

crunchfish 



xoxo.cash

Q1-21

Words from the CEO

JOACHIM SAMUELSSON

In the key scene in the movie The Matrix, Neo realizes he must choose between the willingness to learn a potentially unsettling and life-changing truth, by taking the red pill, or remaining in contented ignorance with the blue pill and staying in the Matrix. Neo chose (spoiler alert if you have not yet seen the movie) the red pill. Crunchfish would as well, as we have no respect for the status quo and not afraid of being a challenger in our quest to make the world a better place.

New currency or new format?

The World's Central Banks have an important choice to make when it comes to Central Bank Digital Currency. They can choose to issue it as a new currency, to be handled on existing payment systems, or as a new tokenized format requiring bank infrastructures to be upgraded. Regardless of what the Central Banks decide, Crunchfish's Digital Cash solution will be needed for offline payments, but with a big difference in implementation effort and cost.

The art of making out

Life could be enjoyed drinking white wine every Friday evening and having dinner with friends. That is certainly a great life. Or you may chose to live life to the limit like our neural nets expert Anders Henrysson, who excels at speed-sky diving. Making out with life itself. Our founder Paul Cronholm knows how to, referring to himself as an artist, driven by the joy of exploring the boundaries of technology. Many of us at Crunchfish have

that rebellious soul that love to challenge the status quo. We really are on a quest to change the world in the areas of Digital Cash, Food Waste and Gesture Interaction.

It is more fun to be a pirate than to join the navy

Crunchfish believes it can make the world a better place. As we are a small team with only 25 people we need to play smart and use what we have to our advantage. The problem we take on is really for tech giants to solve, but although having an abundance of resource they often lack the speed and bravery that is a signum of small successful companies.

At Crunchfish we have made our choice to remain nimble, have set sails to conquer the seven seas as we truly believe that it is more fun to be a pirate than to join the navy. Our as our latest recruit Magnus Lageson from Swedish e-wallet Swish puts it: KBK – nobody remembers a chicken.



Crunchfish CEO Joachim Samuelsson points to a decisive choice that will have an enormous impact whether you are a Central Bank, an individual or a company like Crunchfish.

Significant events during and after Q1



Crunchfish group

Crunchfish hires Anna Bostam as its new Chief Marketing Officer. It is extremely important that the company's technical know-how and communication go hand in hand, and we are now further strengthening our marketing ability. Anna has a solid background within marketing, most recently as CEO of marketing agency The Fanclub and as agency director of communication agency Creuna in Malmö.



Crunchfish's annual report for 2020 was published via the company's website on April 21. The annual report can be [downloaded here](#) and is available in Swedish only.

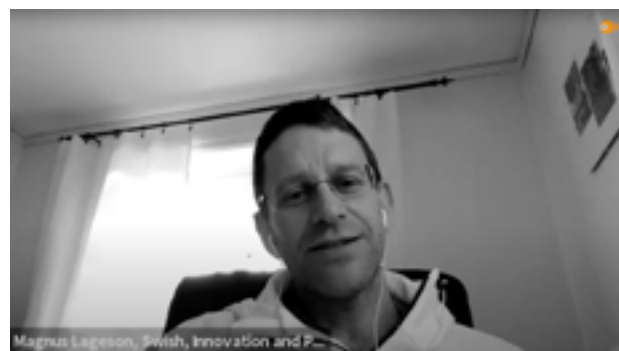


Crunchfish **restructures the company group structure**, with the purpose to clarify the different business areas and put these in relevant subsidiaries. Crunchfish's different business areas will be operated in separate wholly owned subsidiaries, each of which can report its own P&L and balance sheet. The new company group structure will not have any direct financial impact on Crunchfish, but only aims to create a further increase in clarity and transparency.

Digital Cash

Agreements, cooperations and events

Crunchfish and ToneTag have entered a **Marketing & Technical Partnership** Agreement to offer Crunchfish's Digital Cash payments with ToneTag's patented sound wave-based interactions. By integrating the companies' innovative technologies offline payment use cases becomes possible, even with feature phones.



Crunchfish hires payment expert Magnus Lageson. With extensive experience from the payment industry and most recently from GetSwish AB. Magnus has worked many years as Lead Product, Innovation & Partner Manager for Swish and played a central role in the development of the service and its success. At Crunchfish, Magnus Lageson will be Chief Product Officer in Crunchfish Digital Cash AB and work with the company's technical development and commercial rollout.

Crunchfish has **entered into a Memorandum Of Understanding with Nextgen Telesolutions** that has developed a method for hosting a Secure Element on a SIM overlay and microSD card, enabling a stronger solution for implementation of Digital Cash on feature phones.

Crunchfish Digital Cash Wallet offers an exceptionally flexible and interoperable offline payment service that compliments

any online payment service with capabilities that replicate the use of physical cash. Crunchfish **introduces a subscription-based business model** per Digital Cash Wallet deployed, to be charged to the issuing bank or digital wallet provider.



Crunchfish **has filed two trademark applications** at European Union Intellectual Property Office for its Digital Cash Wallet. First, “Crunchfish Digital Cash Wallet” as a word mark and also the two emojis representing “Hugs and Kisses” with the registered domain xoxo.cash as an image mark.

Crunchfish and Swish announce that the companies have submitted a **joint application** to The Swedish Post and Telecom Authority (PTS)’s annual innovation contest, which this year focuses on innovative payment solutions. The goal in the application is to develop a prototype for an offline solution that can be used when net-based payment solutions does not work. The ambition is that the solution will provide the Swedish society with a digital equivalent to cash.

Crunchfish announces **its enrollment into VISA Technology Partner program** with its Digital Cash solutions. As a VISA technology partner, Crunchfish will get access to VISA specifications and toolkits enabling potential integration with the VISA digital payment rail.

Crunchfish announces that Linda Kronby is **appointed as new CEO of Blippit AB**. Linda Kronby was originally hired by

Crunchfish in March 2020 as Senior Business Developer. Linda succeeds Joachim Samuelsson as CEO, who will instead be able to dedicate all his time to his role as group CEO of Crunchfish.

Crunchfish announces that the company has entered into a **Marketing & Technical Partnership Agreement with Taisys Technologies Co., Ltd.** (“Taisys”), enabling Digital Cash to also be implemented with feature phones. Digital Cash can now be implemented on any type of bearer instrument – smart phones, cards and now also feature phones.

Crunchfish **adds Digital Cash Partner #4** by entering into a Marketing & Technical Partnership Agreement with Digitsecure Singapore Pte Ltd (“Digitsecure”) regarding integration of Crunchfish’s Digital Cash solutions into Digitsecure’s EMV and PCI certified SoftPOS payment platform.

An ecosystem for **Digital Cash Partners** will be very important in the commercialization of Crunchfish’s Digital Cash solutions. By cooperating with partners within complementing fields of technology, Crunchfish opens marketing channels, new geographical markets and strategic customer segments. With some partners already in place, Crunchfish now defines an ecosystem for Digital Cash with the purpose to quickly scale up sales and get a global spread of the company’s solutions.

Crunchfish has entered into a **Marketing & Technical Partnership Agreement with neoEYED Inc. (“neoEYED”)** regarding use of behavioral biometrics to enhance the security in Crunchfish’s Digital Cash solutions.

Crunchfish and eCurrency Mint Limited (“eCurrency”), the leading Central Bank Digital Currency (CBDC) technology company, **announce a partnership** to offer an offline CBDC solution.

Patents and inventions

Crunchfish has received the International Search Report of its initial Digital Cash patent application and **decided to request** an International Preliminary Examination of patentability. The patent application will become publicly available on July 29th, 2021, 18 months after the original filing date.



Crunchfish Digital Cash Wallet **xoxo may be credited offline** by clearing a Digital Cash payment from another person's Digital Cash Wallet or topped-up by an online interaction with its corresponding Digital Cash Account. The Digital Cash payment architecture allows merchants to have thin applications that credits the merchant's bank account following an offline clearing.

Crunchfish has **received a Notice of Allowance** from the Chinese Patent Office that a patent regarding proximity-based authentication will be granted. The patent protects how the mobile user proves his or her identity or demonstrates ownership of a document of value in a proximity-based interaction. The Chinese patent, with patent number 201680030051.6, is valid until March 2036. This patent has previously been granted in Sweden, Europe and the USA.

Crunchfish **has created its own cryptocurrency Crunchcoins** in an official Ethereum blockchain based test network and integrated it with Crunchfish's Digital Cash with the purpose to showcase cryptocurrency offline payments and interoperability in physical retail.

Crunchfish is a technical pioneer within digital payments with its novel Digital Cash solutions that settle physical payments in two steps, first offline and then online, making digital payments robust and also preserves the payer's integrity. Digital Cash is extremely flexible and interoperable with all types of payment services, even cross-border and cross-schemes.

Crunchfish announces that its **Digital Cash solutions can solve Central Bank Digital Currency**, CBDC implementation issues swimmingly easy, without any additional infrastructure. This promises to have a major impact on the whole CBDC industry and accelerate Central Bank implementations.

Crunchfish is a technical pioneer within digital payment with Digital Cash that settles payments in two steps, first offline and then online. This enables payments that always work and can also be made with preserved integrity. Digital Cash is extremely flexible and complements all types of payment schemes, both on cards and mobiles. Crunchfish now **enables internationally interoperable payment services** by a global root certificate for Digital Cash.

One year ago, Crunchfish announced a breakthrough innovation of Digital Cash using a two-tier settlement architecture, offline vs. online. Now this ground-breaking solution is extended to **also include Digital Cash on cards**. By tapping a card on a mobile a user may top-up a balance on the card or alternatively pay to an offline wallet on the mobile. These use cases are relevant for the payment schemes of today as well as CBDC to ensure financial inclusion by supporting a bearer instrument that is very simple to use.

Articles and media

Crunchfish **exhibited and presented** at OMFIF's inaugural Digital Monetary Institute symposium, challenging the prevailing perception that bank infrastructure must change as cash becomes digitized. Cash can either be digitized as a new currency, using existing payment systems, or as a new format, requiring large investments in the banking sector.



In the key scene in the movie The Matrix, Neo realizes that he must choose between the red and the blue pill. **Central Banks also have a fundamental choice** of how to digitize cash. – Cash can either be digitized as a new currency, using existing payment rails, or as a new format, requiring large investments in the banking sector, says Joachim Samuelsson, CEO Crunchfish.

Crunchfish Digital Cash Wallet xoxo uses new technology to make cash digital. This is the digital payment of the future and the solution to exploding transaction volumes and financial inclusion worldwide.

On March 26, Joachim Samuelsson, CEO of Crunchfish, presented at All Digital Week – **How will we pay in the future?** The presentation (in Swedish) was held at the event ALL DIGITAL Week, in collaboration with Länsstyrelsen Örebro.

Västra Hamnen Corporate Finance **has published a video interview** with Crunchfish CEO Joachim Samuelsson that lays out the company's business model in Digital Cash.

Cash is dead, long live cash! Sweden might be cashless in three years' time. That would mean the disappearance of the only means of payment that always works and never jeopardizes personal integrity. Although offering the unique features of cash in digital form is urgent, the process of finding an alternative is currently too slow. Besides, the technology used is inefficient and unnecessary. Now, Crunchfish is taking on a leadership role and showing how it's done.

Can you see into the future? Crunchfish creates it. For too long, mankind has adapted to technology. It should have been the other way around. For example, why are we dependent on the net when we pay? Why do we walk around looking down at our phones all of the time? Why is it hard to communicate with the proximity? These are challenges that can only be solved by radical new thinking and cutting-edge technology. Crunchfish is a tech company that creates a society to suit people.

Food Waste

Most people agree that we need to reduce food waste and a lot remains to be done. People's habits need to change, and digital technology can contribute to changing behaviours by, among other things, rewarding those who contribute by saving food already in the store. On March 24, Linda Kronby – CEO of Crunchfish Food Waste AB – **presented how digital technology can contribute to reducing food waste.**



Crunchfish reduces food waste – will you join us? About a third of all food produced in the world is thrown away. This is costly, both for society and the environment. Tech company Crunchfish has invented a solution that can rescue food by rewarding consumers right at the checkout. This fundamentally changes buying behavior and will contribute to a drastic reduction of food waste in the grocery trade.

Gesture Interaction

Crunchfish **announces a new powerful gesture Skeleton network** that enables full body tracking using a standard camera sensor. The solution shows the versatility of the XR Skeleton platform where detection and tracking of new objects can be added in a short time frame by training of algorithms using new image data.

Crunchfish Gesture Interaction AB **enters a commercial License Agreement** with INMO Technology Ltd in China, to use Crunchfish's gesture technology software in their series of AR-glasses. INMO will integrate Crunchfish's software in their commercial AR glasses to enable touchless interaction using hand gestures. The business model includes a smaller upfront fee as well as a running royalty per produced unit that includes Crunchfish's software.

Crunchfish Gesture Interaction AB **enters an Evaluation License Agreement** with Extremesight Technology Ltd in China, to evaluate Crunchfish's XR Skeleton gesture control software for their new AR-glasses. Extremesight will pay a smaller fee for the evaluation license and support services that will give the company access to Crunchfish XR Skeleton to integrate and evaluate for commercial use as a next step.

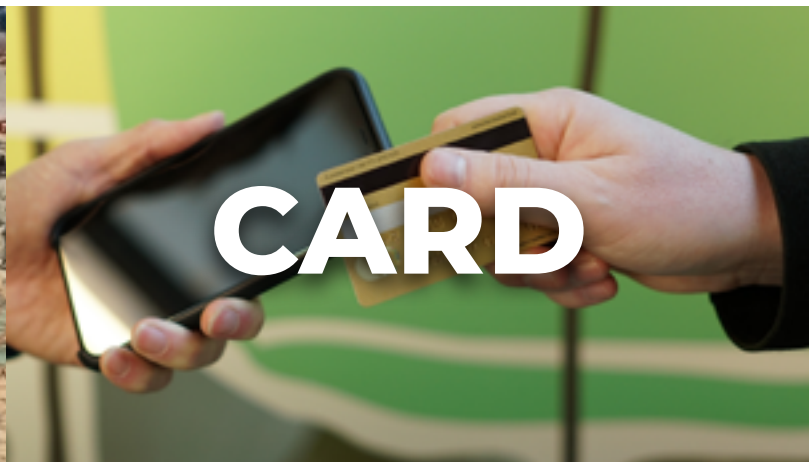
How does the world look through smart glasses? The only thing we know for certain about the future, is that it is sure to be different. It may sound like science fiction, but soon many of us will wear smart glasses that enhance the reality around us with digital objects and make our everyday lives both easier and more efficient. The world will hardly be the same.

To show the possibilities and flexibility of Crunchfish's gesture control product – XR Skeleton – the company **publishes a video** of a prototype in AR, in which interaction with virtual objects and buttons is shown. As previously announced, the company's gesture control product XR Skeleton has impressive performance and advanced features, which creates the conditions for high-precision interaction with virtual objects in Augmented Reality (AR) as well as Virtual Reality (VR) environments.

Crunchfish **launches an update** of its latest gesture control product XR Skeleton. In XR Skeleton 1.1, Crunchfish has managed to compress more functions in the same neural network and doubled the precision with a 30 percent reduction in processing power. With an ordinary mobile camera, XR Skeleton detects and follows the hand through 21 points in three dimensions.

Digital Cash is the future of Digital Payments

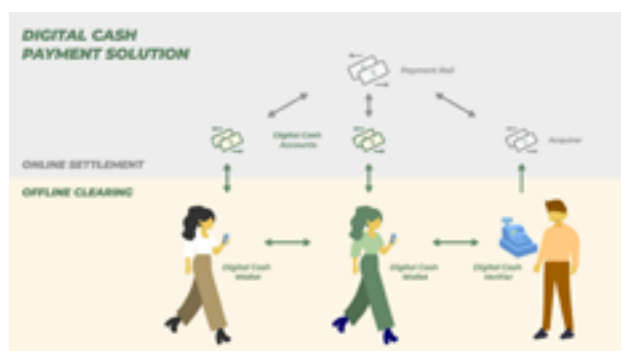
Card, instant and crypto are the three digital payment schemes of today. In addition, central banks around the world are planning to digitize cash as Central Bank Digital Currency (CBDC). Crunchfish Digital Cash Wallet xoxo.cash compliments all of these schemes with a robust, interoperable and exceptionally flexible payment service, replicating the properties of paying with physical cash. This is the digital payment of the future and the solution to exploding transaction volumes and financial inclusion worldwide.



Two-tier architecture

Crunchfish's **Digital Cash Wallet** is an exceptionally flexible and interoperable solution that compliments any digital payment service **on smart cards** or in **digital wallets** with capabilities that replicates paying with cash. A **two-tier hierarchical architecture** makes Digital Cash payments independent from the net, offering instant clearing offline at the moment of payment, followed by settlement online to move money between accounts.

The Digital Cash Wallet has a mirrored Digital Cash Account which is debited when either the payer or the receiver connects online. The Digital Cash Account may only be debited from the Digital Cash Wallet, protecting against overdrafts, and it also registers all activity in the Digital Cash Wallet.



Business model

Crunchfish's business model will be a subscription model charged per deployed Digital Cash Wallet to the issuing bank or digital wallet provider. The business model will be controlled by Crunchfish as a global Certificate Authority, providing signed certificates for use in the Digital Cash Wallets. The business model is well known in the payment industry and similar to issuing card services. **Global interoperability**, cross-service, cross-scheme and cross-currency will be offered as optional add-ons.

The addressable market for Digital Cash Wallets is huge as it spans billions of smart cards with debit, credit, pre-paid or gift card services as well as digital wallets in apps on smartphones, smart watches and feature phones using any payment scheme.



A photograph of a person in a tan coat holding a smartphone over a basket of fruit at a market stall. The basket contains strawberries and grapes. The text "Digital Cash – making instant payments robust" is overlaid on the image.

Digital Cash – making instant payments robust

Why do we need Digital Cash when we already use our mobiles to make payments?

Crunchfish's Digital Cash solutions enables digital payment solutions to become robust since it works independently from the net. This is especially important for real-time payments between accounts since this is vulnerable to disruptions.

Real-time payments account to account is gaining traction on a global scale. In Sweden, Swish has become very popular due to its user-friendliness and the country's well-functioning digital infrastructure. However, real-time payments have an inherent vulnerability. Besides the connection, the servers at the payment service, the settlement systems, the banks as well as electronic identification must be operational. If one of the links in this chain fails, payments become unavailable. This is where Crunchfish's Digital Cash solution comes in, as an insurance against the major societal consequences of failed payments.

Magnus Lageson, Chief Product Officer for Crunchfish's Digital Cash solution with vast experience from real-time payments, understands the needs. He speaks of the usefulness of Digital Cash as a complement for real-time account-to-account payments such as Swish, and similar solutions in the world that are based on similar infrastructure for real-time payments.

Account-to-account payments are part of our everyday life and they must work 24/7. Digital Cash makes the service robust when the connection is deficient, such as in the archipelago,



Account-to-account payments are part of our everyday life and they must work 24/7. Digital Cash makes the service robust.

Crunchfish Chief Product Officer, Magnus Lageson

on the ferry, in the mountains, on the train or on the plane. In addition, the real-time systems are made robust even for temporary downtime that brings the service down.

The pandemic has reminded us all about how sensitive our society is both in the grand and the small scheme of things. In crisis situations with additional operational disruptions, Digital Cash creates stability and thus a better functioning society. With the strength of cash in digital form to always work no matter where you are, a secure solution is offered both in terms of function and access.

For people that have difficulties using digital services, for example the elderly and the disabled, many mobile wallets today already have well-functioning supporting functions that these groups often feel comfortable and secure with. With another safety aspect about guaranteed offline functionality, security is strengthened and participation in society will increase.

Digital Cash is a universal method for payment solutions that complements all other payment solutions. Being able to always pay with the payment solution you prefer, regardless of who and where you are, provides trust in digital services, Magnus Lageson concludes.

Payment services for all

Crunchfish participates this year in PTS innovation challenge in collaboration with Swish. Digital Cash enables Swish to work everywhere in Sweden, even at places without mobile coverage and during temporary service downtime. People, merchants and organisations can trust a payment service where the risk of disturbances and downtime has been eliminated.



Digital Cash – a new card service

Facilitating card payments offline

In Sweden, cards are used in 87% of all in-store purchases. Cash is going extinct and is disappearing more and more from everyday commerce. In doing so, the only payment method that always works offline will disappear. Crunchfish's ingenious Digital Cash Wallet xoxo.cash offers offline payments on the card rail as well.

There are different types of card services. The most common type is debit cards that draw funds directly from the payer's bank account. With credit cards, the payer gets an invoice afterwards with all purchases instead. There are also pre-paid cards where only an amount previously transferred to the account is exposed. On the card rail, Crunchfish's Digital Cash Wallet works as a pre-paid card, with the difference that the debited account is blocked.

Crunchfish's Digital Cash solution complements today's existing offerings with a new card service which secures that the payer has available funds in offline payments both at

card terminals and in push payments. Crunchfish delivers a new innovative card service, Crunchfish's CEO Joachim Samuelsson explains.

On the card rail, Crunchfish's Digital Cash Wallet acts as a guard. A Digital Cash payment can only be initiated in case sufficient funds are available in the Digital Cash Wallet and all other rules set by the issuer bank are met. After that, everything works as a normal card payment in which debiting is done towards the corresponding and blocked Digital Cash account. No change is necessary, neither in the card terminal, receiving bank nor in the card rail.



"Crunchfish's Digital Cash solution complements today's existing offerings with a new card service which secures that the payer has available funds in offline payments both at card terminals and in push payments. Crunchfish delivers a new innovative card service"

Crunchfish CEO, Joachim Samuelsson

Card services in an offline mode

The fact that Digital Cash can be implemented as a new card service that is compatible with the card rail means that this new payment service can be used at card terminals, by payment service providers and provided by payment networks like VISA and Mastercard without any change the existing infrastructure. This makes Digital Cash a very scalable payment service. Next step for Crunchfish is to certify our Digital Cash payment service on the EMV card rail.

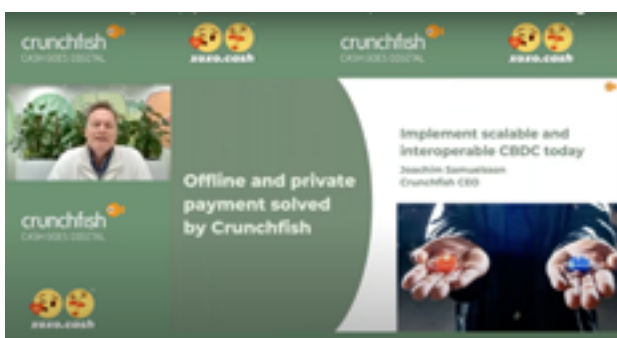
The benefits of using a card service with Digital Cash over existing card services is that there is no risk for the acquirer to accept a payment offline in a card terminal as funds are guaranteed to be available in the Digital Cash account when the transaction eventually settles. Further, in case where the merchant or receiver does not have a card terminal, Digital Cash provides the benefit of facilitating card payments also in an offline mode. This provides the same robustness as critically required in instant payment schemes also in the card rail.



Crunchfish goes global within CBDC

Central Banks around the world are evaluating and piloting Central Bank Digital Currency (CBDC) implementations where offline and private payments are key requirements. As Crunchfish Digital Cash solution offer these capabilities the company has decided to pursue a global strategy within CBDC, broadening focus from Sweden and India only.

The strategy to **go global within CBDC** is kicked-off by the presentation "**Solving offline payments for scalable and interoperable CBDCs**" by Crunchfish's Group CEO Joachim Samuelsson at OMFIF's inaugural Digital Monetary Institute Symposium, in which he challenges the prevailing perception that banking infrastructure must be upgraded to handle CBDC. Crunchfish has recently joined as a member of the international forum **OMFIF.org** as they frequently publish articles and organize meetings in this area.



Video presentation at OMFIF inaugural DMI symposium: "**Solving offline payments for scalable and interoperable CBDCs**"



"Crunchfish provides the most cost-efficient CBDC solution in the world and it is fast to implement"

Crunchfish CEO, Joachim Samuelsson

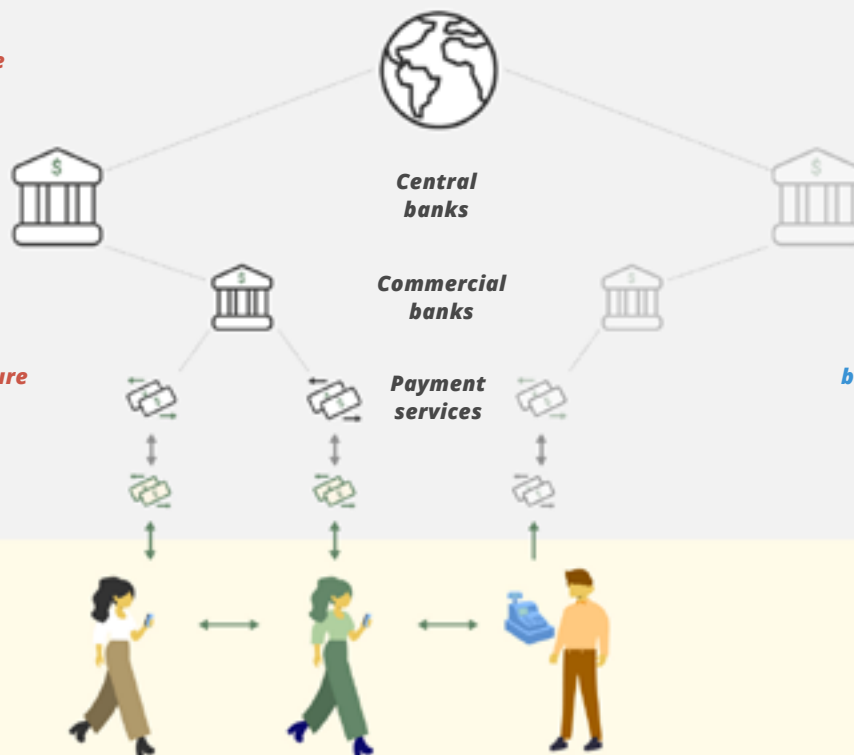
Crunchfish presented recently to Bank of International Settlement's Innovation Network's CBDC Offline Payments Workstream with participants from 11 Central Banks from around the world that are investigating solutions to solve offline payments. The presentation outlined a detailed comparison of Crunchfish's Digital Cash vs. VISA's Offline Payment System for CBDC. Although similar in some respects, no less than 27

important differences were discussed, most of them patent-pending by Crunchfish. **Bank of International Settlement** acts as a bank for Central Banks and supports Central Banks' pursuit of monetary and financial stability through international cooperation, where the Offline Payments Workstream is one of such initiatives.

**Current
currency exchange**

**New
currency**

**Current account
based infrastructure**



**New
crypto exchange**

**New money
format**

**New token
based infrastructure**

Central Banks have a choice to make. They can either choose to issue their digital cash as a new currency or as a new money format requiring banking infrastructures to be upgraded.

Deeply intuitive gestures

Crunchfish develops AI technology for gesture control with exceptional performance, optimized for augmented and virtual reality (AR/VR) and the next generation digital interfaces. The latest product - XR Skeleton 1.1 – has during the quarter been launched and delivered to customers and partners for commercial evaluation.

Company and market

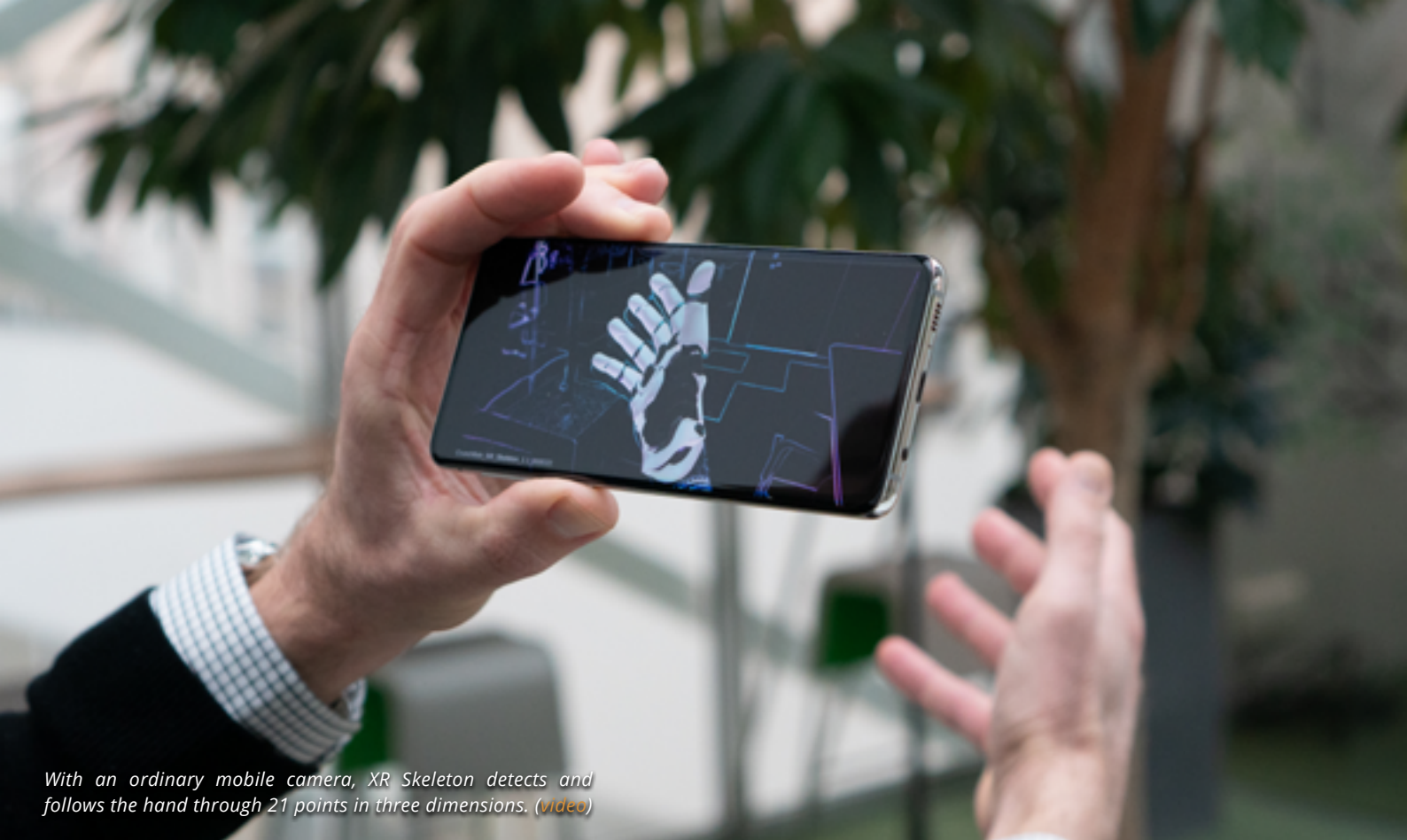
Development of new generations AR glasses for consumers is in full swing at many suppliers of consumer electronics and new products were launched at the world's largest Consumer Electronic Show (CES) early Q1. Companies like Lenovo, OPPO, TCL and Vuzix showed new models of AR glasses that addresses end users for daily use which shows a positive trend.

Crunchfish has during the quarter started to deliver the latest product - **XR Skeleton 1.1** to customers and partners. XR Skeleton provides 21 points per hand with tracking of each point in three dimensions where the points represent different joints on the hand. Each point can be used as an interaction surface for eg. virtual objects or menu systems in AR glasses or other digital screens and enable full interaction flexibility for the user.

Technology and development

Many new features and enhancements were added to the XR Skeleton product and also the flexibility of the platform was proven, when a 2D version was developed in a few weeks to meet the requirements from several AR smartglasses providers with products more suited for 2-dimensional interaction.

To support the business segment Public screens, a special product track was developed where full skeleton tracking can be used for interaction in front of a screen which further shows the dynamics of the XR Skeleton platform. By also combining two neural networks into one mixed network, both performance and power efficiency was further increased.



With an ordinary mobile camera, XR Skeleton detects and follows the hand through 21 points in three dimensions. [\(video\)](#)

Customers and partners

Many providers of AR/VR devices show interest for XR Skeleton and are asking for evaluation licenses to try the touchless experience. **Extremesight** in China being one of them. Vuzix is one of our partners in the US that want to improve the user interaction in their products, and to further stress the benefits of gesture control in their AR smartglasses and show XR Skeleton's great performance in a real environment, the XR Skeleton demo was adapted for Vuzix M400 smartglasses with impressive results.

Market interest related to the business segment Public screens continue to grow and product evaluations targeting screen interaction from a distance is ongoing for projects related to TVs as well as infotainment screens in aircrafts. COVID-19 has really had a positive impact on this segment where many people now want to avoid touchscreens due to risk of infection.

Product focus 2021

Crunchfish will continue to further develop the gesture control products where support for several simultaneous camera sensors and simultaneous two-hand gestures will be important areas to meet all types of hardware configurations. By also combining the next generation of neural networks with huge amounts of data, simulated backgrounds, and different lighting conditions, the XR Skeleton will continue to excel as one of the leading products for gesture control on the market.



Financials



Financial Q1 report

Sales and earnings for the quarter

Net sales amounted to SEK 1,101 (1,948) thousand for the first quarter and operating expenses amounted to SEK 12,563 (10,756) thousand. Operating expenses increased due to the Group's investments in Digital Cash. EBITDA for the period amounted to SEK -5,578 (-4,803) thousand. Profit or loss before tax for the first quarter amounted to SEK -7,766 (-6,491) thousand and has been charged with amortization of intangible assets of SEK 1,899 (1,704) thousand and tangible fixed assets of SEK 94 (113) thousand.

In September 2018, the Company began a collaboration with ClearOn whereby Crunchfish and ClearOn formed the jointly owned company Blippit, with the aim of offering new digital opportunities for marketing products and making payments in stores. Blippit has acquired a right of use of the technology developed its subsidiary Crunchfish Digital Cash. Starting in September 2018, Crunchfish Digital Cash performs development services for Blippit to adapt the technology to the specific usage area. Of the Group's profit or loss for the first quarter, SEK 1,064 thousand (1,846) relates to consulting fees invoiced to Blippit.

Investments

During the first quarter, the Group invested SEK 3,346 (1,380) thousand in intangible fixed assets and 0 (0) in tangible fixed assets. Investments in associated companies amounted to SEK 1,000 (1,000) thousand.

Liquidity and financing

At the end of the period the Group's cash and cash equivalents amounted to SEK 11,534 (5,715) thousand. Cash flow from operating activities during the first quarter amounted to SEK -2,899 (-5,153) thousand.

Associated companies

Blippit AB is an associated company and the holding is reported in the consolidated accounts using the equity method. The equity method means that the value of the shares in the associated company reported in the Group corresponds to the Group's share in the equity of the associated company. Crunchfish's share of the associated company's earnings is reported as a separate item in the consolidated income statement.

Staff

As of March 31, 2021, the number of employees was 23 (23).

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 note issued by Crunchfish in March 2020 and the annual report for FY 2020, which can be found at www.crunchfish.com.

Related party transactions

In December 2020, Crunchfish AB entered into a financing agreement worth SEK 25 million with the Company's two largest shareholders, Crunchfish CEO Joachim Samuelsson, and Midroc Invest AB, represented by the Chairman of the Company's Board, Göran Linder. The financing consists of a loan commitment of SEK 25 million that the Company can call off on one or more occasions within a term of 14 months from December 18, 2020 to February 17, 2022. A commitment fee of 4% per year is paid as compensation. The interest rate for credit used amounts to 8% per year.

In the first quarter of 2021, credit of SEK 10 million was raised. The first quarter of 2021 has been charged with expenses regarding commitment fees and interest of SEK 263 thousand.

Sales and earnings for the quarter, parent company

The parent company's net sales amounted to SEK 5,682 (102) thousand for the first quarter and operating expenses to amounted to SEK -5,964 (-7,165) thousand. EBITDA for the period amounted to SEK 255 (-3,588) thousand. During the first quarter, the parent company invested SEK 0 (606) thousand in intangible fixed assets and SEK 0 (0) thousand in tangible fixed assets.

Up to and including March 2020, the gesture control business was carried out in the parent company, and the reported sales consisted of income from royalties. On April 1, 2020, the gesture control operations were transferred to the wholly owned subsidiary Crunchfish Gesture Interaction AB, and from this date only company management and administrative staff are employed in the parent company. Reported sales in the parent company from April 1, 2020 consist of income from

services rendered for management and administration of the Company's two subsidiaries.

The share

There is one class of shares in Crunchfish. The share is listed at Nasdaq First North Growth Market under the symbol "CFISH". Per March 31, 2021, the number of shares in the company was 28 348 190 (25 771 082). The average number of shares during the first quarter of 2021 was 28 348 190 (25 771 082).

Warrants

At Crunchfish AB's Extraordinary General Meeting on September 11, 2018, it was decided to introduce an incentive program for the company's management and other employees through a directed issue of warrants with the right to subscribe for new shares in the company. The directed issue comprised of 700,000 warrants of series 2018/2022, each with the right to subscribe for one (1) new share in the company at a price of SEK 10.92 per share between June 1–30, 2022. The warrants were issued to a wholly owned subsidiary and subsequently transferred to the recipients at a price of SEK 0.23 per warrant, which corresponded to the value of a warrant according to the Black & Scholes model. Of the 700,000 warrants, 620,000 have been transferred to the company's management and other employees as well as full-time consultants. After recalculation due to share issues in March 2019 and April 2020, holders of a warrant have the right to subscribe for 1.19 new shares in the company during the subscription period for each warrant at a subscription price of SEK 9.13.

At Crunchfish AB's Annual General Meeting on May 20, 2020, it was decided to supplement the aforementioned incentive program through a directed issue of warrants with the right

to subscribe for new shares in the company to those in the company's management, and other employees, who does not previously hold warrants in the company. The directed issue comprised of 700,000 warrants of series 2020/2024, each with the right to subscribe for one (1) new share in the company at a price of SEK 46.89 per share between June 1–30, 2024. The warrants were issued to a wholly owned subsidiary and then transferred to the recipients in three tranches at a price corresponding to the value of a warrant according to the Black & Scholes model. Of the 700,000 warrants, 675,000 have been transferred to the company's management and other employees as well as full-time consultants, and the remaining 25,000 warrants can be allocated up to and including the 2021 Annual General Meeting.

Financial calendar

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

Half-year report, 2021

August 26, 2021, 8:30 am CET.

Interim report for January – September 2021

November 17, 2021 8:30 am CET.

Year-end report 2021

February 17, 2022, 8:30 am CET.

Shareholders in Crunchfish AB (publ) per March 31, 2021

Shareholders	No. of shares	Percent
Femari Invest AB (CEO & BM Joachim Samuelsson)	7 500 000	26,46
Midroc Invest AB (Chairman Göran Linder)	5 000 000	17,64
Paul Cronholm (Founder & CTO)	1 093 800	3,86
Carlquist Holding AB	1 000 000	3,53
Coeli Fonder	888 652	3,13
Nitrox Consulting AB	664 585	2,34
Eldgaffeln AB (BM Håkan Paulsson)	634 869	2,24
Lars Andreasson and family	373 500	1,32
Claes Capital Consulting AB	320 000	1,13
Anders Harrysson	307 550	1,08
Total ten largest shareholders	17 782 956	62,73%
Other shareholders, approx. 5000	10 565 234	37,27%
Total	28 348 190	100,00%

Share price development until May 7, 2021



Accounting principles

This report has been drafted according to the Annual accounts act (Årsredovisningslagen) and BFNAR 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

Ulf Rogius Svensson, IR & Marketing Manager
ir@crunchfish.com

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, May 19, 2021

The Board of Directors

Göran Linder (chairman)

Robert Ekström

Susanne Hannestad

Patrik Olsson

Håkan Paulsson

Joachim Samuelsson

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 May 19, 2021.



Group income statement (SEK)

	Q1 2021	Q1 2020	2020
Operating income			
Net sales	1 101 212	1 947 894	10 883 365
Own work capitalized	3 346 438	1 380 339	10 105 636
Other operating income	544 764	820 230	2 215 316
Total operating income	4 992 414	4 148 463	23 204 317
Operating expenses			
Goods for resale	-150 098	-17 440	-213 469
Other external expenses	-4 140 236	-3 950 210	-16 936 158
Personnel expenses	-5 799 425	-4 505 870	-20 965 200
Depreciation of tangible and intangible fixed assets	-1 992 637	-1 804 928	-7 661 968
Other operating expenses	0	0	-48 275
Loss from participations in associated companies	-481 051	-477 790	-2 594 640
Total operating expenses	-12 563 447	-10 756 238	-48 419 710
Operating profit	-7 571 033	-6 607 775	-25 215 393
Financial items			
Other interest income and similar profit items	70 044	123 440	123 440
Interest expense and similar loss items	-264 956	-6 283	-243 472
Profit or loss from financial items	-194 912	117 157	-120 032
Profit after financial items	-7 765 945	-6 490 618	-25 335 425
Profit or loss before tax	-7 765 945	-6 490 618	-25 335 425
Taxes			
Tax on income for the period	0	0	0
Profit or loss for the period / year	-7 765 945	-6 490 618	-25 335 425
Key figures			
EBITDA	-5 578 396	-4 802 847	-17 553 425
Earnings per share	-0,27	-0,25	-0,91
Number of shares, average	28 348 190	25 771 082	27 703 913
Number of shares at balance sheet date	28 348 190	25 771 082	28 348 190
Earnings per share after full dilution	-0,26	-0,24	-0,88
Number of shares after full dilution, average	29 606 490	26 576 082	28 838 380
Number of shares after full dilution at balance sheet date	29 660 990	26 576 082	29 651 990



Group balance sheet (SEK)

Assets	Mar 31, 2021	Mar 31, 2020	Dec 31, 2020
Fixed assets			
Intangible assets			
Capitalized expenses for development work	22 276 964	17 728 845	20 828 680
Total intangible fixed assets	22 276 964	17 728 845	20 828 680
Tangible fixed assets			
Equipment	1 170 268	1 505 241	1 264 751
Total tangible fixed assets	1 170 268	1 505 241	1 264 751
Financial assets			
Participation in associated companies	8 341 883	5 939 784	7 822 934
Other long-term receivables	4 900	0	4 900
Total financial assets	8 346 783	5 939 784	7 827 834
Total fixed assets	31 794 015	25 173 870	29 921 265
Current assets			
Current receivables			
Accounts receivable	478 804	3 259 982	3 048 291
Receivables from associated companies	545 856	852 952	472 050
Other receivables	717 612	556 909	868 566
Prepayments and accrued income	1 254 691	1 803 075	1 317 647
Total current receivables	2 996 963	6 472 918	5 706 554
Cash and bank balances			
Cash and bank balances	11 533 921	5 715 406	8 667 692
Total cash and bank balances	11 533 921	5 715 406	8 667 692
Total current assets	14 530 884	12 188 324	14 374 246
Total assets	46 324 899	37 362 194	44 295 511



Group balance sheet (SEK)

Equity and liabilities	Mar 31, 2021	Mar 31, 2020	Dec 31, 2020
Equity			
Equity attributable to parent company shareholders			
Share capital	1 304 017	1 185 470	1 304 017
Other contributed capital	189 895 143	166 039 920	189 785 051
Other capital including profit or loss for the period	-164 016 940	-137 406 188	-156 250 994
Total equity	27 182 220	29 819 202	34 838 074
Long-term liabilities			
Lease liabilities	0	732 570	560 584
Total long-term liabilities	0	732 570	560 584
Current liabilities			
Lease liabilities	721 052	223 489	228 474
Accounts payable	1 937 532	2 711 085	2 381 119
Current tax liability	74 928	0	26 182
Other liabilities	11 898 650	685 437	1 650 203
Accrued expenses and accrued income	4 510 517	3 190 411	4 610 875
Total current liabilities	19 142 679	6 810 422	8 896 853
Total equity and liabilities	46 324 899	37 362 194	44 295 511
Key figures			
Equity-assets-ratio	58,7%	79,8%	78,6%
Debt-to-equity ratio	39,4%	3,2%	2,3%
Interest-bearing net debt	n/a	n/a	n/a

Changes in the group equity (SEK)

	Q1 2021	Q1 2020	2020
Equity at beginning of period / year	34 838 074	36 309 820	36 309 820
Share issue	0	0	25 513 369
Issue costs	0	0	-2 299 790
Warrant premiums	110 091	0	650 100
Profit or loss for the period / year	-7 765 945	-6 490 618	-25 335 425
Equity at end of period / year	27 182 220	29 819 202	34 838 074



Group cash flow statement (SEK)

	Q1 2021	Q1 2020	2020
Operating activities			
Operating profit or loss	-7 571 033	-6 607 775	-25 215 393
Adjustments for non-cash items	2 473 688	2 282 718	10 304 457
Interest received etc.	0	425	425
Interest paid	-264 956	-6 283	-60 053
Income tax paid	0	0	0
Cash flow from operating activities before changes in working capital	-5 362 301	-4 330 915	-14 970 564
Cash flow from changes in working capital			
Decrease (+) / increase (-) in receivables	2 709 591	-1 781 043	-1 014 679
Decrease (-) / increase (+) in current liabilities	-246 751	958 972	3 040 418
Cash flow from operating activities	-2 899 461	-5 152 986	-12 944 825
Investing activities			
Investments in associated companies	-1 000 000	-1 000 000	-5 000 000
Investments in technology development	-3 346 438	-1 380 339	-10 105 636
Acquisition of fixed assets	0	0	-39 362
Change in cash deposits	0	0	-4 900
Cash flow from investing activities	-4 346 438	-2 380 339	-15 149 898
Financing activities			
Share issue	0	0	23 213 579
Loans from shareholders	10 000 000	0	0
Amortization of financial leasing agreements	-68 006	-54 855	-221 856
Warrant premiums paid	110 091	0	650 100
Cash flow from financing activities	10 042 085	-54 855	23 641 823
Change in cash and cash equivalents	2 796 186	-7 588 180	-4 452 900
Cash and cash equivalents at beginning of period / year	8 667 692	13 180 571	13 180 571
Exchange rate difference in cash and cash equivalents	70 043	123 015	-59 979
Cash and cash equivalents at end of period / year	11 533 921	5 715 406	8 667 692



Parent company income statement (SEK)

	Q1 2021	Q1 2020	2020
Operating income			
Net sales	5 682 223	102 098	16 198 542
Own work capitalized	0	606 299	606 299
Other operating income	528 890	1 674 894	3 303 476
Total operating income	6 211 113	2 383 291	20 108 317
Operating expenses			
Other external expenses	-2 669 110	-2 675 689	-10 795 030
Personnel expenses	-3 286 888	-3 295 250	-12 697 582
Depreciation of tangible and intangible fixed assets	-8 161	-1 194 452	-1 212 623
Other operating expenses	0	0	-11 323
Total operating expenses	-5 964 159	-7 165 391	-24 716 558
Operating profit or loss	246 954	-4 782 100	-4 608 241
Financial items			
Other interest income and similar profit items	119 563	123 440	123 440
Interest expense and similar loss items	-263 014	0	-215 476
Profit or loss from financial items	-143 451	123 440	-92 036
Profit or loss before tax	103 503	-4 658 660	-4 700 277
Taxes			
Income tax	0	0	0
Profit or loss for the period / year	103 503	-4 658 660	-4 700 277
Key figures			
EBITDA	255 115	-3 587 648	-3 395 618
Earnings per share	0,00	-0,18	-0,17
Number of shares, average	28 348 190	25 771 082	27 703 913
Number of shares at balance sheet date	28 348 190	25 771 082	28 348 190
Earnings per share after full dilution	0,00	-0,18	-0,16
Number of shares after full dilution, average	29 606 490	26 576 082	28 838 380
Number of shares after full dilution at balance sheet date	29 660 990	26 576 082	29 651 990



Parent company balance sheet (SEK)

Assets	Mar 31, 2021	Mar 31, 2020	Dec 31, 2020
Fixed assets			
Intangible assets			
Capitalized expenses for development work	10 972	9 862 614	14 560
Total intangible fixed assets	10 972	9 862 614	14 560
Tangible fixed assets			
Equipment	24 547	36 628	29 120
Total tangible fixed assets	24 547	36 628	29 120
Financial assets			
Participations in group companies	56 923 811	22 622 972	56 788 721
Other long-term receivables	4 900	0	4 900
Receivables from group companies	9 511 369	692 794	0
Total financial assets	66 440 080	23 315 766	56 793 621
Total fixed assets	66 475 599	33 215 008	56 837 301
Current assets			
Current receivables			
Accounts receivable	478 804	3 259 982	2 900 691
Receivables from group companies	0	6 369	0
Other receivables	2 072	324 975	231 867
Prepayments and accrued income	1 239 451	2 051 467	989 975
Total current receivables	1 720 327	5 642 793	4 122 533
Cash and bank balances			
Cash and bank balances	10 062 804	5 507 050	7 816 432
Total cash and bank balances	10 062 804	5 507 050	7 816 432
Total current assets	11 783 131	11 149 843	11 938 965
Total assets	78 258 730	44 364 851	68 776 266



Parent company balance sheet (SEK)

Equity and liabilities	Mar 31, 2021	Mar 31, 2020	Dec 31, 2020
Equity			
Restricted equity			
Share capital	1 304 017	1 185 470	1 304 017
Fund development expenses	10 972	9 570 219	14 560
Total restricted equity	1 314 989	10 755 689	1 318 577
Unrestricted equity			
Profit brought forward	62 462 566	33 748 373	67 049 164
Profit or loss for the year	103 503	-4 658 660	-4 700 277
Total unrestricted equity	62 566 069	29 089 713	62 348 887
Total equity	63 881 058	39 845 402	63 667 464
Current liabilities			
Accounts payable	675 682	1 440 719	1 828 079
Other debts	11 053 372	488 885	625 005
Accrued expenses and deferred income	2 648 618	2 589 845	2 655 718
Total current liabilities	14 377 672	4 519 449	5 108 802
Total equity and liabilities	78 258 730	44 364 851	68 776 266
Key figures			
Equity-assets ratio	81,6%	89,8%	92,6%
Debt-to-equity ratio	15,7%	0,0	0,0
Interest-bearing net debt	n/a	n/a	n/a

Changes in parent company equity (SEK)

	Q1 2021	Q1 2020	2020
Equity at beginning of period / year	63 667 464	44 504 062	44 504 062
Share issue	0	0	25 513 369
Issue costs	0	0	-2 299 790
Warrants	110 091	0	650 100
Profit or loss for the period / year	103 503	-4 658 660	-4 700 277
Equity at end of period / year	63 881 058	39 845 402	63 667 464

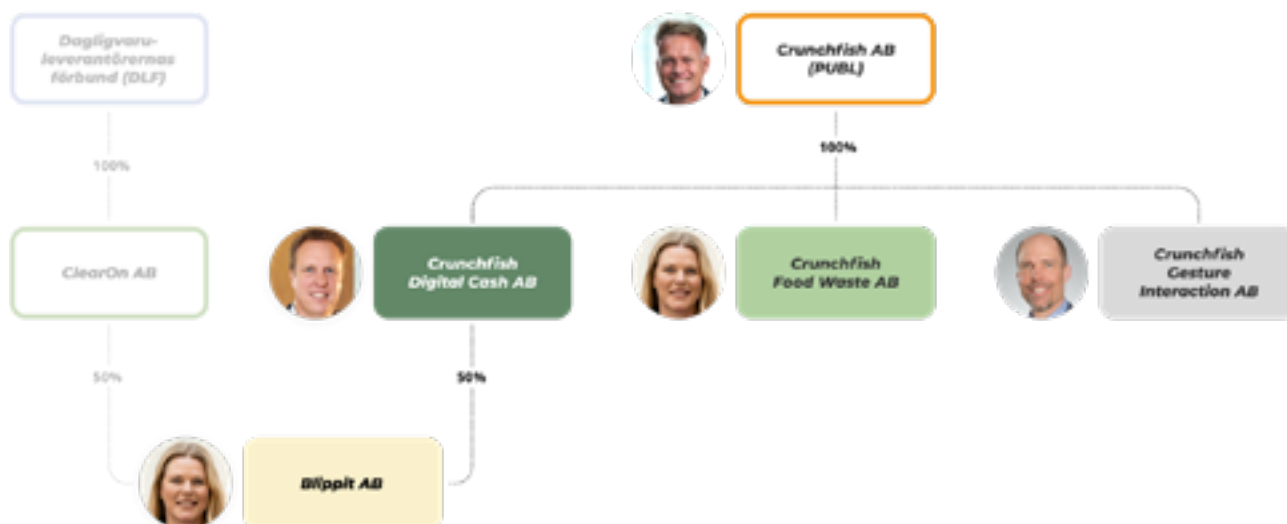


Parent company cash flow statement (SEK)

	Q1 2021	Q1 2020	2020
Operating activities			
Operating profit or loss	246 954	-4 782 100	-4 608 241
Adjustments for non-cash items	8 161	1 194 452	1 212 623
Interest received etc.	54 260	426	426
Interest paid	-263 014	0	-33 705
Income tax paid	0	0	0
Cash flow from operating activities before changes in working capital	46 361	-3 587 222	-3 428 897
Cash flow from changes in working capital			
Decrease (+) / increase (-) in receivables	2 402 206	-1 759 891	-239 631
Decrease (-) / increase (+) in current liabilities	-731 130	181 392	770 745
Cash flow from operating activities	1 717 437	-5 165 721	-2 897 783
Investing activities			
Investments in technology development	0	-606 299	-606 299
Acquisition of shares in subsidiaries	-25 000	-50 000	-50 000
Loans provided to group companies	-9 511 369	-1 934 163	-25 570 252
Change in cash deposits	0	0	-4 900
Cash flow from investing activities	-9 536 369	-2 590 462	-26 231 451
Financing activities			
Share issue	0	0	23 213 579
Loans from shareholders	10 000 000	0	0
Warrant premiums paid	0	0	650 100
Cash flow from financing activities	10 000 000	0	23 863 679
Change in cash and cash equivalents	2 181 068	-7 756 183	-5 265 555
Cash and cash equivalents at beginning of period / year	7 816 432	13 140 218	13 140 218
Exchange rate difference in cash and cash equivalents	65 304	123 015	-58 231
Cash and cash equivalents at end of period / year	10 062 804	5 507 050	7 816 432



Operational subsidiaries (SEK)



	Q1 2021	Q1 2020	2020
Crunchfish Digital Cash AB			
Net income	1 064	1 846	8 251
Net expenses	-6 302	-3 422	-22 365
Cash flow from operations	-5 238	-1 576	-14 114

Blippit AB

Net income	0	0	0
Net expenses	-830	-2 178	-9 298
Cash flow from operations	-830	-2 178	-9 298

Crunchfish Food Waste AB

Founded April 1 2021

Crunchfish Gesture Interaction AB

		Proforma	Proforma
Net income	33	102	2 452
Net expenses	-3 441	-4 194	-13 363
Cash flow from operations	-3 408	-4 092	-10 911

