



DSFR

A photograph of a person in a red jacket and backpack climbing a snowy mountain slope. The person is seen from the back, walking up a steep, snow-covered mountain. The person is wearing a red jacket, dark pants, and a backpack. They are holding a yellow rope or stick. The mountain is covered in snow and has a rocky peak in the background. The sky is blue. The entire image is framed by a thick red border with rounded corners.

# DSFR WHITEPAPER

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# Catalog

## Executive Summary

Blockchain and cryptocurrencies have been the defining invention of the 21st century. By creating a mathematical basis for decentralised and distributed trust, it has now become the tool for fundamentally altering multiple industries. However, Retail is one industry that is still largely untouched by cryptos. According to the reports of Statista, global retail eCommerce sales skyrocketed nearly US\$4.28 trillion. This colossal number makes us comprehend the value of the retail and eCommerce sector in today's world.

A report from Crypto.com described that the number of crypto users had been raised to nearly 106 million all across the globe. We yearn to take this to the next phase by integrating cryptocurrencies into the retail stores and eCommerce sites. It is no more a dream for crypto enthusiasts who were waiting all these years to use the cryptocurrencies to purchase their favorite items - DSFR is here!

DSFR, abbreviated as Digital Swiss Franc, is an ERC-20 standard token built on the robust Polygon (Matic) network. It works with the prime objective of enabling crypto admirers worldwide earn DSFRs as cashbacks when shopping online or offline and also to use DSFR to purchase goods. We will partner with small and medium enterprise stores to facilitate this opportunity for the participants. We further wish to leverage the benefits by establishing tie-ups with leading eCommerce portals, online ticketing, hotel reservations, and other IT-enabled online services to make effective use of our tokens.

# DSFR

## An Introduction



DSFR, a blockchain-based entity, operates with an aim to enable users across the world to use cryptocurrencies in their everyday life. DSFR brings out society to use cryptocurrencies in retail stores and eCommerce platforms without any complexities. We also assist small and medium enterprises to expand their market by bringing in a new breed of modern and crypto-friendly customers into our partner stores.

We aid the retail and eCommerce merchants to dip their toes into the ocean of cryptocurrency, thereby bestowing them a chance to explore the idea of crypto payments. We partner with small and medium business firms and allow payment using our Prepaid DSFR cards or integrate our Crypto POS or Payment Gateway into their platform. This permits the participants to pay for their purchases through DSFR and other leading crypto assets. Similarly, we will join hands with the best-selling eCommerce platforms, and other portals that support online services to enable a cryptocurrency payment system in their platforms. This will stand tall among the crypto admirers, and they can purchase their beloved goods using crypto assets as easily as fiat currencies. Through paying cryptos, the users will be able to reap handsome rewards of DSFR coins in all the previously mentioned platforms. They can use our coins to avail cashbacks or even purchase the goods with the same.

Being based on Polygon, a Layer 2 protocol, it leverages the best of technology available today including high throughput, low transaction cost, lower gas fees and no network congestion.



## Our Mission

DSFR will bring cryptocurrency to mainstream commerce, both online and offline. It will also serve as a one-stop destination for cashbacks across retail categories.

## Our Vision

To make DSFR the default choice of currency for shopping and a long term investment for wealth creation

## Our Values

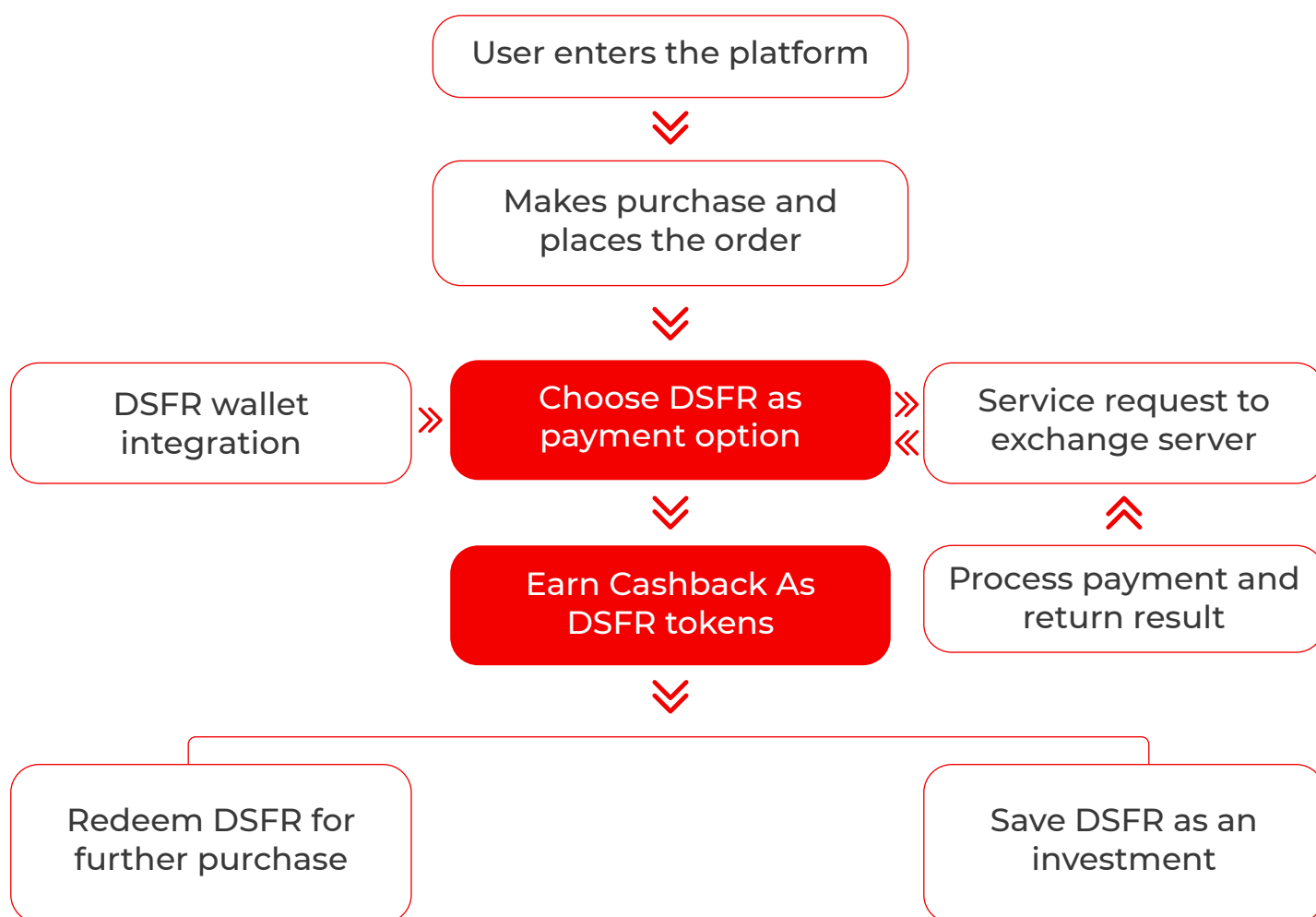
- Trust (for every partner, investor and customer)
- Innovation (working and adapting the latest technologies)
- Passion (to change the world)
- Collaboration (with the wide world)
- Empathy (helping the needy and charitable causes)

# Solutions and Use Cases of the DSFR cryptocurrency

## 1. Cashbacks

DSFR will tie-up with a range of retail stores and chains in the offline space and e-commerce and D2C players in the online space to become the numero uno cashback service. The customer can purchase in fiat and receive cashbacks in his wallet in DSFR. The best deals and cashbacks across the sector will be aggregated on our platform.

### DSFR User Journey Flow Diagram



When a customer purchases from any partner retail or ecommerce platform, DSFR offers an efficient payment gateway and wallet service that enhances your shopping experience with exciting cashback rewards. DSFR allows you to pay with multiple payment options like fiat currency, other crypto currencies and DSFR itself. For each payment DSFR offers exciting rewards that support the user for further purchase. The user has the feasibility to redeem the token for the next purchase. The user can also save the DSFRs earned as an investment which possesses substantial value that grows with the wider adoption of DSFR over time.

## 2. Deal Aggregator App

DSFR will launch its own cashback app which will show the customer all deals online and offline available in his respective geography in one place.

## 3. Multiple Payment modes

DSFR will seed the retail sector with solutions to enable crypto payments.



### 1 Prepaid Cashback Card

DSFR will launch its own Prepaid Cashback Card that can be used at regular POS machines and online payment gateways.



### 2 Crypto-POS

DSFR will launch and provide state-of-the-art crypto-POS machines to retail outlets to enable them to accept payments in DSFR and other leading cryptocurrencies.



### 3 Payment Gateway

DSFR will be a part of major online payment gateways and in the future even launch its own payment gateway for seamless direct payments at e-commerce platforms in DSFR and other leading cryptocurrencies



### 4 Crypto-ATMs

DSFR will partner with retailers and kiosks and set up a chain of Crypto-ATMs that make convenient to buy or sell DSFR and other leading cryptocurrencies with fiat or vice versa.



## 4. Loyalty Programme

Primarily medium and small businesses, but many large retailers too, have so far failed to create and leverage a customer loyalty programme that can help them bring their customers closer. DSFR will enable stores, retail chains and e-commerce and DTC companies to implement their loyalty programmes through rewards, cashback and coupons which will utilize DSFR as the underlying technology and token. A cross-merchant crypto-based cashback token will be a world-first offering from DSFR.

## 5. Low Handling and Transaction Charges

Utilising the modern blockchain and cryptocurrencies, the payment systems for retail will be 1% or lower, a significant saving and direct addition to the retailers' bottomline compared to the current 2-2.5% charges incurred by them on credit card payments.

## 6. Transparent Ledger and Record of transactions

The DSFR distributed ledger technology creates an immutable permanent record of customer transaction at stores, and will prove to be a very rich Big Data source for Retail Analytics for the stores to understand customer behaviour and purchase patterns.

## 7. AI/ML and Big Data Analytics

Utilising the rich data source on millions of customers and trillions of transactions, DSFR plans to introduce an upper layer of Big Data Analytics focussing on Price, Promotion and Markdown Optimization, Assortment, Replenishment and Inventory Optimization, and Customer Journey, Loyalty and Retention tools for Retail businesses of all sizes, both online and offline. This will be a game changer and a significant long-term advantage to our retail partners.

## 8. Robust Security

The use of blockchain and cryptocurrency provide robust security to the process. The tampering of data or forging of information is almost impossible in this mode of payment. It builds a great reputation for the brand and increases the trust among the users of the platform.

## 9. Internet of Behaviour (IoB)

The IoB is partly based on the IoT and consists of a multitude of approaches to capture, analyze, understand and respond to all kinds of digital representation of customer behaviours. Rich data can be leveraged to understand, affect and influence the behaviour of individuals or collective demographic groups. The IoB combines multiple sources of intelligent data include commercial, location, publicly available government data and social media amongst others. DSFR will leverage emerging technology innovations and algorithms to enable more precise understanding and interpretation of behaviours.





## 10. Total Experience (TX)

Today we are living in an era of experience economy and the demands and expectations from customers, employees and other stakeholders of the retail business continue to change. Total Experience (TX) as a strategy aims to create superior shared experiences for all stakeholders by linking customer experience (CX), Multiexperience (MX), Employee Experience (EX) and Customer Experience (CX), especially as these experiences continue to be more virtual and distributed. DSFR will introduce solutions that breaks apart the silos in which CX, EX, UX and MX activities typically run and will leverage it to create significant advantages in the digital experience economy.

## 11. Intelligent Composable Business

AN intelligent composable business is one that drives superior, timely and contextual business outcomes. This is achieved by re-engineering business processes and developing technology based capabilities that help adapt to the pace of business. Monolithic business technology needs to give way to modern distributed processes, and what better way than a blockchain based DApp to make this transition. DSFR will introduce solutions in its DApp avatar which use external data and events to adapt to the new scenarios and offer a real-time autonomous re-engineered platform for deployment.

## 12. Cryptocurrency Investment

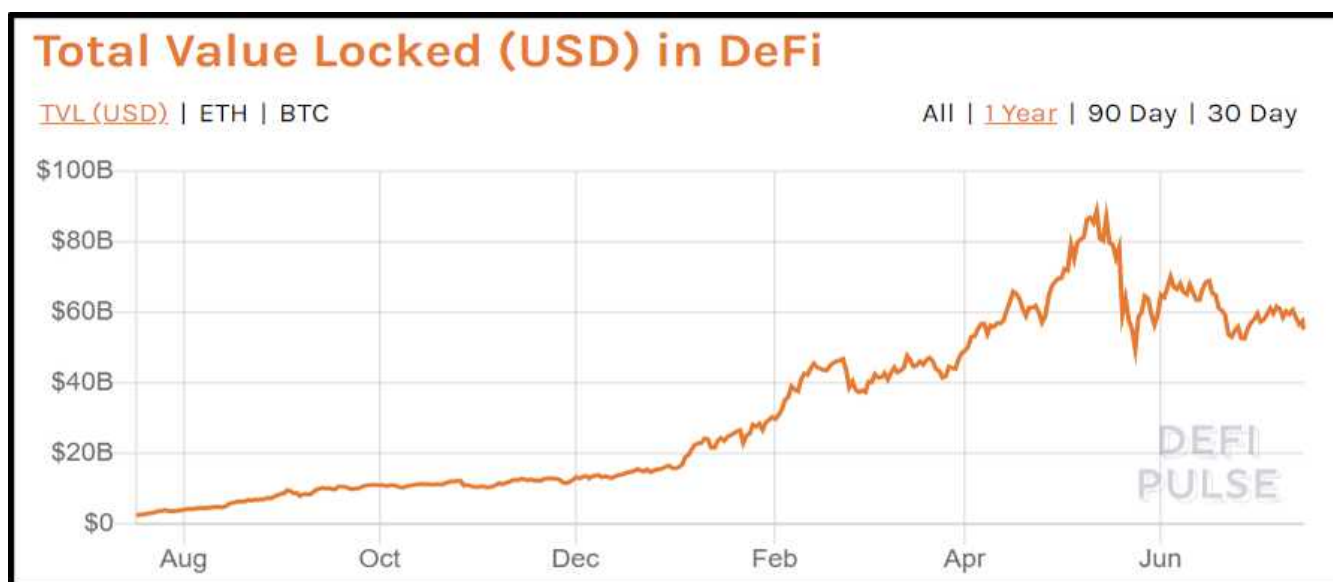
With its varied use cases, industry wide acceptance and rich development plan, DSFR tokens make for a very compelling alternative investment case. Today crypto investment is an integral part of most modern portfolios and our investors and customers can use DSFR as an investment for future where the circulation and liquidity in real world use drive up the demand for DSFRs and hence its value over the mid-to-long term. By being listed on major Crypto-exchanges, buying or selling DSFRs will be a very easy and compelling proposition.



# Technology behind DSFR

## Introduction

DSFR leverages the tremendous rise of blockchain technology and cryptocurrency in recent years and brings it to everyday usage, serving as a viable alternative to fiat currencies. According to DeFi Pulse, the total value locked in DeFi protocols as of July 2021 is nearly US\$58.08 billion. It is about 15x times higher when compared to the previous year. This gargantuan value makes us acknowledge how the world has swiftly shifted to the decentralized ecosystem.



Building in robust protocols into the code and utilising state-of-the-art security features for the wallet, DSFR introduces an open financial service that can be used by anyone from their smartphones.

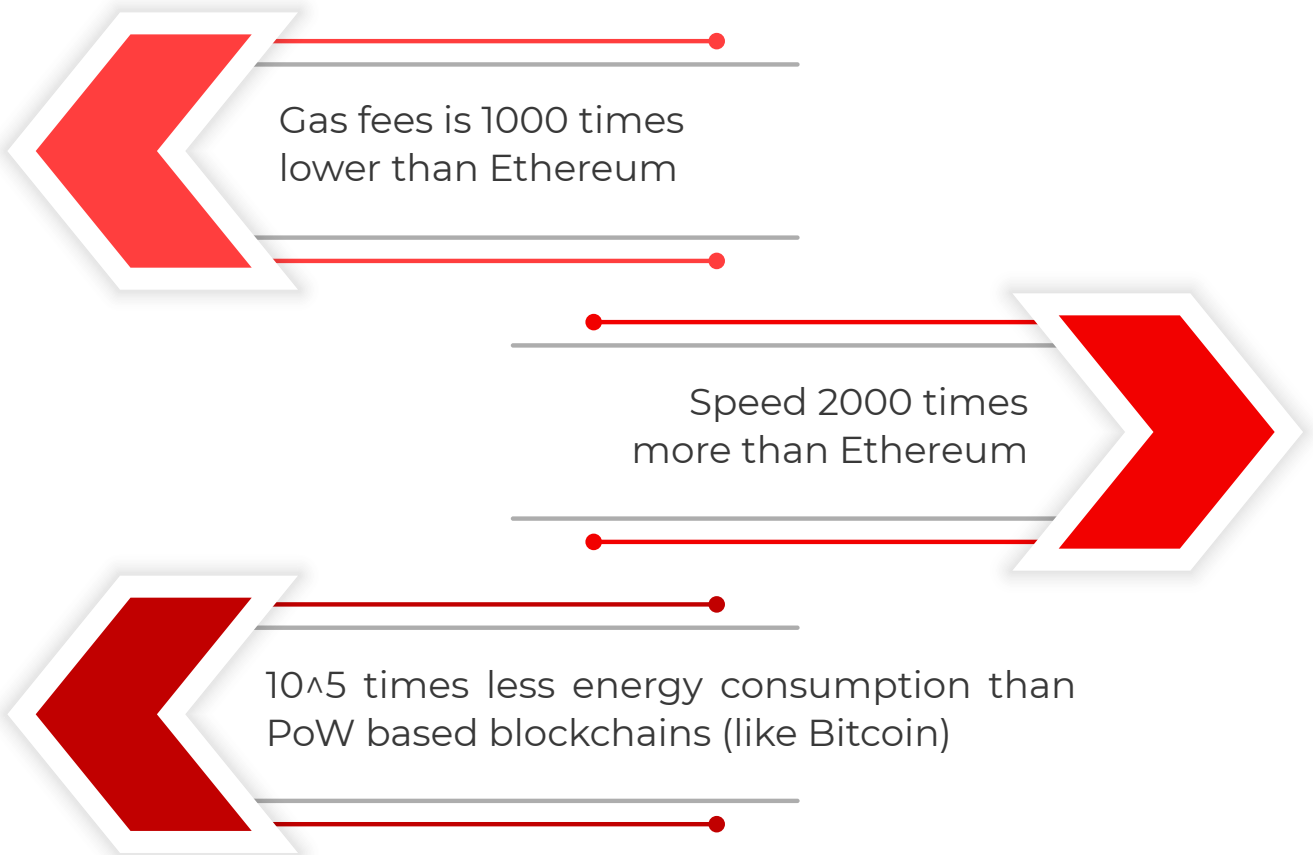
DSFR is an ERC-20 standard token and is based on the Ethereum blockchain technology and goes further to utilise the best technology for smart contracts available in 2021 - the Polygon sidechain technology.

# Polygon - the cornerstone of DSFR technology

## Existing problems with Ethereum

Though Ethereum is a prominent blockchain network, its mass adoption has led to severe limitations, including network congestion, scalability, and high transaction costs. The gas fee may range from acceptable to unbearable values, say, an average of \$9 to above \$30 for a single transaction. The prices are very high because the network can process only about 15-20 transactions per second. Also, the smart contract transaction charges have also skyrocketed to a whole new level. To get over this issue, the users have only two options left. They can either increase the gas fee to make miners know that their transaction is a priority and get it confirmed, or wait till the network congestion gets settled. Other smart contract platforms assure higher throughput, but they sacrifice decentralization to enhance the transaction speeds.

## The Polygon Approach



To get rid of these shortcomings of scalability and usability without sacrificing decentralization, Polygon (Matic) has come up recently to very effectively reduce the transaction time and costs dramatically and make them possible at a fraction of the cost on the main Ethereum chain. Polygon did this by managing some of the transaction logic of the main chain to diminish the size of each transaction, and by grouping a set of transfers into one transaction. The network can support nearly 1000 transactions per second with a confirmation time of 1 second or below.

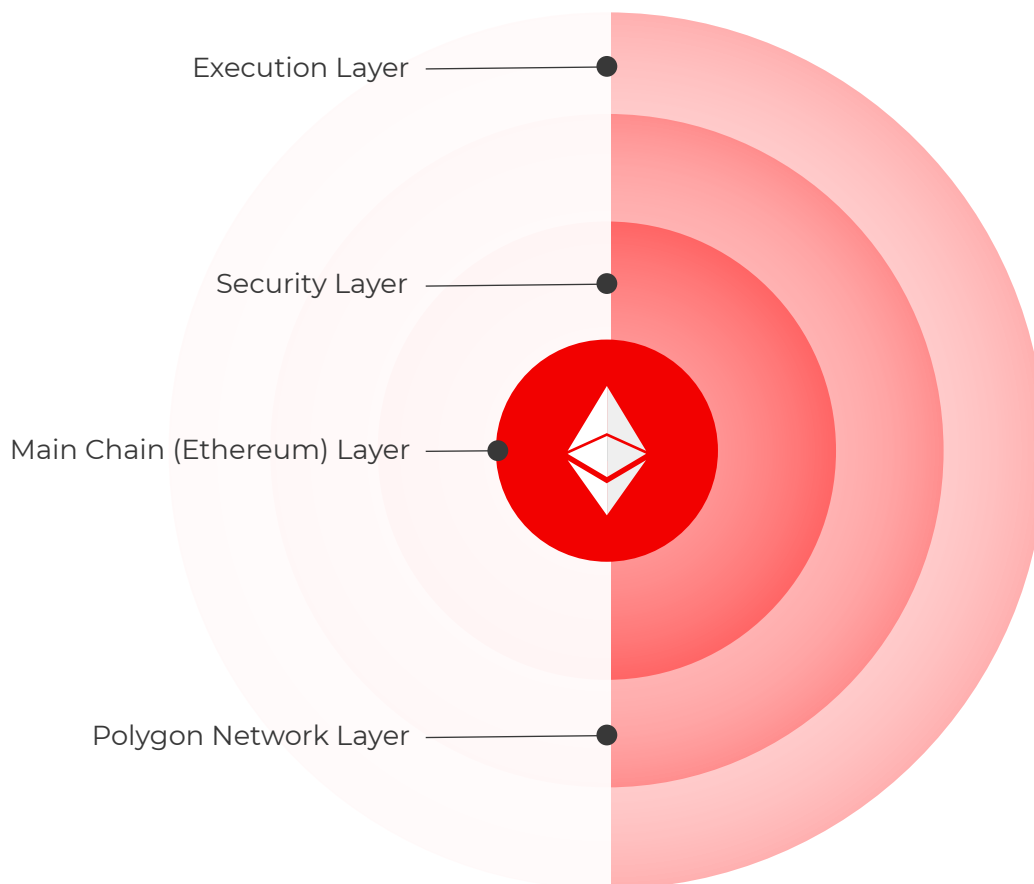
At the same time Polygon allows cross chain applications with a wide host of different blockchain applications. It is a side chain scaling solution developed to bestow scalability, higher throughput, interoperability, and the best-in-class user experience for DApp's features and functionalities. It uses Plasma technology to process transactions before confirming them on the Ethereum main chain.

For DSFR, Polygon facilitates users of the platform to seamlessly pay, transfer, or hold crypto assets without thinking of the complications of the underlying system. Being an Ethereum-compatible network, it provides sturdy security either by Ethereum directly (via fraud proofs) or by its own set of professional validators. Here is how it works:

- When you deposit a crypto token, it gets confirmed on the main chain, and tokens will be displayed on the Polygon chain using the Polygon Deposit bridge.
- Once confirmed, you can transfer them promptly to anyone with negligible charges. The Polygon chain blocks are faster, and it confirms the transaction with a second or even less than a second.
- You can withdraw your tokens to the main chain by establishing proof of remaining tokens on the Root contract.
- Therefore, using a DSFR token to purchase your product can save your time by facilitating faster transactions at a very low price, while providing a top-notch crypto trading experience.

## DSFR Architecture

DSFR has 4 layers built into it. They are:



### Main Chain (Ethereum) Layer

This is an optional layer that allows implementation of smart contracts on the main Ethereum chain. It bestows services for finalizing DSFR's transactions, staking, dispute resolving, and establishes communication between Ethereum and the side chain.

### Security Layer

The security layer of DSFR runs parallelly with Ethereum and performs 'validators as a service' function and permits chains to enjoy the add-on security. To be specific, this layer renders services for robust security and verification across the Polygon network.

Each transaction in the blockchain takes place with the process of encryption and decryption. The combination of private and public keys and the hash code behind it secures each transaction in the blockchain. The transaction executed by a sender can be received only if the receiver knows the private key to the corresponding public key.

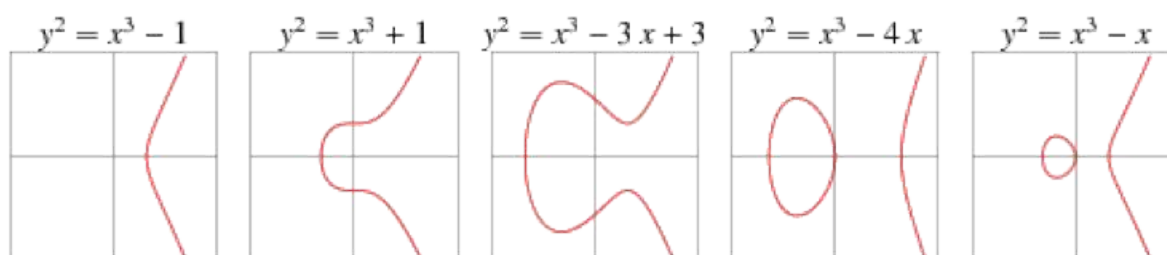


The efficient way to make public-key cryptography is through elliptic curves. Most cryptocurrencies Bitcoin and Ethereum use elliptic curves, because a 256-bit elliptic curve private key can achieve the security provided by 3072-bit RSA private key.

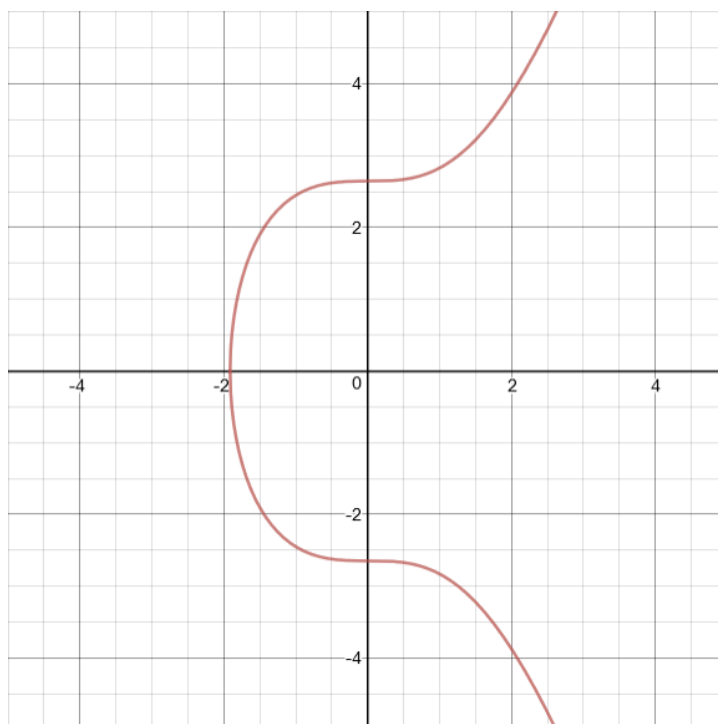
An elliptic curve consists of all the points that satisfy an equation of the following form:

$$y^2 = x^3 + ax + b$$

where  $4a^3 + 27b^2 \neq 0$



The elliptic curve used by Bitcoin, Ethereum, and many other cryptocurrencies is called secp256k1. The equation for the secp256k1 curve is  $y^2 = x^3 + 7$ .



The curve used by Satoshi for Bitcoin is secp256k1. The base point used by the secp256k1 curve has the following x- and y- coordinates:

Example:

x-coordinate:

550662630222773436695787188951685343262506034537775941755001873603891  
16729240

y-coordinate:

32670510020758816978083085130507043184471273380659243275938904335757  
337482424

Your private key would then be a random 256-bit integer and your public key would be the x- and y- coordinates of a point on an elliptic curve. This would satisfy the property that “It is computationally infeasible to derive the private key corresponding to a given public key.”

## **Polygon Network Layer**

The Polygon network layer is entirely responsible for handling local consensus, transaction collation, and block productions.

## **Execution Layer**

The execution layer is responsible for the execution of smart contracts using Polygon's Ethereum Virtual Machine (EVM).

## **DSFR's final goal: DApp**

DSFR aims to evolve into a decentralized application (DApp) and the decentralized governance of such a system is where the core value of owning DSFR tokens would entail.

### **Governance**

As a App DSFR will continuously monitor the activity of its users, and depending on their performance, amount of DSFR tokens staked, and other factors, it will provide governance tokens to the selected users. With these attributes, it would make our platform a community-driven

platform as the user's decisions are taken into consideration, and they will play a crucial role in the development of the platform. And it is their contribution and performance that will help them to emerge as a governance token holder. If this holder wishes to exit, the individual must pay the exit fee, and the tokens held will be burnt. This fee will be split and divided among the other governance token holders.

DSFR utilizes DApps as a tool to leverage the benefits of decentralized finance. This is because the end-users make use of the application to avail of our services. Our application doesn't rely on a single source of failure similar to that of a hosting server. Therefore, it assures no downtime or restrictions. It is completely open-source and provokes faster and much secure advancement of our ecosystem. Our borderless payment platform will allow you to utilize your funds in line with your requirement - Purchase, Spend, Trade or Save your DSFR tokens or other crypto assets efficiently and effortlessly. Our DApps are highly secured with 2-Factor Authentication (2FA) and improved Device Authorization and allows only the right user to access the accounts.

## Voting Rights

One of the most cherished privileges of governance token holders will be the right to vote for our platform's future growth, partnerships, alliances, marketing and new use case rollouts. Our management will consider their vote, and they will decide whether to implement the changes or not.



## Transaction Fee

The next privilege of the holder will be to decide the transaction fee. The holders can directly vote on the transaction fee and make the users enjoy the transaction at an affordable price.



## Community-Driven Platform

We will give our governance token holders an excellent opportunity to suggest their ideas for the betterment of our platform. All their suggestions and ideas will be considered by our board members and will be implemented accordingly.

## **Proof-of-Work vs Proof-of-Stake**

Another problem with Ethereum's scalability is that it attempts to attain global consensus before finalizing the transactions. The proof-of-work (PoW) consensus mechanism makes the process cumbersome, slow and non-scalable today. To solve this issue, the Polygon framework came up with its proof-of-stake (PoS) consensus mechanism. It duly relies on the validators, who are a kind of operators, to safeguard the network. It is these validators who have to run a complete node, produce a block, validate, and participate in consensus. By staking its native tokens, one could be eligible to become a validator. Also, they will be provided with exciting rewards. The transaction gets confirmed only if two-third of the total validators approve it.

## **Burning Mechanism**

DSFR follows a unique token-burning mechanism to provide a constructive impact on our coin price in the market. We remove some of our tokens from circulation periodically. By burning, we mean that we send our coins to a frozen address named burn address. It is a one-way route in which the sent coins can never be reversed or utilized in the market as there will be no private keys specified to the address. The constant burning of DSFR tokens will steadily enhance the value of the coins and bestows magnificent benefits in the long term. DSFR's protect and-burn is directly linked to the community's growth. We will update our token burnt particulars on our website regularly.



## DSFR - A look at the numbers

### TOKEN DETAILS

TOKEN NAME	Digital Swiss Franc
TOKEN SYMBOL	DSFR
TOKEN TYPE	ERC-20
TOTAL TOKEN SUPPLY	9,000,000,000
TOKEN LAUNCH PRICE	0.05 CHF

