

# Q4 2023

Stellar Development Foundation  
Quarter-in-Review

February 2024



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# 01.

# EXECUTIVE SUMMARY

# EXECUTIVE SUMMARY

**+92 MILLION**  
payments

**+\$1.3 BILLION**  
relevant asset txn vol

## STELLAR COMMUNITY FUND

**226**

submissions

**\$3.8M**

worth of  
lumens awarded

**88**

projects

**100%**

of projects represented in  
Soroban Minimum Viable  
Ecosystem



One year anniversary of

**STELLAR AID  
ASSIST**

**\$2 MILLION**

disbursed\*

**PUBLISHED**

“The Case for Open  
Systems: Creating an  
Interoperable, Integrated  
World”

# 02.

# NETWORK STATS

To measure and assess growth of the network over time, SDF has established a select group of metrics to track throughout 2023 and compare year-over-year to their 2023 equivalents: total accounts, total payments, average daily decentralized exchange (DEX) volume, and total operations processed.

These metrics serve as indicators of general usage of the network.

## Total Accounts

# +50%

Total accounts increased by 5% YoY, with over 7.8 million accounts in Q4 of 2023.

\*SDF has updated its methodology for calculating total accounts, which now compares the difference between cumulative account creation and account deletion operations in order to provide a count of all existing accounts on Stellar. The prior approach counted accounts that existed in the current ledger state given a point in time, and that dependency meant the calculation could change over time.

**7,432,397\***

Q4 2022

**7,805,772**

Q4 2023

**92,374,690**

Q4 2023

## Total Payments

**+98.4%**

The number of total payments more than doubled YoY, with over 92 million payments made in Q4 2023 compared to 46 million in Q4 2022.

**46,539,775**

Q4 2022

\*Previously reported Q4 2022 total payments figure (44,268,643) was an incomplete, underreported count due to data delivery delays. The figure has been updated to include the missing data.

## Average Daily DEX Volume (XLM)

# -27.8%

Average daily volume on Stellar's decentralized exchange (DEX) was about 9.4 million XLM per day. The decrease can be partially attributed to a drop in non-payment related activity this quarter.

**13,102,120**

Q4 2022

**9,448,452**

Q4 2023





## Total Operations

# -34.4%

Total operations processed on the network saw a decrease this quarter compared to last year, netting 732 million in Q4 2023. The decrease can be partially attributed to a drop in non-payment related activity this quarter.

\*Previously reported Q4 2022 total operations figure (1,065,976,265) was an incomplete, underreported count due to data delivery delays. The figure has been updated to include the missing data.

**1,117,281,253\***

Q4 2022

**732,719,752**

Q4 2023

## Relevant Assets

The following metrics look at relevant assets, which serve as indicators of how the network is being used. Usage of relevant assets answers the question of how well Stellar is moving towards connecting global financial systems. SDF defines a relevant asset as an asset tethered to a real financial instrument.

- The on-network transaction volume of relevant assets grew by **337% YoY**, with transaction volume for the quarter amounting to **\$1.363 billion**.
- The total number of relevant assets stayed the same YoY at **79**.

## Relevant Assets

# +337.6%

Relevant Asset Transaction Volume

**\$311,589,818\***

Q4 2022

**\$1,363,782,083**

Q4 2023



# Decentralization Update

Given the important role decentralization plays in the health and success of the network, SDF will continue to include the total number of nodes and validator nodes, as well as the average ledger close times completed by the network, in its quarterly reports through 2023.

# 5.835s

Average Ledger Close Time

The decentralization of the network is consistent with last fiscal year — accounting for the same number of Tier 1 validator nodes and an increase in total nodes. Average ledger close time clocked under 6 seconds.

**108**  
TOTAL  
NODES

**23**  
TIER 1  
VALIDATOR  
NODES

**03.**

**MAKE  
INNOVATION  
EASY &  
SCALABLE**

# SOROBAN DEVELOPMENT

Launch a new, state of the art, smart contracts platform that is developer-friendly, scalable and is deeply integrated with Stellar

Soroban development continued to be the top priority this quarter. The following activities were completed to ensure the robustness of Soroban in preparation for Mainnet launch:

- Increased test coverage of the Soroban stack.
- Completed multiple internal audits of the Soroban runtime.
- Completed a second external audit of the Soroban runtime.

SDF and the maintainers of key Stellar SDKs [announced](#) the release of a full suite of software that supports Protocol 20, and the phased rollout of Soroban to Mainnet:

- [Protocol 20](#) introduces new network settings that validators control. The upgrade vote ([initially scheduled](#) for January 30, 2024, [later targeted](#) for February 20, 2024), will be followed by a series of additional votes to increase those settings to increase the capacity for Soroban transactions.
- Phase 0 begins immediately following a positive validator vote. It is designed to allow network operators to observe the network after the upgrade. It is not intended for developers to deploy contracts.
- In Phase 1, builders gain the ability to deploy contracts on Mainnet for testing. It is intended for developers to deploy contracts and test readiness and for network operators to gauge the impact of smart contracts on network performance.
- Phase 2 marks deployment of a user-ready Mainnet where contracts can support regular usage, at around 10 transactions/second.

Efforts to continue to expand capacity and introduce further capabilities to enhance the network's functionalities will be ongoing.



# SOROBAN DEVELOPMENT (cont.)

Launch a new, state of the art, smart contracts platform that is developer-friendly, scalable and is deeply integrated with Stellar

In October, we [announced](#) a strategic partnership with industry-leading security firm Certora to develop formal verification tooling and auditing protocols built on Soroban:

- This will bring Soroban compatibility to their industry leading Certora Prover tool.
- Certora is developing a new open-source specification language specific to Soroban smart contracts. Engineers and researchers can use this language to define desired specifications of Soroban contracts, and can be integrated with fuzzers and formal verification tools to enhance code security.

Soroban is the first WASM-powered platform to be supported by Certora, traditionally associated with the Ethereum Virtual Machine (EVM). Developers will now be able to use Certora's software to ensure the reliability and security of their smart contracts.



# ENGINEERING & PLATFORM UPDATES



SDF's engineering team delivered updated tools, documentation, and infrastructure to support future releases with an emphasis on Soroban.

- **Horizon** work this quarter was mostly in support of the Soroban smart contracting effort. Stable [builds](#) were issued to support the rollout of Protocol 20. The team also began a series of work to bring significant performance improvements to the Horizon ingestion system, which is planned to land early this year. Additionally, public developer docs received an overhaul, in an effort to better the integration experience for Horizon operators. Horizon and Soroban RPC serve as the primary gateway for developers to access on-chain data and interact with the ecosystem, which fosters widespread adoption of the platform. Updated documentation allows operators to get started quickly and easily, with minimal support from SDF.



# ENGINEERING & PLATFORM UPDATES (cont.)

SDF's engineering team delivered updated tools, documentation, and infrastructure to support future releases with an emphasis on Soroban.



- **Hubble** released a stellar-etl build to support the rollout of Protocol 20. This release adds 4 new Soroban-related state tables. It also supports all Soroban operations. The Data Platform team has laid the groundwork to standardize and accelerate analytics through the use of [dbt](#). The team created a new project, stellar-dbt-public, which is designed to be imported as a library in individual dbt projects. Other platform products limit Soroban data accessible to developers. For historical raw data, Hubble is the platform of choice. With the rollout of dbt, developers will be able to transform their own protocol data and build their own analytics, without needing to write bespoke ETL from scratch.

# WALLET TOOLS

Ensure developers can easily build Stellar wallets.



Version 1.0 of the Kotlin Wallet SDK, which allows builders to develop applications easier and faster, was released. The Typescript Wallet SDK was brought to parity with the Kotlin SDK, including new documentation and test coverage.



New wallets building on Stellar are using the Wallet SDK and providing feedback.



All new features and updates are available in the open source repositories ([Kotlin](#), [Typescript](#)).

**04.**

**WIN OVER  
BUILDERS**

# SOROBAN ADOPTION

Contribute to a thriving DeFi ecosystem with real, sustainable use cases leveraging smart contracts.

The Soroban ecosystem continues to gain momentum: there are over **170 projects** now that we know of in the public project directory, and more are getting added every day.

In addition to all the projects that are currently building on Soroban, SDF continues to onboard developers more generally into the ecosystem: tinkerers, tool builders, web3 mavens, the blockchain curious.



The goal to attain **100% representation of project types in the Soroban [Minimum Viable Ecosystem](#)** has been accomplished.



At the end of Q4, **membership in the Stellar Developer Discord**, a channel dedicated to technical discussions about Stellar and Soroban, stood at over **8,300**.



Over **40 Soroban projects demoed at Meridian**.

# STELLAR COMMUNITY FUND

This quarter marked a new era of community empowerment with [SCF 5.0](#), which includes a more streamlined award process and Community Vote now powered by the first implementation of [Neural Quorum Governance](#), a new governance and voting mechanism explicitly designed for SCF in collaboration with R&D firm [BlockScience](#).



Rounds #20-22 were completed this past quarter, with 226 submissions received.



More than \$3.8M worth of XLM was awarded to 88 projects with input from the community.



Over 120 people from both SDF and the community interacted with nearly 50 participating projects to provide valuable feedback during [Soroban Pre-Mainnet Testing & Feedback Week](#).

# DEVELOPER ACTIVATION

Stellar is home to a motivated community of startups, developers, and enthusiasts working together to build the future of finance. SDF continued to grow, engage, and support that community through focused education and outreach around Soroban.

## SOROBANATHON

- Another round of [Sorobounties](#) closed this quarter. Submissions were also highlighted from [Sorobounty Spectacular](#), a dapp content bounty for Soroban that provided the structure for devs to build dapps and create published written and video tutorials.
- Sorobanathon Road to Mainnet, a month-long virtual hackathon, concluded with many fantastic and eclectic submissions, all of which were developed as MVPs within the hackathon setting and showcased the creators' technical prowess. [Four projects received awards](#).

## RPCIEGE

Coding games provide a fun and engaging way for developers to learn about Soroban fundamentals and experiment with various functions. In this quarter, we released two new games:

- [Siege 5](#) is comprised of four individual challenges focused on state expiration
- [Axe & Ember](#) is a text-based adventure game created with smart contracts on Soroban. Coding is only one aspect of the program: art, collectible NFT cards, and the storyline also keep users engaged. There is also a leaderboard that keeps things competitive.



# TIER 1 ASSETS

## *Live on the network: Welcome EURS*

STASIS, a trailblazer in issuing euro-backed stablecoins, has recently integrated STASIS EURO or EURS on Stellar.

This brings a new digital version of the second-most widely used currency in the world to the Stellar network, broadening access to transparent and reliable euro-denominated stablecoins.

One of the significant challenges in cryptocurrency transactions, especially for daily use, is volatility. The introduction of EURS to the Stellar network offers a market-tested and dependable option amidst the market's ups and downs, not only to Eurozone clients, but globally.

Learn more [here](#).

# TIER 1 ASSETS

*Fostering growth for the most used assets in the world to be represented on Stellar*

- Adoption of fiat-backed stablecoin EURC on Stellar continues to grow since going live on the network [last quarter](#), with over 970,000 in circulating supply.
- Mercado Bitcoin, the largest exchange in Latin America, enabled EURC on Stellar for deposits, withdrawals, transfers, and trading.





# CREATING GREATER ACCESS

*Fostering development for easy-to-use, accessible, and cost-competitive on and off-ramps globally and apps that use them.*



## BITNOVO

- Headquartered in Spain, Bitnovo went live support for Stellar's hosted deposit and withdrawal standard. This provides yet another option for developers building solutions on Stellar to connect to a cost efficient, global on/off-ramp solution. This means that any Stellar wallet that has a preexisting deposit and withdrawal integration (ex: MoneyGram Access) can now seamlessly plug in Bitnovo's fiat rails.
- What is noteworthy about Bitnovo is their broad geographic coverage and range of accepted payment methods (including physical cash in select countries), enabling Stellar wallets to offer cost effective financial solutions to users.

## MoneyGram Access

- The MoneyGram Access service allows wallets or applications to enable users to convert their physical cash into digital dollars and back – even if users don't have a bank account.
- Two new wallets, Meru and Island Pay, went live with MoneyGram Access this quarter.

# GENERAL FUNDING UPDATES

## Q4 Enterprise Fund Investments

SDF made a \$3 million Series C equity investment into the OwlTing Group, a Taiwan-based blockchain SaaS & payments company focusing on e-commerce in Japan, Taiwan, Singapore, Hong Kong, EU/UK, and the US.

Owlting is on a mission to reinvent e-commerce using blockchain technology. This investment seeks to help bring network benefits from increased interoperability with Asian payment flows brought forth by OwlTing.

Enterprise Investment of



**\$3M**

Additionally, one of the Enterprise Fund's portfolio companies, Securrency Inc., was acquired by DTCC in December. As part of the acquisition, the Enterprise Fund received proceeds of approximately \$5 million. These funds will be used to make future Enterprise Fund investments.

**05.**

**FOCUS ON  
UTILITY TO  
BUILD TRUST**



# MARKETING UPDATES

## Resilient with Blockchain

The SDF Marketing and Communications team executed an integrated marketing campaign in celebration of the one year anniversary of the launch of Stellar Aid Assist, as well as marking UNHCR disbursing over \$1 million to more than 1,500 individuals via the open source tool.

The 6-week campaign included:

- #ResilientwithBlockchain social campaign & [dedicated landing page](#).
- Celebration of UNHCR's \$1 million disbursement milestone.
- A collaboration to benefit shelter Casa Tochan, highlighted at a live event during Art Basel in Miami and resulting in the first end-to-end, on-chain use of SDP from individual donor to organization to receiver.
- A blog post to recognize [A Year of Impact and Innovation](#).

On the heels of the brand refresh last quarter, this was a compelling and tangible way to drive home the message that Stellar is 'Where Blockchain Meets the Real World'.

# STELLAR IN THE NEWS

## General SDF News Coverage Updates

BLOOMBERG CRYPTO

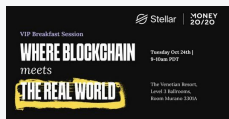
NOVEMBER 28, 2023

### [Stellar Development Foundation CEO on Shift Towards Tokenization, Binance Impact](#)

- [Stellar, PwC publish 'framework' to judge emerging market blockchain projects](#) | Cointelegraph
- [Crypto remittances offer cheaper alternative, but still face challenges to adoption](#) | Cointelegraph
- [Stellar, Early Blockchain Built for Payments, Adds Smart Contracts to Take on Ethereum](#) | CoinDesk
- [Idris Elba on his Stellar journey to unlocking human potential](#) | Cointelegraph

# VIRTUAL AND LIVE

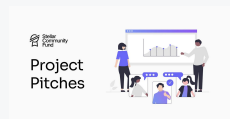
## General Event Updates



Money20/20 USA



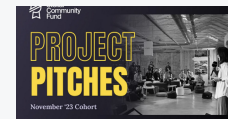
AidEx 2023



SCF Project Pitches #20



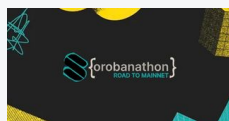
Exploring CBDC:  
Atlantic Council &  
Digital Dollar Project



SCF Project Pitches #21



Future of Digital Assets



SCF Project  
Pitches #22



Stellar Sunday



SPARK '23 by  
Fireblocks

# AIDEX

October 23-24, 2023

- This was our first year sponsoring and SDF was the only blockchain represented. Our presence included: a booth, moderating a panel, and a workshop to highlight the speed and transparency possible for cash assistance using Stellar Aid Assist.



# MONEY 20/20

October 27-30, 2023

- SDF's presence included: a private breakfast with speakers from MoneyGram, Circle, Wisdom Tree, and Arf; a booth; and a happy hour hosted with Airtm, Circle, and Moonpay.



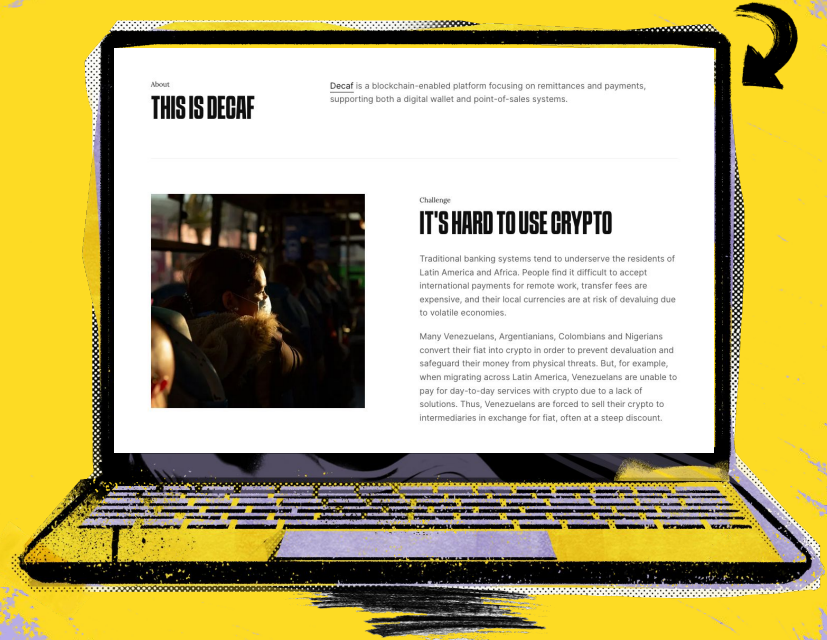
# CASE STUDY

Decaf: making crypto usable and accessible

Many Venezuelans, Argentinians, Colombians and Nigerians convert their fiat into crypto in order to prevent devaluation and safeguard their money from physical threats. But when migrating, Venezuelans are unable to pay for day-to-day services with crypto due to a lack of solutions. Thus, Venezuelans are forced to sell their crypto to intermediaries in exchange for fiat, often at a steep discount.

Addressing a critical challenge, Decaf has given thousands of Latin Americans the ability to navigate effortlessly between crypto and fiat without having to worry about borders, all on the Stellar network.

[Read the full case study.](#)





# POLICY HIGHLIGHTS

Both domestically and internationally, SDF continues to engage with key policymakers, non-governmental organizations, central banks, and leading interest groups to shape digital asset policy across the globe.

## RESEARCH & RESPONSES

- In our new paper "[The Case for Open Systems: Creating an Interoperable, Integrated World](#)," SDF explores the historical context, core principles, and real-world applications of open systems. It makes a compelling argument for further adoption of open systems, emphasizing their role in fostering innovation, transparency, and equitable access to technology. SDF's dedication to advancing this cause ensures a continued focus on creating a connected and interoperable future.
- The Policy team [responded](#) to an EU consultation on sustainability impacts of blockchain technology.

## ENGAGING WITH POLICYMAKERS

- Candace Kelly, Chief Legal Officer, moderated a panel on the [evolving litigation landscape for digital assets](#) at the Center for Business Law Roundtable on Financial Policy and Regulation.
- Lesley Chavkin, Head of Policy, participated in a [Digital Dollar Project/Atlantic Council panel](#) on understanding illicit finance risks in digital assets.
- Candace Kelly hosted a [fireside chat](#) on blockchain technology with Oleksander "Alex" Bornyakov, Ukraine's Deputy Minister of Digital Transformation at the Blockchain Association Annual Policy Summit.
- SDF participated in a BIS workshop on using digital assets for financial inclusion.
- Officially [joined](#) the Stablecoin Standard Advisory Board.

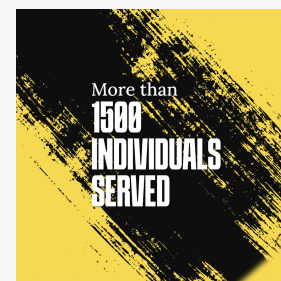
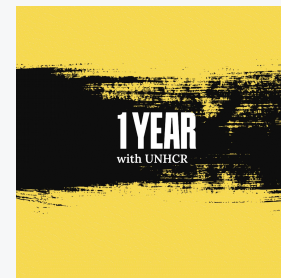
# PRODUCT UPDATES: AID & DISBURSEMENTS

Organizations are leveraging the newly open-sourced Stellar Disbursement Platform's (SDP) capabilities for both aid and non-aid use cases.

A year into the introduction of Stellar Aid Assist and the SDP, we are cementing the Stellar network's value in cash assistance programs, demonstrating value of SDP outside of humanitarian use case, and fostering engagement with the Stellar community through open source code and collaboration with SDF engineering team.

## HIGHLIGHTS

- SDF partnered with Friends With Benefits at Art Basel Miami to benefit Casa Tochan, a shelter serving migrants and refugees. Casa Tochan made a disbursement to migrants in Mexico City—the first end-to-end, on-chain use of SDP from individual donor to organization to receiver.
- Several independent deployments of SDP at ecosystem companies for various use cases, including humanitarian programs and cross-border contractor payments.
- Received open source contributions from community members that expanded SDP functionality and improved experience.



# PRODUCT UPDATES: VIBRANT



This quarter, Vibrant continued to focus on grassroots marketing strategies and adding new utility to strengthen real-world use cases.

## HIGHLIGHTS

In Q4, the Vibrant team expanded on grassroots marketing tactics, improved user experience, and more. Some achievements include:

- Launching the Promo Codes feature to support new marketing channels
- Onboarding new influencers and launching additional marketing campaigns
- Further expanding our Customer Support team to provide timely assistance, reinforcing trust and reliability in our user experience.
- Continuing additional integration development with new anchors
- Improving user experience by completed new Home screen updates scope & designs to further focus on local market needs.

## KEY OUTPUTS

Overall Vibrant saw strong quarter-over-quarter growth:

- MAU Growth: 87%
- Transaction \$ Growth: 111%
- Transaction Count Growth: 94%

# PRODUCT UPDATES: ANCHOR PLATFORM

The Stellar Anchor Platform is the easiest and fastest way to deploy an anchor service on Stellar. Significant improvements to the Anchor Platform were made this quarter, including reduced build and test times, better test usability, and test coverage.

## HIGHLIGHTS

- **Deposit and withdrawal support**, a standard way for anchors and wallets to interact on behalf of users, was added this quarter. This improves user experience by allowing wallets and other clients to test and deploy their integrations more quickly and easily.
- SDF implemented **the RPC API** to better support state transitions in transaction lifecycles for businesses using the Anchor Platform, enabling them to efficiently update transactions, adhere to SEP protocols without in-depth knowledge, and reduce engineering efforts.

All Anchor Platform updates are available in the [open repository](#).



**06.**

# **MANDATE & DISTRIBUTION**

# MANDATE & DISTRIBUTION

## Overview

SDF is a non-profit organization whose mission is to create equitable access to the global financial system. SDF has no shareholders, no dividends, and no profit motive. The Foundation is funded by some of the lumens generated by the Stellar protocol at inception. Today, SDF holds roughly 21 billion lumens, and all of those lumens will eventually be used to enhance and promote Stellar.

Live accounting of the addresses with those lumens and funds are available on SDF's mandate page. SDF details exactly which ledger addresses hold those funds and exactly how those funds will contribute to Stellar's success. Anyone can observe progress towards SDF's stated goals, more or less in real time. The next slides cover a summary of how lumens were allocated in Q4 of 2023.

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# MANDATE & DISTRIBUTION

Lumen Distribution | October 2023 - December 2023<sup>1</sup>

Mandate Category	Wallet	Amount	Uses
Direct Development	Various	418,558,144	SDF Operations, Employee Grants
Ecosystem Support	Currency Support	5,776,319	Bitstamp, STSS Limited, Settle Network, Mercado, VNX Commodities AG, JST
	Developer Support	69,635,024	SSCF, Vendor Payments, Infrastructure Grants, Validation Cloud, Shift Markets, Ankr, Cheesecake Labs, Airswift Technologies, Banxa, New York University, Brale, Otter Audits, Veridise, Wirex, Runtime Verification, Coinspect, Hackerone, Zodia Custody, Block Science, CoinFabrik, MyKobo
User Acquisition	Enterprise Fund	25,006,435	OwITing
	Marketing Support	431,256	Meridian Speaker Reimbursements, PMI Americas Sponsorship
Use-Case Investment	In-app Distribution	0	
	New Products	50,203,703	MoneyGram International Inc.

<sup>1</sup> From time to time, SDF makes payments in dollars, and then later moves lumens from the relevant wallet into a Direct Development wallet. The amount of lumens is calculated using the price of lumens on the day of the dollar payment. This table compiles lumen distributions accrued in the quarter, even if the actual transfer occurred after the end of the quarter.

# MANDATE & DISTRIBUTION

## SDF Account Balances as of Jan 1, 2024

Mandate Category	Wallet	Amount
Direct Development	Direct Development	4,478,877,179
	Jan 1 2021 Escrow	0
	Jan 1 2022 Escrow	0
	Jan 1 2023 Escrow	0
	Direct Development Hot Wallets <sup>2</sup>	294,295,880
Ecosystem Support	Developer Support	492,010,101
	Developer Support Hot Wallet	168,518,182
	Currency Support	871,852,600
Use-Case Investment	New Products	1,672,766,538
	Enterprise Fund	7,486,365,385
Use-Case Acquisition	In-app Distribution	3,906,599,180
	In-app Distribution (Hot)	44,003,149
	Marketing Support	1,978,178,760

<sup>2</sup> SDF maintains multiple hot wallets, which in this chart are aggregated by category. A complete list of SDF accounts can be found on Stellar Expert (<https://stellar.expert/directory?tag1=sdf>) or on the SDF Mandate Page (<https://www.stellar.org/foundation/mandate>).





# NEXT REPORT: Q1 IN APR 2024

[stellar.org](https://stellar.org)



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