

Last Update: August 12th, 2022



# P2E LITE PAPER



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# 1. GUIDING PRINCIPLES AND DISCLAIMER

Spider Tanks is a Play and Earn (P&E) Ecosystem - a web of participants including NFT holders, players, and game developers - that revolves around playing Spider Tanks matches and receiving Victory Points that can be submitted for game token reward distribution.

The game token of this ecosystem is SILK\*\* - an ERC-20 Token governed by contract 0xB37Db40e16a7CaaE38f1e4dbd6B1e44cfFe03072 - that is acquired by involving oneself in the Spider Tanks ecosystem - primarily by playing and winning games, but also by supporting the ecosystem. This document provides a quick overview of the ecosystem - how players can be rewarded with and spend SILK, what governs its issuance, etc.

## NOTE

Please note that this document is subject to change at any time. In particular, the numbers provided here, unless otherwise specified, are for comparative purposes only.

**All items may be subject to change as the game service and tokenomics evolve. In particular, items marked with an asterisk (\*) are still in active development and may be removed or adjusted substantially prior to release.**

*\*\* Gala Games makes no predictions, promises or speculations about the value of SILK. All SILK rewarded through playing shall be unminted in a player's treasure chest. As such, in order to transfer, list, buy or sell, users must first actively mint the token.*

## 2. SILK REWARDS

Any participant in the ecosystem can receive SILK rewards in a number of ways:

### 2.1 NFT Player

If a participant owns a Play-And-Earn NFT - namely a Tank Body, Tank Weapon, or a Hero Tank consisting of the combination of the two - they are rewarded with Victory Points by playing and winning in the game, which can then be submitted for SILK distribution. To be more specific, every time they win a match, the specific number of **Victory Points** rewarded is based on the level and rarity of their NFT(s) used. The reward distribution follows a diminishing returns curve for a given day, and is such that they should be able to receive the majority of their daily distribution of Victory Points (~90%) within the first 20 victories\*\*, although they will continue to be rewarded for every match they win. Assuming fair matches, that would require 40 games - which translates roughly to 3 hours of consecutive play. At the end of the day (00:05 UTC), those Victory Points will be totalled and SILK distributed based on the Victory Point-to-SILK ratio for that day\*\*\*, and the appropriate amount of SILK will be placed in a player's Treasure Chest, which they may continue to hold there or mint and utilize at their pleasure.

Note that in the future, Victory Point and other possible rewards per win will be generated with an additional layer of complexity, as those who contribute more to the match will receive more than those who contributed less.

\*\* For more information, see the description of the Energy mechanic at 3.3t

\*\*\* See paragraph 4

### 2.2 Map Owners

Map owners will receive Victory Points for allowing matches to be played on their Maps. Map owners can link their Map NFT to a Planetary Node, which will allow matches to be played on their Map. The Map owner's reward from a single match is equivalent to a relatively small percentage of the Victory Points given to the victorious team in that match. The number of matches that can be played on a given Map for a given time period is determined by the level of that Map - see section 3.5 Map Upgrades for more details.

## 2.3 Planetary Node Operators

Planetary Node operators, as the ones enabling Map owners to receive Victory Points and allowing matches to be played, get a reward equivalent to a portion of the Map owner's reward for each match that is played on Maps linked to that particular Planetary Node (and therefore, a small percentage of the Victory Points given to the victorious teams).

## 2.4 F2P Players

Even if a player does not own a Tank or a Map, they can still participate in the Spider Tanks ecosystem by playing through the Pilot Program

*(see 5. Pilot Program for more details).*

## 2.5 Others

Gala and GAMEDIA - the publisher and the developer of Spider Tanks respectively - as well as Founder's Node operators also receive a proportion of the distribution.

## 3. SPENDING SILK

SILK can also be spent in a number of ways, the chief of which is purchasing upgrades for a Tank Item NFT.

### 3.1 Arachnium

Arachnium is the premium in-game currency of Spider Tanks, which can be obtained in two ways. It can be purchased in the Store with SILK; alternatively at the end of the game, a winner can decide whether to receive their reward in Victory Points (that they can then claim to receive SILK) or Arachnium (with the amount of Arachnium received determined by the Points-to-SILK ratio), which is equivalent to receiving SILK and buying Arachnium immediately. Arachnium, in turn, can be used to purchase:

- Components for Upgrades
- Upgrades and Upgrade Rerolls
- Energy Fix\*
- And more...

Once Arachnium is bought in the store (or claimed after a game) it cannot be exchanged for SILK, and can only be used in game to purchase database items.

### 3.2 Upgrades

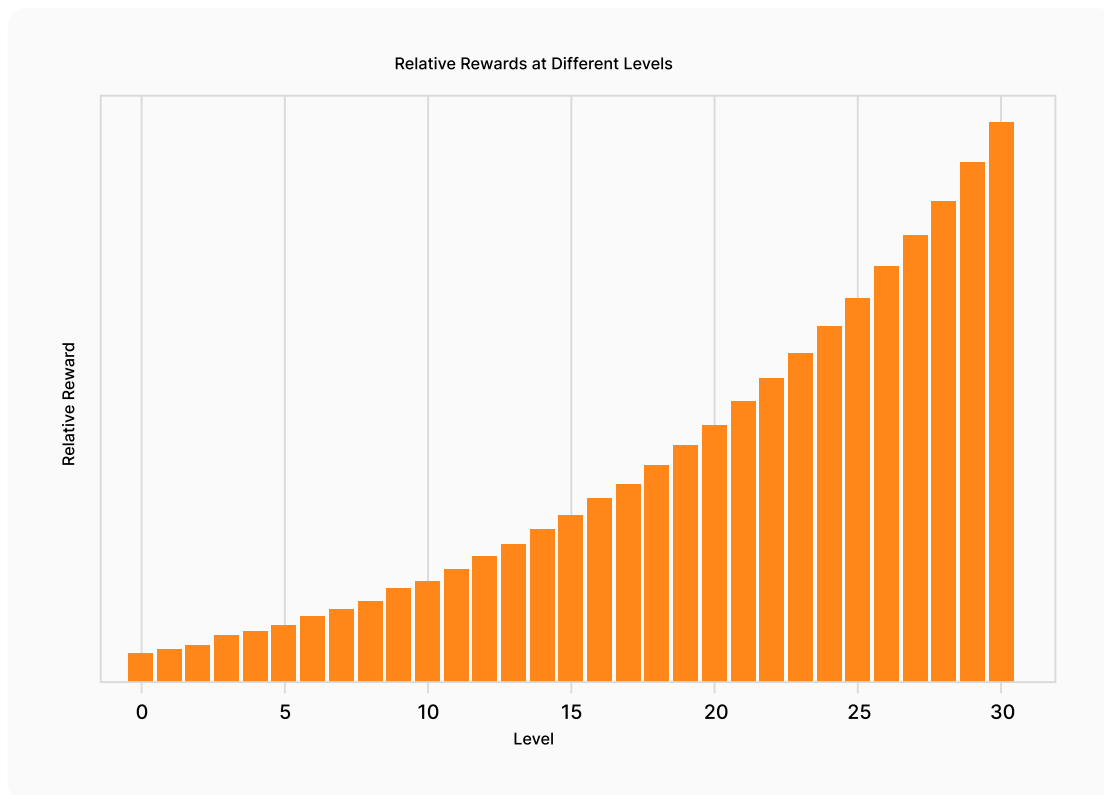
To upgrade a Tank Weapon or Body, an NFT Owner will currently need to purchase the appropriate amount of Components and Arachnium, priced according to their rarity (later on, these items will become available in-game via the Factory mechanic)\* - a potential breakdown of component prices would look like this:

- Common ("Bolt") : 0.01 SILK
- Uncommon ("Scrap Metal") : 0.02 SILK
- Rare ("Chips") : 0.05 SILK
- Epic ("Hydraulics") : 0.10 SILK
- Legendary ("Engine") : 0.20 SILK
- Ancient ("Energy Core") : 0.50 SILK

To upgrade an item of a given rarity, one will only need components of up to that rarity inclusively. For example, to upgrade a Common Weapon from level 0 to 1 a player will need to spend a fairly small amount of SILK, distributed between Arachnium and Bolts. To upgrade an Ancient Weapon from level 28 to 29, however, they will need to spend a much larger amount of SILK, divided between Arachnium, Bolts, Scrap Metal, Chips, Hydraulics, Engines, and Energy Cores.

### 3.2.1 Upgrade Quality

Upgrading a Tank item serves a number of purposes. It directly increases the Victory Points reward potential of that item. The maximum amount of Victory Points awarded to a Level 30 Common Weapon for a victory will be several times larger than that of a Level 0. Upgrading also, as the name suggests, increases the stats of an item, and with better stats, the chance of winning also increases.



### 3.2.2 Rerolls

To account for the fact that upgrade quality - how large the increase in stats is - is variable between *Decent* and *Perfect*, players have a chance to increase the quality of their upgrades prior to applying it. This is done by rerolling the upgrade for a cost equal to ~15% of the full upgrade to the next level. Note that rerolling does not guarantee a higher quality of upgrade - if a player has a Good upgrade, for example, there is no guarantee that, on rerolling, it will become Excellent rather than Decent. At the same time, the number of rerolls a player can apply to a given upgrade is not limited. Please note that re-rolls will be restricted to specific geographic regions only.

### 3.3 Energy Fix\*

Energy is the metric that governs where along the curve of diminishing Victory Point returns per day a given item lies; with each win, Energy is expended, decreasing the number of Victory Points an item is able to claim for each consecutive victory. As mentioned above, Energy has been set up in such a way that a player will be able to receive ~90% of their daily Victory Point allocation within 20 wins - requiring, on average, 40 games or 3 hours of play.

For those eager to get a higher Victory Point allocation, we will introduce the Energy Fix mechanic, which allows players to fix their Energy to a set level for a certain number of matches (not wins) through an expenditure of SILK that is dependent on the item's rarity and level.

The Energy Fix will fix an item's Energy level, allowing it to receive a constant amount of points issuance per victory. These rewards do not diminish and remain constant while the Energy level remains fixed for a period of 20 games. When the fix expires, an item's Energy level reverts to what it was prior to the Energy Fix being applied.

### 3.4 Purchase Tanks in Store with SILK\*

Later on in the game's lifecycle, players will be able to use the SILK they have received to purchase Tank NFTs, including Bodies, Weapons, and Hero Tanks. Sales of Tanks in SILK will occur at limited times, and the quantity of NFTs is likely to be even more constrained than for usual sales.



### 3.5 Map Upgrades

Map owners receive Victory Points by linking their Map to a Planetary Node and allowing matches to be played on that Map. To determine which Map a particular match is going to be played on, the game will reference a Map in the Map Queue. When a particular Map has been used (by a match playing on that Map), the Map automatically goes to the back of the Map Queue.

The level of the Map determines the number of slots in the Map Queue that a Map can populate, increasing how frequently it is used. In order to ensure their Map has more slots in the Map Queue, Map owners can increase the level of their Map NFT with Arachnium and/or Components. The more slots a Map populates in the Queue, the more games it will host, and the more rewards it will receive for that service.

### 3.6 Planetary Node Upgrades

Planetary Node operators can upgrade their Node with SILK (and GALA) to increase its capacity to perform useful work for the Spider Tanks ecosystem via interactions with the Map system. With upgrades, increased capacities Planetary Nodes will also be expected to perform greater workloads.

Nodes interact with matches in a similar way to Maps. This means that for a match to be played, there must be a Map item on which the match will be played, and a Node to make that match possible. A Node enables a particular match in the same way as a Map NFT. A Map NFT waits in a Map Queue to be paired with a particular match, and a Planetary Node enters the Node Queue to be paired with a particular match (and therefore Map NFT as well). Similarly to a Map owner, a Node operator can increase the number of slots their Node occupies in the Node Queue by upgrading the Level of their Node with SILK (and GALA).

### 3.7 Other Uses

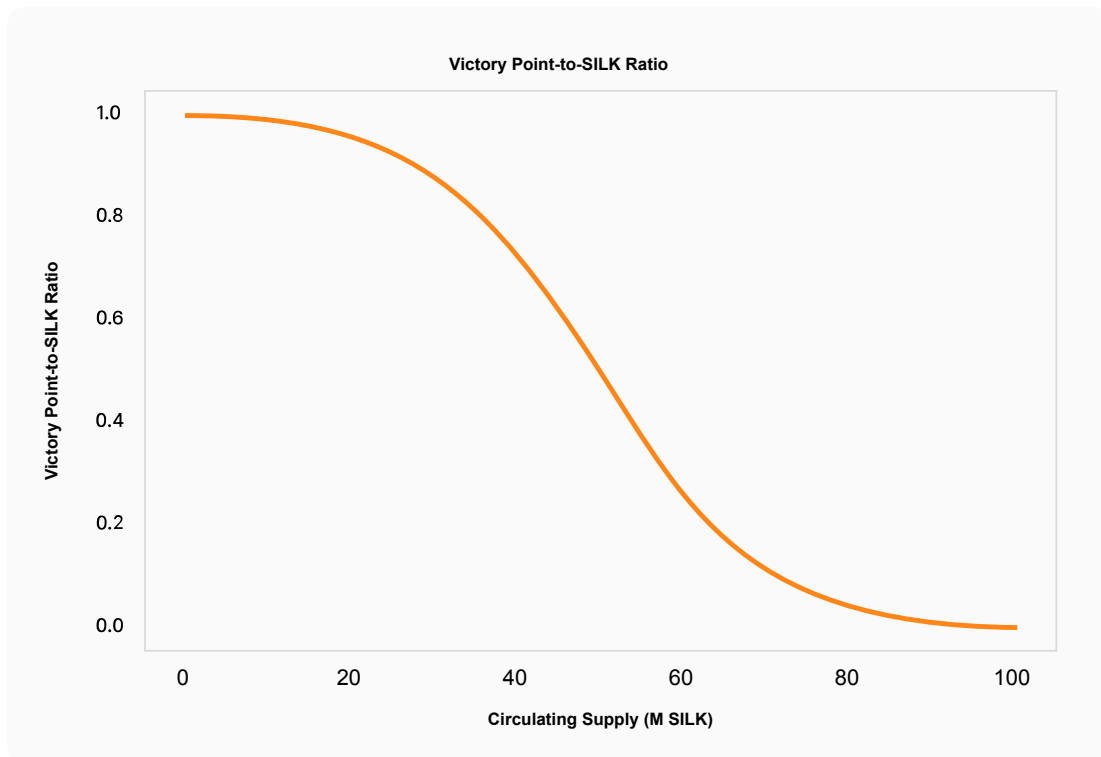
As we introduce more and more elements into the game, players will be able to purchase other items in SILK as well, ranging from purely cosmetic items to add a certain flair to their personal Tank, to in-game buffs and boosts and uncapped pro matches. See section 8 for more detailed information on upcoming updates.

## 4. VICTORY POINT-TO-SILK RATIO

The distribution of SILK at the end of a day is governed by the Victory Point-to-SILK ratio for that day, in turn informed by the amount of Victory Points accumulated by all participants at the end of the day, as well as the current supply of SILK. This mechanism is introduced in order to implement a **soft cap** on the amount of SILK circulating both in the Spider Tanks economy and beyond. The magnitude of the **soft cap** is determined by the expenditure into the Spider Tanks ecosystem.

SILK will always be the only currency of the Spider Tanks ecosystem, and as that ecosystem grows in size, supply will not increase in-kind. SILK output is thus designed to become scarcer over time.

The Victory Point-to-SILK ratio for any given day is determined by the following parameters: the current **cumulative mint** as well as the **total burn** up to that day; the relationship between the Victory Point-to-SILK ratio and the circulating supply is described by the chart below:



As the amount of **cumulative mint** increases, the amount of SILK rewarded per Victory Point decreases. At the same time, rather than accepting SILK spent in our store as revenue, all SILK received for purchases in the store will be sent to the null address and therefore burned. As a counterbalance to the decrease of the Victory Point-to-SILK ratio, as the **total burn** increases, so does the Victory Point-to-SILK ratio. As the **circulating supply** of SILK tends towards the **soft cap** of 100M, the Victory Point-to-SILK ratio approaches 0, meaning at some point in the future, rewards will tend towards 0 as well, if there is no SILK spent in the game.

## 5. PILOT PROGRAM\*

In order to allow players to utilize all of their items more effectively, the Pilot Program is introduced - a mechanic by which the owners of Tanks, Captains, can allow other players, Pilots, to play with their Tank. Whether a player owns an NFT Tank or not, anyone can play with a Captain's Tank and receive a portion of the Victory Points that would have been available to the Captain had the Captain used it themselves.

When a Captain participates in the launch version of the Pilot Program, they may submit only one Tank into the Program every 24 hours. The Tank will be locked into the Program for that time period and will be returned to the Captain automatically at the end of it. The Captain must resubmit that Tank - or any other - if they want to participate in the Pilot Program again. When the Captain's Tank is used by a Pilot, the Captain will receive a portion of the Victory Points from the matches won with their Tank. A portion of the Victory Points for each match is taken as a 'processing fee' and burned - the remainder is split equally between the Pilot and the Captain. Later on, as the game develops and the Pilot Program improves, the number of Tanks a Captain may submit to the Pilot Program may increase and the Captains may be able to recall their Tank or Tanks before the 24 hour locking period is over.

From the Pilot's perspective, the initial launch of the Pilot Program will take the form of a random assignment of Tanks from the available pool. A player, regardless of whether they own a Tank, can participate in the Pilot Program so long as there are Tanks available in the Pilot Program, and temporarily receive a random Tank from that Tank pool. In the event of victory, they will split the Victory Point rewards (excluding the 'processing fee') with the Captain, while the Tank may be recalled by its owner. Currently, a Pilot can go through a diverse array of Tanks to pilot over the course of several matches, ranging in rarity and level. As the game grows, the Pilot Program will become more complex with a more robust correlation between the experience of the Pilot and the quality of the Tank they will be assigned.

## 6. POWER MECHANICS

The Spider Tanks ecosystem relies on the support and engagement of its players - the Power mechanics outlined below represent the ways in which a player can access the Spider Tanks economy.

### 6.1 SILK Power\*

As the Spider Tanks ecosystem becomes more robust, players will be required to hold SILK in their wallet or Treasure Chest in order to power their P2E potential for a given day. In order to receive Victory Point rewards on a given day, the player must hold a certain amount of SILK - that SILK can be spread between minted SILK in their wallet (registered with GALA) and unminted SILK in their Treasure Chest in any proportion.

The amount of SILK a player must hold is determined by a dynamic SILK Power multiplier. For example, if the SILK Power multiplier is 10, a player must hold 100 SILK in order to receive up to 10 SILK (or rather, the equivalent number of Victory Points at the contemporaneous Victory Point-to-SILK ratio). The held SILK is not used up in any way, and can continue to power the player's reward generating ability, provided they continue to hold it.

SILK Power will kick in after a given amount of rewards are issued, meaning that every user will be able to receive a base amount of rewards before requiring SILK.

#### 6.1.1 GALA-SILK Power\*

Higher level items have a higher Victory Point reward potential - to support it, players will need to hold not only SILK but also GALA. To enable a higher level of reward, the player must hold a certain proportion of their SILK Power in GALA - for example, again with a SILK Multiplier of 10, in order to receive a reward of more than 50 SILK on a daily basis, the player must hold 500 SILK as well as GALA equivalent to 100 SILK.

As the Gala Games Ecosystem grows, game-specific partitions of players' GALA Power may be introduced.

## 6.2 HONOR System\*

The Honor system was created to keep players incentivized to engage in the Spider Tanks ecosystem, and therefore improve the game experience for those participating in the game and its underlying tokenomic structure. The Honor system aims to achieve this goal by directly affecting the rewarded Victory Points of players who act against the fundamentals instilled into the game ecosystem. It is important to note that what we propose is not the final state of the Honor system - we have designed it through listening to our community and its suggestions but want to hear all suggestions when the Honor system is released.

In simple terms, everyone who participates in this game has a potential to receive Victory Points based on their successes in the game (as outlined in this paper). While the potential to receive Victory Points in a day is unlimited, a player's ability to earn its maximum available Victory Points possible per win is limited by that player's Honor score. In a to-be-released additional "lite paper" the Honor System mechanic will be outlined. For now, the important takeaway is that while there is no limit to Victory Points, your Honor score will determine how easy or difficult it is to stack Victory Points.

## 7. 'DYNAMIC SUPPLY' MECHANISM

Under the Dynamic Supply Mechanism, Gala Games and GAMEDIA will maintain ability and access to a few controls to use at their own discretion. In the beginning, these are the controls that Gala Games and GAMEDIA foresee possibly using:

### 7.1 POINT-TO-SILK Ratio

In addition to the straightforward dynamic of the Victory Point-to-SILK ratio outlined in P.4, Gala Games and GAMEDIA may increase or decrease the Victory Point-to-SILK ratio.

### 7.2 Component Price

Components (data-base items) - priced in SILK directly, not US Dollar equivalent - may also see their prices adjusted to reflect changes in rate of issuance.

### 7.3 SILK Power Multiplier

The exact amount of SILK Power that players will be expected to hold will change across the lifetime of the game.

## 8. UNDER CONSTRUCTION

As the web of the Spider Tanks ecosystems becomes more robust, we will be introducing new elements to the economy, gradually increasing its complexity and the number of ways players can interact with it.

Please see an incomplete list of the updates we are looking to introduce below, and note that it will be updated with dates and more details as we move closer to implementing these mechanics.

- Consumables to provide in-game buffs and benefits during play,
- Cosmetics to allow players to make their Tank truly stand apart from the rest,
- A fully integrated Land and Factories system that would allow players to receive components in-game, to be detailed fully at a later date,
- A mechanic to allow players to engage in uncapped reward generation at the highest level of play.
- A fully fledged-out 'Dropship' system allowing the player to remotely command an armada of both piloted and AI-operated Tanks
- And more...

### 8.1 Dropships

Dropships are a game feature that will enable players to remotely command their armada of Tanks. Every player will have access to the Dropship feature. All Dropships will start with one Drop Pod, in which a player can place one Tank. This Tank will be placed into the Pilot Program and be made available to other players. Players will be able to purchase upgrades to add additional Drop Pods to their Dropship, which increases the number of Tanks a player can place into the Pilot Program at once. (See 5. Pilot Program for more details).

As the Dropships feature continues to improve, players may be able to further upgrade their Dropship to place their Tank into the AI Program - where it could potentially be run by a customizable and upgradable AI Pilot.

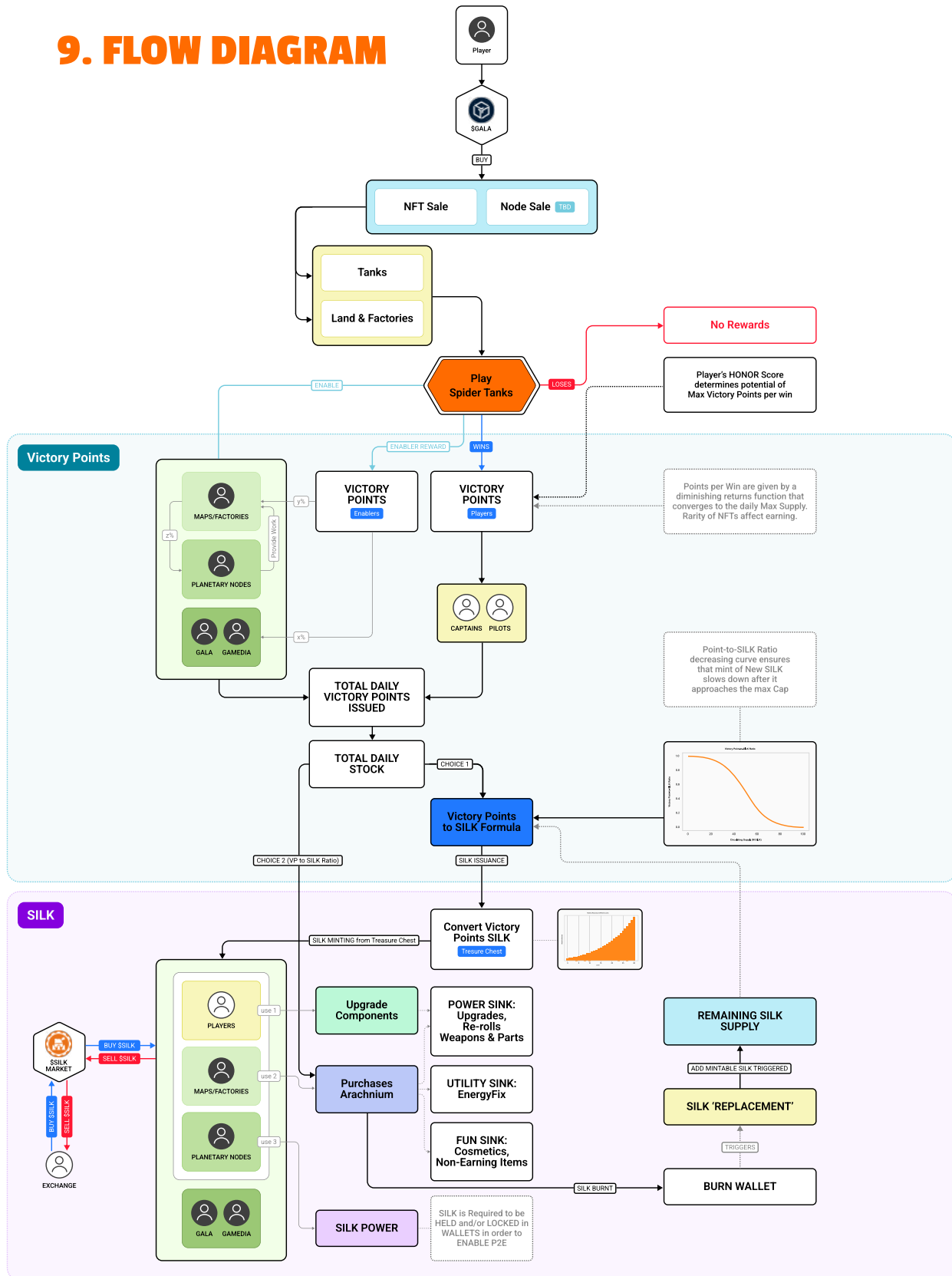


NOTE

**PLEASE READ THE ENTIRETY OF THIS “DISCLAIMER” SECTION CAREFULLY.**

The information set out herein is only conceptual, and describes the future development goals for the SpiderTanks protocol to be developed. In particular, the project roadmap in the Litepaper is being shared in order to outline some of the plans of the SpiderTanks team, and is provided solely for INFORMATIONAL PURPOSES and does not constitute any binding commitment. Please do not rely on this information in making purchasing decisions because ultimately, the development, release, and timing of any products, features or functionality remains at the sole discretion of the Company, the Distributor or their respective affiliates, and is subject to change. Certain statements, estimates and financial information featured in this Litepaper are forward-looking statements that are based on and take into consideration certain known and unknown contingencies and risks which in eventuality may cause the estimated results or may differ factually and substantially from the featured estimates or results extrapolated or expressed in such forward-looking statements herewith. Further, the Litepaper or the Website may be amended or replaced from time to time. There are no obligations to update the Litepaper or the Website, or to provide recipients with access to any information beyond what is provided herein.

# 9. FLOW DIAGRAM





 **GAMES**  
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