

NFID Wallet Whitepaper

The first decentralized cloud wallet, making self-sovereign digital identity easier to use, harder to lose, and ensuring all wallet revenue fuels the DAO instead of centralized corporations.

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Overview

In Web3, wallets are Web3's most valuable layer because they're the gateway to value—but all single-signature wallets exploit this position to extract hundreds of millions of dollars in fees for centralized corporations, like MetaMask does for Consensys.

NFID Wallet takes a user-centric approach, replacing corporate control with a decentralized organization governed by its stakeholders. Designed to be easier to use, harder to lose, and powered by a global community, NFID Wallet ensures that all wallet revenue fuels the DAO, not a corporation.

Our vision is to become the decentralized Apple Pay of Web3 wallets—enabling seamless payments on any chain with any token, secured by simple and intuitive methods like face or fingerprint scans. By becoming the easiest to use, hardest to lose, and stakeholder-controlled wallet, we make NFID Wallet the most attractive choice for both markets: Users new to crypto who need something easy, and native crypto users with a desire for security and/or stakeholder control.

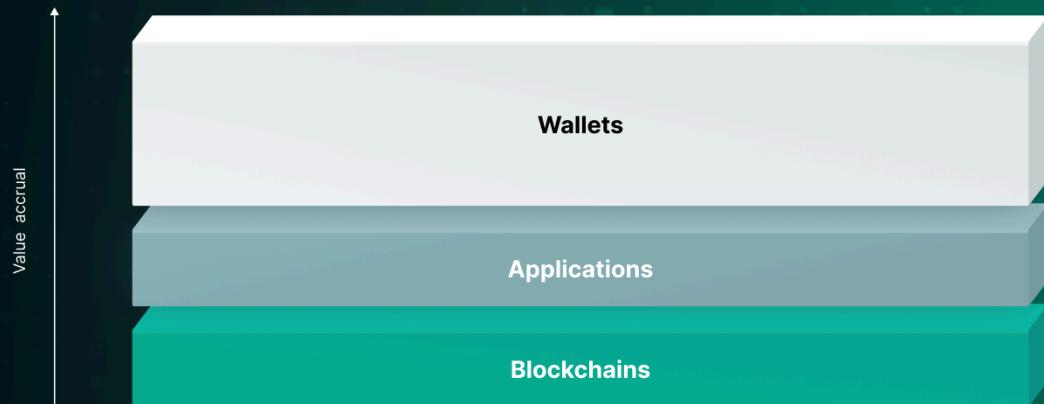
With \$4M in funding from leading investors like Polychain, Tomahawk, Outliers, and the original developer of Internet Identity, we've built a product trusted by over 150,000 users worldwide. NFID Wallet redefines how assets are managed in Web3, empowering users to participate in shaping the future of decentralized finance and identity.

The Fat Wallet Thesis

After 5 years of learning and developing Web3 wallets as a team of 12, we've solidified our belief in the "fat wallet thesis", which posits that most value accumulates at the layer closest to users: the wallet.

Shrinking profit margins in the blockchain layer validate that value doesn't stay there and the ease of "vampire attacks" in applications shows that value doesn't last at the app level, either:

“Fat wallet” thesis: the closer to the user, the more valuable the layer



Source: <https://members.delphidigital.io/reports/the-fat-wallet-thesis#looking-ahead-4ed0>

However, value does stick in the wallet layer—even with abundant competition. MetaMask, for instance, has generated \$300 million in swap fees for its centralized corporate sponsor, despite the availability of hundreds or even thousands of alternative wallets, centralized exchanges, and decentralized exchanges with lower fees:

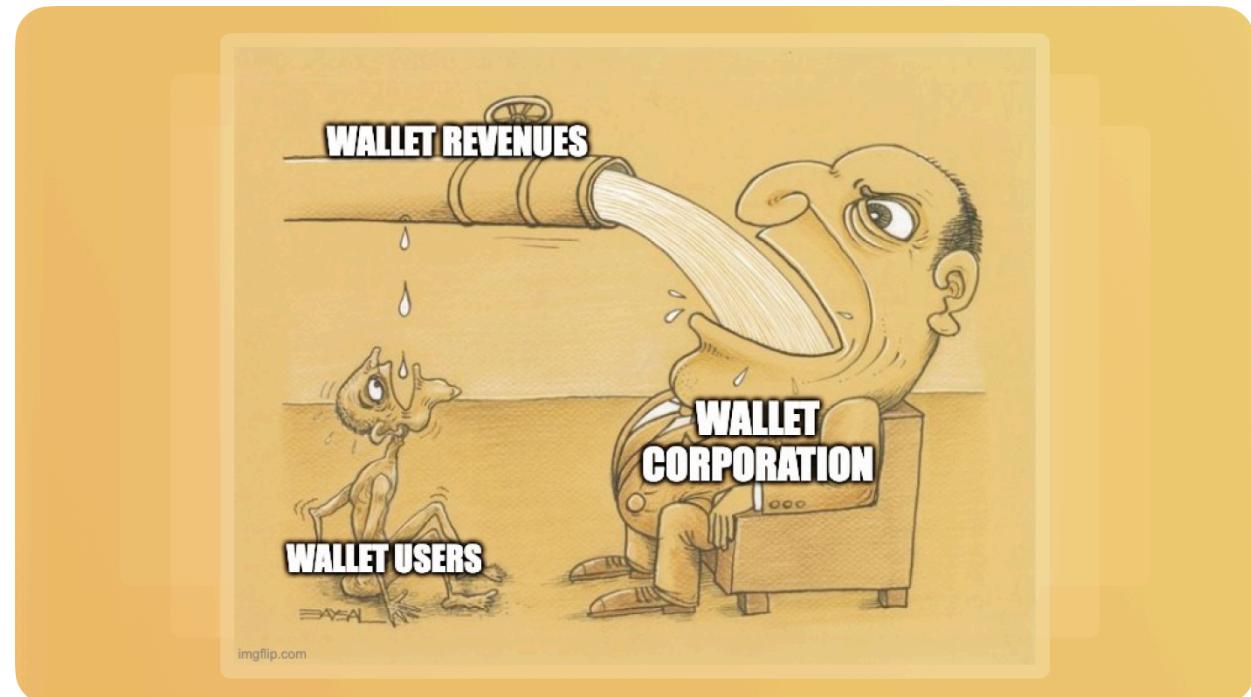
Wallets are sticky, even in competitive markets



Wallets not only retain users, they capture far more value per user. MetaMask, for example, generates 100 times the revenue per \$100 traded compared to DEX frontends:



While MetaMask and similar wallets capture significant value in Web3, their design creates natural limits. Usability challenges, the risk of loss, lack of seamless multi-chain support, and centralized control reduce the value these wallets provide to their users:



We believe wallets that empower users with governance can surpass the fee volumes of centrally-controlled wallets by providing a seamless, chain-abstracted experience where users hold a stake in its evolution and revenue distribution.

With a successful token generation event, NFID Wallet will be the first in Web3 to bring this vision to life.

Market comparison

NFID Wallet's market differentiation

Today, there are hundreds, if not thousands, of single-signature wallets on the market, against which NFID Wallet differentiates by the following factors:

First decentralized cloud wallet

Unlike traditional single-signature hot wallets, which require users to download a client-side application and rely on recovery phrases to restore access on new devices, NFID Wallet offers a revolutionary solution. Built on a decentralized cloud powered by smart contract canisters on the Internet Computer Protocol, NFID Wallet enables users to access their wallet securely from any device, eliminating the risks and hassles of seed phrases.

First wallet that benefits the DAO, not a centralized corporation

Unlike traditional single-signature wallets, which are controlled by centralized companies that funnel all value to themselves, NFID Wallet is the first whose governance token stakeholders are in control of the codebase and revenue distribution.

First wallet that lets users approve software updates

Because all other wallets are controlled by a centralized corporation, they can push updates without user input or consent. NFID Wallet enables users, through a DAO, to approve or reject software changes.

Fastest onboarding of any Web3 wallet

Most wallets require 10-20 minutes to set up, involving a complicated browser extension download, password setup, and recovery phrase creation. NFID Wallet streamlines this process, allowing users to create a wallet in seconds using just an email.

Most accessible wallet in Web3

Many wallets are limited to a single device or platform, such as a specific browser on desktop or mobile. Even wallets that support multiple platforms lack the seamless, cross-device accessibility users expect from services like Google or Apple. NFID Wallet is a browser-based

wallet with both frontend and backend code stored on-chain, making it tamper-resistant and accessible securely from any major browser on any device without requiring software downloads.

The hardest wallet to lose, and easiest to recover

Most wallets use seed phrases for recovery, which can lead to significant losses if compromised or lost. NFID Wallet employs passkeys, an enterprise-grade, highly secure authentication method widely regarded as the future of digital security. This approach provides multiple, secure recovery options that are resilient against loss and theft.

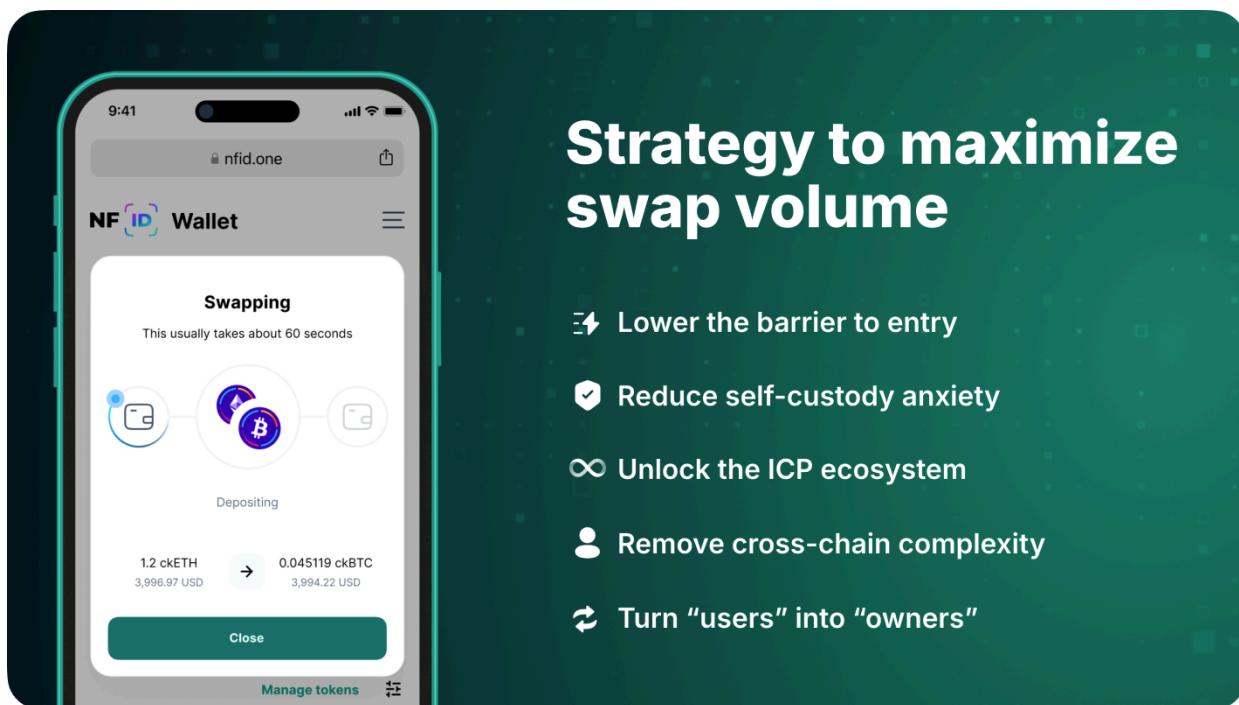
Audited and open source

The very best and most trustworthy wallets are open source and third-party audited. NFID Wallet is ICP's only open-source wallet today, let alone the only one in the ecosystem with a third-party audit.

Target audience

NFID Wallet is built for anyone with an interest in Web3. Since it's built on the Internet Computer Protocol, those interested in ICP may be more eager to participate in the early stages while NFID Wallet only supports this network. The target audience will expand as NFID Wallet incorporates other networks and its "pay on any chain with any token" one-balance feature.

Revenue



The image shows a smartphone on the left displaying the NFID Wallet mobile application. The app's interface includes a header with the NFID logo and 'Wallet', a sub-header 'Swapping' with a note 'This usually takes about 60 seconds', and a central area showing a swap transaction between 'ckETH' and 'ckBTC'. Below this are amounts: '1.2 ckETH 3,996.97 USD' and '0.045119 ckBTC 3,994.22 USD', separated by a right-pointing arrow. At the bottom are buttons for 'Close' and 'Manage tokens'. To the right of the phone is a large green rectangular callout box with white text. The title of the callout is 'Strategy to maximize swap volume'. Below the title is a bulleted list of five items, each preceded by a small icon:

- ➡ Lower the barrier to entry
- ☑ Reduce self-custody anxiety
- ∞ Unlock the ICP ecosystem
- 👤 Remove cross-chain complexity
- ⇄ Turn "users" into "owners"

NFID Wallet currently generates revenue via a 0.875% convenience fee for every in-app swap. These fees are deposited into a canister that will soon be managed by the NFID Wallet DAO (ID: urhee-6iaaa-aaaar-qajja-cai).

The strategy for revenue growth focuses on becoming the easiest and most user-friendly platform for token swaps by:

1. **Lowering the barrier to entry**, making it easy for anyone to swap.
2. **Reducing self-custody anxiety**, making it easier to choose NFID Wallet over a centralized product.
3. **Unlocking the ICP ecosystem**, making a more attractive environment for developers to build applications.
4. **Removing cross-chain complexity**, making swaps and purchases easy no matter which network the tokens are native to.
5. **Turning “users” into “owners”**, making it more attractive for users to swap in an environment they own a stake in rather than one they don’t.

Technical features

Over 150,000 NFID Wallet users are connecting to dozens of Web3 applications either directly or through a standards-based toolkit we built for the community of developers called [NFID IdentityKit](#).

Fully on-chain

Hosting

NFID Wallet's frontend and backend are entirely hosted within ICP smart contract canisters, ensuring a fully decentralized architecture.

Signatures

The pre-genesis launch video of ICP, and in particular Internet Identity, sparked the inspiration that set our team on this journey. NFID Wallet merges the robust security model of Internet Identity with our vision of creating the world's first community-governed Web3 wallet. The key security innovation is that signatures for ICP and every other Web3 network are generated by ICP smart contract canisters, rather than client-side private keys.

Frictionless UX

Instant onboarding

NFID Wallet users don't need to download an extension that only works on certain browsers or an application that requires frequent updates from centralized teams – all they need is a web browser.

We've developed a mechanism to streamline the creation of an NFID Wallet with one-click email authentication, making Web3 more accessible to a wider audience. This user-friendly approach encourages greater exploration and participation in the Web3 ecosystem by eliminating high-friction dropoff events. Users can bypass the cumbersome process of downloading an app or browser extension and setting up a recovery phrase, which typically takes 10-20 minutes. As a result, more people can quickly and easily join the Web3 revolution with the NFID Wallet.

Passkey authentication

NFID Wallet supports Passkey authentication, allowing users to skip email login for a more secure and convenient experience. Passkeys are resistant to phishing, inherently strong, and do not rely on shared secrets. They work seamlessly across Apple, Google, and Microsoft devices, ensuring a user-friendly and highly secure login process.

Recovery phrase optional

Most people still have a hard time with password hygiene, leading to millions of worldwide data breaches annually. NFID Wallet makes recovery phrase management an optional feature by giving users email and Passkey authentication as the most convenient and secure default options, both of which are extremely difficult to lose.

Embedded authentication

The recommended approach for integrating NFID Wallet into ICP dApps is through IdentityKit – a developer toolkit we created for the community – making it simple for ICP developers to interact with any standards-compliant wallet. IdentityKit represents the culmination of many months of dedicated effort, not only in building the toolkit but also in collaborating within the Wallet and Identity Standards Working Group. Our team worked closely with [Frederik Rothenberger](#) and others at DFINITY, as well as community developers like [Sea-Snake](#), to design the 8 necessary standards and multiple more in draft phases. This collaboration ensures that IdentityKit meets the highest standards of interoperability and usability, facilitating seamless integration and wallet interaction for developers.

In-app swaps

NFID Wallet processes swaps through ICPSwap, with plans to dynamically route swaps through all DEXs, ensuring users always get the best price.

Off-chain components

- Like any other ICP dApp with a custom domain, the nfid.one domain is owned by the core team but can be bypassed using the ICP-hosted frontend (<https://3y5ko-7qaaa-aaaal-aaaaaq-cai.ic0.app>)
- Google and email authentication are also off-chain, with a plan to provide users with alternative decentralized choices in the future (though even if these off-chain components were removed, Passkey users would still maintain their self-sovereign wallet access).

Roadmap

Our priority is to maximize swap revenue under token stakeholders' control, with the following development ranked by technical effort and potential for increasing market share.

Unlock ICP

Empower ICP with the every-where every-time wallet it needs (late Spring 2025)

For the past three years since ICP's genesis, the wallet landscape has been a persistent challenge for users. Early efforts by Fleek, through tools like Plug, Sonic, DAB, token standards, and wallet standard proposals, laid the groundwork for an interconnected ecosystem of smart contract canister applications. However, their departure stalled progress, making it harder to achieve seamless user experiences across the ICP network.

Recognizing this gap, our team invested heavily with the DFINITY Foundation in developing the critical standards necessary for users to navigate the ICP ecosystem effortlessly—with a unified identity that carries their assets and social reputation across all ICP applications. We've participated in writing over a dozen standards and built a developer toolkit—NFID IdentityKit—to make working with wallets easy.

Today, NFID Wallet stands as the only standard-compliant solution that's been rigorously audited, and that boasts security properties comparable to ICP's most secure applications, the NNS and Internet Identity. Onboarding takes mere seconds, with biometric authentication ensuring user convenience and security. Automated end-to-end testing guarantees reliability, while seamless connectivity across standard-adopted applications ensures users have a consistent identity throughout the ecosystem. NFID Wallet effectively merges the Internet Identity and Oisy products—offering the ability to connect across applications with a unified identity while providing the flexibility to use application-specific wallet addresses whenever users prefer—while improving the user experience at each step.

To fully unlock the potential of ICP, we're committed to meeting user expectations for:

1. Mobile and extension wallets
2. Automatic token detection, and
3. Ecosystem-wide support for the adoption of wallet standards

By the end of Spring 2025, the NFID Wallet browser extension and mobile app will match the reliability of the web app while delivering an unmatched user experience, cementing NFID Wallet as the gateway to the ICP ecosystem.

Become the go-to for swaps and staking within ICP (late Summer 2025)

Market data shows that leading wallets in EVM (MetaMask) and SOL (Phantom) capture approximately 1% of their respective swap markets. We believe the same potential exists within

the ICP ecosystem, and NFID Wallet is well-positioned to dominate by being the most audited, transparent, simple, reliable, accessible, and developer-friendly wallet.

As NFID Wallet secures the majority of market share, it will naturally evolve into the all-in-one platform for the ICP ecosystem—helping users navigate, manage assets, and govern seamlessly. By late Summer 2025, NFID Wallet will deliver on this promise. Users will access the best token prices and the most reliable swaps, with intelligent recommendations guiding them to use the optimal DEX for each trade. Staking and governance will be simple and intuitive, enabling users to easily manage tokens and participate in decentralizing the network and other on-chain DAOs. For advanced governance needs, users can connect their NFID Wallets to the NNS or other governance applications, enabling a customizable experience with the flexibility to choose from various frontend applications tailored to their governance preferences.

Easily bring fiat liquidity into ICP (late 2025)

The barrier for new users looking to bring liquidity into ICP applications—whether for governance, liquid staking, NFTs, DEXs, or other commercial use cases—is currently too high.

By late 2025, NFID Wallet will simplify this process with NFID PaymentKit, offering seamless fiat on-boarding, off-boarding, and in-app payments. Whether through the wallet or while interacting with an ecosystem application, users will experience the most streamlined and convenient fiat liquidity flows ICP has ever seen. This will empower users to easily inject liquidity into the ecosystem, driving greater adoption and engagement across all application types.

Unlock Web3

Leverage chain fusion to bring omni-chain management within the NFID Wallet user's control (Spring 2026)

ICP's Chain Fusion technology enables NFID Wallet to seamlessly store, send, and receive tokens across any network.

By Spring 2026, we anticipate ICP will have earned the trust of a broader market to securely store significant token volumes from other networks. At that point, we plan to extend NFID Wallet's optimized UX—already known for its simplicity, security, and ease of use—across all networks. This will empower users with the simplest, most secure, and DAO-governed wallet experience available, no matter which network they choose.

Establish .nfid as the standard for Universal Account name representations (Fall 2026)

By Fall 2026, NFID Wallet will solidify its position as a powerful, multi-chain self-custodial wallet, offering a compelling alternative to corporate-managed wallets like Coinbase Wallet (with the key differentiator that NFID Wallet is governed by its stakeholders, with the community controlling both the codebase and the treasury).

The final frontier for Web3 wallets is solving the challenge of chain abstraction—allowing users to transact seamlessly across chains without worrying about native tokens for gas fees. NFID Wallet will address this by leveraging NFID's Universal Account standard, enabling users to connect to ecosystems like EVM and SOL and pay gas costs with any token they choose. This breakthrough will pave the way for making .nfid the definitive standard for universal account representation, combining unmatched convenience with true user empowerment.

Team

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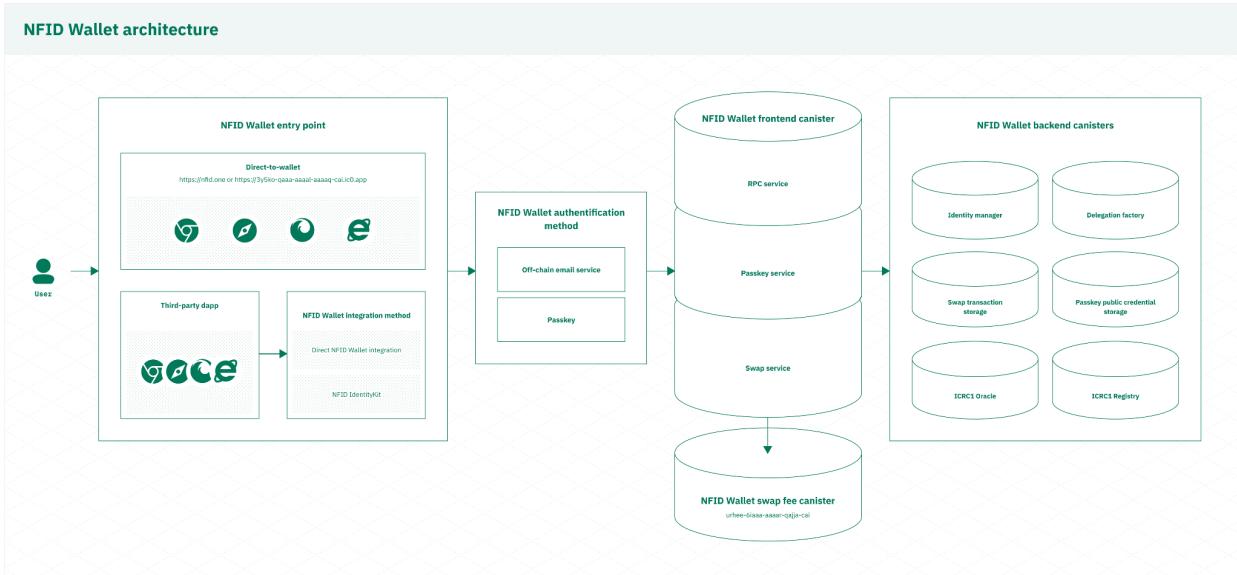
Oleksandr Diukarev

Vitalii Pustovyj

Accomplishments

- Developed world's first DAO-controlled single-signature wallet (NFID Wallet)
- Developed world's first multi-chain multi-signature smart wallet (NFID Vaults)
- Developed the toolkit for dApps to interact with standard-conformed wallets (NFID IdentityKit)
- Wrote and contributed to the development of 8 working-group-approved standards for the ICP ecosystem (<https://github.com/dfinity/wg-identity-authentication>)

Technical architecture



NFID Wallet consists of 8 smart contract canisters:

- Frontend: Serves the frontend assets
- NFID Wallet swap fee: NFID Vault canister that collects all swap fee revenue
- Identity Manager: Manages the mapping of accounts
- Delegation Factory: Signs delegations
- Swap Transaction Storage: Stores swap transaction history
- Passkey Public Credential Storage: Stores public key credentials
- ICRC1 Oracle: Stores and groups metadata for all known ICRC1 tokens
- ICRC1 Registry: Stores list of tokens imported to users' profiles

Users enter the frontend directly from <https://nfid.one> or <https://3y5ko-7qaaa-aaaal-aaaq-cai.ic0.app>, or indirectly from a 3rd party application.

Users can authenticate either through an email service or, if they already have a wallet and added passkeys, a passkey service.

Visit our [GitHub repository](#) for more information about the codebase and review [SolidState's audit](#).

NFID Wallet DAO

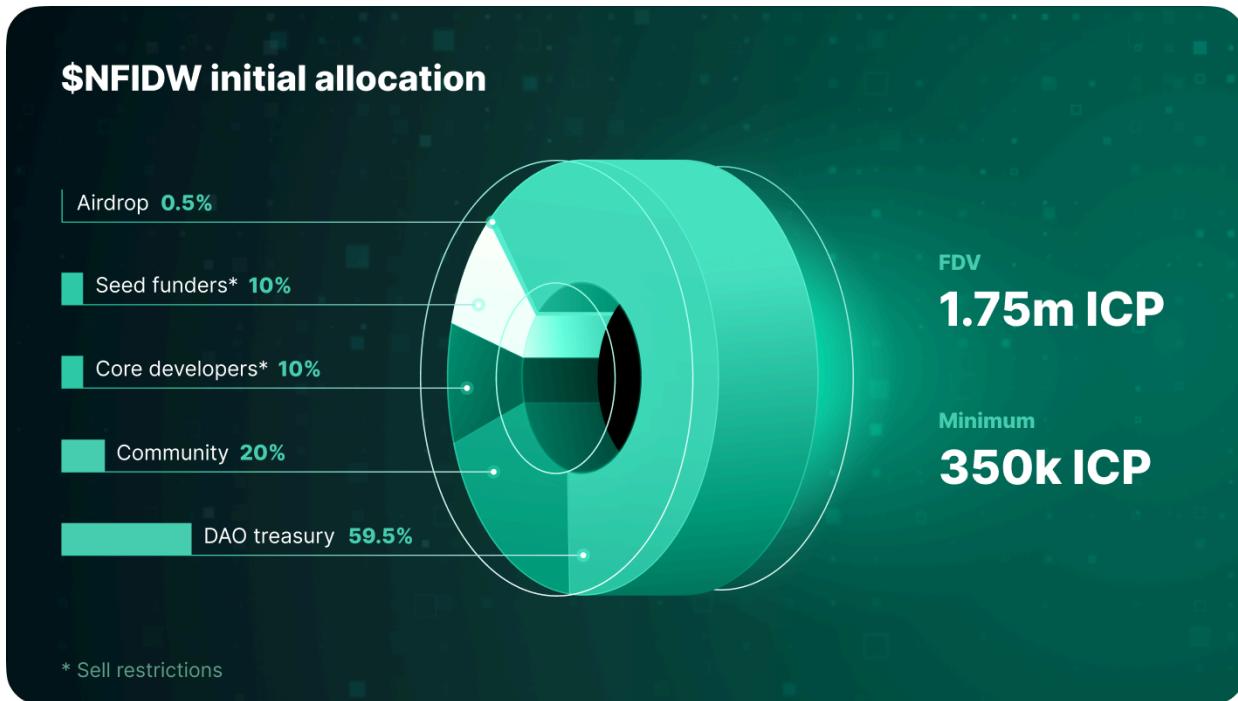
Summary

- NFID Wallet DAO is being formed to operate and steer the direction of NFID Wallet toward becoming the world's "fattest wallet" anyone can take a governance stake in.

- NFIDW token stakers will govern every aspect of NFID Wallet, including its frontend assets, backend services, and swap fee revenue

Creation of the DAO

The NFID Wallet DAO will be established using ICP's SNS launchpad, with its initial configuration made permanently and publicly inspectable:



A proposal detailing the decentralization sale and initial token allocation will be submitted to ICP's on-chain governance system, the NNS. If accepted, the NNS will initiate a decentralization swap of NFIDW tokens as outlined.

Participants from NNS-supported countries can join the swap by depositing ICP and receiving NFIDW tokens proportional to their contribution. The proceeds will be held in the NFIDW-controlled treasury.

Control of the DAO

After the decentralization swap, NFIDW token stakeholders will control NFID Wallet, including its treasury of NFIDW and ICP. Only NFIDW stakeholders will have the authority to upgrade the NFID Wallet smart contract canisters and access the DAO's treasury.

Upgrades will be conducted through proposals, which any NFIDW stakeholder can submit and vote on.

In exceptional circumstances, an NNS proposal could theoretically make changes to the dApp.

Governance of the DAO

Proposals

NFID Wallet DAO proposals have the following types:

- **Motions** are statements of intent but do not have any actual action that is automatically taken if they succeed. They could be used, for example, to propose new features or capabilities for development or to set the dev team's priorities.
- **Canister upgrade** proposals contain a canister ID and a wasm module and instruct the SNS to upgrade the specified canister's code to the wasm module. This can be used to upgrade dApp canisters controlled by the SNS and the SNS canisters themselves.
- **SNS config change** proposals allow various SNS parameters to be changed. Part of the boot-strapping process for the SNS is to provide initial values for all of these parameters which will be covered later.
- **Token transfer** proposals allow tokens to be transferred to/from the specified SNS owned account. The SNS "treasury" can potentially include any ICP native token such as ICP, not just NFIDW, and so this proposal can be used to transfer any ICP native token.
- **Burn token** proposals will allow NFIDW to be burned to reduce the total supply.
- **Custom function** proposals allow for an arbitrary function to be called on a given canister by the SNS governance canister. In practice, this allows for arbitrarily complex behavior to be controlled by the NFIDW DAO.

There will be some proposals to look out for soon after the decentralization sale including:

- One or more proposals to transfer some ICP and NFIDW to one or more DEXs to create initial liquidity pools to enable trading of NFIDW.
- A proposal to transfer a portion of the ICP to Internet Identity Labs so it can pay for ongoing hosting costs (in cycles).
- The core dev team will engage with the community and use a token transfer proposal for development in the following quarter.

Voting and voting rewards

Proposals are used to govern all aspects of the NFID Wallet dApp. Token holders are rewarded for participating in votes on proposals so that decisions are decentralized and reflect the will of the community.

Neurons have a property called dissolve delay which is the length of time it would take to dissolve the neuron into liquid tokens. Voting rewards increase with longer dissolve delay which aligns voters with the long-term interests of NFID Wallet.

If NFIDW is staked in a neuron with a dissolve delay set to at least 1 month then this neuron can be used to vote on proposals.

You can either vote on a proposal with a neuron(s) explicitly or configure your neuron to follow another neuron(s) per proposal type, in either case through the [NNS dApp](#). By default, newly

created neurons will not be following other neurons so this would need to be manually configured.

The dev team will configure a small neuron to be a "beacon" which anyone is welcome to follow on any topic. This beacon neuron will itself follow the neurons of each member of the dev team and will implicitly vote when a majority of the dev team vote the same way. The dev team will vote on every proposal so if you are happy to follow their lead you will implicitly participate in every vote and so maximize your voting rewards. After the SNS decentralization sale the dev team will publish their beacon neuron ID.

Each neuron has "voting power" which is calculated as the token value multiplied by the dissolve delay bonus multiplied by the age bonus. The dissolve delay bonus starts at 1x with zero dissolve delay and linearly increases up to 2x for neurons with the maximum 1 year dissolve delay. The age bonus starts at 1x at zero age and linearly increases up to 1.25x for the maximum 6 months age. This means for neurons with the same value, those that have spent 6 months with a dissolve delay of 1 year will have a voting power 2.5x those with a newly set 1 month dissolve delay.

For a proposal to be adopted the sum of the voting power of the "adopt" votes must exceed the sum of the voting power of the "reject" votes after 4 days or after a period of quiet. Also, the "adopt" votes must have at least 3% of the total voting power. The vote will end immediately if either the "adopt" or "reject" votes exceed 50% of available voting power. It is possible to participate in a vote for a proposal if still within the 4 day period even if it has already been resolved. This is so the neuron can still be a beneficiary of voting rewards.

Voting rewards are generated by the SNS and accumulate in neurons that have participated in voting as maturity. Maturity can be disbursed to an account according to [maturity modulation](#). Alternatively, it can be staked or auto-staked. For a given proposal vote, the voting reward earned by a given neuron is in proportion to its voting power compared to the overall voting power of participating neurons. The voting rewards are distributed daily and take into account all of the votes that ended on that day. If there are no proposals on a given day the rewards are carried over to the next day. The proportion of total token supply that is generated annually for voting rewards is 2.5%. In practice, given that much of the supply will not be in voting neurons, a neuron with a 1 year dissolve delay would expect a voting reward significantly higher than this figure.

[Learn more](#) about SNS voting and rewards.

The power of the DAO

There are many factors which will influence the success of NFID Wallet. It must have the standard features expected of a Web3 wallet and new capabilities and properties which set it apart from the competition. The ICP ecosystem of applications must adopt standards to allow NFID Wallet to securely connect with the same stable identity. But most importantly, DAO

stakeholders need to be in control of the revenue distribution and become part of the governance ecosystem, unlike any other wallet on the market.

NFIDW utility token

- It can be staked as neurons (very similar to ICP neurons) allowing token holders to participate in the governance of NFID Wallet by [voting](#) on SNS proposals, and by doing so, earn voting rewards. These rewards increase the longer the tokens are staked and so token holders are incentivised to act in the long term interests of NFID Wallet.
- It could be used to reward contributions to the evolution or growth of the NFID Wallet service through SNS-proposed grants.

Burn mechanism

\$NFIDW buyback-and-burn sustainability proposal				
Year	Proportion of MetaMask fees	Annual revenue (USD)	NFIDW burn	NFIDW supply
1	0.10%	\$60,000	2,655,150	2,124,120,314
2	0.50%	\$300,000	4,340,247	2,333,877,195
3	1%	\$600,000	6,984,918	2,524,634,495
4	2%	\$1,200,000	11,083,903	2,692,796,095
5	5%	\$3,000,000	17,367,661	2,836,127,218
6	11%	\$6,600,000	26,907,629	2,953,475,600
7	19%	\$11,400,000	41,261,795	3,044,245,515
8	31%	\$18,600,000	62,664,865	3,107,629,659
9 (1st year of sustainable supply)	53%	\$31,800,000	94,247,780	3,141,592,654

NFID Wallet's goal is to become the easiest and most financially attractive place for users to swap any token on any chain in the fastest time possible. As NFID Wallet accumulates fees, the NFID Wallet DAO can vote to buyback-and-burn NFIDW to maintain a sustainable supply.

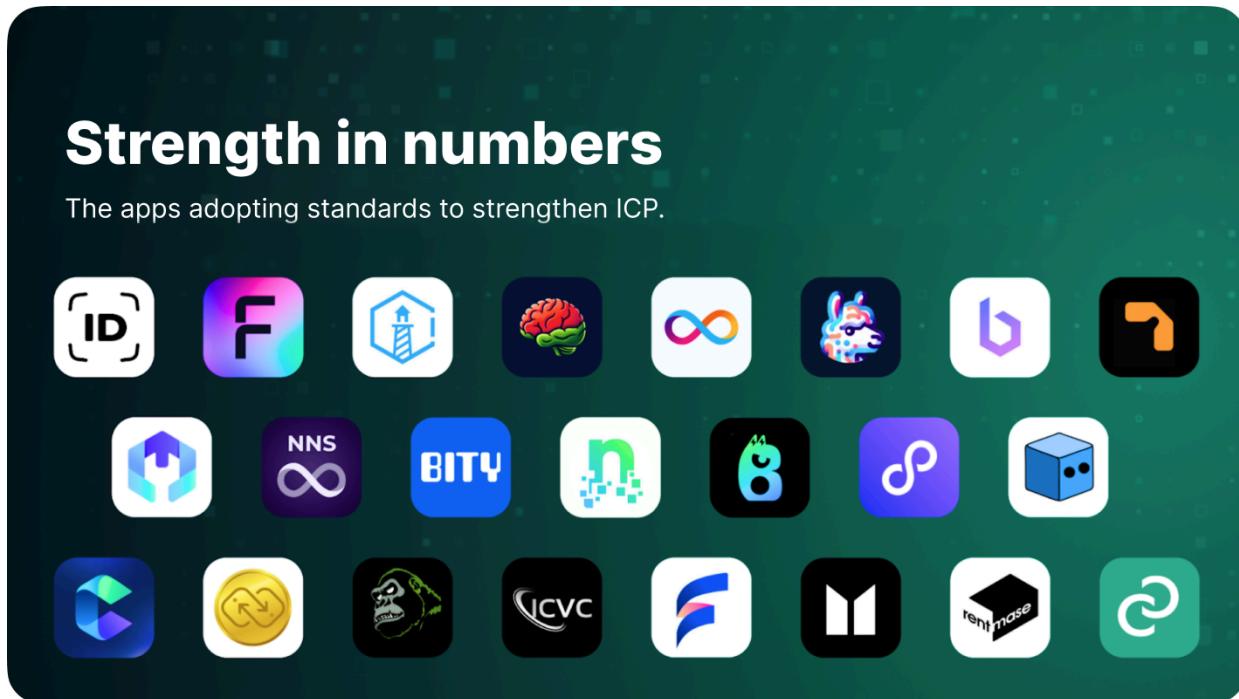
Given a conservative assumption of ICP DeFi growth and NFID Wallet's market share of swaps within the ICP ecosystem, NFID Wallet should achieve a sustainable burn of ~94m NFIDW / year in its 9th year.

Why now?

ICP Needs a Trustworthy Wallet for Seamless, Unified Dapp Connectivity

No decentralized ecosystem can thrive without a reliable wallet, yet users on ICP have expressed dissatisfaction with the existing wallet options, which lack open-source transparency and often encounter reliability issues. This has contributed to distrust, low adoption, limited activity, and a heavy concentration of liquidity in the NNS, currently one of very few applications users trust with significant assets.

In Web3, where ecosystems are reaching record transaction volumes quickly, ICP's growth has lagged, partly because users face challenges navigating the ecosystem with a consistent identity across dApps. NFID Wallet addresses this gap, delivering security on par with the NNS, a third-party audit for verified trust, and the simplest setup process in Web3. Our commitment to open-source standards and a unified user identity enables a seamless connection to all dApps on ICP. With support from DFINITY and growing momentum across the ecosystem, NFID Wallet is set to become the trusted, accessible wallet ICP needs.



Decentralizing NFID Wallet is the Perfect Showcase for ICP's Unique Capabilities

Decentralizing NFID Wallet now offers an opportunity to demonstrate the full potential of ICP's technology to a wider audience. NFID Wallet would be the only end-to-end, DAO-governed wallet in Web3, setting a new standard for how digital wallets can operate transparently, securely, and with full community ownership. By directing revenue generated from swaps into a

decentralized treasury, NFID Wallet ensures that resources go directly to developers and community initiatives, fueling further innovation across the ICP ecosystem.

This approach showcases ICP's strengths, from chain abstraction to seamless governance integration, setting ICP apart as the leading infrastructure for decentralized finance and identity. As more users and developers observe ICP's unique ability to manage assets, revenue, and governance within a single framework, NFID Wallet becomes a powerful example of what's possible, attracting greater interest and adoption from the broader Web3 community.

Decentralized Cross-Chain Payments Are Now Within Reach

With NFID Wallet, decentralized, cross-chain payments using any token are finally possible. Built on ICP's chain-key technology, NFID Wallet has the potential to eliminate the need for centralized exchanges or bridges, allowing users to transact seamlessly across networks. This approach lays the groundwork for a truly interoperable Web3 experience, where users can hold, manage, and pay with any token on any chain in a secure, decentralized way.

Decentralizing NFID Wallet now allows the community to actively participate in shaping and realizing this vision of cross-chain payments, showcasing ICP's unique capability to lead in the future of chain-agnostic financial interactions.

Growing Demand for Decentralization

With [DeFi projected to reach \\$497.9 billion by 2032](#) and Gartner predicting [business value reaching approximately \\$3.1 trillion by 2030](#), the increasing desire for decentralized solutions reflects a broader trend towards greater autonomy and control over digital assets. As users become more aware of the limitations and risks associated with centralized services, community-driven dApps offer the transparency, security, and trust that decentralized governance can provide.

Advancements in Blockchain Technology

Technological advancements in blockchain and decentralized protocols, in particular the Internet Computer Protocol (ICP), have made it possible to create highly secure and efficient decentralized applications. These advancements enable the creation of robust, fully on-chain solutions like NFID Wallet, ensuring that it can operate seamlessly and securely without reliance on centralized components.

Empowerment Through Governance

The increasing importance of user empowerment and participation in governance is shaping the future of digital services. Users want to have a say in how the tools they use are developed and managed. A community-driven wallet allows users to influence decisions, ensuring that the wallet evolves to meet their needs and expectations.

Enhanced Security Needs

With the rise in cyber threats and vulnerabilities, users and companies are seeking more secure ways to manage their digital assets. According to recent studies, [61% of companies are prioritizing digital transformation initiatives](#) that emphasize user-centric development and engagement. A community-driven wallet, governed by stakeholders who prioritize security, can implement and continuously improve upon the latest security measures, providing a safer environment for users.

Shift Towards User-Centric Development

There is a growing recognition that user feedback and community input are crucial for the successful development of digital products. By leveraging community governance, NFID Wallet can ensure that its features and functionalities are directly aligned with user needs, leading to a more user-friendly and effective product.

Increased Adoption of Digital Assets

As the adoption of cryptocurrencies and digital assets continues to grow, there is a pressing need for wallets that cater to a diverse and expanding user base. A community-driven wallet can quickly adapt to changing demands and incorporate support for new assets and applications, ensuring it remains relevant and useful.

Economic Inclusion and Accessibility

Decentralized, community-driven wallets promote financial inclusion by making digital financial services more accessible. By removing barriers associated with traditional finance, such as high fees and complex onboarding processes, NFID Wallet can attract a broader audience, including those previously underserved by conventional financial systems.

Trust in Decentralized Systems

The recent trend towards greater trust in decentralized systems, driven by high-profile successes and increased public awareness, creates a favorable environment for launching a community-driven wallet. Users are increasingly recognizing the benefits of decentralization, including greater transparency, reduced risk of censorship, and enhanced control over personal data.

Token allocation at SNS genesis

Initial token allocation



The SNS will be initialized with 2.124 billion NFIDW tokens allocated in the following proportions:

Decentralization swap (yellow)

20% of the total supply will be swappable to decentralize the governance and raise funds for the SNS. The maximum that can be raised will be configured to 500,000 ICP and the minimum to 350,000 ICP.

Participants in the decentralization sale will deposit ICP into the SNS and once the sale has completed they will receive the same proportion of NFIDW tokens as their share of the ICP deposited. Each participant will receive their NFIDW as a basket of 6 equal value neurons. The first neuron will have a zero dissolve delay and so be immediately disbursable to liquid NFIDW tokens. The other neurons will have dissolve delays of 2, 4, 6, 8, and 10 months respectively.

Each Community Fund participant will also receive their share of tokens as a basket of 6 neurons with the same configuration.

Founders and funders (purple)

NFID Wallet has been in development since November 2021, now as a team of 10 full- and part-time employees and contractors, and has received seed funding from Tomahawk, Polychain, Outliers Fund, the DFINITY foundation, Spaceship DAO, Fyrfly VC, Blockchain

Founders Fund, Rubylight Ventures, and 4 angel investors including the original creator of DFINITY's Internet Identity system.

Each of the founding team will receive a combined 10% of the NFIDW tokens, each as a basket of 25 neurons. Each neuron will have a dissolve delay of 1 month but with an additional "vesting period" of 11 months for 25% of the tokens, and monthly unlocks thereafter until the 36th month. The founding team is unable to sell its share of vested tokens until investors reach a "break-even" point on their investment.

Seed investors will receive 10% of the NFIDW tokens, distributed as 25 neurons per investor, and with the same vesting schedule as the founding team but without the sell restrictions of the founding team.

If a neuron has a "vesting period" it cannot be touched until the period is over (and that includes increasing the dissolve delay). This ensures that the founders/funders cannot rug-pull investors and provides an ongoing incentive to make NFID Wallet successful.

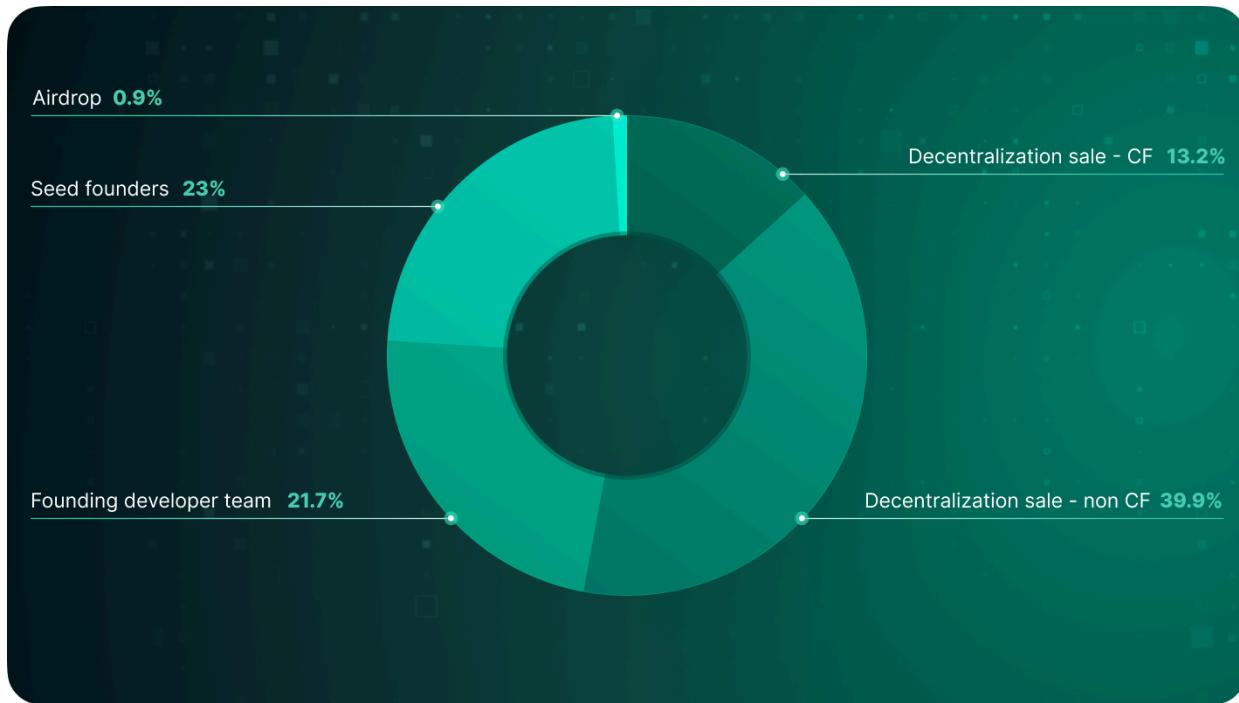
As these founder/funder neurons all have a relatively short dissolve delay of 1 month which cannot be increased, this ensures a reduced voting power compared to the community so that governance is properly decentralized.

SNS treasury (blue)

After the decentralization sale the SNS will be left with a treasury of the remaining 59.5% of NFIDW tokens. The bulk is likely to be used over time to provide exchange liquidity and help NFID Wallet grow. It will also be available to pay grants, by SNS proposal, to compensate people who contribute to NFID Wallet more generally. This could be used for instance to reward 3rd party developers for code contributions.

Airdrop (light blue)

364 users participated in an airdrop campaign leading up to SNS launch, and will be distributed their share of 10m tokens as a basket of 5 neurons.



Initial SNS configuration

The SNS will initially be configured with the values shown in the tables below which can all subsequently be changed by proposal.

Transaction fee in NFIDW tokens that must be paid for ledger transfers	0.001
Number of NFIDW tokens that a rejected proposal costs the proposer	10
Minimum number of NFIDW tokens that can be staked in a neuron	5
Maximum voting period for a proposal	4 days
Proportion of voting power needed for a proposal to be accepted	3%
Minimum neuron dissolve delay to vote	1 month
Maximum neuron dissolve delay	1 year
Maximum dissolve delay bonus	2x
Maximum age for age bonus	6 months
Maximum age bonus	1.25x

Percentage of total supply that will be generated annually for rewards	3%
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SNS decentralization sale configuration

The decentralization sale will be configured with the values shown below.

The total number of NFIDW tokens to be sold	424,824,063 (20%)
The maximum ICP to be raised	500,000
The minimum ICP to be raised (otherwise sale fails and ICP returned)	350,000
The ICP to come from the Community Fund	119,000
End date of sale (unless maximum ICP raised sooner)	14th March 2023 at 12:00 (noon) GMT (TBC)
Minimum number of sale participants	500
Minimum ICP per buyer	1
Maximum ICP per buyer	100,000

Valuation range

The reason to impose a maximum target is to give participants a minimum bound on the number of NFIDW tokens they will receive for their ICP investment. The lower bound of 0.35M ICP and the upper bound of 0.5M ICP for 20% of the tokens gives the NFID Wallet DAO an initial total valuation between 1.75M ICP and 2M ICP. 1 NFIDW token would initially be worth between 0.0008 -> 0.0012 ICP.

NFID Wallet SNS treasury

The SNS will hold a treasury of both ICP tokens and NFIDW tokens.

Immediately after the decentralization sale the SNS will have an ICP ledger account with the ICP raised in the sale and a NFIDW ledger account with 1.264B tokens.

Any liquid ICP in the reserve could be used directly, or the DAO could swap NFIDW from the NFIDW reserve for ICP at a DEX, and use it to fund expenses such as cycles for hosting, 3rd party services, and later for paying the development team.

ICP for cycles to fund hosting

NFID Wallet will occasionally need to be topped up with cycles to continue running.

3rd party services

The intention is for NFID Wallet to have no off-chain dependencies so that it is not necessary to trust any human agent, and it can already do that after initially verifying an email to create the wallet, however, Internet Identity Labs currently uses an off-chain component to pay for securing email authentication.

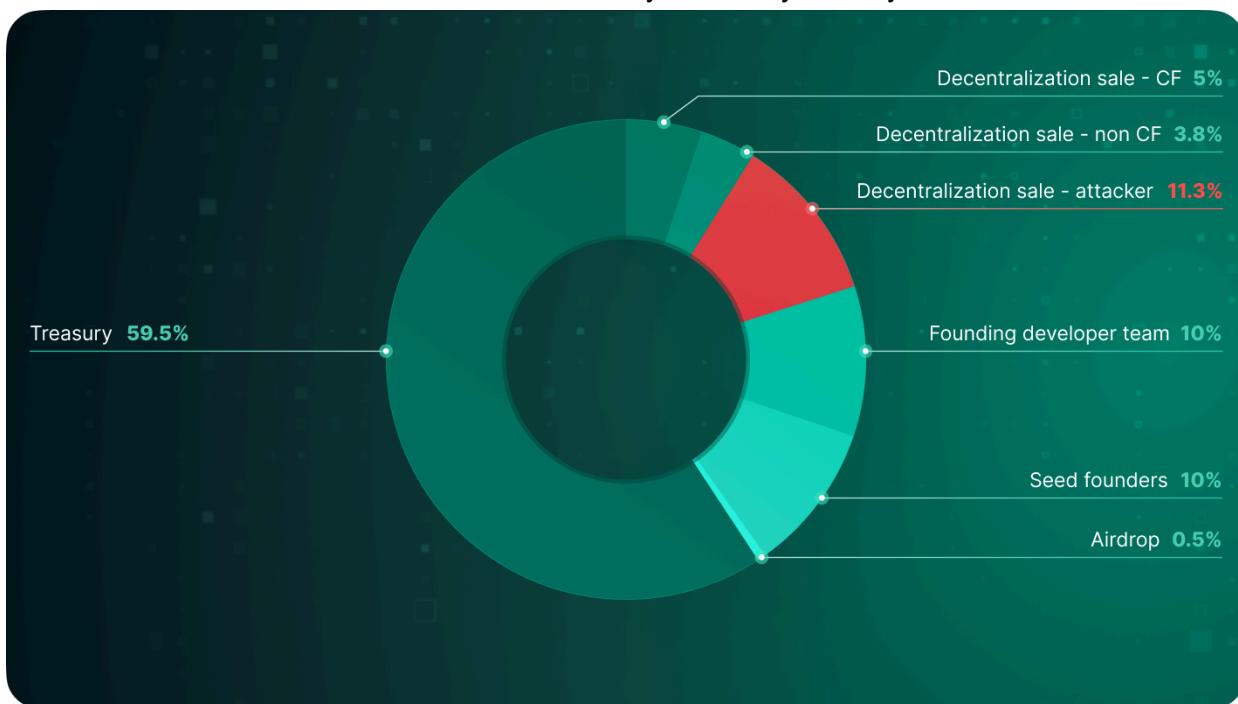
Pay the development team

Development team(s) can make proposals to the SNS to receive ICP for ongoing funding. For example, teams could make a proposal each quarter with a development plan and a request for funds.

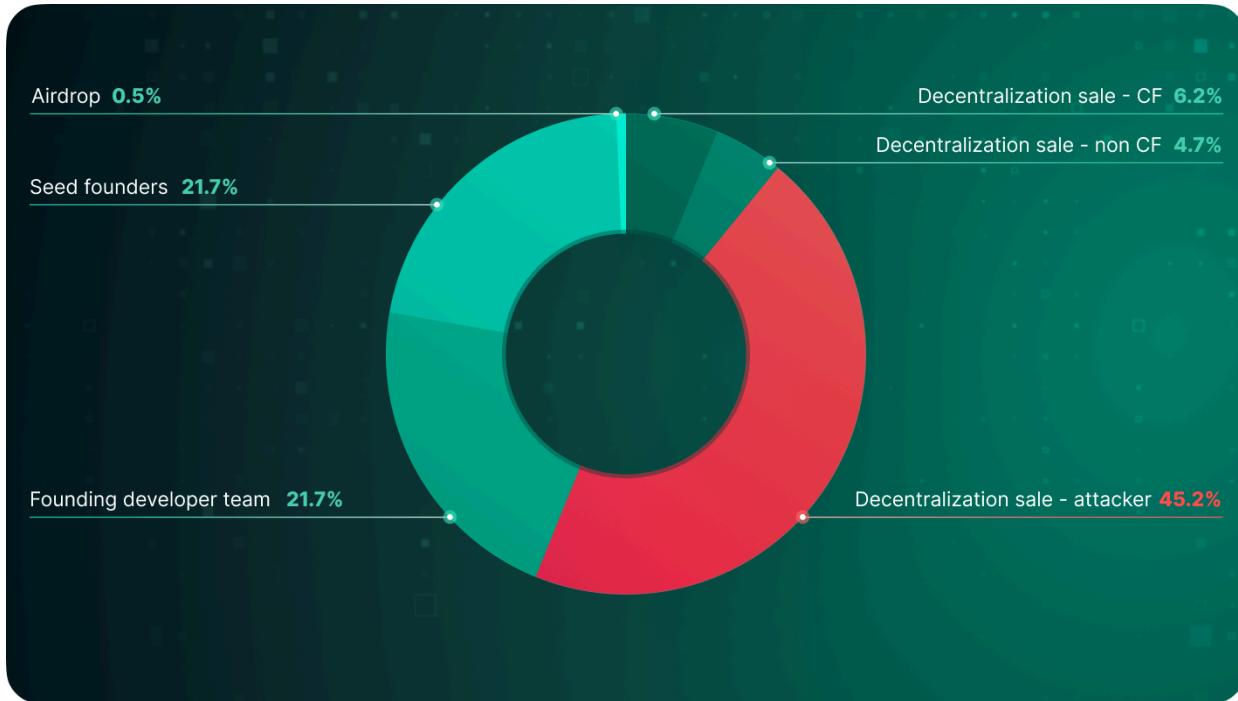
Mitigation against a 51% Attack

There is a danger that the NFID Wallet SNS treasury could be the target of an attack. One possible scenario is for an attacker to buy a large proportion of the NFIDW tokens in the decentralization sale and immediately increase the dissolve delay of all of their neurons to the maximum 1 year in an attempt to gain > 50% of the SNS voting power. If successful they could force through a proposal to transfer the entire ICP and NFIDW treasury to themselves. The Community Fund actually provides a great deal of mitigation against this scenario because it limits the proportion of voting power an attacker would be able to acquire.

This chart represents a scenario whereby an attacker manages to buy 75% of the available tokens in the decentralization sale which is already extremely unlikely:



If the attacker then increases the dissolve delay of all their neurons to the max this chart shows how much voting power they would be able to acquire. As can be seen, the attacker would still fall significantly short of the necessary voting power to gain control with only 42.8%:



Tokenomics

Total supply levers

At genesis the total supply of NFIDW tokens will be 2.124B. The supply will increase if more tokens are minted and decrease if tokens are burned.

The SNS is configured to generate 2.5% of the total supply annually to pay voting rewards to participating neurons. Voting rewards accumulate in participating neurons as [maturity](#).

At the point a neuron's maturity is disbursed it is burned and the corresponding value of NFIDW tokens will be minted by the SNS ledger to an account. It is also possible for the SNS to mint tokens by proposal although it is unlikely the NFID Wallet DAO will elect to do this.

The only way the SNS can burn tokens is by proposal.

Income and outgoings

At Genesis the SNS will have a treasury of ICP from the decentralization sale and 1.264B NFIDW tokens.

The SNS will receive an income in NFIDW tokens from in-wallet swap fees.

The SNS will have various outgoings. It will use ICP to pay the NFID Wallet dApp hosting costs (cycles), 3rd parties for services, and at some point soon, the core dev team. It will use NFIDW to pay user rewards and grants.

As the NFID Wallet DAO sees fit it can choose to use those fees to buyback and burn NFIDW tokens to keep a sustainable total supply. The expectation is that over several years the SNS will buyback and burn NFIDW at an increasing rate until the burn rate exceeds the minting rate from voting rewards and the total supply remains constant.

The following diagram depicts a projection of the total supply of NFIDW over time. For this projection it is assumed that the reward rate will remain at a constant 10%, decreasing to 3% after 8 years, and that the burn rate will start at 0.125%, increasing by a factor of 1.49 each year, until it overtakes the reward rate.



Token price

Various factors will influence the price of NFIDW tokens such as

- Total supply
- Market sentiment
- Income
- Costs
- Liquid supply

We have discussed total supply but arguably liquid supply is a bigger factor when considering the token price.

After the decentralization sale, participants will receive a basket of neurons of varying dissolve delays with only 1/5 being immediately liquid. The voting reward rate, initialized to 10%, is expected to encourage token holders to lock up a certain proportion of tokens thus, at least temporarily, removing them from the liquid supply. In the case of the seed funders, their neurons have vesting periods from 12-36 months before they can even start dissolving. In the case of the founding dev team, the vesting periods are the same, with even more restrictions on selling (namely until investors “break-even” on their initial \$4m investment).

There are various tokenomics parameters that can affect the proportion of NFIDW that is locked up. These include the max dissolve delay, the dissolve delay bonus, min dissolve delay to vote, max age, max age bonus, and the voting reward rate. We have carefully chosen initial values for these parameters which we believe provide a good balance of incentives but these are all levers available to the DAO to allow it to influence the total and liquid supply and therefore the price if so desired.

Consider the SNS treasury of NFIDW tokens. These tokens are liquid but are only being trickled out (in percentage terms) to the community as user rewards and grants, and then only some proportion will find their way onto the market (DEXes). It is a similar story for the portion of NFIDW held in the NNS reserve - it is liquid but will not enter the market unless the DAO decides to conduct a future sale.

Model

You can [view the spreadsheet](#) we have used to model various aspects of the NFID Wallet tokenomics which is also the source for the various charts in this document.

Internet Computer Overview (ICP)

ICP is a groundbreaking decentralized global compute platform that leverages innovative blockchain technology to achieve consensus within its subnets. This platform is globally distributed across numerous independent data centers, ensuring that it remains tamper-proof and unstoppable.

Unlike traditional systems, ICP can host fully on-chain applications without the need for a centralized frontend layer. This unique capability allows applications to operate with unparalleled efficiency. Moreover, ICP is significantly more cost-effective, offering computational and storage solutions at a fraction of the cost of most other blockchains.

One of the standout features of ICP is its reverse-gas model. In this model, the costs of computation and storage are borne by the application or service providers, rather than the end users. This approach not only makes the platform more accessible but also enhances the user experience by eliminating transaction fees typically incurred by users.

Canister smart-contracts

Applications on ICP are composed of canister smart contracts organized into subnets. Each subnet can contain hundreds of thousands of canisters and is typically made up of 13 node machines. These nodes are distributed across different independent data centers worldwide, ensuring maximum geographical and jurisdictional diversity.

Canisters within a subnet can securely communicate with canisters on other subnets, allowing ICP to scale horizontally. Each canister operates on a virtual machine using WebAssembly (WASM), replicated across the subnet. Implementing the actor model, canisters are single-threaded, processing input messages one at a time. They can send messages to other canisters and add response messages to an output queue.

Canisters can be called by clients or other canisters using two types of operations: queries and updates. Queries can be served immediately from any node and do not change the state, while updates can modify the state and require consensus among the nodes to agree on the result before responding. The consensus process, integral to the blockchain, ensures data integrity and consistency across the network.

One of the standout features of canisters is their orthogonal persistence. As a programmer, you simply write data objects to memory, and the system automatically persists them. This eliminates the need for a traditional database, significantly simplifying the development and deployment of applications on ICP compared to traditional IT stacks.

[Learn more](#) about ICP.