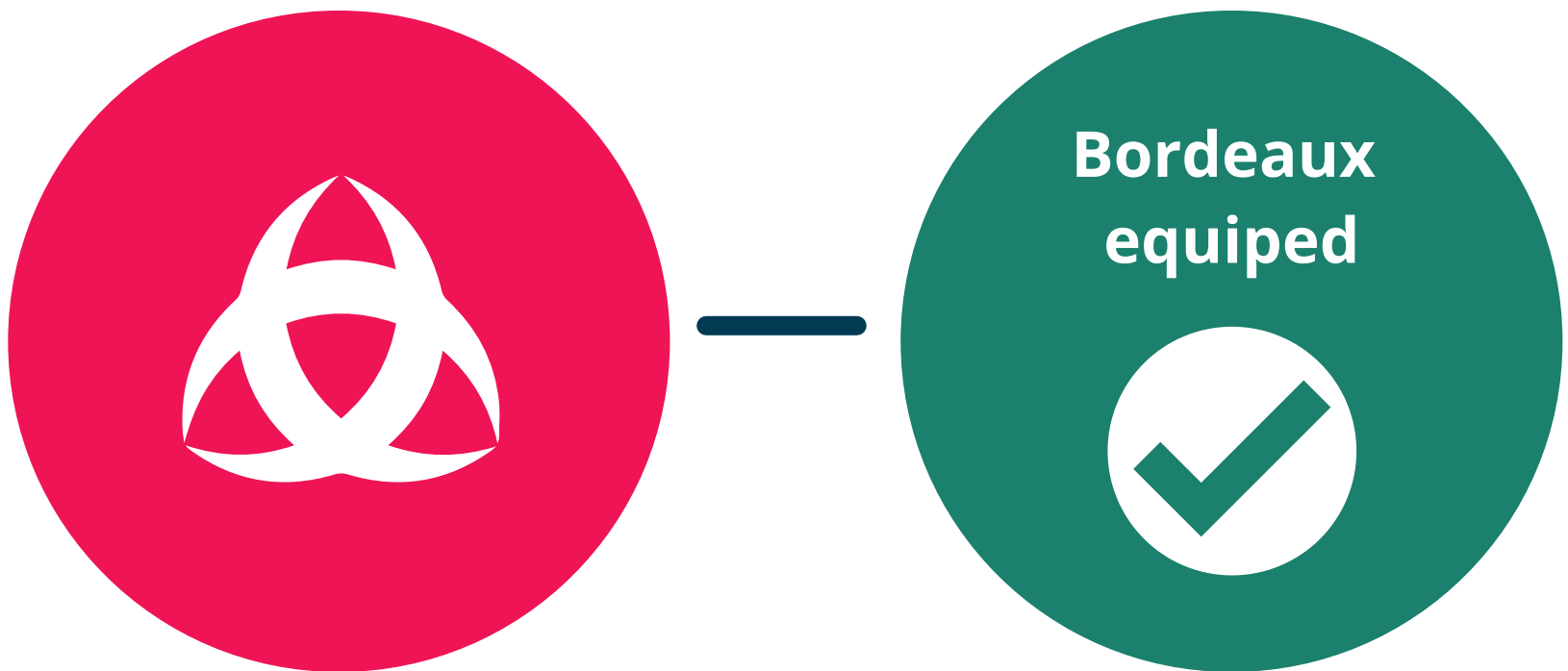
2

by arriving on **new cities.**

In order to quickly offer sufficiently dense networks, Cyc'lock wishes to invest in its network by financing part of the development of the parking spaces (converted car spaces, etc.) made available by the municipalities.



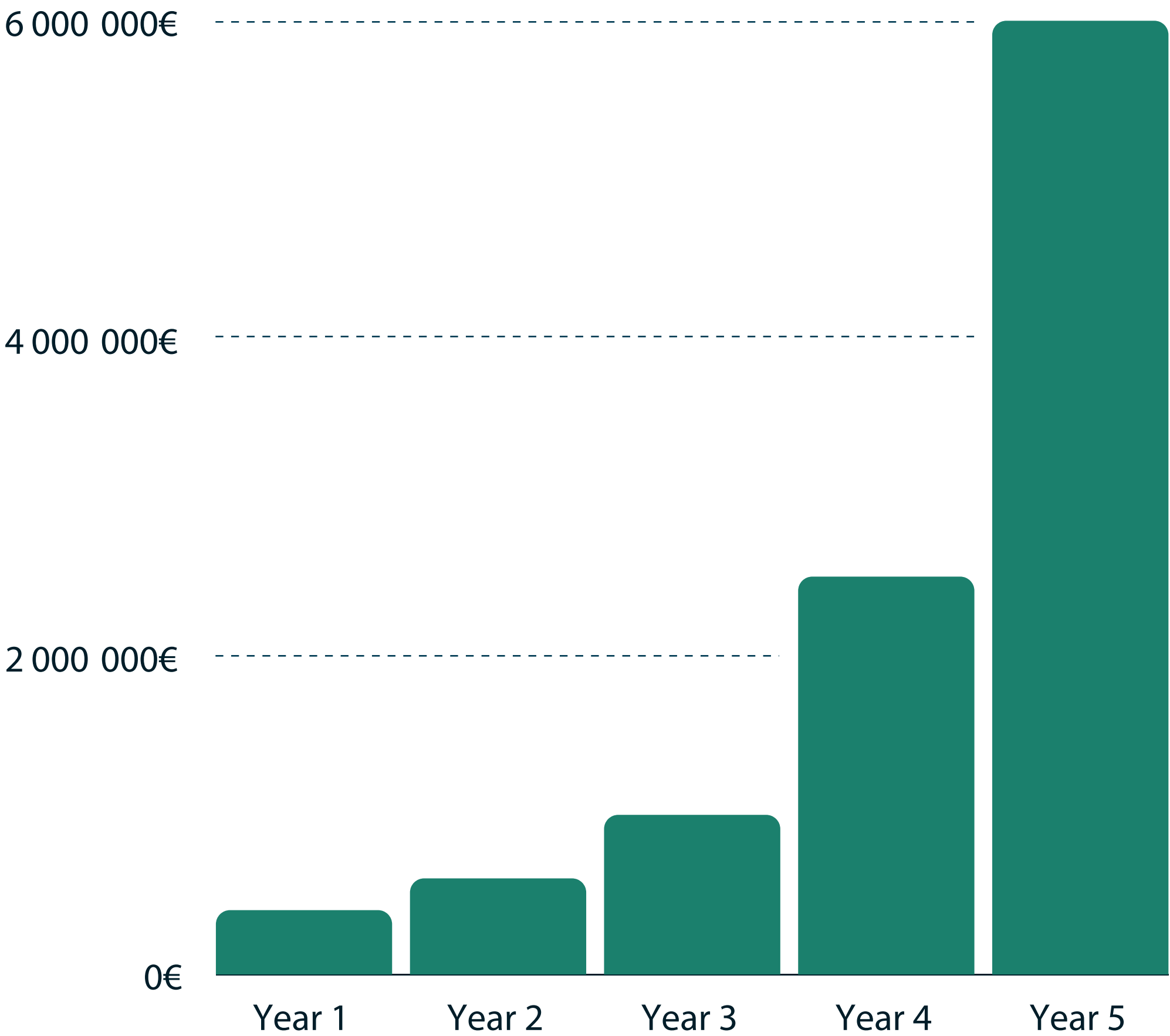
# Development assumption



- 2000 parking points over 5 years
- 300 parking points in the first year
- 16M € of developments to reach the target density

Average cost per parking point\*: 8k €.

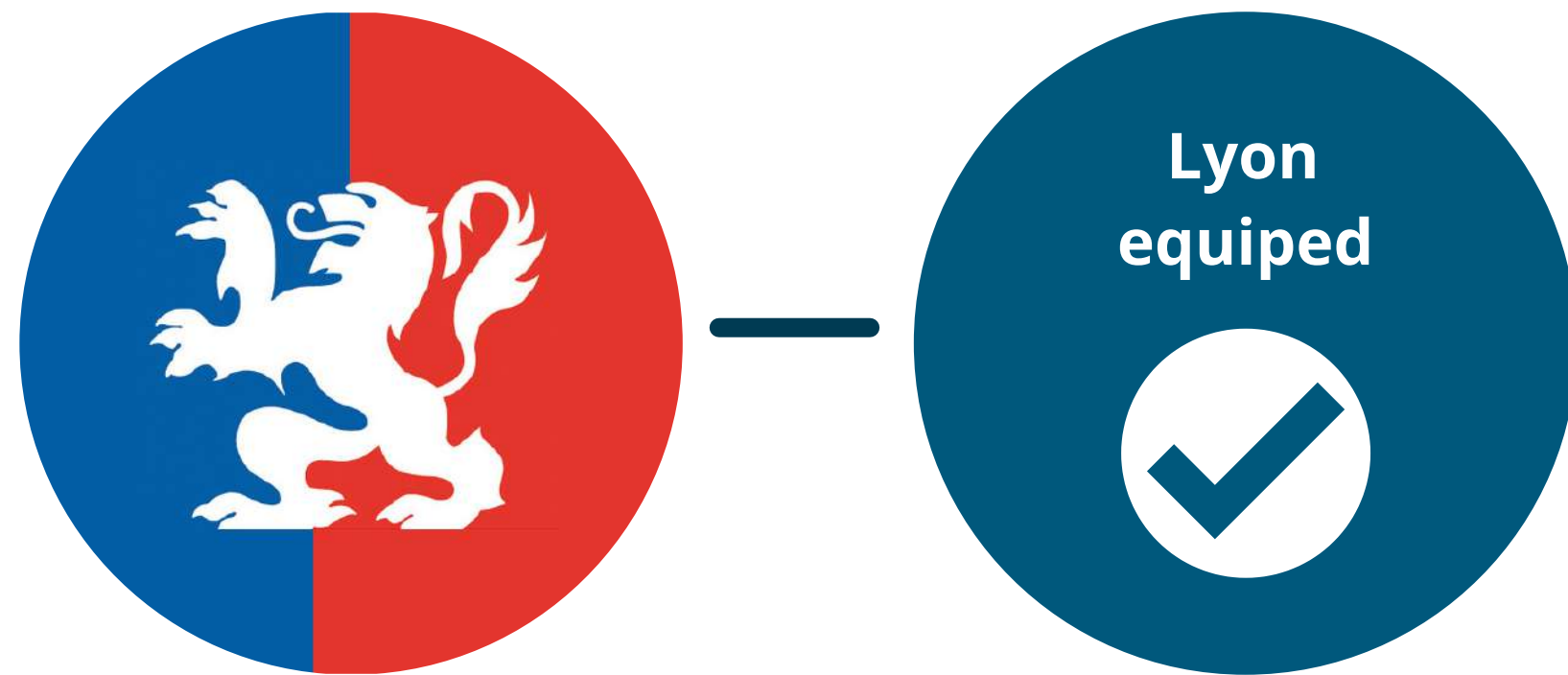
\*Cost calculated according to the ratio of garages needed to be installed and the number of garages already present to be connected



Strong local revenue growth over 5 years

# New deployment

With a greater development potential resulting from the experience obtained in Bordeaux

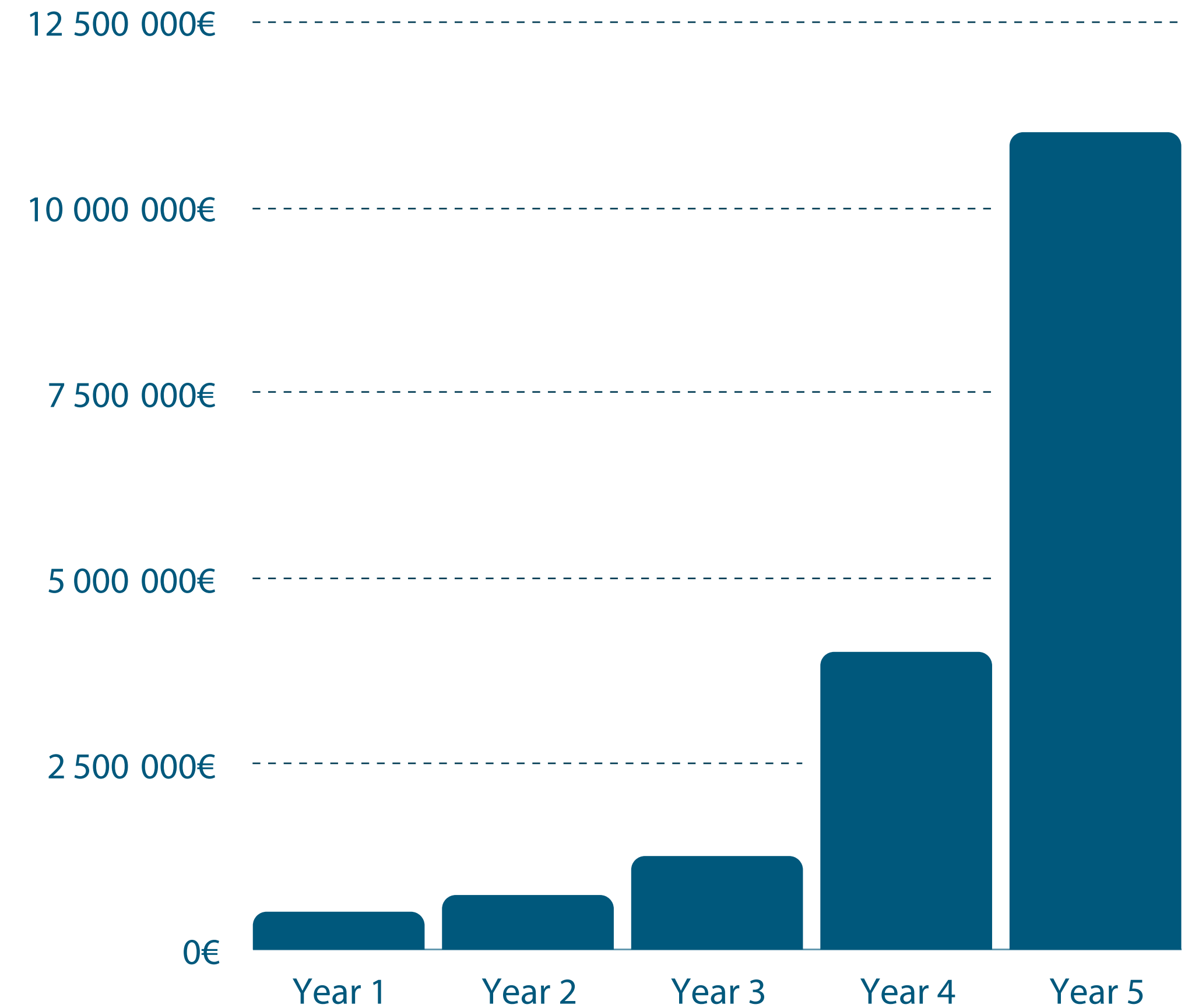


3000 parking points over 5 years

600 parking points in the first year

26M € of developments to reach the target density

Average cost per parking point: 8.6 k€.

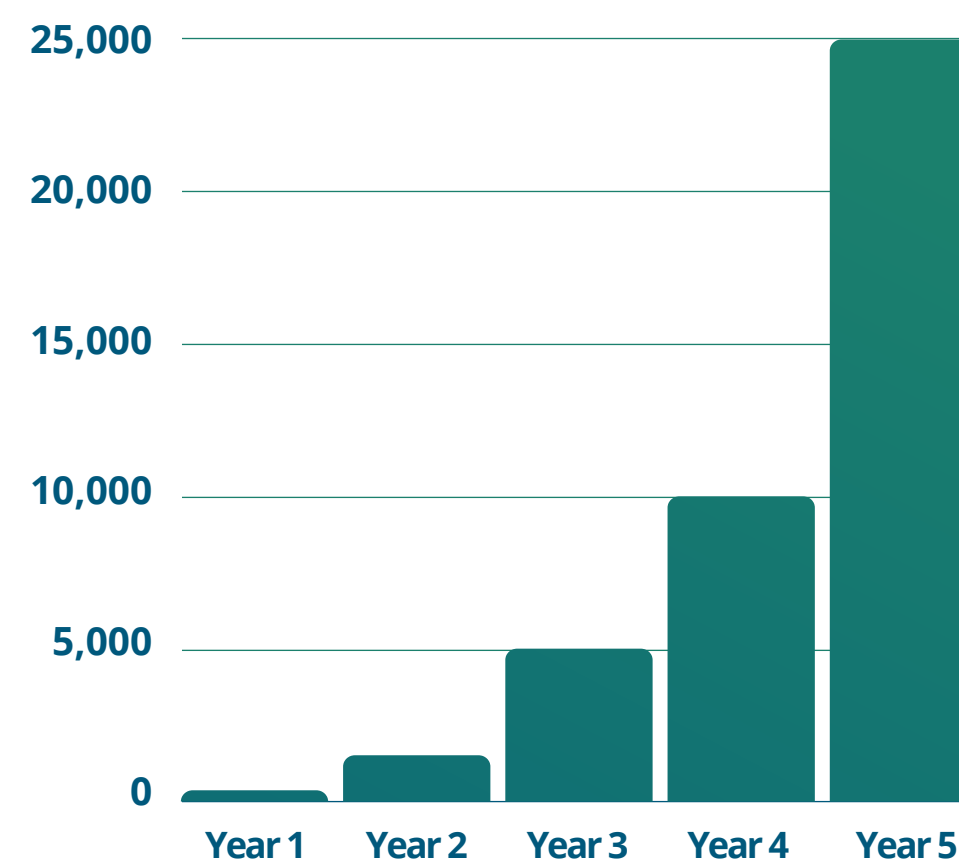


Strong local revenue growth over 5 years

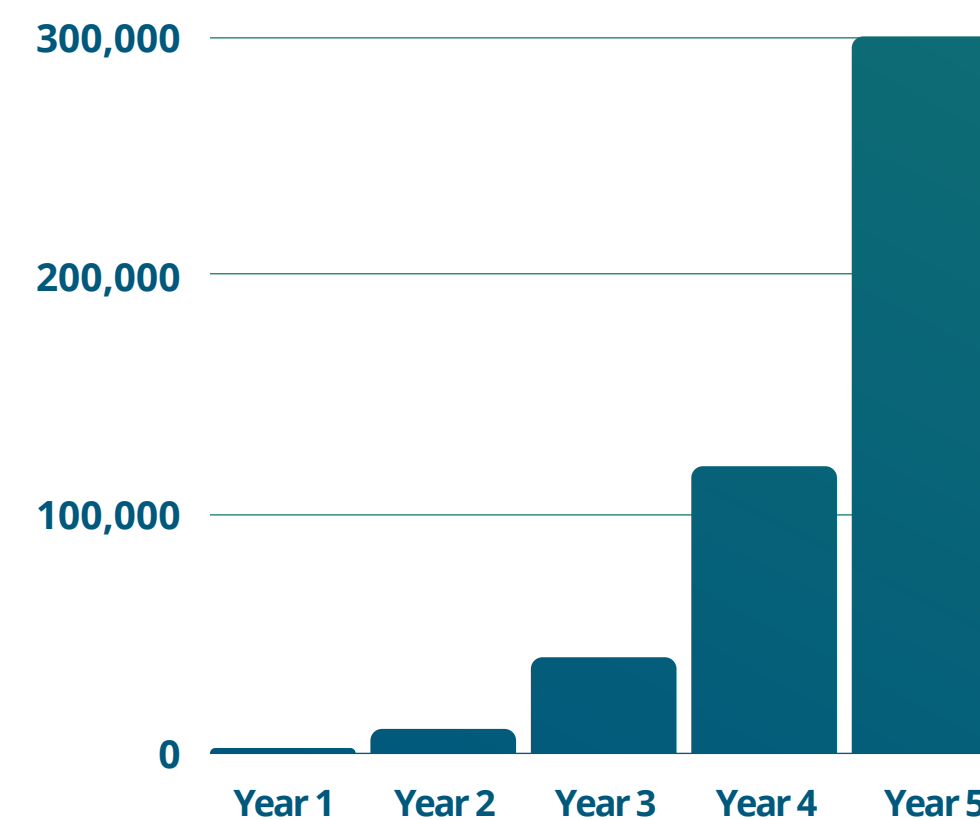


France has **22 million cyclists** and a parking market of more than **€2 billion per year**.

### Target figures



Annual evolution of the parking lot



Annual evolution of the number of Cyc'lock subscribers



**The first brick laid by Cyc'lock aims to bring the benefits of Elrond's Blockchain technology to an everyday utility without requiring users to have specific skills in the field.**

**In doing so, we develop 4 key expertises:**

- 1 Identification of IoT needs in cities**
- 2 Deployment of embedded and connected solutions**
- 3 Implementation of data from connected objects in the blockchain**
- 4 Indexing data from the Elrond blockchain and inference via an API**



# By applying our methods to sectors such as :

**N.B. All the new sectors  
addressed will be driven by the  
\$CYC token.**



public  
lighting



general  
parking



public  
transport



traffic



waste  
management



intelligent  
buildings



public health  
/ pollution

...



We ensure a vast  
scalability potential  
to the project, while  
bringing a solution  
to one of the main  
problems evoked in  
smartcities projects:

**data management.**

# 2 The crypto model



## 2.1 The Elrond blockchain

## 2.2. The business model V2

## 2.3. Buyback & burn mechanics:

value generated by data

## 2.4. Buyback & burn mechanics: value generated by data

## 2.5. Securing the Network with

Elrond Blockchain

## 2.6. What to do with the \$CYC token ?

### 2.6.1. Farming \$CYC

### 2.6.2 Compagny Services

### 2.6.3 Mint and Stake NFTs

## 2.7. Decentralized guarantee

## 2.8. The \$CYC Token

## 2.9. Initial distribution

### 2.9.1. Presales / Launchpad

### 2.9.2. Supply evolution

## 2.10. DAO or not DAO ?



2.1

# The Elrond blockchain



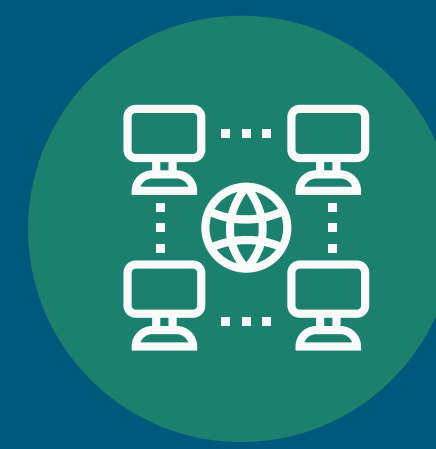
High speed  
blockchain:  
15k transactions/s,  
\$0.01/tx



Europe's first  
CO2-negative  
BlockChain



Large, growing and  
supportive community for  
new projects



Decentralization by  
3200 nodes in the  
world



More than 200  
partners

Secure  
Proof of Stake



State-sharding,  
better transaction  
efficiency

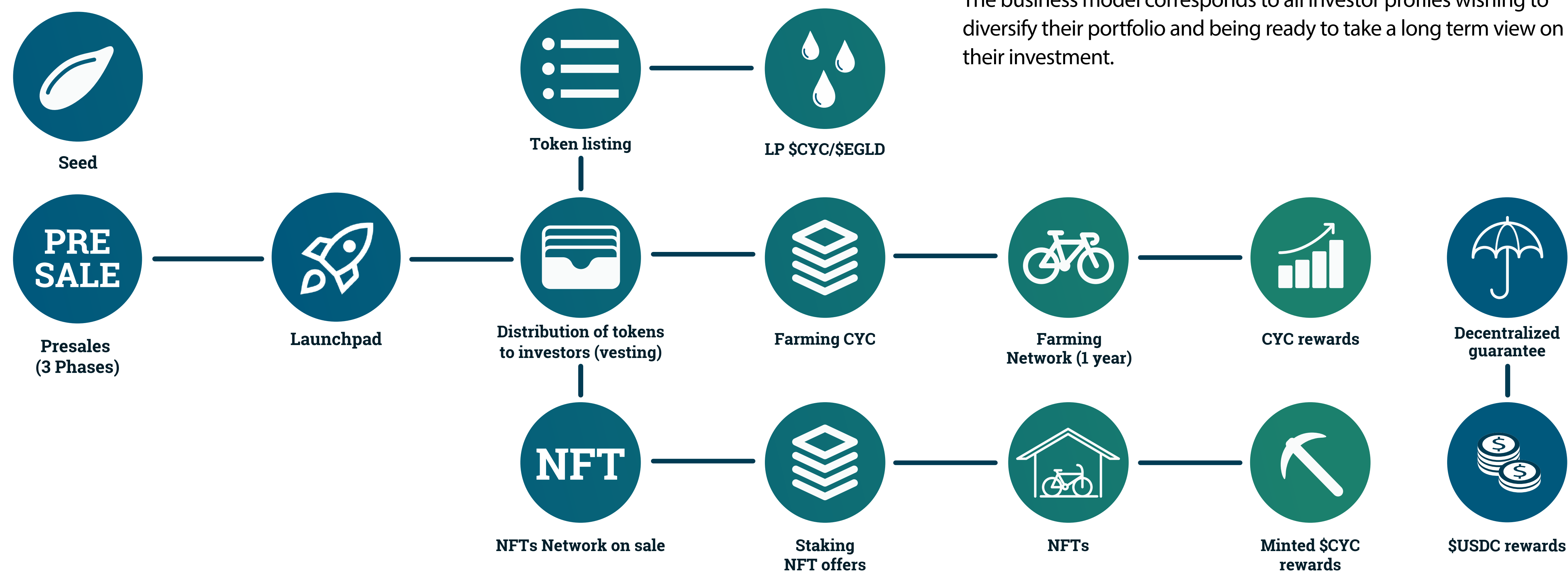


# 2.2 The business model V2

One of the main values of Cyc'lock is sharing.

Through the economic model, we have developed an idea that allows all stakeholders in the ecosystem to benefit from it.

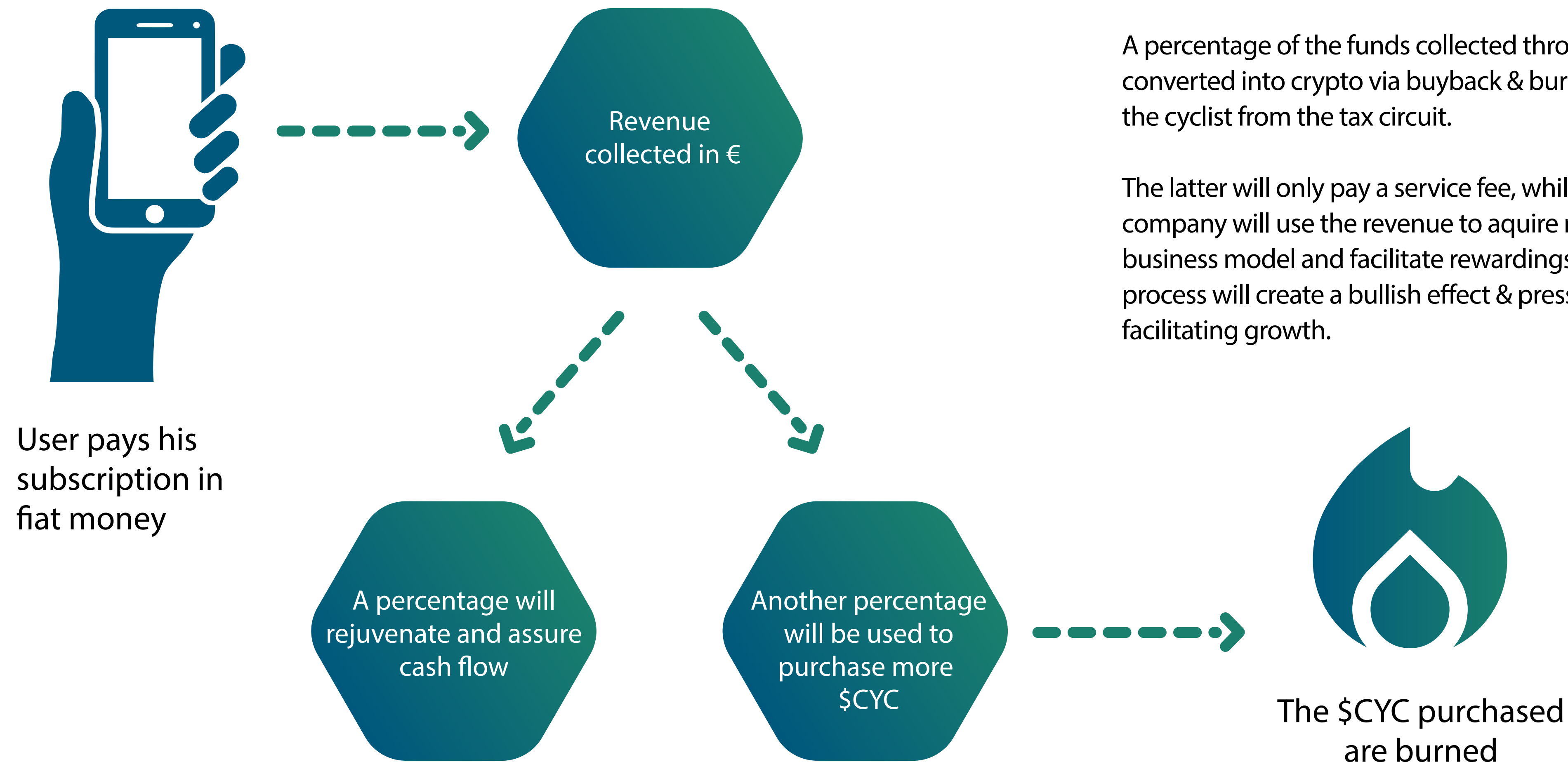
The business model corresponds to all investor profiles wishing to diversify their portfolio and being ready to take a long term view on their investment.





## 2.3 Buyback & burn mechanics: from subscription

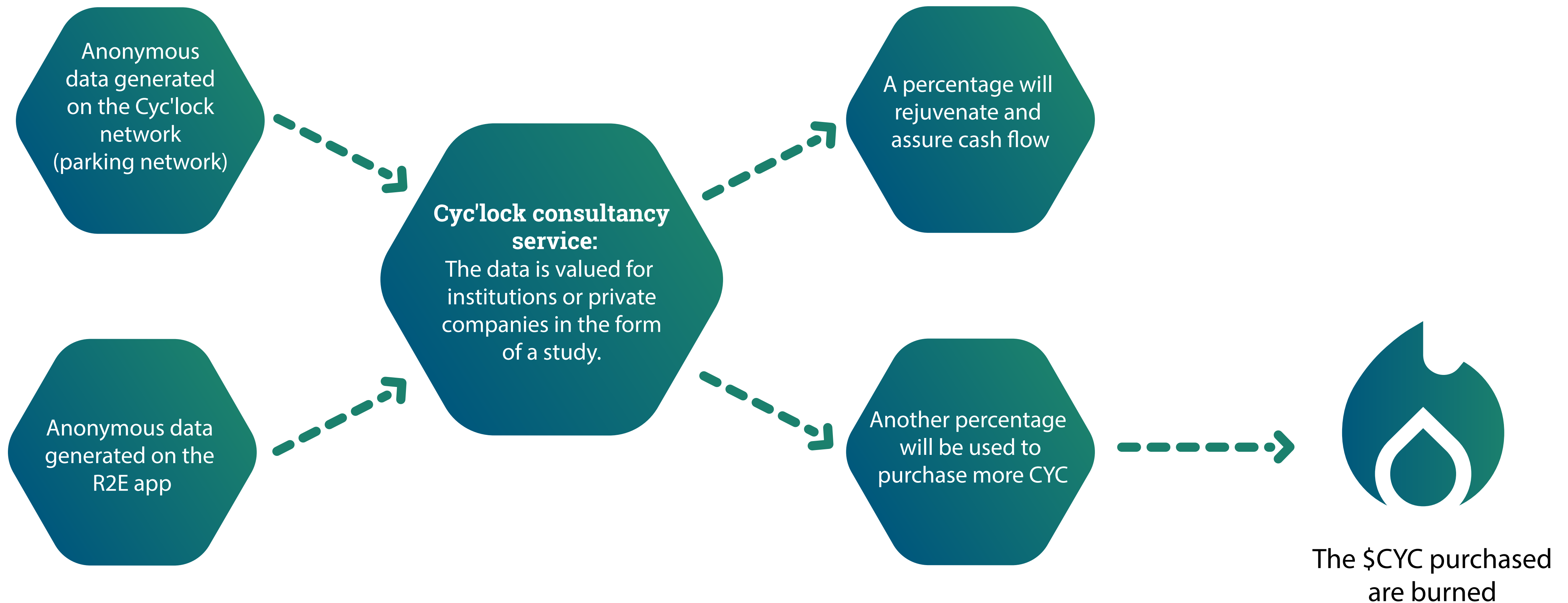
**Cyclists will be able to use the app without hearing about crypto.**



A percentage of the funds collected through subscriptions will be converted into crypto via buyback & burn mechanism, excluding the cyclist from the tax circuit.

The latter will only pay a service fee, while in the background the company will use the revenue to acquire more \$CYC, run the business model and facilitate rewardings for the NFT Stackers. This process will create a bullish effect & pressure on the asset, facilitating growth.

## 2.4 Buyback & burn mechanics: value generated by data





## 2.5 Securing the Network with Elrond Blockchain

One of the main components of the project is security. From an IT point of view, security will initially be ensured using current methods.



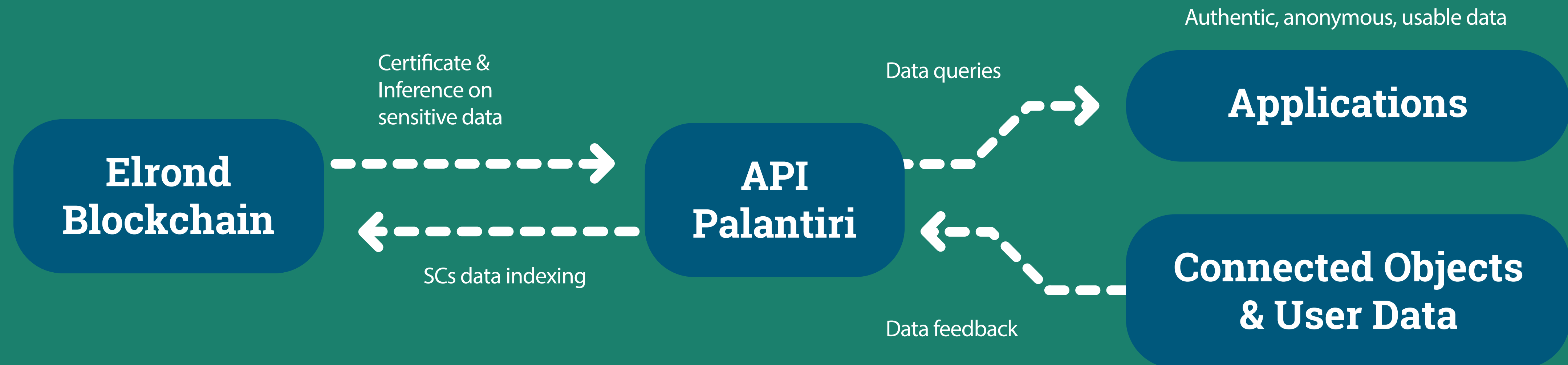
Once the foundations of the network have been laid, the network will be migrated to the Elrond blockchain.

The objectives are to:

- 1 Develop an **API** linking our IoT data to the blockchain
- 2 Have all the history of use of the network for statistical purposes
- 3 Secure the Cyc'lock network through the blockchain
- 4 Protect user data and make them anonymous
- 5 Authenticate the collected data

The **API**, called "**Palantíri**" will be co-developed with Titan Stake as well as the professional statistical processing tool

Below is a diagram summarizing the usefulness of the developed application:



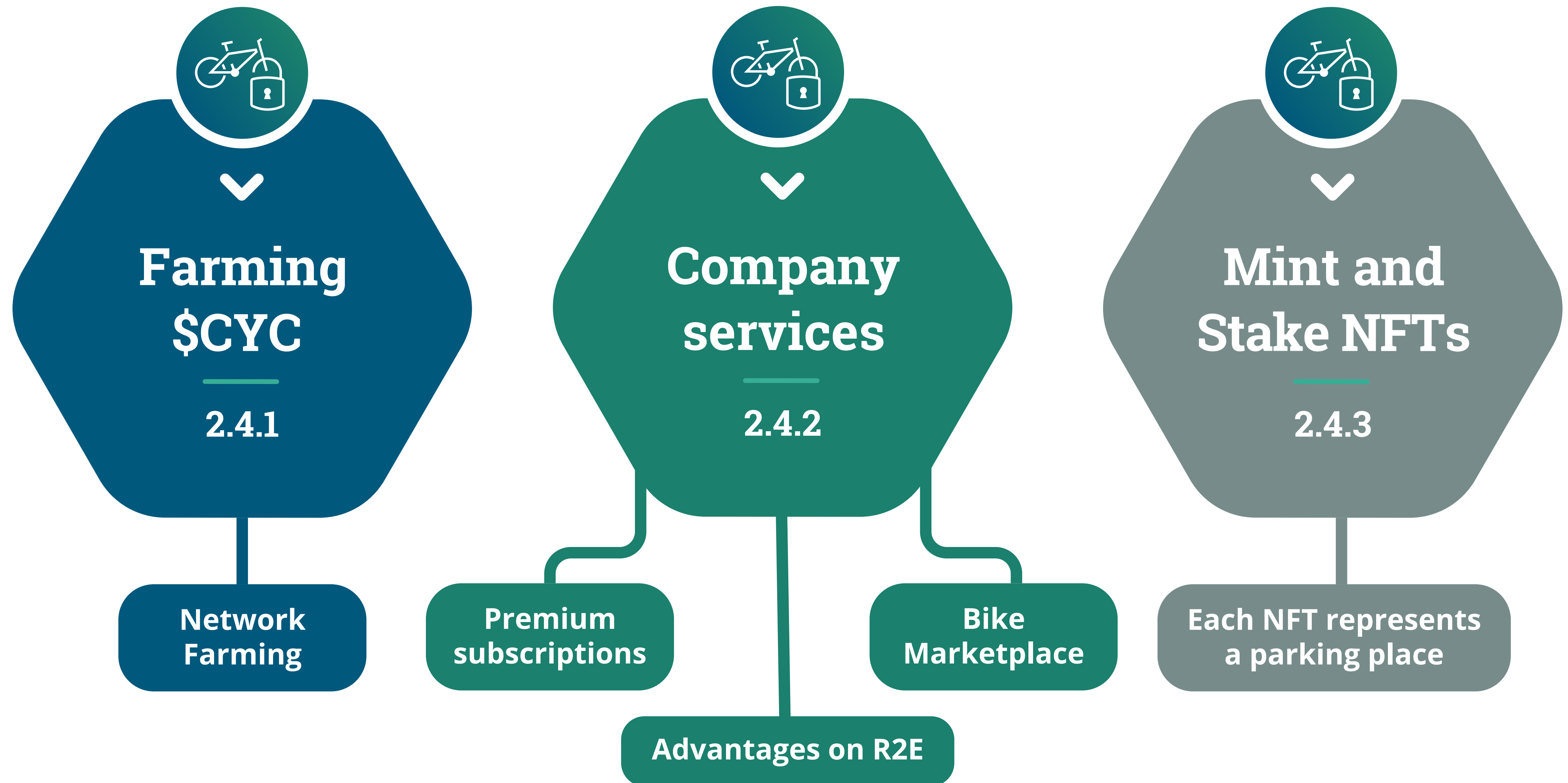
The usefulness of these developments will not only stop at the \$CYC project but will extend to all future IoT projects developed by the company.



Some of the API features will also be used in other projects developing on Elrond.



## 2.6 What to do with the \$CYC token?



2.6.1



**Farming  
\$CYC**

1

## Network Farming

A staking offer will be put in place as soon as the token is listed, allowing \$CYC holders to **accumulate more \$CYC**.

The staking can be locked for a period ranging from **1 to 6 months**. The more you trust our project, the more you will be rewarded with a **boosted APR**.

This one year offer will distribute to stakers a part of the **16% token rewards**.



2.6.2



## Company Services

2

### Premium subscriptions

Holders of at least 50€ of CYCs will be entitled to a **discount** on the cost of the premium subscription to access the Cyc'lock network.

### Advantages on R2E

The **CYC** token and the **EGLD** will be accepted as a means of **payment on a marketplace** developed by Cyc'lock. Cyclists will be able to find a selection of bikes, accessories, equipment and dedicated tools, new or used.

## Bike Marketplace

The \$CYC token will be used also as a way to acquire products from the Cyc'lock developed & owned marketplace. Various well-known brands can refer certain items from their catalogue, via the Cyc'lock marketplace. Our company will collect fees on purchases and the funds will be used to reward \$CYC to Network Stackers.

Bikes

Accessories

Cyc'lock Bike  
Marketplace

Purchased in \$CYC

Fees

Remuneration of  
\$CYC & Network  
Stackers

## 2.6.3



### Mint and Stake NFTs

# 3

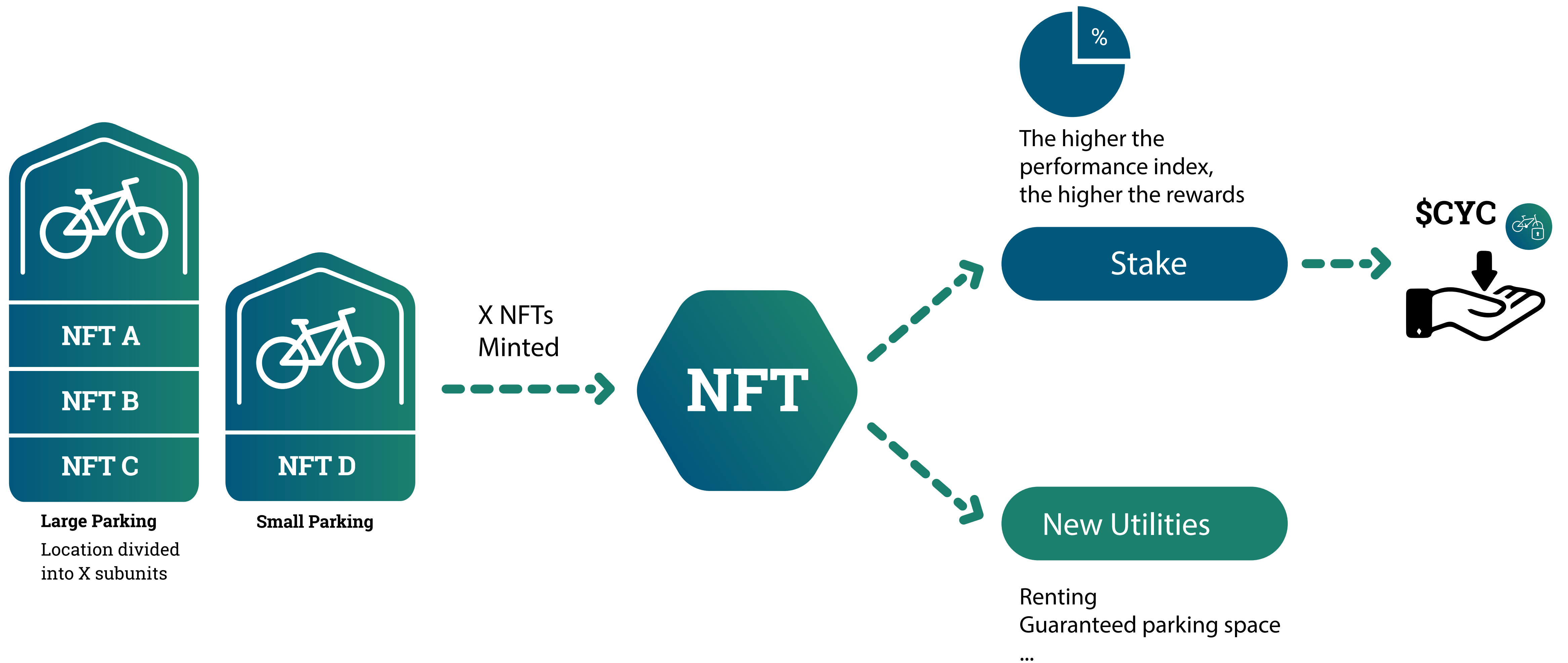
## Network NFTs

\$CYC tokens will allow to mint Network NFTs. Each NFT represents a parking place operated by the Cyc'lock company. There can only be one NFT for most of the parking places making them all rare and unique.

In order to allow more people to enter and also smaller wallets, some parking points will be split into several NFTs.

The cost in \$CYC of these NFTs will be defined according to the performance index of the parking point. This index, defined by the API, will be calculated from a public algorithm, representing the average occupancy rate of the garage and its frequentation. This index will be revised periodically.





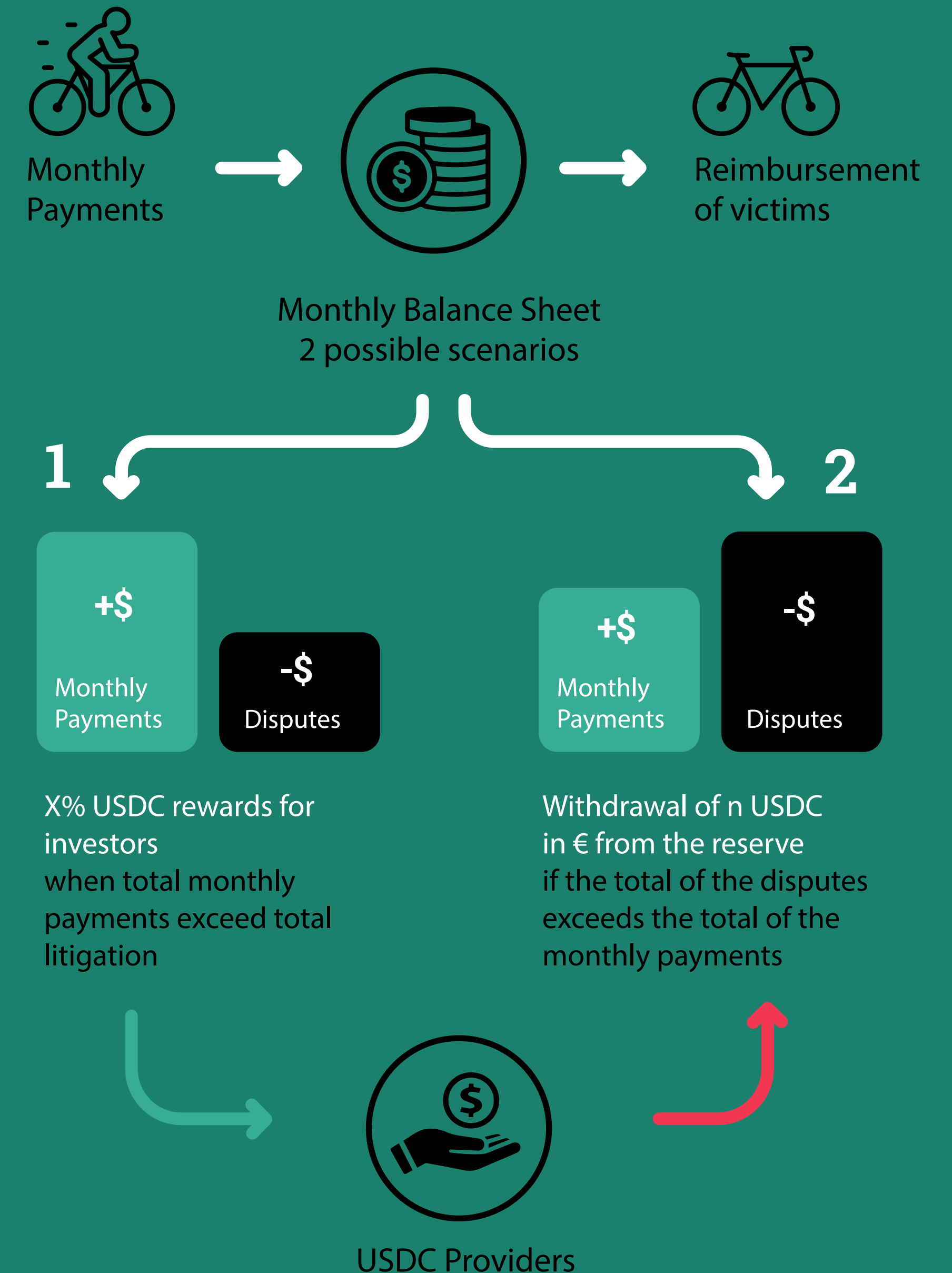
## 2.7 Decentralized guarantee

**Despite all efforts, the possibility of theft or damage exists. Cyc'lock plans to implement a decentralized guarantee financed by the \$USDC token holders.**

The liquidity provider will be able to deposit its USDCs in a smartcontract which will be made available to the company in case of a claim.

In case of problem, the victim can declare the theft or the degradation on his application and he will obtain, in case of confirmation of the dispute, the reimbursement of his material according to the GTC. Cyc'lock will systematically check the dispute in two ways, by visual and computerized observation.

In return the liquidity provider receives 80% of the monthly payments made by the subscribers to the guarantee in proportion to the number of \$USDC tokens present in the smartcontract.



## 2.8 The \$CYC Token

**The \$CYC token allows investors to contribute to the development of the network and the growth of the company while receiving a fair return.**







**\$CYC**



**An utility token**



**Decimals: 9**

**Supply: 100 000 000**

**Token ID: CYC-b4ed61**

**Allowing the investor to:**

**1**

**Actively participate in the growth of the Cyc'lock network**

**2**

**Invest in Network NFT and get rewards**

**3**

**Benefit from the company's services**

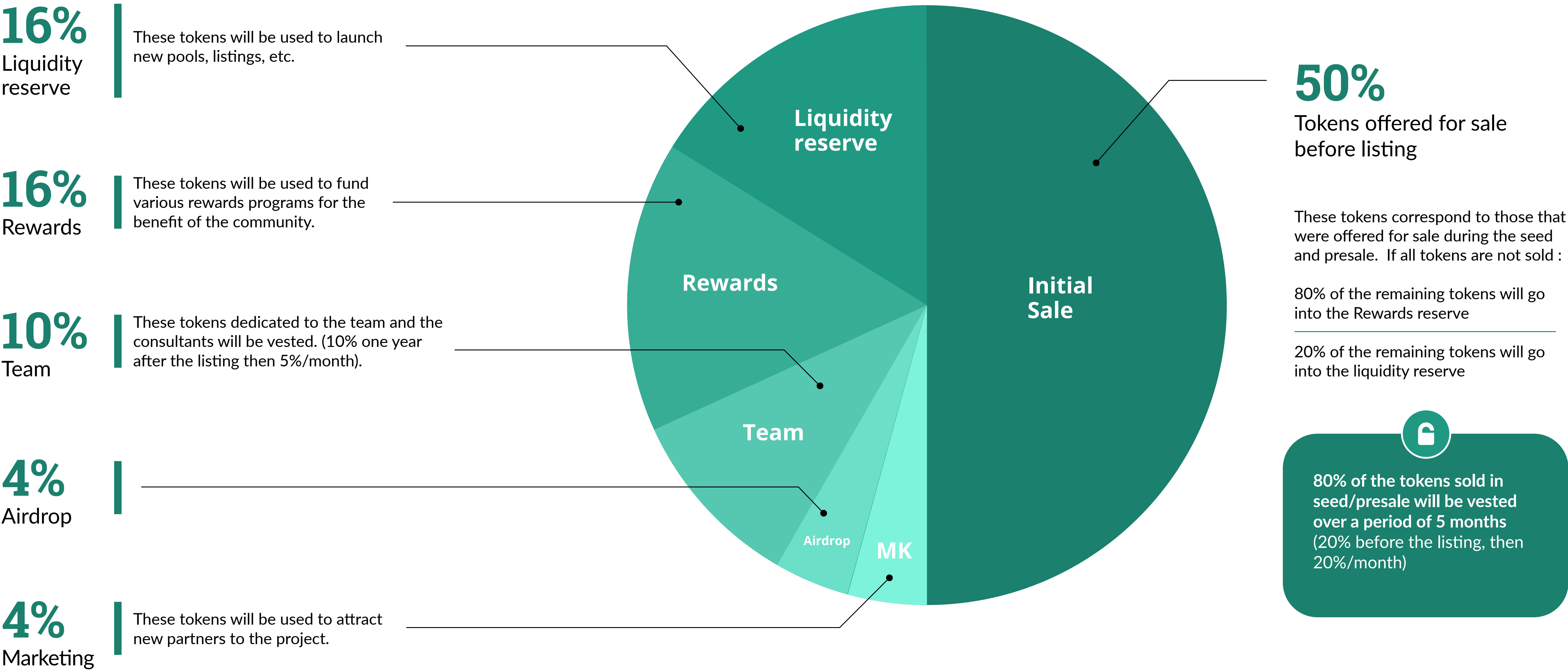
**4**

**Buy bike equipment on a marketplace and earn fees**

**5**

**Get privileged access and investment opportunity in the ride2earn**

# 2.9 Initial distribution



## 2.9.1 Presales / Launchpad

Presales phase of the tokens will take place in 4 stages at an entry cost for the first presale of 0,05€/SCYC.

A total of 50 million tokens will be offered during those stages.

Access to Cyc'lock services is conditioned by the acceptance of your identity through the KYC process.

The price will evolve as follows:  
Minimum +0,025€ or 0,0001 EGLD  
(According to the price at the time of calculation) between each phase:

Phase 1 4,5 millions Tokens

Phase 2 6 millions Tokens

Phase 3 8 millions Tokens

Phase 4 Launchpad:  
23.5 millions Tokens



# 2.9.2 Supply evolution

**All \$CYCs dedicated to the PURCHASE of NFTs will be BURNED**

introducing the deflationary character of the supply correlated to the growth performance of Cyc'lock networks.



**BURN**



**All the \$CYCs dedicated to the REWARDS of the NFTs stakers will be MINTED**

introducing the inflationary character of the supply correlated to the performance of the Cyc'lock networks.



**MINT**



**The deployment of Cyc'lock on a new city will introduce a token minting mechanism calculated according to the commercial projections to be realized on the city.**

**For example, when Cyc'lock is deployed in a new large city, it can be planned to:**



**install up to 1,000 parking points**



**over 5 years**

Thanks to the API, and according to the known performances on the previous cities, an average index of performance of parking point will be proposed. This index will be used to calculate the average number of \$CYC tokens to be burned to mint the NFTs Network of this city.

This number will be used to define the number of minted tokens and their injection period.

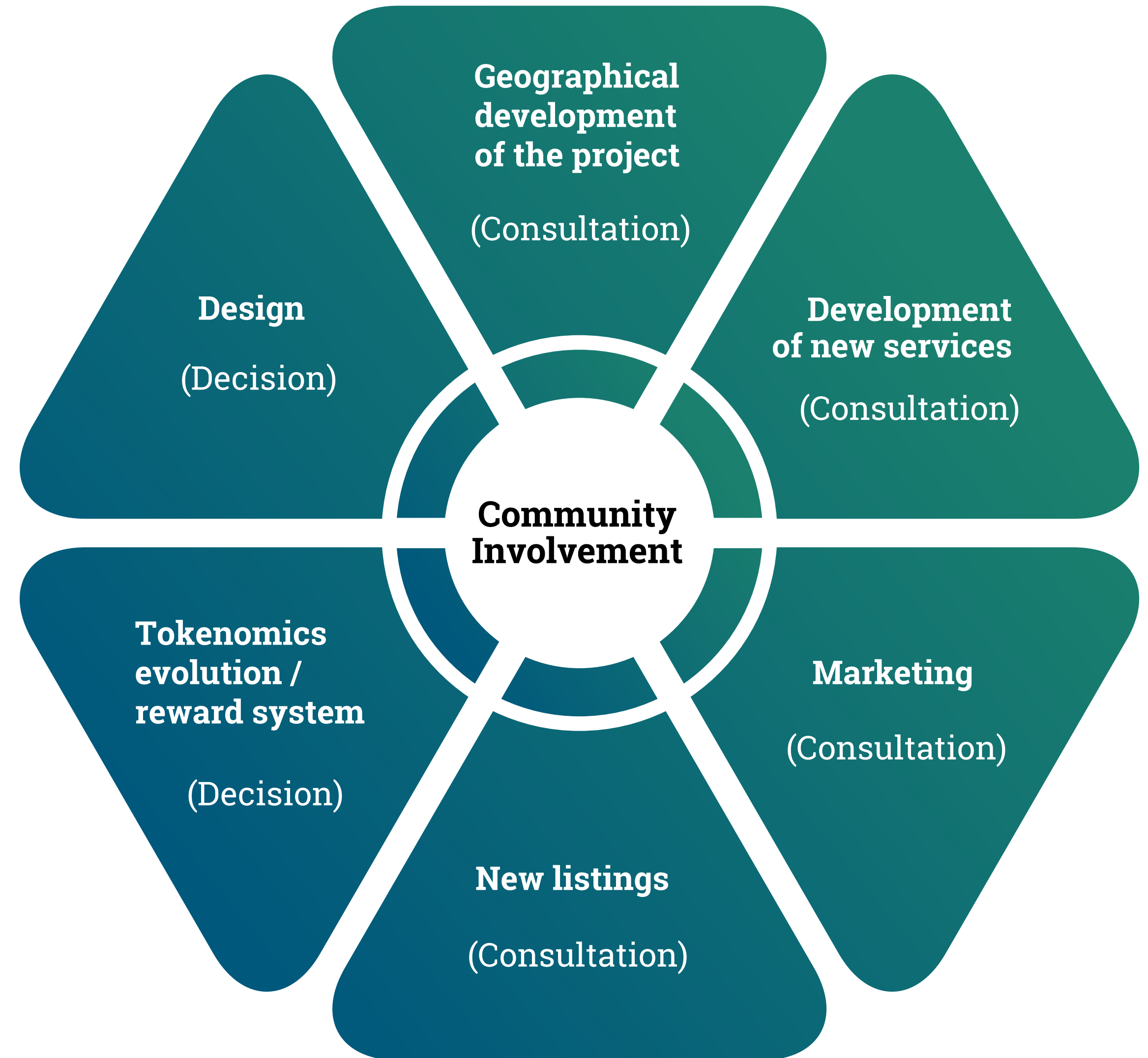
The objective is to preserve a supply in circulation globally at the balance (between Mint and Burn) allowing to ensure the arrival of new entrants as the company grows.

## 2.10 DAO or not DAO?

**The acquisition of tokens allows access to part of the governance of the project. We want to offer many consultations to the community including on the following topics:**



**The overall business of the company will remain managed by the corporate team but the governance of the platform will be decentralized.**





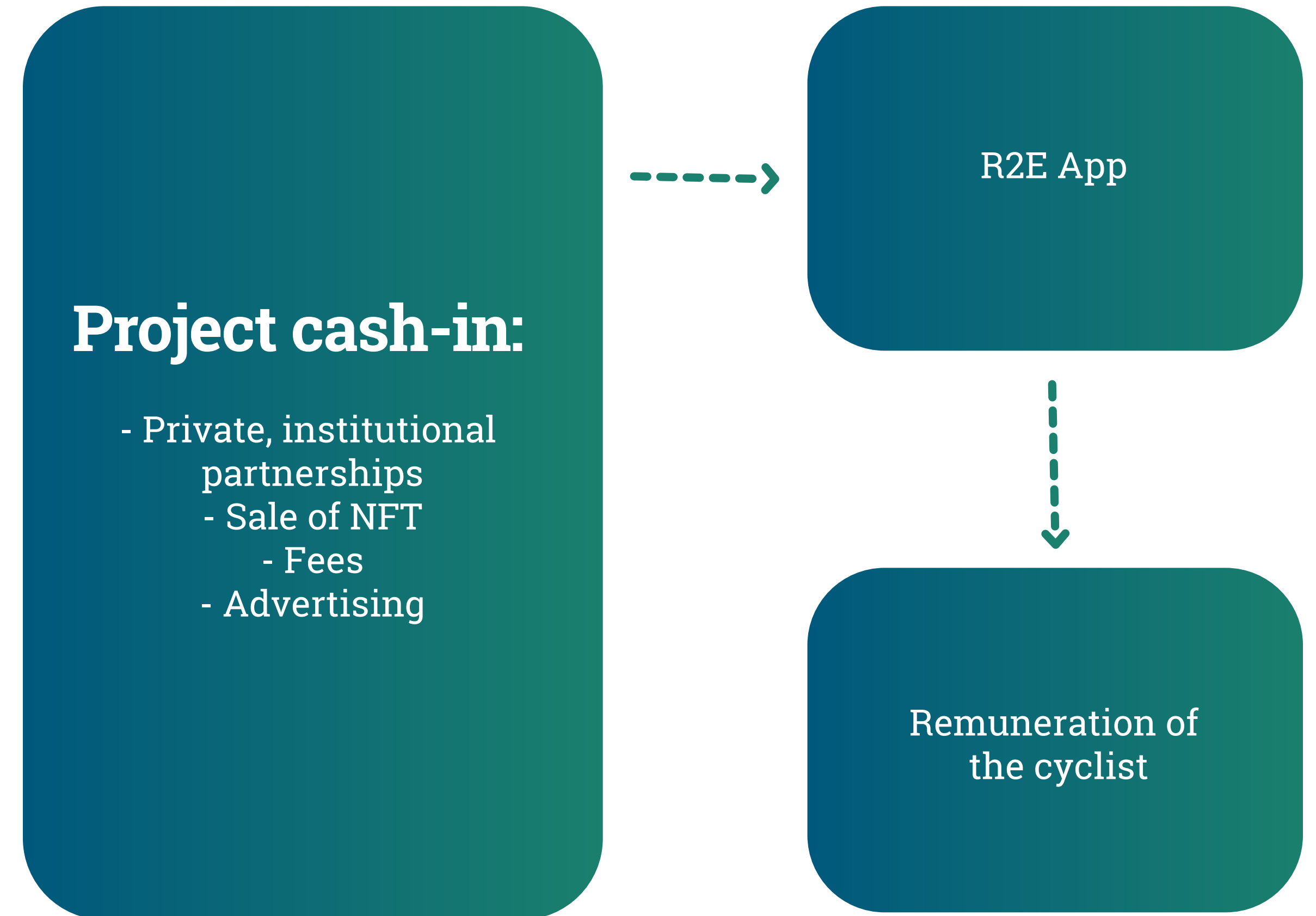
# 3 Whitepaper extension: Cyc'lock's Ride2Earn

## Project overview:

In partnership with InBlocks, we are creating a secondary token dedicated to our Ride2Earn concept. This token will enhance our rewarding capability and creates the possibility to provide rewards to cyclists when they ride their bikes.

To use the Ride2Earn dedicated application, cyclists will require the purchase of a virtual bike in the form of an NFT, whose attributes will determine the reward type and volume. These NFT's can be optimized to best fit the cyclist practice (racing, city, mountain bikes)

This R2E token makes it possible to federate a higher number of users, reaching out to all bikers, with no discrimination whatsoever starting from the most casual biking style towards the most assiduous.



- **The R2E token targets massive adoption, from all**
- **With the purchase of a bike NFT, the cyclists will have access to all features developed within the app.**
- **The cyclist will get rewarded based on the NFT acquired and his dedicated style**

### **Planned features**

- Using your bike to earn tokens
- Ability to measure physical activity and the health benefits
- Track the carbon footprint
- "Trip History" function and favorite routes
- Bike maintenance dates tracking and reminders

### **Planned partners**

- Major Actors/players in the cycle industry
- Specialized brands and speciality products
- Cycle events & competitions
- Institutions, public and private

### **Values carried**

- **Healthy and sustainable tokenomics built underlining non-pyramidal systems.**
- **Open ecosystem**
- **Realistic returns for a sustainable remuneration**
- **Reward & benefits for \$CYC holders**



# 4 The Team



**Mawuse Degboe**  
CEO



**Louis Gely**  
Co-founder -  
Product manager



**Louis Schneider**  
Co-founder -  
Marketing manager



**Thomas Le Gall**  
Business manager



**1KUBATOR**  
Incubator -  
Associate



**Maëlle Guilloux**  
Graphic designer &  
illustrator



**Teodor Radoi**  
CM & crypto advisor



**SOON**  
UX/UI Designer



**SOON**  
Communication  
Project Manager



**SOON**  
Hardware  
developer



# 5 Major partners

## Commercial partners:



**1KUBATOR**  
Incubator - Associate



**Vélo-cité**  
Expert in bicycle development



**ARNODVA**

**Arnodva**  
Development office



**BNP PARIBAS**

**BNP Paribas**  
Banking partner



**INNOPRODUCT**  
CREATE FOR TOMORROW

**Innoproduct**  
Engineering office



**BAM**  
Expert in soft mobility



**Garrigos Design**  
- Étude & Conception -

**Garrigos Design**  
Design office

## Blockchain partners:



**InBlocks**  
Dev partner (R2E)



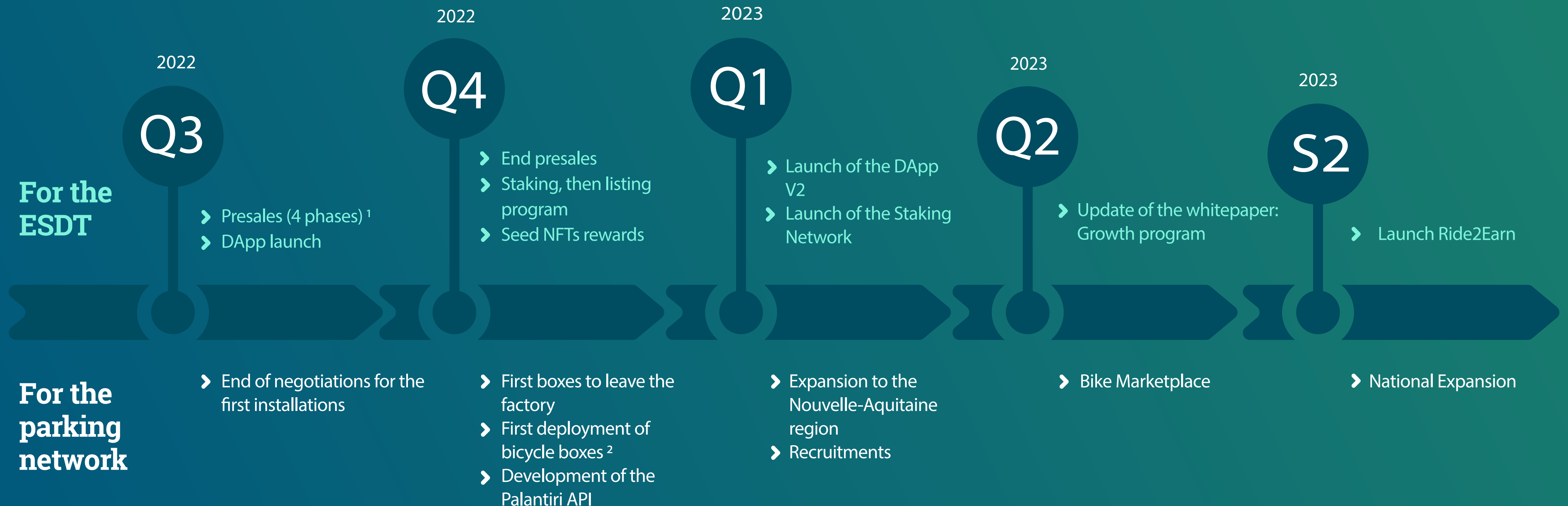
**TITAN STAKE**

**Titan Stake**  
Staking solution & Dev partner



**Jexchange**  
Associate exchange platform

# 6 Roadmap



<sup>1</sup> Presales delays: Observing the market taking a bearish trend before jumping in.

<sup>2</sup> Industrial supply delayed