

**YEAR-END REPORT**  
**2024**

# Focusing on business

Crunchfish has a unique and patented approach to offline payments providing a perfect balance between security and scalability. Despite the technical strength of our Digital Cash solution, it has taken longer than expected to get commercial deals. This led to requiring further financing at the end of 2024 and decided to close the Gesture Interaction business. In 2025 with a slimmer organization we focus all efforts on securing business for offline payments, especially in India, emerging markets, and for Central Bank Digital Currencies (CBDC) projects, where we see a clear demand for our Digital Cash solution.

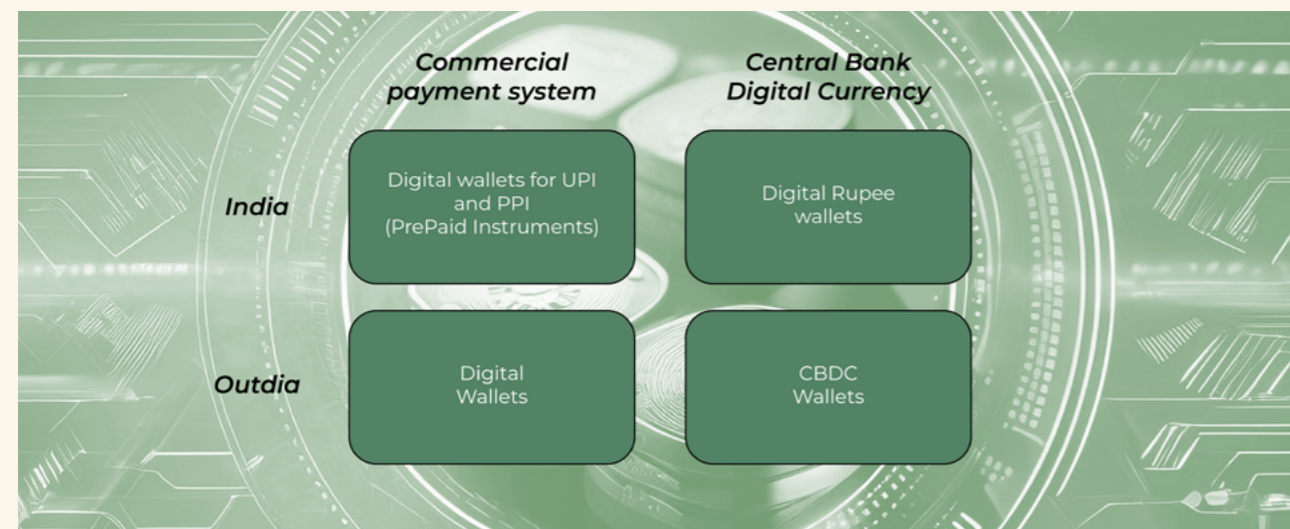
## Focusing on Digital Cash

Crunchfish is a pioneer in offline payment. The key challenge is to enable offline payment with mobiles, regardless of which device the user has. Crunchfish has solved this problem and created an offline payment solution that is secure as well as scalable as it may be deployed to any smartphone. The solution has been pilot tested in India by leading banks and it was approved by the Reserve Bank of India for rollout in December 2023.

Crunchfish divides the offline payment market geographically as India and the rest of the world outside India as well as whether it is a commercial payment system or initiated by central bank as Central Bank Digital Currency (CBDC). Key market segments with demand for offline services is India and emerging markets as well as CBDC projects where offline is often a required functionality. Crunchfish pursues

revenue opportunities in all these four segments. In this year-end report we provide a fresh update on the status and progress.

Crunchfish has pursued both gesture interaction as well as offline payments for many years. This has been costly as neither the Gesture Interaction business nor the Digital Cash business is yet profitable. In 2024 we decided to exit our Gesture Interaction business to reduce our operational cost base by 25% and focus the business solely on Digital Cash and offline payments. Crunchfish has a unique and patented positioning for CBDC projects as well as commercial payment systems by offering device-agnostic trusted applications where the offline transactions may be verified both offline and online to detect and mitigate double spending attacks.



CRUNCHFISH CEO JOACHIM SAMUELSSON  
IN FRONT OF THE HEADQUARTER IN MALMÖ  
WITH TURNING TORSO IN THE BACKGROUND

## Financing the business

Entering commercial deals for offline payments is a process that has taken longer than Crunchfish expected. The Board decided to carry out a rights issue to finance the business in 2025. The financing was done with a unit emission where 2 existing shares gave the right to subscribe in November 2024 to 2 new shares at 1,45 SEK each and 1 warrant referred to as TO10 series for subscription in February 2025 and 1 warrant referred to as TO11 series for subscription in May 2025. The subscription price for those warrants are set at 30% discount of the average share price during 2 weeks before the year-end report for TO10 and before the Q1 report for TO11.

The Rights Issue was subscribed to approximately 45 percent, of which guarantors subscribed to about 16% and Crunchfish thereby received approximately SEK 26 million before issue-related costs and before set-off of the 5 million loan from Corespring Invest AB entered in September 2024. By the exercise of warrants series TO 10 and TO 11 Crunchfish will receive additional funding at the end of February 2025 and May 2025, respectively.

## Business outlook

It has taken time to succeed with a new product, to new customers in a novel offline payments market. We remain optimistic that our unique approach and patented Digital Cash solution will bring us significant business in 2025. With financing in place, we are on track in relation to the business opportunities presented in the prospectus for the rights issue at the end of 2024. Progress has especially happened in our focus market India with the Reserve Bank of India, National Payments Corporations of India and leading banks as our unique and patented Digital Cash solution fits the market needs. Securing these business opportunities will have a major impact of Crunchfish's success in 2025.



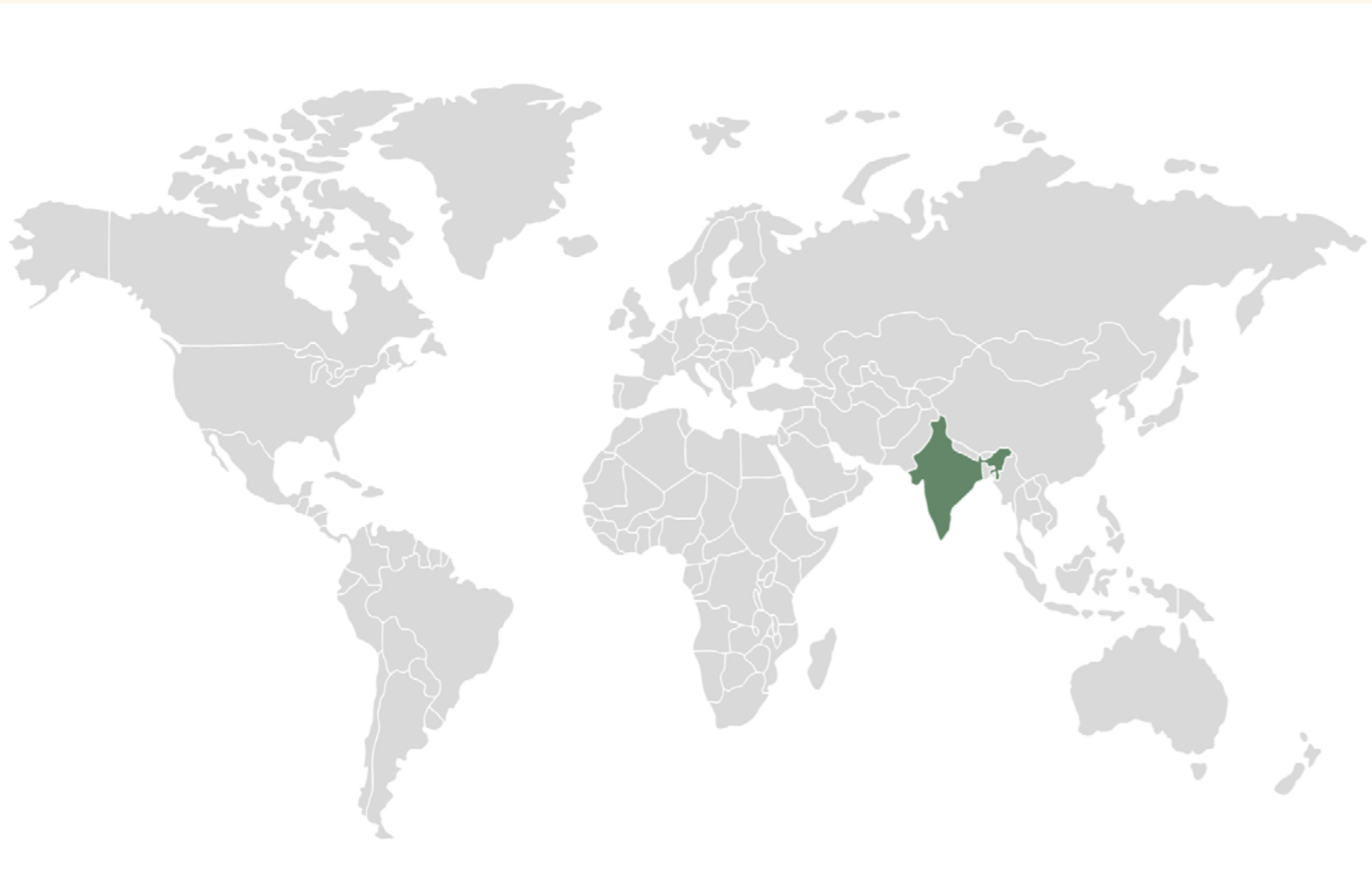
# Digital Cash





# Digital Cash in India

India is the leading market for real-time payments in the world. With 16,7 billion transactions in **December 2024**, the Unified Payments Interface (UPI) caters for around half of the **world's transaction volume**. The Digital Rupee is one of the most advanced CBDC implementations in the world. The Reserve Bank of India (RBI) and the National Payment Corporation of India (NPCI) form the hub of the payment market ecosystem in India. Crunchfish has developed the Digital Cash products based on the needs in India.



## Central Bank Digital Currency in India

India's central bank RBI is piloting digital currency (CBDC) with leading Indian banks. In February 2024, **RBI announced** that offline payments are a priority for the Digital Rupee, both in the form of offline payments in proximity and remotely. Crunchfish has together with IDFC FIRST Bank rolled out a solution for offline payment remotely. Crunchfish is also in discussions with leading Indian banks regarding Offline payment in proximity for the Digital Rupee.

Crunchfish in collaboration with IDFC FIRST Bank was **announced as the runner-up** for the Digital Cash telecom solution in RBI's second global hackathon HaRBlinger 2023. Crunchfish's solution competed in the problem statement "New use cases for CBDC-Retail including offline transactions". Digital Cash telecom enables users to scan and pay by initiating payments remotely, without an internet connection, with an SMS to the payment service. The award was the starting point to jointly take this solution to commercialization. Following the HaRBlinger award, the IDFC First Bank Digital Rupee app with Digital Cash support has undergone review and approval by RBI, Apple and Google. The Digital Cash telecom functionality is since mid 2024 available in the IDFC First Bank app via Google Play and the Apple App Store for all Android and iOS devices.

anonymity in token-based (CBDC) transactions while maintaining financial system integrity" with the submission "Balancing privacy with regulatory requirements for transactional traceability with Crunchfish Digital Cash". The submission improved on Crunchfish Digital Cash innovative **privacy by design** feature. During the Grand Finale Crunchfish together with IDFC First Bank demonstrated the solution.

The Digital Rupee will be used in India to **pay out grants** to the population for various purposes. Crunchfish is very well-positioned to support this as the latest version of Crunchfish Digital Cash has implemented support for **holding balances for various purposes** in a digital wallet.

Currently Crunchfish has ongoing discussions with RBI and several major Indian banks on how Digital Cash can add value to the Digital Rupee. Crunchfish has presented a proposal to RBI on how to design an interoperable offline Digital Rupee solution. Interoperability will be a key aspect to make the Digital Rupee successful. All banks are currently under pressure from RBI to do a system wide upgrade to a new generation of the Digital Rupee system, going from fixed nominated tokens to value-based tokens. Offline support is highly demanded by RBI, but this upgrade of the online system needs to be completed before support for offline also will be added. Crunchfish expects that the new generation will be in place and ready to be extended with offline support during Q2. In parallel with the discussions with RBI and the banks, a subsidiary to RBI has also initiated collaboration with Crunchfish for other payment areas prioritized by RBI.



Privacy is an important feature for the Digital Rupee, as well as other CBDC systems, to be adopted by the public. During 2024 Crunchfish yet again qualified for the RBI HaRBlinger Grand Finale, for the third consecutive year. Out of more than 500 contenders Crunchfish was selected as one of the finalists for the problem statement "Ensuring transaction

# Digital Cash in Outdia

## Commercial Digital Wallets in India

India's dominant payment system is the Unified Payments Interface (UPI), the world's most successful real-time payment system. UPI was launched in November 2016 and currently has a transaction volume of **16,7 billion transactions per month**. NPCI, which is the product owner of UPI, announced at the Global Fintech Fest (GFF) in Mumbai in September 2024 that it plans for an increase in the coming years to 100 billion transactions per month. To achieve this, offline payments are important for load balancing and coverage in areas where internet connectivity is poor or non-existent.

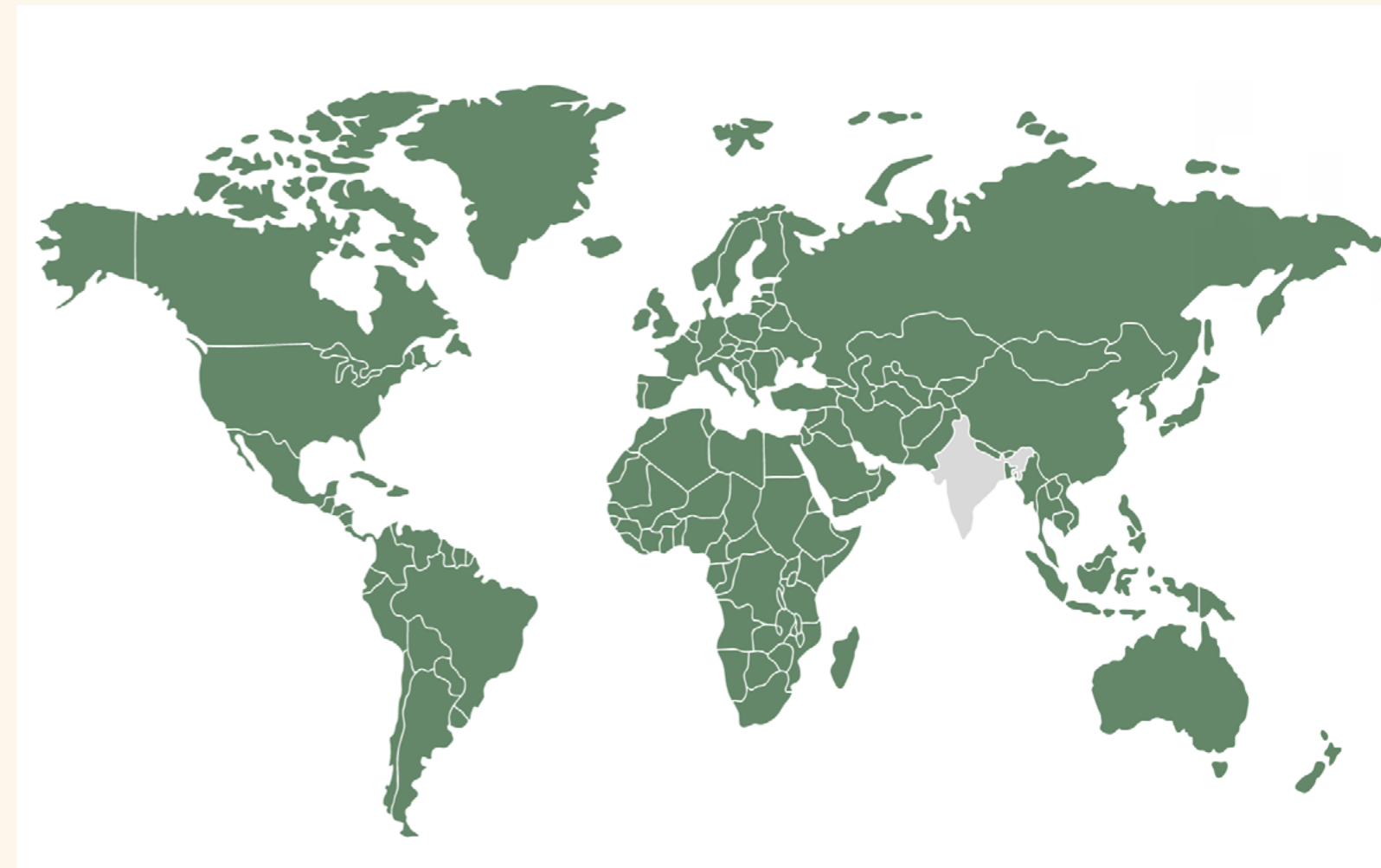
In Q2 2023, Crunchfish in collaboration with **HDFC Bank and IDFC FIRST Bank** completed a joint project in the RBI Regulatory Sandbox to demonstrate and test offline payments. The pilot project was evaluated by RBI. In an official statement dated December 11, 2023, RBI announced that **the offline solution from Crunchfish** is approved to be used by regulated entities. The announcement created a foundation for Crunchfish's work with banks and payment services in India, as well as in the dialogues with NPCI.

NPCI launched UPI Lite X during the GFF fintech trade show September 2023 to enable offline payments. One and a half year later, UPI Lite X has yet to be rolled out widely in the Indian market. Crunchfish welcomes NPCI's focus on offline payments and believes that the main reasons for the slow deployment is lack of proximity interaction methods and constraints in the security of UPI Lite X. Digital Cash complements UPI Lite X with a more secure and robust offline payment solution. It is also more versatile as it supports all possible proximity methods, like QR-codes, Bluetooth and Ultrasound, as well as NFC which is the only supported method by UPI Lite X currently. Providing offline support to only NFC enabled devices is limiting the addressable market significantly, as most devices in India are lacking of NFC support and both devices in a transaction need to have the functionality.

UPI Lite X, like Crunchfish Digital Cash, is based on the payer and recipient being able to trust each other and the offline payment. Crunchfish Digital Cash has applied for a patent for a solution that protects how both parties can securely forward the offline payment to the backend of the payment system, in order to increase reliability. The patent has received **a positive international report on patentability**, is a **granted patent in the US** and **has received a Notice of Allowance from the European Patent Office**. UPI Lite X uses the same approach and Crunchfish has brought this to NPCI's attention, although Crunchfish does not yet have any granted patents in India as they are under review. A non-disclosure agreement is in place with NPCI and discussion around co-operation has been ongoing throughout 2024. Currently a proposal has been provided to NPCI for a proof-of-concept (POC) project on how the Digital Cash solution can complement and improve UPI Lite X and how Crunchfish can help with offline expertise. Feedback on this POC proposal is expected during Q1.

Crunchfish also has active dialogues with selected players with PPI (PrePaid-Instruments) digital wallets. These PPI providers offer payment in closed-loop systems outside of UPI. A large oil company is currently evaluating to include offline support in their customer app for gasoline payments.

Most of the world's central banks are evaluating or preparing to **launch CBDCs**. Support for offline payments is on the agenda for most of these projects. Outside of India and the CBDC market, it is primarily the emerging markets that have potential for offline payment in commercial wallets.



## Central Bank Digital Currency in Outdia

Crunchfish's Digital Cash market strategy for the CBDC market is to partner with CBDC platform providers and other relevant companies in the CBDC ecosystem. Crunchfish enables the platform providers to integrate Digital Cash into their solution to be able to offer offline payments to central banks. One of the partners is **Tata Consultancy Services** from India, which markets its system Quartz to central banks with Crunchfish Digital Cash as a complementary offline solution. Crunchfish also has some of its own dialogues with central banks that prioritize offline payment in their solution.

During 2024, Crunchfish has positioned Digital Cash towards central banks and the surrounding ecosystem of suppliers by participating in and presenting at CBDC conferences around the world organized by **Currency Research** and the **CB+DC Conference**. Crunchfish has previously also hosted the webinar series **"Enabling offline payments in an online world"** where a number of whitepapers have been presented. In 2024, **three additional white papers** were also released, outlining the challenges of implementing mobile offline payments.

The European Central Bank (ECB) early 2024 launched a **call for a pilot project** in five areas around the Digital Euro, of which offline support is one of the focus areas. The offline part alone is budgeted by ECB at a value of €220 million and up to maximum €662 million. This project attributes a very high value to the offline solution and will most likely also affect other major central banks' view on the need for offline support to CBDC. Crunchfish has together with partners submitted an offer to ECB, but is not allowed to comment further on the process with regard to non-disclosure agreements with ECB. In parallel with this large tender a smaller call for innovation was also raised by ECB. Crunchfish has submitted a proposal for programmable offline payments, which is based on the **patent filed** by Crunchfish in June.

Crunchfish's core patent rights protect offline payment (1) from a secure element, whether hardware-based or software-based, (2) using asymmetric cryptography, and (3) where both the payer and the recipient stores the transaction and either party send up the offline transactions when online. Crunchfish believes that this patent constitutes an important component in solutions for offline payment.

This patent application, which is **internationally reviewed with a positive patentability opinion** and **granted in the United States**, has received a **Notice of Allowance from the European Patent Office** and is awaiting approval in India.

Crunchfish is in the final stage to start a CBDC pilot with an Asian central bank together with one of the CBDC platform partners. A local System Integrator in the country is leading the project and has just finalized the technical preparations, by setting up the entire environment for the pilot in their own staging environment. Crunchfish has had long interaction with the Central Bank about offline support, which is a key feature for both the pilot and the following roll-out. The pilot is expected to start with real users and merchants second half of Q1 or during Q2.

Crunchfish is also in advanced discussions with an east European central bank for a CBDC pilot that will start mid-2025. Crunchfish's has responded to an RFI (Request for Information) in January specifically dedicated to offline payment support for their CBDC project.



## Commercial digital wallets in Outdia

Mobile payments through telecom operators are an integral part of the economy of many developing countries. Many businesses and individuals rely on it for day-to-day transactions. Mobile payment services, which are mainly provided by telecom operators and supported by a network of licensed agents, allow registered users to deposit cash into a digital wallet and use these funds for payments and transactions. However, poor infrastructure and internet connectivity limit the potential and use of these payment services. With Crunchfish Digital Cash, mobile payments can reach their full potential in developing countries as more people can use these services.

To develop these opportunities, a collaboration agreement was entered with SaaS Expand Agency in Q1. The founders of SaaS Expand Agency have extensive experience working with telecom operators in developing countries. The company is established to act as an agent for Crunchfish. Initially, the focus will be on the major telecom operators in Africa. The partnership also includes the right for SaaS Expand Agency to act as an agent in Latin America.

A non-disclosure agreement has been signed with a major group of operators in Africa and some other local operators. With one of the local operators a Development and Demonstration Agreement is ready for signing. Once the agreement has been signed, integration of Digital Cash into the operator's digital wallet will start.

Crunchfish is also partnering with payment platform providers that have integrated Digital Cash for offline payment into their systems. These payment platform providers promote Digital Cash to their existing customers as part of their overall offering. One of them has a focus on the African market, with several mobile operators as existing customers. The integration of Digital Cash was completed during Q4. The partner will actively market the offline solution in upcoming exhibitions and customer interactions.

Another important area for Crunchfish is central nodes of commercial payment systems. Several countries have a centralized real-time payment switch, similar to UPI in India, making the payment apps in the country interoperable with each other. Getting an offline solution integrated with the

managing entity of the switch would have several benefits when it comes to scalability, as a great part of the integration work would only need to be done once, compared to integration with each of the participating payment providers. Crunchfish is in discussions with two such country switches. One is with a country in Africa where an NDA has been signed and three technical workshops have been conducted. This country has in their roadmap to add offline support during H2 2026. To reach that they will need to start design, implementation and tests during 2025. Crunchfish also has an early, similar discussion, with a country in Asia. This country realized during the severe **Microsoft bug** during the summer, causing the entire payment system in the country to break down, that offline support is essential for the resilience of the payment system. Crunchfish has initiated a discussion with the bank association in the country, that has been tasked to investigate how to add offline support.

# Balancing security and scalability

It is a challenge to add offline payment capabilities to payment applications on mobile devices. Crunchfish strikes the perfect balance between security and scalability with its Digital Cash solution. The level of security must be increased as offline payments cannot rely on the backend security when making and storing offline payments. For scalability, it is important to be able to deploy and upgrade the offline payment solution on all devices on which the underlying payment application is available. Crunchfish Digital Cash is deployed as an add-on for either CBDC and commercial payment applications.

## Security issues

Offline assets reside in a mobile device that is in control of an attacker. It is of critical importance that the offline wallet takes the necessary precautions to protect the offline assets (keys, tokens/balance, risk limits, transactions, etc) and any operation performed on them to prevent fraud. Furthermore, there is an increased financial risk in offline payment systems as fraudulent wallets may remain offline. It is of critical importance in case of lack of isolated runtime and storage for offline assets on the user device that the backend can detect an attack on an offline wallet by its transaction footprint. It is also important to be able to configure the offline wallets using risk limits such as number of transactions, transaction value, accumulated transaction values, number of hops for consecutive offline payments, etc.

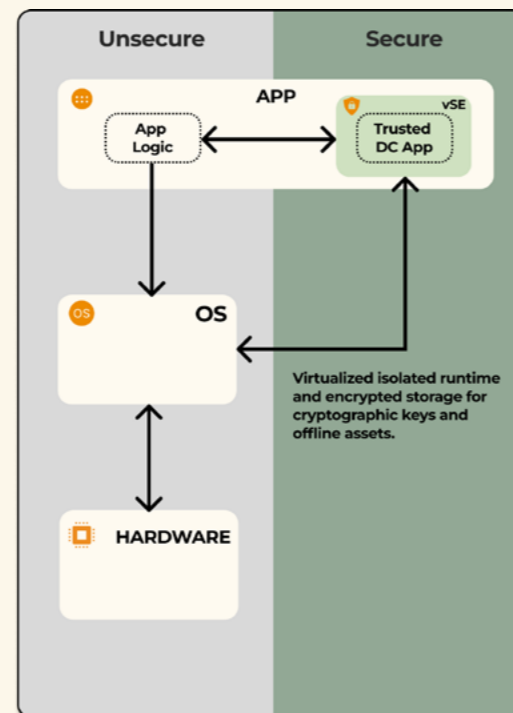


Figure: Crunchfish Digital Cash offline wallet is implemented as Trusted Application within a virtual secure element.

## Crunchfish Digital Cash provides secure offline wallets:

<p><b>Isolated runtime and encrypted storage for offline assets</b></p>	<ul style="list-style-type: none"> <li>Crunchfish Digital Cash is an app-integrated offline wallet with an isolated runtime within a software-based virtual secure element and encrypted storage for cryptographic keys and other offline assets that is sufficiently secure for offline payments with rollback mitigations online and offline in place.</li> </ul>
<p><b>Offline wallet integrity</b></p>	<ul style="list-style-type: none"> <li>App-integrated isolated runtime for all offline assets to prevent double-spending and manipulation of risk limits offline. No isolated storage of offline assets requires mitigation of rollback attacks.</li> <li>Mitigation of rollback attacks, both locally and remotely.</li> <li>Secure time ensures that fraudulent offline wallets cannot be used past its expiration and provides a trustworthy offline transaction timestamp.</li> </ul>
<p><b>Online detection of fraudulent offline wallets</b></p>	<ul style="list-style-type: none"> <li>Fast online detection of fraudulent offline wallets.</li> <li>Payer and payee independently upload the same offline transaction for simultaneous debit and credit reconciliation online.</li> <li>Payer bank verifies offline transactions and can immediately detect fraudulent wallets in case of rollback attacks.</li> </ul>
<p><b>Configurable offline wallets to control risk</b></p>	<ul style="list-style-type: none"> <li>Configurable risk limits for individual offline wallets.</li> <li>Ability to control and configure the number of hops for consecutive offline payments for each individual wallet by tracking both a spendable and a non-spendable offline balance.</li> </ul>



## Scalability issues

To avoid excluding users from making offline transactions it is important that the proximity interaction methods are supported in most mobile devices. A streamlined proximity protocol minimizes message exchanges, enhances robustness, and reduces points of failure. To accelerate adoption of a new offline payment service and boost usability it is important to quickly enable payees to receive

payments. Offline payment is a niche service important for payment service resilience. Reusing existing online payment infrastructure and an interoperable offline protocol ensures that the offline payment solution becomes widely accepted by users, payees and payment services and reduces the cost of the solution.

## Crunchfish Digital Cash provides scalable offline wallets

<p><b>Easy to deploy and upgrade</b></p>	<ul style="list-style-type: none"> <li>Crunchfish Digital Cash offline wallets can easily be integrated with a payment application with the same flexibility as writing a regular app. It can be deployed and updated on any smartphone together with the payment app using app stores. This makes it highly scalable and well-suited for offline payments on mobile devices.</li> </ul>
<p><b>Inclusive and streamlined proximity interaction</b></p>	<ul style="list-style-type: none"> <li>A light-weight proximity protocol with only two message exchanges in-between payee and payer.</li> <li>Fast transmission which simplifies retransmission of offline payments that increases robustness and user experience.</li> <li>Supports diverse user flows using any proximity method such as Bluetooth, NFC, Ultrasound, and low-tech QR-based interactions.</li> </ul>
<p><b>Accelerating payee adoption</b></p>	<ul style="list-style-type: none"> <li>A wallet-to-wallet solution where both payer and payees are using offline wallets.</li> <li>Payees may have a light-weight interoperable verifier component that is only able to request and verify offline payments accelerates adoption by reducing integration complexity and enabling faster deployment.</li> </ul>
<p><b>Interoperable offline transactions</b></p>	<ul style="list-style-type: none"> <li>An offline layer-2 solution using a separate security protocol than what is used by the underlying online services.</li> <li>This enables domestic offline interoperability between account-based and token-based services and cross-border interoperability offline between services from different countries.</li> <li>It is possible to make different online services interoperable offline by using the same offline layer-2 protocol.</li> </ul>

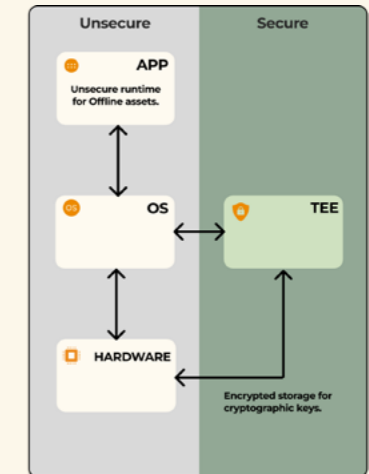
## Hardware-based offline wallets

Offline wallets may also be implemented as hardware-based solutions, but they all fail to strike the right balance between security and scalability.

The solutions are either unsecure or hard to deploy and upgrade. Below are three hardware-based architectures for offline wallets.

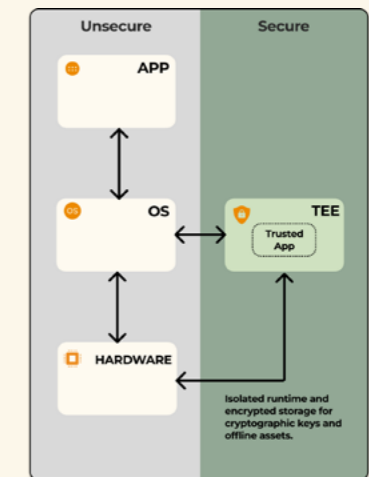
### Secure cryptographic keys, but unsecure for offline wallets

A device-integrated hardware-based secure elements that only provides an isolated runtime and encrypted storage for cryptographic keys, such as Android Keystore / Strong Box or iOS Keychain / Secure Enclave, are widely available on mobile devices, but not sufficiently secure for offline wallets with stored values as there is no isolated runtime for the other offline assets (tokens/balances, risk limits, transactions, etc) besides the cryptographic keys.



### Secure offline wallets, but hard to deploy and upgrade

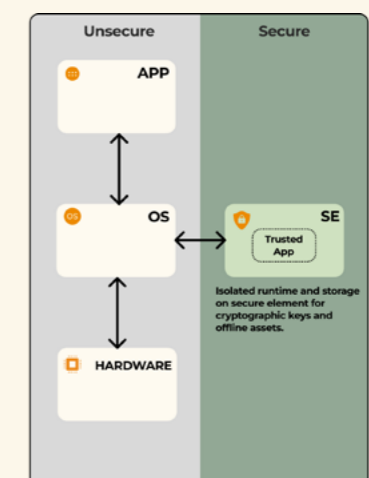
An offline wallet with an isolated runtime on a device-integrated hardware-based secure element, such as ARM Trustzone TEE, and encrypted storage for both cryptographic keys and other offline assets, is sufficiently secure for offline payments if rollback mitigations online and offline are in place.



However, it is hard to deploy in practice in a device fragmented market as it would be necessary to partner with multiple device manufacturers to deploy the offline wallets and achieve widespread availability in the market.

### Isolated offline wallets, but hard to deploy and upgrade

An offline wallet on a standalone secure element, such as an embedded SE or on a SIM or eSIM, provides a high level of security for offline wallets as they provide both an isolated runtime and storage for offline assets.



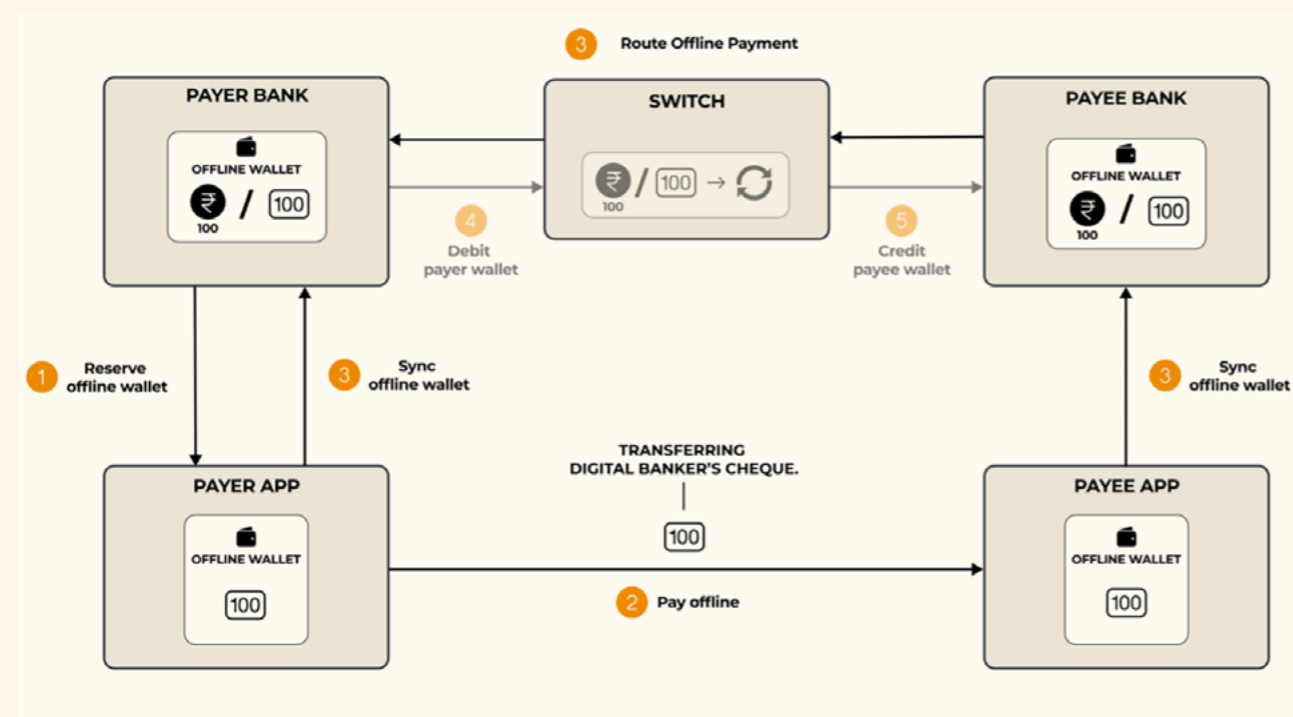
However, it is hard to deploy offline wallets in practice in a device fragmented market as it would be necessary to partner with multiple device manufacturers or possibly mobile operators if the standalone TRE is implemented on a SIM. It is therefore hard to achieve widespread market scalability for the offline wallets.



# Patented position

Crunchfish has a strong patent portfolio with multiple granted patents and patent-pending applications that protect many aspects of offline payments. This section focuses on explaining the innovation in the initial patent application filed in January 2020 as it protects many fundamental aspects of offline payments.

## Balance-based Offline Payment



The innovation is about how to make sure that an offline payment transaction can be transferred and trusted by multiple parties in the payment ecosystem. This fact that the payee can trust the payment offline and then any node in the backend can also trust the same offline payment to facilitate a debit and a credit online is a very common way to implement offline payments.

If offline assets and cryptographic keys are stored encrypted on the device, it opens up possibilities to

exploit the solution using rollback attacks which may lead to double spending. A rollback attack is a way to restore a previous state, usually a balance, in an offline wallet. To counter potential rollback attacks the solution must implement detection and mitigation of such attacks. This must be implemented both locally on the device as well as remotely in the backend.

This patent enables rollback mitigation remotely in the backend by the banks and payment services as offline transactions are uploaded and can be analyzed.

The flow described in the picture is that:

<p><b>1</b> Reserve offline wallet</p>	<p>The payer reserves funds in the backend for offline use while having online access. This is a limit for what the payer can spend offline. This online reservation can be made in either token-based or account-based payment systems which means that the patented offline payment system may be implemented in both scenarios.</p>
<p><b>2</b> Pay offline</p>	<p>The payer pays offline by digitally signing an offline transaction designated to a payee if there are sufficient funds available on the local device. The cryptographic digital signing is using a private key within either a hardware-based or software-based secure element. The patent protects offline payment system implemented in any kind of secure element. This may be compared to signing a banker's check in favor of a payee which the payee can trust and subsequently bank the check. The payer stores the signed offline transaction and sends it to the payee using any kind of proximity interaction method such as NFC, Bluetooth, QR or Ultrasound.</p> <p>The payee verifies the offline transaction by using the public key, associated with the payer's private key, that the payee can trust is associated with a legit offline payment. The payee also stores the signed offline transaction to forward it later when the payee gets online access.</p>
<p><b>3</b> Sync offline wallet</p>	<p>When either the payer or the payee gets online connectivity then the offline transaction is uploaded to the backend. Any node in the backend can trust and verify the offline transaction from the payer to the payee by using the public key, associated with the payer's private key. The patent protects that the signed offline payment can be trusted by the backend even if only one party has uploaded the signed offline transaction.</p>
<p><b>4</b> Debit payer wallet</p>	<p>The offline wallet with the reserved offline funds at the payer's bank is debited with amount in the offline transaction and transferred to the payee's bank.</p>
<p><b>5</b> Credit payee wallet</p>	<p>The offline wallet at the payee's bank is credited with amount in the offline transaction.</p>

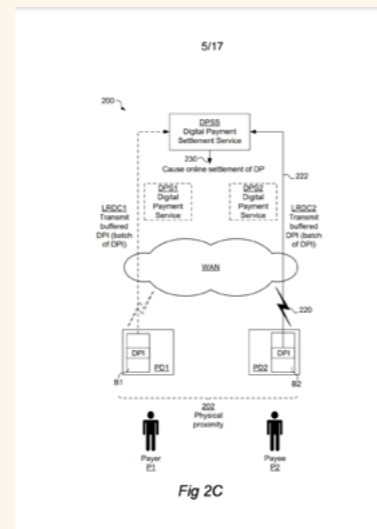
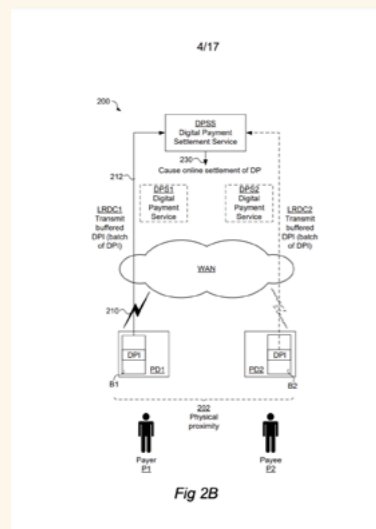
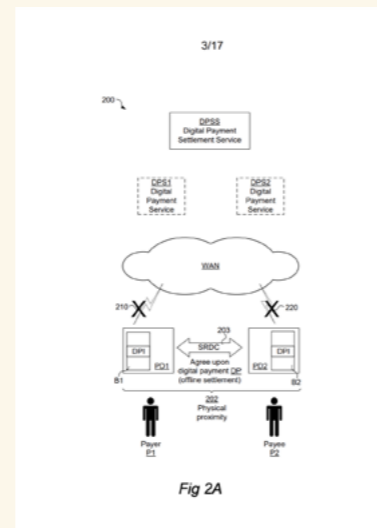
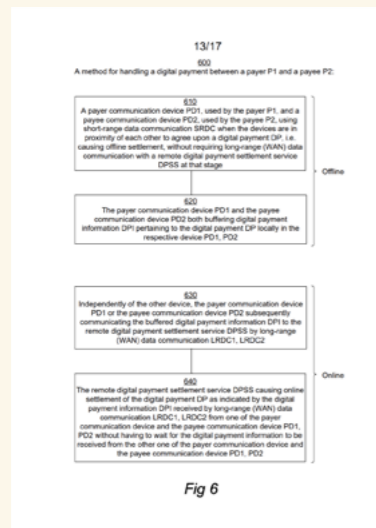


Figure: Drawings from the initial patent application filed in January 2020, protecting many aspects of offline payments.

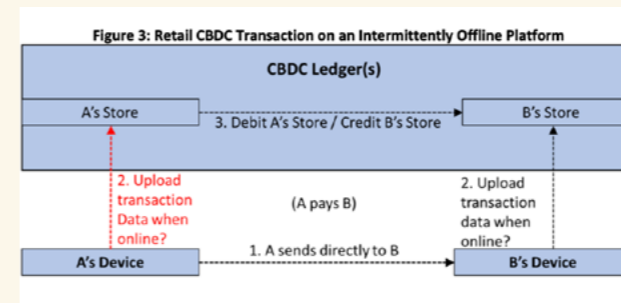
In March 2024, the Swedish Riksbank presented an offline payment pilot with cards as payment instruments in their **fourth phase of the e-krona**

**project** which uses the same architecture as patented by Crunchfish in January 2020.



**Swedish Riksbank:**

"In the fourth phase, the focus has been on testing and evaluating whether it is possible to design a secure, balance-based offline solution based on the conditions of the e-krona pilot's test environment. The solution reserves e-krona for offline use in a so-called shadow wallet in the online system. The payment instrument in the form of a card records the shadow wallet balance and subsequent offline transactions. The actual e-kronas issued by the Riksbank never leave the online system and only change hands when the payment instruments are synchronised. The solution thus differs from the offline solution tested in Phase 2, which was token-based and involved moving copies of the e-krona to the payment instrument."

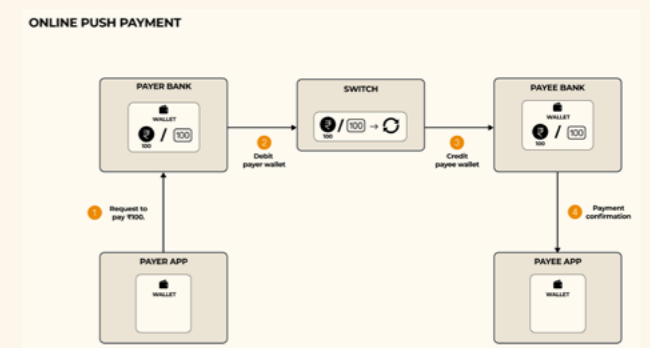


The Digital Currency Global Initiative at ITU's Telecom and Standardization sector published in January 2025 a **report on CBDC Reference Architecture** indicating that the process of subsequent online settlement of offline payments has often been used in CBDC projects around the world.

This patent application has been **granted in the US in July 2024**, received a **notice of allowance in Europe in December 2024** and received a **positive International Preliminary Report on Patentability in 2022**. Crunchfish is in the process of nationalizing the patent application in India, China, and Taiwan.

This granted patent is commercially very valuable for Crunchfish as it covers many common implementation scenarios for offline payments in many key markets:

- Token-based or account-based online payment systems.
- Hardware-based or software-based secure elements for the payer.
- Any proximity method for transferring the offline payment.
- Remote rollback mitigation.
- US, Europe, India, China and Taiwan.



Crunchfish's patented offline payment approach utilizes existing core banking systems for checking for potential fraudulent offline transactions and wallets as well as existing push payment rails for online settlement of offline transaction.

**Other patents**

Crunchfish has many other granted patents and patent-pending applications for offline payments at various stages in the the patenting process.

Granted patents protects innovation for:

- interoperable offline payments services
- offline value exchanges between mobiles and cards
- offline wallet cloning prevention
- quantum-safe offline payments

Patent-pending applications include:

- consecutive offline payments
- trusted application protocols
- anonymous wallets
- programmable offline payments



# Transaction privacy and anonymity

Crunchfish was a finalist for the third consecutive year in Reserve Bank of India's innovation challenge HaRBInger. This is an achievement as there were more than 500 entries and only 28 finalist in four categories. Crunchfish provided an innovative solution in the category Ensuring transaction anonymity in token-based (CBDC) transactions while maintaining financial system integrity that provided transaction privacy for both online and offline payments.

Every transaction a payer makes with its credit card or mobile phone using a bank account is recorded and stored by the bank. Under certain circumstances law enforcement and tax authorities can have access to the records of all of your transactions in your bank accounts. This is how digital payments works today.

Customer are free to choose their bank which they trust to safeguard their money. The banks validate their customer with Know Your Customer (KYC) processes and are responsible for Anti-Money Laundering and Countering of Financing of Terrorism (AML/CFT) and keeping transaction records.

Crunchfish solution for the 3rd HaRBInger innovation challenge decided to showcase transaction privacy rather than anonymity as complete anonymity comes with the risks of tax evasions, crime and terrorist financing. The solution is based on that payer's bank provides transaction privacy for both online and offline transactions by shielding the customer's identity from any other parties in the payment ecosystem.

The solution for private offline transactions is based on the same principle that the payer banks shields the customer identity for the any other party in the payment ecosystem with the addition that the offline proximity transaction must be encrypted first using the Crunchfish Digital Cash solution to hide the identity of the payer for the payee / merchant and then uploaded encrypted with the public key of the payer's bank so that only the payer bank can decrypt and execute the uploaded transaction.

Benefits of this solution are that the payer just marks a transaction as private to hide their identity to be hidden from the whole payment eco-system, safe for their own bank and that the payer may request private payments for both online and offline transactions. The payer's bank is able to ensure financial system integrity using their normal processes as it has full visibility of the transaction.

There is a difference between transaction privacy and anonymity. In case of transaction privacy the identity of the payer is only visible to selected parties, for instance the payer's bank, whereas transaction anonymity means that the payer's identity is not visible to anyone. If a financial regulator allows transaction anonymity, rather than just transaction privacy, this can also be supported by Crunchfish Digital Cash solution. In this case, offline transactions are uploaded encrypted with the public key of the payer, instead of using the public key of the payer's bank. This means that it is only the payer that is able to decrypt the transaction and it would be completely anonymous for the entire ecosystem, including the payer's bank. A financial regulator may want to allow such anonymity for small value offline transactions and accept that such transactions come with a higher financial risk.

## eR ONLINE WITH PRIVATE TRANSACTIONS

PAYER ACCOUNT DEBIT TO TOKEN

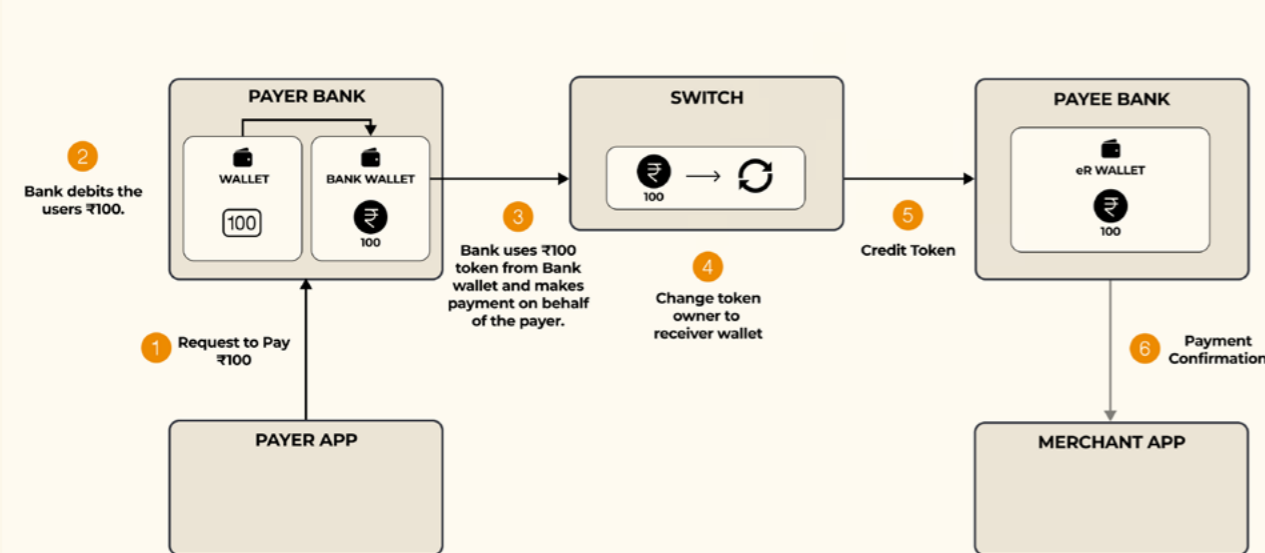


Figure: Private online transactions are relatively easy to implement.

## eR OFFLINE WITH PRIVATE TRANSACTIONS

OFFLINE TO TOKEN INTEROPERABILITY

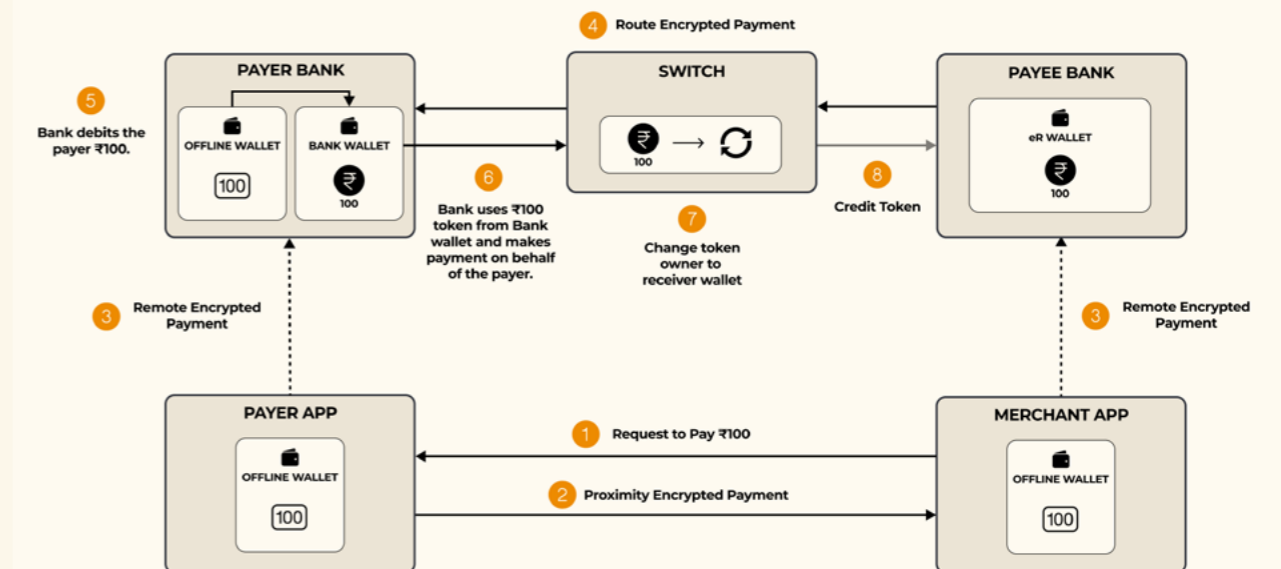


Figure: Private offline transactions are built on Crunchfish Digital Cash solution.





# Significant news during and after Q4

2025-01-21

Crunchfish **received Swedish patent** for quantum-safe offline payments.

2024-12-16

Crunchfish **received European patent** for its initial fundamental offline payment innovation.

2024-11-22

The board of directors of Crunchfish **announced the outcome of the rights issue** that was announced on September 20th, 2024.

2024-11-08

Granitor Invest AB **announced the intention to subscribe for its pro rata share** in the ongoing rights issue of units in Crunchfish AB.

2024-11-08

Crunchfish **signed license agreement** with Precise Biometrics for XR Skeleton 3.

2024-11-01

Crunchfish prepared an **EU Growth Prospectus** regarding the rights issue of units announced on September 20th, 2024. The Prospectus was approved and registered by the Swedish Financial Supervisory Authority.

2024-11-01

Crunchfish **published the Q3 2024 report**, and **held a webinar about it**, where Crunchfish CEO Joachim Samuelsson was interviewed by Equity Research Analyst Johan Widmark from Emergers.

2024-10-24

Crunchfish **held an extraordinary general meeting**. The summary is in Swedish.

2024-10-08

Crunchfish **held a Lunch Talk** where CEO Joachim Samuelsson discussed the company's right issue with analyst Johan Widmark at Emergers. The content is in Swedish.



# Financials



## Financial report

### Sales and earnings for the quarter

Net sales amounted to SEK 562 (333) thousand for the fourth quarter and operating expenses amounted to SEK 7,439 (31,819) thousand. EBITDA for the period amounted to SEK 6,073 (-7,476) thousand. Loss before tax for the fourth quarter amounted to SEK 5,261 (26,815) thousand and has been charged with amortization of intangible assets of SEK 678 (918) thousand, tangible fixed assets of SEK 65 (134) thousand and with reversal of impairment/impairment of intangible assets of SEK -1,543 (18,243) thousand.

### Sales and earnings for the year 2024

Net sales amounted to SEK 2,933 (988) thousand for the year and operating expenses amounted to SEK 44,423 (68,944) thousand. EBITDA for the year amounted to SEK -21,001 (-26,545) thousand. Loss before tax for the year amounted to SEK 26,447 (49,305) thousand and has been charged with amortization of intangible assets of SEK 2,808 (4,281) thousand, tangible fixed assets of SEK 325 (323) thousand and with impairment of intangible assets of SEK 2,254 (18,243) thousand.

As a result of discontinuing the gesture business, balanced development costs related to this business was written down in the financial statements for the year 2023. The write-down affected the result for the fourth quarter and the full year for 2023 negatively with SEK 18,243 thousand.

### Investments

During the fourth quarter, the Group invested SEK 1,025 (4,159) thousand in intangible fixed assets and 0 (0) in tangible fixed assets. During the year, the Group invested SEK 12,708 (16,474) thousand in intangible fixed assets and SEK 0 (1,233) thousand in tangible fixed assets.

### Liquidity and financing

At the end of the year the Group's cash and cash equivalents amounted to SEK 17,276 (30,725) thousand. Cash flow from operating activities during the fourth quarter amounted to SEK -6,491 (-4,979) thousand. During December 2024, the company raised an additional SEK 20,7 million after issue costs in a new share issue.

### Staff

As of December 31st, 2024, the number of employees was 19 (22).

### Risks and uncertainties

A number of different risk factors could impact Crunchfish's operations and industry negatively. It is therefore very important to consider relevant risks in addition to the Company's growth opportunities. Relevant risks are presented in the prospectus issued by Crunchfish AB in November 2024 and the annual report for FY 2023, which can be found at [crunchfish.com](https://www.crunchfish.com).

### Related party transactions

Group management and administrative staff are employed in the parent company Crunchfish AB. Reported sales in the parent company consists of income from services rendered for management and administration of the company's two subsidiaries.

In September 2024, Crunchfish AB entered into a financing agreement worth SEK 5 million with the Company's second shareholder, Corespring Invest AB, represented by the Chairman of the Company's Board, Göran Linder. The financing consisted of a loan of SEK 5 million that was due for repayment on March 4th, 2025. The interest rate amounted to 7% per year. The loan was repaid in connection with the new issue that was carried out in December 2024. Total interest paid in 2024 amounts to SEK 73 thousand.



### Sales and earnings for the quarter, parent company

The parent company's net sales amounted to SEK 3,073 (4,253) thousand for the fourth quarter and operating expenses to amount to SEK -3,538 (-4,748) thousand. EBITDA for the period amounted to SEK 118 (63) thousand. During the fourth quarter, the parent company invested SEK 0 (0) thousand in tangible fixed assets.

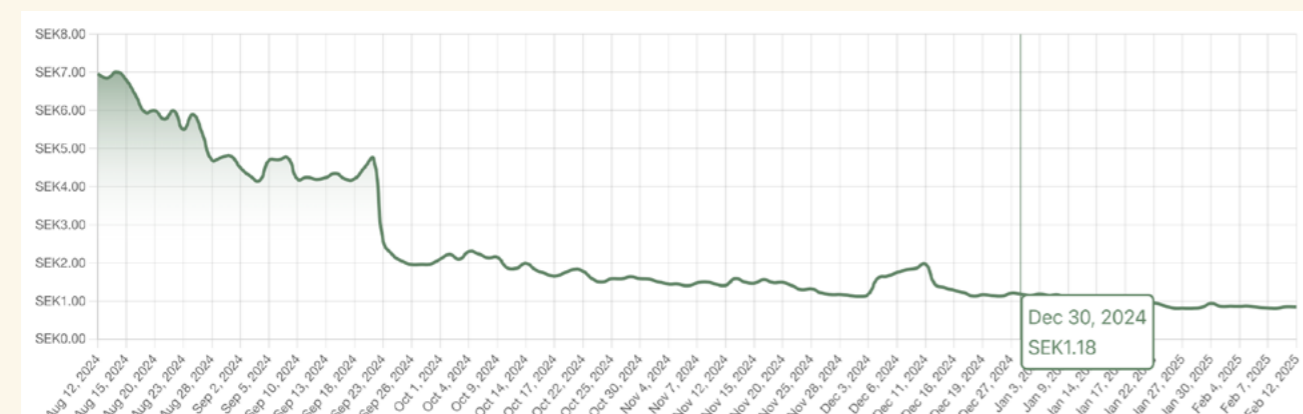
In December 2024, the shares in Crunchfish Digital Cash AB were written down by SEK 111 million. The write-down was carried out in order to make the book value of the shares to harmonize with the book value of capitalized development expenses in the subsidiary.

### Major shareholders for Crunchfish AB (publ) as of December 31st 2024\*

Name	Number of shares	Share %
Corespring Invest AB (Chairman Göran Linder)	10 401 456	18.09
Femari Invest AB (CEO Joachim Samuelsson & Petra Samuelsson)	7 500 000	13.04
Nowo Global Fund	2 810 626	4.89
Nordic Underwriting ApS	2 118 680	3.68
Mats Kullenberg incl. company holdings	1 178 677	2.05
Paul Cronholm (Founder)	1 101 601	1.92
Carlquist Holding AB	900 000	1.56
Granitor Invest AB	839 513	1.46
Mikael Kretz incl. company holdings	760 000	1.32
Håkan Paulsson incl. family and company holdings	625 000	1.09
<b>Total, ten largest shareholders</b>	<b>28 235 553</b>	<b>49.10</b>
<b>Other shareholders (approx. 5,000)</b>	<b>29 273 421</b>	<b>50.90</b>
<b>Total</b>	<b>57 508 974</b>	<b>100.00</b>

\*The number of shares is estimated based on information from Euroclear and shareholders.

### Share price development during 6 months



### Sales and earnings for the year 2024, parent company

The parent company's net sales amounted to SEK 14,668 (17,241) thousand for the year and operating expenses to amount to SEK -16,746 (-18,791) thousand. EBITDA for the year amounted to SEK 294 (515) thousand. During the year, the parent company invested SEK 0 (0) thousand in tangible fixed assets.

During 2024, the shares in Crunchfish Gesture Interaction AB were written down by SEK 9 million as a result of discontinuing the gesture business.

### Financial calendar

Crunchfish AB publishes financial reports after each quarter. Upcoming reports are planned to be published according to the schedule below:

#### Year-end report 2024

February 13th, 2025, 8:30 am CET

#### Interim report Q1 2025

May 21st, 2025, 8:30 am CET

#### Annual General meeting (Malmö) 2025

May 21st, 2025, 10:00 am CET

#### Half-year report 2025

August 22nd, 2025, 8:30 am CET

#### Interim report Q3 2025

November 13th, 2025, 8:30 am CET

#### Year-end report 2025

February 12th, 2026, 8:30 am CET

### Accounting principles

This report has been drafted according to the Annual accounts act (Årsredovisningslagen) and BFAR 2012:1 (K3).

### Auditor's review

This report has not been subject to review by the company's auditor.

### Company information

Crunchfish AB (publ), corporate registration number 556804-6493, is a limited company seated in Malmö, Sweden.

### Certified Adviser

Västra Hamnen Corporate Finance AB is the company's Certified Adviser.

E-mail: ca@vhcorp.se

Phone: +46 40 200 250

### Further information

For further information, please contact:

Joachim Samuelsson, CEO

ir@crunchfish.com

Crunchfish AB (publ)

Stora Varvsgatan 6A

211 19 Malmö

### Statement by the Board of Directors and the CEO

The Board of Directors and the CEO hereby assures that this interim report gives a fair overview of the company's operations, financial status, and result.

Malmö, February 13th, 2025

The Board of Directors:

Göran Linder (chairman)

Susanne Hannestad

Joakim Nydemark

Birendra Sahu

Joachim Samuelsson (CEO)

Malte Zaunders

*This information is information that Crunchfish AB is obliged to publish in accordance to the EU Market Abuse Regulation. The information was provided by the contact person above for publication on February 13th, 2025.*





## Group income statement (SEK)

	Q4 2024	Q4 2023	2024	2023
<b>Operating income</b>				
Net sales	562 121	333 351	2 933 125	987 834
Own work capitalized	1 025 184	4 159 342	12 708 120	16 473 949
Other operating income	579 072	554 585	2 393 788	2 089 237
<b>Total operating income</b>	<b>2 166 377</b>	<b>5 047 278</b>	<b>18 035 033</b>	<b>19 551 020</b>
<b>Operating expenses</b>				
Other external expenses	-2 791 835	-4 436 547	-15 717 962	-19 691 267
Personnel expenses	-5 447 062	-6 769 661	-23 249 122	-25 076 057
Depreciation and impairment of tangible and intangible fixed asset	799 717	-19 295 182	-5 386 783	-22 847 399
Other operating expenses	0	-1 316 046	-86 386	-1 327 509
Gain/loss from participations in associated companies	0	-1 082	17 230	-1 422
<b>Total operating expenses</b>	<b>-7 439 180</b>	<b>-31 818 518</b>	<b>-44 423 023</b>	<b>-68 943 654</b>
<b>Operating profit</b>	<b>-5 272 803</b>	<b>-26 771 240</b>	<b>-26 387 990</b>	<b>-49 392 634</b>
<b>Financial items</b>				
Other interest income and similar profit items	74 549	15 538	155 214	274 708
Interest expense and similar loss items	-62 301	-59 303	-214 230	-186 674
<b>Profit or loss from financial items</b>	<b>12 248</b>	<b>-43 765</b>	<b>-59 016</b>	<b>88 034</b>
<b>Profit or loss after financial items</b>	<b>-5 260 555</b>	<b>-26 815 005</b>	<b>-26 447 006</b>	<b>-49 304 600</b>
<b>Profit or loss before tax</b>	<b>-5 260 555</b>	<b>-26 815 005</b>	<b>-26 447 006</b>	<b>-49 304 600</b>
<b>Taxes</b>				
Tax on income for the period	-78 774	-105 884	-78 774	0
<b>Profit or loss for the period/year</b>	<b>-5 339 329</b>	<b>-26 920 889</b>	<b>-26 525 780</b>	<b>-49 304 600</b>
<b>Key figures</b>				
EBITDA	-6 072 520	-7 476 058	-21 001 207	-26 545 235
Earnings per share	-0,09	-0,74	-0,60	-1,46
Number of shares, average	57 508 974	36 343 037	44 112 423	33 865 134
Number of shares at balance sheet date	57 508 974	39 646 906	57 508 974	39 646 906
Earnings per share after full dilution	-0,09	-0,74	-0,60	-1,46
Number of shares after full dilution, average	76 628 676	37 717 537	49 923 224	35 239 634
Number of shares after full dilution, balance sheet date	76 628 676	41 021 406	76 628 676	41 021 406



## Group balance sheet (SEK)

	Dec 31, 2024	Dec 31, 2023
<b>Assets</b>		
<b>Fixed assets</b>		
<b>Intangible assets</b>		
Capitalized expenses for development work	33 779 659	26 132 777
<b>Total intangible fixed assets</b>	<b>33 779 659</b>	<b>26 132 777</b>
<b>Tangible fixed assets</b>		
Equipment	906 372	1 449 809
<b>Total tangible fixed assets</b>	<b>906 372</b>	<b>1 449 809</b>
<b>Financial assets</b>		
Participation in associated companies	0	67 231
<b>Total financial assets</b>	<b>0</b>	<b>67 231</b>
<b>Total fixed assets</b>	<b>34 686 031</b>	<b>27 649 817</b>
<b>Current assets</b>		
<b>Current receivables</b>		
Account receivables	329 212	48 941
Other receivables	1 615 856	1 951 018
Prepayments and accrued income	1 057 877	1 139 804
<b>Total current receivables</b>	<b>3 002 945</b>	<b>3 139 763</b>
<b>Cash and bank balances</b>		
Cash and bank balances	17 276 249	30 725 483
<b>Total cash and bank balances</b>	<b>17 276 249</b>	<b>30 725 483</b>
<b>Total current assets</b>	<b>20 279 194</b>	<b>33 865 246</b>
<b>Total assets</b>	<b>54 965 225</b>	<b>61 515 063</b>



## Group balance sheet cont. (SEK)

	Dec 31, 2024	Dec 31, 2023
<b>Equity and liabilities</b>		
<b>Equity</b>		
<b>Equity attributable to parent company shareholders</b>		
Share capital	2 645 414	1 823 758
Other contributed capital	339 097 900	318 492 646
Other capital including profit or loss for the period	-294 580 064	-268 054 284
<b>Total equity</b>	<b>47 163 250</b>	<b>52 262 120</b>
<b>Long-term liabilities</b>		
Lease liabilities	754 498	957 492
<b>Total long-term liabilities</b>	<b>754 498</b>	<b>957 492</b>
<b>Current liabilities</b>		
Lease liabilities	202 994	460 031
Accounts payable	642 794	1 046 542
Other liabilities	810 044	784 093
Accrued expenses and accrued income	5 391 645	6 004 785
<b>Total current liabilities</b>	<b>7 047 477</b>	<b>8 295 451</b>
<b>Total equity and liabilities</b>	<b>54 965 225</b>	<b>61 515 063</b>
<b>Key Figures</b>		
Equity-assets-ratio	85,8%	85,0%
Debt-to-equity ratio	2,0%	2,0%
Interest-bearing net debt	n/a	n/a

## Changes in the group equity (SEK)

	Q4 2024	Q4 2023	2024	2023
Equity at beginning of period/year	31 759 273	36 487 824	52 262 120	58 771 444
Share issues	25 899 999	51 209 977	25 899 999	51 209 977
Issue costs	-5 242 030	-8 503 355	-5 242 030	-8 503 355
Translation difference	33 887	-11 437	-52 264	-41 360
Warrant premiums	51 450	0	821 205	130 014
Profit or loss for the period/year	-5 339 329	-26 920 889	-26 525 780	-49 304 600
<b>Equity at end of period /year</b>	<b>47 163 250</b>	<b>52 262 120</b>	<b>47 163 250</b>	<b>52 262 120</b>



## Group cash flow statement (SEK)

	Q4 2024	Q4 2023	2024	2023
<b>Operating activities</b>				
Operating profit or loss	-5 272 803	-26 771 240	-26 387 990	-49 392 634
Adjustments for non-cash items	-858 848	20 580 880	5 307 962	24 128 377
Interest received etc.	21 222	36 402	105 772	58 428
Interest paid	-62 301	-110 725	-214 230	-151 488
Income tax paid	0	0	0	0
<b>Cash flow from operating activities before changes in working capital</b>	<b>-6 172 730</b>	<b>-6 264 683</b>	<b>-21 188 486</b>	<b>-25 357 317</b>
<b>Cash flow from changes in working capital</b>				
Decrease(+)/increase(-) in receivables	670 878	1 489 060	136 818	-52 475
Decrease(-)/increase(+) in current liabilities	-988 677	-203 266	-990 937	497 749
<b>Cash flow from operating activities</b>	<b>-6 490 529</b>	<b>-4 978 889</b>	<b>-22 042 605</b>	<b>-24 912 043</b>
<b>Investing activities</b>				
Investments in technology development	-1 025 184	-4 159 342	-12 708 120	-16 473 949
Investments in equipment	0	0	0	-1 232 856
<b>Cash flow from investing activities</b>	<b>-1 025 184</b>	<b>-4 159 342</b>	<b>-12 708 120</b>	<b>-17 706 805</b>
<b>Financing activities</b>				
Share issue	20 657 969	42 706 622	20 657 969	42 706 622
Loans from shareholders	0	0	5 000 000	7 500 000
Repayment loans from shareholders	-5 000 000	-7 500 000	-5 000 000	-7 500 000
New loans financial leasing agreements	0	0	0	1 232 856
Amortization of financial leasing agreements	-33 320	-87 306	-227 125	-198 818
Warrant premiums paid	51 450	0	821 205	130 014
<b>Cash flow from financing activities</b>	<b>15 676 099</b>	<b>35 119 316</b>	<b>21 252 049</b>	<b>43 870 674</b>
Change in cash and cash equivalents	8 160 386	25 981 085	-13 498 676	1 251 826
Cash and cash equivalents at beginning of period/year	9 062 536	4 769 953	30 725 483	29 292 563
Exchange rate difference in cash and cash equivalents	53 327	-25 555	49 442	181 094
<b>Cash and cash equivalents at end of period/year</b>	<b>17 276 249</b>	<b>30 725 483</b>	<b>17 276 249</b>	<b>30 725 483</b>



## Parent company income statement (SEK)

	Q4 2024	Q4 2023	2024	2023
<b>Operating income</b>				
Net sales	3 072 836	4 252 741	14 667 941	17 240 870
Other operating income	580 760	554 585	2 361 074	2 053 852
<b>Total operating income</b>	<b>3 653 596</b>	<b>4 807 326</b>	<b>17 029 015</b>	<b>19 294 722</b>
<b>Operating expenses</b>				
Other external expenses	-1 514 745	-2 764 896	-8 936 349	-9 958 369
Personnel expenses	-2 020 729	-1 979 701	-7 711 561	-8 818 661
Depreciation of tangible and intangible fixed asset	-3 010	-3 010	-12 040	-12 040
Other operating expenses	0	0	-86 386	-2 286
<b>Total operating expenses</b>	<b>-3 538 484</b>	<b>-4 747 607</b>	<b>-16 746 336</b>	<b>-18 791 356</b>
<b>Operating profit</b>	<b>115 112</b>	<b>59 719</b>	<b>282 679</b>	<b>503 366</b>
Profit/loss from participation in group companies	-112 810 000	-48 176 713	-119 900 000	-48 176 713
Other interest income and similar profit items	193 383	315 464	449 875	866 680
Interest expense and similar loss items	-66 020	-28 564	-205 328	-138 140
<b>Profit or loss from financial items</b>	<b>-112 682 637</b>	<b>-47 889 813</b>	<b>-119 655 453</b>	<b>-47 448 173</b>
<b>Profit or loss after financial items</b>	<b>-112 567 525</b>	<b>-47 830 094</b>	<b>-119 372 774</b>	<b>-46 944 807</b>
<b>Profit or loss before tax</b>	<b>-112 567 525</b>	<b>-47 830 094</b>	<b>-119 372 774</b>	<b>-46 944 807</b>
<b>Taxes</b>				
Tax on income for the period	0	0	0	0
<b>Profit or loss for the period/year</b>	<b>-112 567 525</b>	<b>-47 830 094</b>	<b>-119 372 774</b>	<b>-46 944 807</b>
<b>Key figures</b>				
EBITDA	118 122	62 729	294 719	515 406
Earnings per share	-1,96	-1,32	-2,71	-1,39
Number of shares, average	57 508 974	36 343 037	44 112 423	33 865 134
Number of shares at balance sheet date	57 508 974	39 646 906	57 508 974	39 646 906
Earnings per share after full dilution	-1,96	-1,32	-2,71	-1,39
Number of shares after full dilution, average	76 628 676	37 717 537	49 923 224	35 239 634
Number of shares after full dilution, balance sheet date	76 628 676	41 021 406	76 628 676	41 021 406



## Parent company balance sheet (SEK)

	Dec 31, 2024	Dec 31, 2023
<b>Assets</b>		
<b>Fixed assets</b>		
<b>Tangible fixed assets</b>		
Equipment	27 059	39 099
<b>Total tangible fixed assets</b>	<b>27 059</b>	<b>39 099</b>
<b>Financial assets</b>		
Participations in group companies	34 619 145	121 798 538
<b>Total financial assets</b>	<b>34 619 145</b>	<b>121 798 538</b>
<b>Total fixed assets</b>	<b>34 646 204</b>	<b>121 837 637</b>
<b>Current assets</b>		
<b>Current receivables</b>		
Account receivables	282 289	48 941
Other receivables	359 727	757 005
Prepayments and accrued income	1 057 877	1 128 561
<b>Total current receivables</b>	<b>1 699 893</b>	<b>1 934 507</b>
<b>Cash and bank balances</b>		
Cash and bank balances	16 109 962	29 789 506
<b>Total cash and bank balances</b>	<b>16 109 962</b>	<b>29 789 506</b>
<b>Total current assets</b>	<b>17 809 855</b>	<b>31 724 013</b>
<b>Total assets</b>	<b>52 456 059</b>	<b>153 561 650</b>





## Parent company balance sheet cont. (SEK)

	Dec 31, 2024	Dec 31, 2023
<b>Equity and liabilities</b>		
<b>Equity</b>		
<b>Restricted equity</b>		
Share capital	2 645 413	1 823 758
<b>Total restricted equity</b>	<b>2 645 413</b>	<b>1 823 758</b>
<b>Unrestricted equity</b>		
Profit brought forward	165 286 994	191 574 281
Profit or loss for the period/year	-119 372 774	-46 944 807
<b>Total unrestricted equity</b>	<b>45 914 220</b>	<b>144 629 474</b>
<b>Total equity</b>	<b>48 559 633</b>	<b>146 453 232</b>
<b>Current liabilities</b>		
Accounts payable	233 651	643 293
Liabilities to group companies	652 663	3 500 000
Other liabilities	328 077	560 617
Accrued expenses and accrued income	2 682 035	2 404 508
<b>Total current liabilities</b>	<b>3 896 426</b>	<b>7 108 418</b>
<b>Total equity and liabilities</b>	<b>52 456 059</b>	<b>153 561 650</b>
<b>Key Figures</b>		
Equity-assets-ratio	92,6%	95,4%
Debt-to-equity ratio	0,0%	0,0%
Interest-bearing net debt	n/a	n/a

## Changes in parent company equity (SEK)

	Q4 2024	Q4 2023	2024	2023
Equity at beginning of period/year	140 417 738	151 576 704	146 453 232	150 561 403
Share issues	25 899 999	51 209 977	25 899 999	51 209 977
Issue costs	-5 242 030	-8 503 355	-5 242 030	-8 503 355
Warrant premiums	51 451	0	821 206	130 014
Profit or loss for the period/year	-112 567 525	-47 830 094	-119 372 774	-46 944 807
<b>Equity at end of period /year</b>	<b>48 559 633</b>	<b>146 453 232</b>	<b>48 559 633</b>	<b>146 453 232</b>



## Parent company cash flow statement (SEK)

	Q4 2024	Q4 2023	2024	2023
<b>Operating activities</b>				
Operating profit or loss	115 112	59 719	282 679	503 366
Adjustments for non-cash items	3 011	3 010	12 041	12 040
Interest received etc.	176 742	291 856	438 436	650 400
Interest paid	-66 020	6 548	-205 328	-103 028
Income tax paid	0	0	0	0
<b>Cash flow from operating activities before changes in working capital</b>	<b>228 845</b>	<b>361 133</b>	<b>527 828</b>	<b>1 062 778</b>
<b>Cash flow from changes in working capital</b>				
Decrease(+)/increase(-) in receivables	281 198	480 248	234 614	914 722
Decrease(-)/increase(+) in current liabilities	-632 670	184 514	-364 655	-297 547
<b>Cash flow from operating activities</b>	<b>-122 627</b>	<b>1 025 895</b>	<b>397 787</b>	<b>1 679 953</b>
<b>Investing activities</b>				
Loans provided to group companies	-7 693 757	-10 520 953	-34 746 739	-43 417 461
<b>Cash flow from investing activities</b>	<b>-7 693 757</b>	<b>-10 520 953</b>	<b>-34 746 739</b>	<b>-43 417 461</b>
<b>Financing activities</b>				
Share issue	20 657 969	42 706 622	20 657 969	42 706 622
Loans from shareholders	0	0	5 000 000	7 500 000
Repayment loans from shareholders	-5 000 000	-7 500 000	-5 000 000	-7 500 000
Warrant premiums paid	0	0	0	130 014
<b>Cash flow from financing activities</b>	<b>15 657 969</b>	<b>35 206 622</b>	<b>20 657 969</b>	<b>42 836 636</b>
Change in cash and cash equivalents	7 841 585	25 711 564	-13 690 983	1 099 128
Cash and cash equivalents at beginning of period/year	8 251 736	4 089 445	29 789 506	28 509 210
Exchange rate difference in cash and cash equivalents	16 641	-11 503	11 439	181 168
<b>Cash and cash equivalents at end of period/year</b>	<b>16 109 962</b>	<b>29 789 506</b>	<b>16 109 962</b>	<b>29 789 506</b>

