

HÉLICE

Yellow Paper (introduction)

Lite Paper Reminders

- The Hélice token maximum supply is 1 unit and it can be divided up to 18 decimals.
- The token can't be transferred outside Hélice's platform nor any non-partner exchange.
- There can only be **one and single Order Book**, whatever the number of partners.
- Hélice doesn't have any inside information and can't in any way manipulate the price of its token.
- When registering on the platform, all investors grant Hélice discretionary rights on 1 to 10% of the amount of daily exchanges in order to achieve gains to finance all prostheses (or other related products).
- The token doesn't give any rights on the capital nor dividends, nor any voting rights.
- First, Hélice shall be the distributor of the prosthesis thanks to partnerships.

Roadmap

Phase 1: At first, Hélice shall use transaction fees to finance the prostheses in order to develop its own algorithm and to set up its platform to establish its discretionary rights.

Phase 2: Establishing the discretionary rights.

Discretionary Rights

The **first essential characteristic** of the model Hélice offers is that it has been granted discretionary rights to achieve gains by taking advantage of the arbitrage trading opportunities on its own Order Book. Hélice **NEVER uses these gains as a source of profit but to finance prostheses (or other related products)**.

This is the only way to finance prostheses on a day-to-day basis, without the need for: New tokens on a permanent basis or too many transaction fees.

Discretionary Rights: Common Interest

The stakeholders, i.e. the patient, the investor and Hélice, have a shared interest in implementing the discretionary rights:

➔ **The Patient** : Is entitled to some important discount on the price of the prosthesis (up to 50%).

➔ **The Investor** :

- Is not subject to any dilution since no money or security creation is necessary.
- This enables Hélice to perform buyback and burn operations on the H token (slide 12).
- Avoids paying very expensive transaction fees.
- Provide liquidity to the market.

➔ **Hélice** : can thus gain market shares through this competitive price advantage, so as to eventually develop its own technology.

1/2 Basics: contractual legitimacy.

All participants have agreed to grant Hélice discretionary rights (Rousseau's logic) instead of using force, speed or any technological innovation to achieve this goal (Schumpeter's logic).

Indeed, when registering on the platform, all investors agree to implement these discretionary rights. And all of them can benefit from this (slide 5).

2/2 Basics: Market failure and economic benefit

- Arm, leg, heart prostheses, exoskeletons, retinal implants, etc., are very sophisticated technologies that require a very high degree of individualization. Most of them can be customized. Some factors can explain the very high prices, such as the fact that no large-scale production is possible, that they are not flexible enough to match pain (all this significantly curtailing demand),
- One of the main functions of any financial market is to raise capital and allocate it efficiently to finance productive activities, and that's exactly what Hélice does. In this case, it means manufacturing prostheses. Contrary to what happens with all financial markets, Hélice never issues new securities on the markets so as to finance itself. The objective being not to dilute the buyer's savings. Thanks to Hélice, it is also possible to generate some capital inflow so as R&D can spend more time working on less painful prostheses; and indeed the current biotech model is too slow in this process.

A sluggish market: speed bump and blocking period

On Hélice Order Book, all the orders are subject to a maximum delay of a few seconds before being validated or executed

Moreover, when implementing its discretionary rights, Hélice will operate a time-out (according to the liquidity and that shall be estimated beforehand) for the orders. These latter shall then accumulate in an “anteroom”.

On the platform the investor can have access to:

- The Order Book (the orders being classified based on the best bid/ask).
- The anteroom (the orders being classified chronologically and being cumulative).

The imbalance in the way all participants can have access to the information (which is acquired, among other things, by ultra speed and collocation) is minimized thanks to the speed bump. The time-out period of the orders (a few seconds maximum depending on liquidity) enables Hélice to take advantage of the arbitrage trading opportunities to use its discretionary rights.



Discretionary Rights: Hélice takes advantage of arbitrage opportunities.

Example of orders that are blocked when there is some buying pressure.

When all the orders are blocked (even those on the market) by Hélice, they accumulate chronologically in the anteroom from the bottom to the top. On the other side, they are still classified by the Order Book based on the best bid/ask.

Anteroom (chronological order)

	Bid	Ask	
	Prix	Prix	
	<u>11,0</u>	11,5	
	<u>11,0</u>	11,4	
	10,9	11,6	
	10,5	11,5	
	10,7	12,0	
N° 3	10,0	11,4	
	<u>10,0</u>	<u>10,0</u>	N° 2 ←
	10,0	11,0	

Hélice takes advantage of the arbitrage and “picks up” in the Book that has been blocked. In this example, Hélice can buy (the orders are marked in bold) at €10.00 and sell at €10.70 or €10.50, or €10.90, or €11.00.

As noted above (slide 4), thanks to its discretionary rights, Hélice can overtake all the other orders, even if they had a counterpart. Hélice shall continuously watch and worry about its investors when processing the arbitrage, in particular it shall only partially “curtail” the orders (in small quantities, as is the case for high frequency trading).

Moreover, Hélice **shall decide of a maximum amount** to determine for each order for the arbitrage process.

Before the arbitrage was made by Hélice, the second selling order (€10.0) could have found the counterpart, thus it is crossed out. Even if the third buyer decides of a order at a price of €10.0, it is impossible for him to preempt it. The said order can be seen in the anteroom and not in the Order Book.

(*For the explanation to be easier to understand, the quantities have been removed).

Exchange platform

On the Hélice platform, the investor can have access to the Order Book and to the anteroom (when Hélice stops orders). The orders on the market can't be seen in the Order Book, they are replaced by the next orders, based on the best bid/ask.

In this example, Hélice made the arbitrage and bought at €10.00 and sold at €11.00.

Anteroom (chronological order)

Bid	Ask
Price	Price
11,0	11,5
11,0	11,4
10,9	11,6
10,5	11,5
10,7	12,0
10,0	11,4
10,0	10,0
10,0	11,0

← Before the buying pressure, the best bid was 10.00 and not 10.90. →

Bid	Ask
Price	Price
10,9	11,4
10,7	11,5
10,5	11,6
10,4	11,7
10,3	11,9
10,2	12,0
10,0	12,6
9,8	12,9

The Order Book once the orders are not blocked anymore (best bid/ask order)

(*For the explanation to be easier to understand, the quantities have been removed).

Anticipation and risk management

Hélíce shall use its discretionary rights over **1 to 10% of the daily volume**.

The investor is asked to anticipate and adjust his strategy when he is made aware of the risk, meaning the risk for his order not to be executed in spite of the counterpart. **In the future, Hélíce shall be able to set up hedging strategies.**

When the investor decides to trade on an order, he **knows in advance the maximum amount** Hélíce can use for arbitrage purposes should the order be chosen by the algorithm.

Buyback and burn

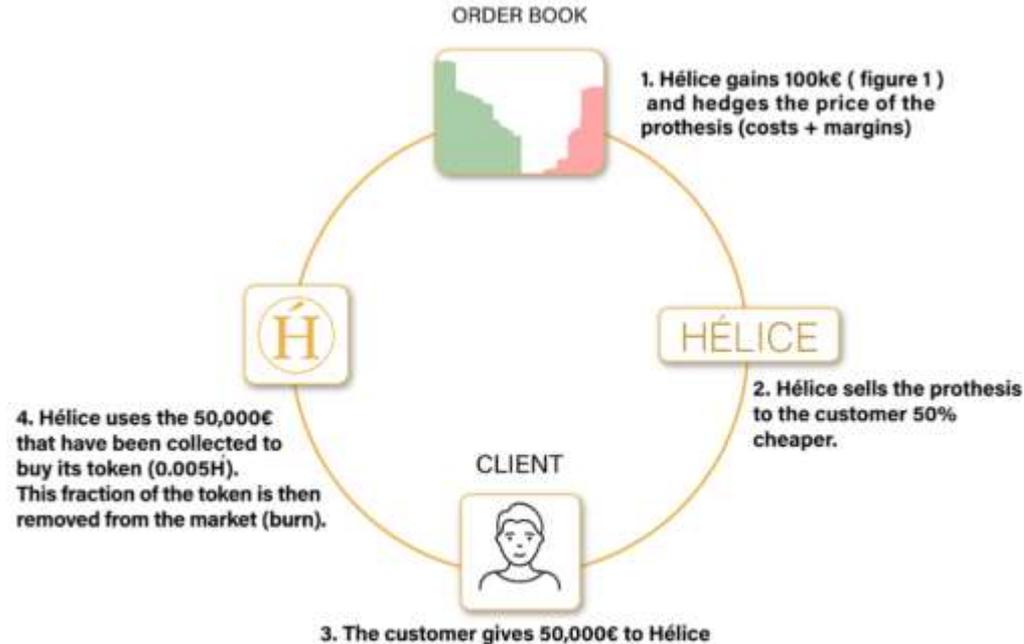
The **second essential characteristics** of the Hélice model is the fact that it gives the possibility to reduce the price of a product thanks to token. Once the gains have been generated through the discretionary rights, Hélice shall finance a prosthesis and sell it at a discounted price (up to 50%).

Once the money has been collected from the client, Hélice buy back and deletes a fraction of its token.

Thus, some liquidity from real economy is **continuously fed back into the system**.

The quantum of the buyback-burn (in the case 50%) depends on the discount that has been granted to the client. Should Hélice have sold the prosthesis 10% cheaper, there would have been a 90% buyback, meaning 90k€

Example of a selling pattern for a prosthesis 100.000€ worth with $1\text{H} = 10.000.000\text{€}$
Figure 2



The patient pays less and with the burn the total supply of the token is reduced

Transparency

The arbitrage processes (the amount of the gains generated by Hélice), the buybacks, the burn (the way it works shall be specified later), **are available to users**. In the same way, Hélice's identity is never hidden. Hélice platform shall disclose to everyone and in real time any buy back and burn transactions performed, as well as the number of tokens deleted and prostheses sold.

The Investor Psychology

While **complying with the GDPR rules**, Hélice may collect some data about its investors since all of them will have to register on its platform (or partner platforms) to buy and sell the token.

Thus, Hélice can publish statistics (nationality, gender, age, etc.) that shall be made available to the users of the platform; it can also publish records and some situational analysis (number of investors, average duration of the investment, etc.).

Hélice can also ask questions to the investors, conduct surveys, etc.

All this with one objective in mind: to define as precisely as possible a typical profile of the person subject to investing in the Hélice token and **help all users to understand and evaluate the market**.

Disclaimer

This Yellow Paper is not a flyer within the meaning of the L.412-1 Article of the monetary and financial code. Nor does it constitute any informational document that has been validated by the Autorité des Marchés Financiers.

The Hélice model is so new that it may lead to some undesirable effects or to some unexpected behaviors all along the process consisting in discovering all prices. The Hélice model is still at development stage, thus it may be slightly different from what it was when initially submitted. That's why Hélice can, at its own discretion, amend or edit it. Any investment in cryptocurrencies, ICOs or in tokens is a highly speculative process that may imply a total loss of your capital.

Hélice shall not be liable should any loss or depreciation of your token arise. Indeed, these assets are **highly volatile**. Please make sure to search for information and check them by yourself at all times.