Open Banking for Crypto and Fiat Currencies
Abstract

The ORCA Alliance is a community-based initiative which promotes the large-scale adoption of cryptocurrencies through the ORCA Platform. ORCA, which is short for 'Open & Regulated Cryptocurrency Adoption', will be the first platform of its kind to globally integrate both banking and cryptocurrency accounts, as well as spearhead the growth of the crypto economy. ORCA will take advantage of the EU’s revised Directive on Payment Services (PSD2)\(^1\), which empowers account holders with the authority to share data, removing the financial institution's role as gatekeeper. In addition, the ORCA Platform fosters the creation of a dynamic financial services ecosystem through its ancillary components - the ORCA App Center, a one-stop shop for crypto service development, and Quest, a gamified community that fosters blockchain technology innovation.

Legal disclaimer

By participating in our token sale, you represent, acknowledge, agree and warrant that participation in a token sale can be highly speculative and could involve a risk of loss and the proposed outcomes indicated in this whitepaper may not be achieved and orca alliance may be released of any liability of such failure.

This further described token sale is not a crowdfunding or initial public offer (ipo) event. This whitepaper and the website do not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities in any jurisdiction or a solicitation for investment in securities. Orca tokens do not represent ownership interests or grant ownership, control and voting rights in any company, as well as do not grant any rights to receive a share of any company’s profit.

You should carefully read, consider and evaluate each of the risk factors and all other information contained in terms and conditions of orca alliance’s token sale separately presented to you before registering at our website and participating in the token sale.

By participating in our token sale, you agree with the terms and conditions of this token sale. If you do not agree to all or part of the terms and conditions, please do not use the website or any information, links or content contained on the website and do not participate in the token sale.

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Achieving the Mass Adoption of Cryptocurrencies

Today the use and adoption of cryptocurrencies is growing exponentially. In 2017 alone, the price of Bitcoin rose more than 1300% while other major cryptocurrencies such as Ethereum and Ripple had even more impressive results.

The number of cryptocurrency wallets in existence has grown from approximately 4.6 million at the end of 2014 to more than 50 million\(^2\) as of February 2018. The figure is expected to reach 500 million by 2024.\(^3\) Coinbase, the largest cryptocurrency wallet provider, is opening new accounts at the rate of 1.2 million per month. About $8 billion of bitcoins is currently being traded on a daily basis, and this figure is further rising following the introduction of Bitcoin futures and options in December 2017.

The use of cryptocurrencies for raising startup capital is becoming an integral part of the global financial ecosystem. Initial Coin Offerings (ICOs), whereby new cryptocurrency projects are financed through the sale of tokens to the public, are becoming increasingly popular. More than $6.1 billion was raised in 2017 alone, of the cumulative $7 billion raised since 2014:

\(^2\) Just the number of BTC and ETH addresses already exceeds this figure (link1), (link2)

\(^3\) Current trends suggest the total number of crypto wallets will be several times larger than the number of Bitcoin wallets.
In 2017 a total of **887 ICOs** were held, which is a 19-fold increase over 2016, when **46 ICOs** were held. Currently there are more than 1,500 cryptocurrencies in circulation, with a combined market capitalization of over **$750 billion**, which compares with less than $20 billion in January 2017:
Global adoption and acceptance of cryptocurrency seem inevitable as most developed economies are already on the verge of becoming cashless. Only 24% of Americans were using cash for day-to-day purchases in 2016, down from 36% in 2011. The trend is similar in the EU, where the total number of non-cash payments increased by 8.5% to 122 billion in 2016.

Today, over 100,000 merchants across the world accept Bitcoin and more than 30 crypto debit cards are now available on the market. Although the use of cryptocurrencies for the purchase of goods and services is still in its infancy, it is nonetheless growing rapidly. BitPay, one of the top Bitcoin payment platforms, reported that the dollar value of transactions on the platform between January and September 2017 was up 328% year-on-year.

Currently a number of obstacles are preventing cryptocurrencies from becoming fully mainstream. The most notable one are:

- **Obstacles to the use of cryptocurrencies**
  Despite the proliferation of cryptocurrency portfolios and trading accounts, the use of cryptocurrencies for the purchase of goods and transfers of funds remains extremely limited. This is often due to a lack of payment options and high transaction fees.

- **An uncertain regulatory environment**
  While many developed countries (including Australia, Japan and the UK) have fully embraced and are regulating the use of cryptocurrencies, in most countries cryptocurrencies exist in a legal vacuum. This is slowing down use and adoption since the legal implications of owning and using cryptocurrencies remain largely unclear to consumers. There is also a need for community engagement to properly explain to the public differences in national policies and the ongoing introduction of new regulations. That would permit rapid and sustainable growth of the cryptocurrency economy.

- **Lack of knowledge**
  Most people in most countries have a very limited understanding of the technical capabilities of cryptocurrencies. Even if their use for trading is widespread, the majority of users have little knowledge of the potential benefits of blockchain technology or the advantages that cryptocurrencies offer for the global economy.
Consumer safety issues

A number of events in 'crypto space' in recent years have left consumers wary of the potential dangers of owning cryptocurrency. Most notable are the DAO hack and the collapse of the Mt. Gox exchange. Such events have sparked uncertainty about whether cryptocurrency portfolios are safe from cybersecurity threats, online scams and other fraudulent activities. Without a doubt, the creation within the EU of a legislative framework that oversees, protects and regulates the use of cryptocurrency is of paramount importance for supporting both its growth and adoption.

The resolution of these issues would accelerate the adoption of cryptocurrencies as a form of payment, thereby laying the foundations for the future crypto economy. ORCA’s goal is to create an Open Banking platform that will not only ensure that this transition happens sustainably, but which will also allow its users to benefit from increasing integration of crypto financial services with the existing financial system. The ORCA Platform provides an accessible and user-friendly interface for consumers to fully benefit from innovation in financial and cryptocurrency services. For the sake of achieving mass adoption, the Alliance has intentionally been established in the European Union and operates within its borders (Estonia and Lithuania, for example). The platform is thus subject to all the applicable national and EU laws and regulations.
The ORCA Platform

The ORCA Platform is the principal tool that the ORCA Alliance utilizes in pursuing its mission. The platform provides the technology needed for capturing the synergy that arises from cryptocurrency service aggregation, community engagement and mainstream adoption. The ORCA Platform includes the following solutions:

**An Open Banking Platform**

A solution to financial data from diverse sources including banks, crypto wallets and financial exchanges. This entails the merging of crypto wallet accounts with regular banking accounts, and provides ancillary infrastructure for monitoring, measuring and suggesting to each user the best course of action.

**An Account Overview Interface**

An easy-to-understand visual depiction of the user’s financial situation. Information such as asset allocation, portfolio performance, portfolio volatility, spending strategy and so on is available at a glance. This will give the user an instant snapshot of their position, and will facilitate and simplify the decision-making process.

**ORCA AI**

‘Machine learning algorithm’-based analysis of customer data and financial activity to provide effective financial management feedback to both customers and financial service providers.

**ORCA App Center**

The “Google Play” of the crypto world, where apps are developed, showcased, tested and monetized. Developers, testers and reviewers will be rewarded.

**Quest**

A community of crypto developers and consumers focused on developing new apps, fostering blockchain innovation, solving problems, shaping or funding future services and contributing to the ORCA community.

**ORCA Tokens**

The fuel of the ORCA Platform: used to purchase services and serve as a payment medium.

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4 These and more options will be accessible via the ORCA Dashboard.
Structure of the ORCA Platform

App Center
A community-based market for third-party apps, Dapps and services which greatly expand the functionalities of ORCA.

| Custom Apps | Trusted Third Party Apps |

The ORCA platform

Dashboard
A customizable dashboard linking all the data together in one place.

| Banks API | Wallets API | Exchanges API |

This is a visual depiction of the ORCA Platform
The ORCA Dashboard

Simple, User-Friendly & Sophisticated

As the financial sector continues to evolve and cryptocurrencies simultaneously proliferate, financial technology (FinTech) innovation is rising to the forefront of the global economy. Banks and financial institutions have been slow to adapt to and accept the rapidly changing face of financial services, leaving a large gap between conventional banking and cryptocurrency services in terms of technology, user know-how and end products.
A 2016 study by PwC found that more than 60% of banks see technological innovation as a threat to their existing business model. Moreover, banks have all but lost their dominant position in the money transfer segment, which was traditionally among their most profitable activities. An estimated 82% of EU consumers “agree” or “strongly agree” that cash transfer services offered by companies such as PayPal and Amazon are just as safe and reliable as the money transfer services offered by banks. These trends represent a major opportunity for innovative FinTech companies.

ORCA aims to offer a consumer-oriented solution that bridges the gap between existing banking and cryptocurrency services, combining the best of both. For the end-user, all features are accessible through a single interface – the ORCA Dashboard. The ORCA Dashboard is a user-friendly gateway into the ORCA Platform, powered by ORCA Tokens. It provides the following services and benefits:

**The integration of fiat currency accounts and crypto wallets,** allowing for the interchangeable use of both, as well as for spending, account management and money transfers in real time. This overcomes the obstacle of crypto acceptance by financial companies, retailers and service providers, and puts cryptocurrencies on an equal footing with national currencies.

**Account synchronization.** Users can quickly review and manage their bank accounts, cryptocurrency wallets and trading accounts in one place - a seamless and easy-to-use interface for all financial activity. This allows users to visualize their crypto holdings as an asset class within a range of diverse, rather than separate.
Financial analysis and personalized suggestions by ORCA Smart AI. This enables portfolio management, asset allocation and conversion options to be tailored to the needs and capabilities of each individual user. It includes a Smart Savings plan and benchmarking of a portfolio's performance against investment indices, alternative portfolios, funds and asset classes.

Intuitive design, with a focus on user-friendliness and simplicity of use, even for novice users. A streamlined user experience fosters faster adoption, positive feedback and referrals from existing users as well as overall customer satisfaction.
The ORCA Dashboard’s advanced algorithms provide users with the parameters they need to manage a wide range of financial services. These include:

- **Cash Account Info Aggregation**
  An aggregated, instant snapshot of the financial status of the user’s accounts.

- **Forecast-Based Savings**
  Shows user possible savings scenarios based on interest rate changes, personal income and variations in asset returns.

- **Asset Categorization**
  Assets are classified based on a wide range of parameters, including geography, liquidity, sector, technology, etc.

- **Savings Rules**
  Allows a user to make savings and spending decisions based on pre-set parameters, risk tolerance, financial objectives and account transaction volumes.

- **Rebalancing**
  Continuous monitoring of portfolio performance and weights with suggestions for rebalancing based on the user’s risk profile.

- **Trend Indices**
  Scans and finds products, assets and portfolios that meet predetermined parameters for performance, sector, region and so on.

- **Event Monitor**
  Scans for extraordinary account inflows and outflows and triggers alerts.

- **Efficiency Curves**
  Compares the risk and performance of financial instruments and investments in order to identify those with the best risk-reward ratio.

- **Portfolio Aggregation**
  An aggregated, instant snapshot of the financial status of the user’s financial portfolio(s).

- **Stress-Testing Algorithm**
  Simulates a variety of market scenarios and their potential impact on user’s portfolio.

- **Portfolio Transition**
  Suggests assets to buy/sell in order to improve portfolio performance.

- **Risk-Bearing Capacity**
  An algorithm which calculates the user’s propensity for risk and their financial capacity to bear it.

- **Target Savings**
  Defines desired savings goals and proposes scenarios for how to reach them.
The ORCA Dashboard allows users to access and manage their accounts, use various services and engage with other members of the ORCA Community. Its ultimate objective is to create the best possible user experience for offering the widest range of financial service options, delivering those services as quickly and seamlessly as possible.

The dashboard’s advantages are a result of its AI programming characteristics. These features make the platform:

- Customizable - easy to configure based on the user’s profile.
- Connected - algorithms communicate with each other, providing real-time feedback.
- Intelligent - state-of-the-art algorithms are supplemented with machine-learning protocols.
- Data-savvy - algorithms are fed by multiple data sources.
- Discreet - software ensures the user remains anonymous and truly secure while using the platform.
- Targeted - modules are modeled around the client’s individual strategies.
- Low-budget - a modular system keeps costs down.
- Compliant - fully complies with EU laws and banking regulations.
The ORCA App Center

The ORCA App Center is a full ecosystem of trusted third-party crypto services conveniently offered to the user in one place. It’s the crypto-world equivalent of Apple’s App Store or Google Play. It provides platform users with a wide range of easy-to-integrate options for accessing products available on the crypto market.

At present, the ecosystem of startups using tokens for their services is extremely fragmented. That means multi-platform users must access and manage the tokens they hold for each different service separately. This is very time-consuming, user-unfriendly and inefficient.

The ORCA App Center aims to centralize users' access to all services providers from a single platform through the API, and allow them to pay for them all using only ORCA tokens. A variety of services are offered, including:

**Copy Trading Services**

Companies such as ZuluTrade and eToro allow people to invest by copying the trades of other successful traders. Users can access one or more of these services, choose which trader(s) to copy and perform actions directly from the ORCA Platform.

**Trading Algorithms (Bots)**

The exchanges covered and trading strategies utilized depend on the client's profile.

**Lending Services**

Platforms such as SALT or ETHLend, which allow users to lend money in a decentralized environment.
App developers to publish new apps using ORCA tokens to submit them to the App Center.

Startups to access early adopters and even attract funds for innovative financial services.

Service providers offer their services to ORCA Platform users. Different tiers of apps and services will be accessible to users, based on the amount of ORCA tokens held. More advanced apps/services, such as trading bots and lending gateways, will be accessible to users with higher overall balances. This will incentivize users to accumulate ORCA tokens in order to unlock more services and apps.

ORCA Token holders will have access to exclusive deals from ORCA’s partners. That could translate into discounts on an online trading platform or bonuses on an online crypto gaming service.

In addition, the ORCA App Center allows:

- Crypto Cards

There are currently around 30 debit cards, including TenX and Monaco, that allow people to use their cryptocurrency funds to pay for goods and services directly. They are often partnered with major payment processors such as VISA and MasterCard. ORCA lets you use a portfolio of debit cards. From the ORCA Platform, you can manage payments, monitor debit-card accounts and spend funds - all using the ORCA Token as a common currency.
The ORCA Mobile App

The Platform at Your Fingertips

The ORCA Mobile App is the interface for mobile use of the ORCA Platform. It includes all functionality, including access to all accounts, services, the Dashboard, the App Center and Quest.

Both the Mobile App and the Platform are currently in development. Multiplatform support will ensure that ORCA users can access different services from different providers with one single app. The app will also feature an integrated Card + App solution, to allow users to spend cryptos or fiat currency for goods and services seamlessly. The ORCA Mobile App will be available for Android and iOS.
The ORCA B2B Solution

Financial Data for Businesses

The ORCA Alliance and the ORCA Platform are not only for the P2P and consumer markets. We also aim to service the burgeoning B2B and B2C markets with applications that enable both individuals and companies to monetize data, earning ORCA tokens for the data they provide. For example:

An individual may want to sell information or data concerning their asset allocation or investment profile to a financial services provider. This may be of value for the latter, as it can be used for product development or marketing. So the individual can anonymously sell their data in exchange for ORCA tokens. Companies will be able to post requests for data that users can respond to, sharing the overall ORCA Token reward among themselves.

Data providers will be able to pseudonymize generated content and sell it directly to businesses for ORCA tokens.

The ORCA Platform thus acts as a financial data aggregator, allowing both individuals and companies to monetize and exchange information quickly and efficiently.
Legislative changes in the EU have already created the conditions for boom in the market for crypto financial services. In 2009, the EU's first Payment Services Directive created the Single Euro Payments Area (SEPA). SEPA reduced the settlement time for payment transactions as well as fees for cross-border payments. This resulted in a more competitive cash transfer market and the compression of bank margins. The EU’s Second Payment Service Directive (PSD2), which was created in 2015 and came into force on January 13th, 2018, promises to be even more impactful. The PSD2’s main characteristics and implications are as follows:

- Third-party providers (TPPs) can access bank account information, and initiate payments with the direct authority of the client. The directive authorizes incumbent banks to provide this information to TPPs, including both account information service providers (AISPs) and payment initiation service providers (PISPs).

- Bank customers can use third-party service providers to manage their funds. This will significantly reduce the role of centralized banks in payment processing. By using banks’ APIs, non-banks (i.e. FinTech startups) can enter the financial market without the heavy compliance and infrastructure burdens that banks face.
PSD2, in essence, incentivizes the disintermediation of financial and banking services, allowing customers to choose financial products from multiple providers rather than having to rely on a single one. It also opens up the disruptive potential of consumer-oriented FinTech startups, especially those harnessing the transactional advantages of cryptocurrencies.

A further important development is the EU’s General Data Protection Regulation (GDPR), which came into effect in May 2018. The GDPR gives consumers more control over their personal information, including knowledge of what data companies hold, the right to ask that personal data be erased, and pseudonymization of customer data by banks/companies.

These regulatory changes have taken the baking sector partially off guard. According to PwC, only 44% of banks in 2016 intended to provide an open banking platform for customers within the following 5 years. Furthermore, only 50% of companies affected by the GDPR will be fully compliant with its requirements by the end of 2018.

- PISPs can initiate and bill P2P payments on behalf of bank customer.
- TPPs can provide more dynamic personal finance management (PFM) services.
On the other hand, consumers have already embraced the change and demand better and more innovative service. Note that:

- 37% of European consumers have said they would change their bank if it did not offer them up-to-date technology.
- 20% of European consumers are willing to buy financial products from companies like Google, Facebook and Amazon.
- 88% of regular banking customers are using third-party providers for online payments.

The importance of PSD2 cannot be overstated as it will affect over 1 billion customers and impact up to 40% of net banking income in the EU. The divergence between customer expectations and the service offering of the incumbent banking system therefore represents an enormous opportunity that innovative startups can benefit from.

The ORCA Platform is positioning itself to take full advantage of PSD2 and the GDPR:

- It offers users the opportunity to access both conventional fiat currency and cryptocurrency services from multiple providers - all from a single platform, for easier and quicker use.
The ORCA App Center will integrate these solutions and provide the infrastructure for fiat owners to conveniently access to diverse crypto services. The end goal is to become the one-stop shop for the crypto economy in the EU.

- It offers users the opportunity to earn money from their personal data, selling it for ORCA tokens to service providers, marketing companies and so on. in a completely anonymous way. (The market potential is large, with 82% of EU consumers intending to take advantage of the new data access rights granted by the GDPR.)

- It allows users to pay for all services, both crypto and conventional, with ORCA tokens, thus saving time and conversion fees.

- It allows users to access and manage multiple bank accounts, credit cards, investment funds, insurance policies and other financial services from a single platform - for simpler comparison of options, faster access, and ease of use.
Community engagement and activities remain the principal driving force behind blockchain technologies and their various applications. On the ORCA Platform, we aim to foster this important dimension of crypto-world value. We see ORCA token holders not just as passive observers, but as active participants in developing the ORCA Platform and achieving our common goals. Staying True to the principles of inclusion and participatory change, ORCA is developing an innovative engagement venue for the community known as Quest.

Quest is a gamified and reward-based section of the ORCA Platform dedicated to facilitating joint action and collective problem-solving among community members. All ORCA token holders are considered members of the ORCA Community, irrespective of the number of tokens held. Fostering collaboration in the community is necessary for achieving our mission of mass cryptocurrency adoption. We see our community members as avid explorers of the crypto world and talented guides who will help us expand the ORCA App Center. Quest members will be able to:

- Access exclusive community offers in the ORCA App Center.
- Participate in community events and activities.
- Take part in community quests, perform tasks and earn rewards for their efforts. Any member can join a quest by depositing a pre-determined amount of ORCA tokens. If the Quest is not completed successfully, all or part of the deposit will be distributed among the quest's host and other community members.

- Upgrade their profiles, for example by adding proof of qualifications, additional services, apps, gadgets and even personal AI assistants. All add-ons will be priced in ORCA Tokens.

- Join the Autonomous Community Management (ACM) structure. Quest will be managed in the same way that Wikipedia is managed, that is, by users who are assigned different roles within the ecosystem. Thus, Approvers will check and confirm quests, Auditors will verify quest completion, and Quest Masters will be responsible for the settlement of disputes and other tasks.

- Shape, initiate and even fund future app development through an Innovation Pool.

- Amplify ORCA’s educational and promotional activities to help us reach wider audiences. Members who achieve qualifications in these activities will be rewarded with badges and their skills level will be listed publicly.
Continuous interaction between users transforms the ORCA Platform into an ecosystem in which apps can be developed and monetized by the community. The overall benefits of Quest are:

- Creation, expansion and engagement of the ORCA Community.
- Generation of revenues for App developers, encouraging them to create innovative products, upload them to the App Center and consequently expand the number of services offered through the App Center.
- Promotion of crypto learning and education of ORCA Community members.
- Ability to offer users the widest range of crypto-development and crypto services in the world, essentially making this the one-stop shop for the sector.

In the long term, ORCA envisions the creation of multi-user tasks that involve collaboration opportunities for startups vetted by the ORCA Platform. These will include opportunities with the most promising technological innovations, the strongest potential to grow and the most robust and professionally experienced management teams.
The ORCA Sidechain

A Solution for Reducing Transaction Fees

Cryptocurrencies share a major problem in the form of high transaction fees. Bitcoin’s transaction fees have risen from an average of $2 in September 2017 to a high of more than $37 in December 2017, as both demand for miner services and the price of the coin grew rapidly. The blockchain system that underlies Bitcoin can process 3 to 7 transactions per second, putting it under strain when demand increases rapidly. High fees have made minor Bitcoin transactions unfeasible, with reports of users paying up to $16 for sending $25 worth of Bitcoin. Another issue is that of processing payments for services with cryptocurrencies. CryptoKitties, a successful blockchain-based game, generated 20% of traffic on the Ethereum network in December 2017, causing significant delays in transactions. In order for mass adoption of cryptocurrencies to occur, it is imperative to make transactions and transfers both affordable and reliable.

The ORCA Platform aims to solve the problem of high transaction costs through the ORCA Sidechain. A sidechain is a protocol that breaks down one transaction into many smaller amounts that are recorded on a separate ledger, and then reassembles transactions and synchronizes them on the main chain. Sidechains are decentralized, P2P networks that provide useful enhancements (for security, risk, or performance, for example) for global systems without third-party verification. As a result, overall fees are reduced and transactions become more scalable. The ORCA Sidechain will store transactions that occur on the ORCA Platform and resend them to the main chain as a bundle.
Hundreds of startups are holding ICOs and launching utility tokens. In the near future, users will need to acquire many different tokens in order to activate all these startups' various services.

ORCA will offer a solution by enabling a Token Swap on the Platform and making ORCA Token a "one-for-all" access token for all third-party services. Once a service is added to the ORCA Dashboard, users will be able to pay for it with ORCA tokens, which will be converted automatically to the service provider’s tokens. The exchange will take place through the Bancor Protocol for continuous liquidity. The end result is that ORCA will become the go-to platform for users to buy and manage all their crypto services in one place.
ORCA Tokens

ORCA tokens are utility tokens for fueling all the activity on the ORCA Platform. They will be used to:

- Access trusted third-party services through the ORCA App Center by paying in ORCA tokens.
- Make in-app purchases and payments. The use of ORCA tokens as the ORCA Platform’s unitary currency streamlines user experience and provides quicker access to third-party services.
- Upload apps to the ORCA App Center, paying the fee in ORCA tokens.
- Get special offers and exclusive deals from ORCA’s partners on the basis of token usage and account value.

ORCA token holders are immediately considered part of the ORCA Community, with lasting appreciation for their support and membership. Only community members will be able to access all parts of the ORCA Platform and use their tokens to take part in other diverse activities, including:

The Loyalty Program
Loyalty Program members gain from lasting engagement, earning bonus ORCA tokens based on the volume of use of existing tokens.

Quests
ORCA members can perform tasks or respond to requests in order to obtain rewards.

Services in ORCA Dashboard
Members can use the full range of cryptocurrency services in the ORCA App Center. ORCA tokens are used to activate and pay for services provided by the ORCA Alliance and trusted third-party service providers.

Exclusive Offers
ORCA tokens enable users to become early-adopters of the most innovative tech products coming to market. This includes community-exclusive and limited-edition new crypto services and products offered by both the ORCA Alliance and its trusted partners.
The ORCA Token (ORCA) is an Ethereum-based ERC-777 token. Its supply is final and new tokens will not be issued in the future. One ORCA token is divisible to nine decimal places.

Total supply: 460 000 000
The ORCA Token Sale

Details & Logic

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<td><strong>Token type</strong></td>
<td>Ethereum (ERC-777) based utility token (compatible with ERC-20 wallets)</td>
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<td><strong>Total token amount</strong></td>
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The ORCA Token Sale is a key event in the ORCA Alliance’s development strategy. The token sale will:

- Help the ORCA Alliance gather the necessary funds to kick-start its immediate activities and support the ORCA Platform’s development.
- Help create an ecosystem of cooperation, coordination and experience-sharing.

The reasons why we have opted for a token sale, rather than crowdfunding or venture capital, are as follows:

- The ORCA Token is a fundamental element in the development of the ORCA Platform. It forms the basis of all transactions, service provision and technological innovation on the platform. By creating the token, we are making all these activities possible. Selling an equity stake to a VC fund or to private investors would effectively raise funds, but it would not increase usage of or involvement in the platform. The token sale achieves both.

- The ORCA Alliance is fostering the creation of a wider user community. A token sale is the perfect medium for expanding the number of users and contributors to the ORCA Platform. A successful token sale will attract attention and boost the visibility of the ORCA Platform, further increasing our number of users, developers, and services on offer.
We plan to expand the platform rapidly, aiming to attract a membership of at least 150,000 in the next 12 months. In order to facilitate this, we are offering 42% of the total supply of ORCA tokens to our potential supporters during token sale. ORCA tokens are utility tokens and will be a core element in the ORCA Platform’s functioning.

- A token sale offers higher flexibility in terms of potential collaborators.
- With a token sale, the interests of the management, who will receive 17% of the tokens during the sale, will be fully aligned with those of the early adopters. It is in the complete interest of the management to ensure the success of the platform.
ORCA Token Distribution

All issued tokens will be distributed according to the following breakdown:

- **42%** distributed through the Bounty Program.
- **18%** Community Development Fund (to attract new community members, partners and influencers).
- **17%** Split among ORCA's founders, developers and advisors (founders' and developers' tokens will vest after 1 year).
- **20%** Sold to contributors during the ORCA Token sale.
- **3%** Partners Fund

All unsold tokens will be burned!
The funding proceeds from the token sale will be spent according to the following breakdown:

<table>
<thead>
<tr>
<th>% of Token Sale Proceeds</th>
<th>Destination</th>
</tr>
</thead>
</table>
| 45%                      | **Platform Development**
  - To develop, test and deploy the ORCA Platform, including efficiently scalable infrastructure, an open banking solution, intuitive design solutions and multi-platform support for the Dashboard, the App Center service integration API, community-interaction space and the Quest ecosystem. |
| 20%                      | **Business Development**
  - To establish and promote lasting business partnerships with industry leaders, including financial institutions, also marketing the App Center to mainstream consumers and app developers and developing consumer-oriented businesses solutions. |
| 20%                      | **Community Development**
  - To grow the ORCA Community by attracting more members and key influencers, support their sustained involvement, improving the efficiency of collaboration, and back community-led initiatives. |
| 10%                      | **Legal and Regulatory Activities**
  - To establish and maintain working relationships with decision-makers, banks and crypto businesses. |
| 5%                       | **Education and Promotion**
  - To support our public projects aimed at educating and informing society at large about cryptocurrencies. |
The ORCA Alliance seeks to become the nexus between the cryptocurrency and banking worlds. We invite all interested parties to get involved and work together in the pursuit of our common mission and goals.

For queries regarding ORCA or to obtain information about participating in the ORCA Token Sale, visit www.orcaalliance.eu or write to us at hello@orcaalliance.eu
Smart Advising

Overview and Analysis

The ORCA Alliance
Smart advising can be conducted in several ways:

1. **Analysis and advice** – spending data is analysed and behavioral spending/saving advice is offered to the user (e.g. recommended course of action - to save/not spend funds, advice on major purchases, etc.)

2. **Smart spending** – Based on the analysis of the current market situation, advice is provided on which assets are worth being liquidated

3. **Smart saving**
   - Risk-Benefit analysis - Advice on selecting assets to be converted into fiat money and saved for the future
   - Automatic savings (e.g. 10% of spending transferred into other accounts/allocation of funds towards the purchase of ORCA and other crypto tokens)

4. **Smart investing** – Advice on purchase timing of crypto assets

5. **Trading**
   - Smart trading – Advice on the timing of buying/selling a crypto asset
   - Automated trading – Ability for configuring Bots to trade automatically for the user
   - Social trading – Following successful trades on social media and benefit from shadowing their traders (can be manual or automated)

**Keywords:** crypto investment advisor bots, smart spending/saving/investing, robo-adviser in crypto assets
Motivation

Open banking provides new opportunities for investors and traders alike. By having legal authorization to access personal financial information of user’s bank accounts, ORCA Smart Advisor can provide users beneficial advice on efficient management of day-to-day finances. In 2017, the general public just began to get acquainted with cryptocurrencies, and this year the trend is set to continue. While some users purchase cryptocurrencies as long term investments, others leverage the rising value of the crypto market for everyday spending.
However, as is often the case with an emerging market, new users tend to lack the know-how of the technology and its usability. Current tools do not offer users the convenience of connecting different wallets and trading markets. Users are forced to remember numerous passwords and links, causing many to keep track of their assets in a text file or spreadsheet. While tools like Cointracking, Cryptonaut or Blockfolio, provide a mechanism for tracking, they do not give the means for the user to buy, trade or make purchases with their crypto assets.

ORCA platform will provide users with simplified access to all of their assets by linking crypto wallets with fiat funds held in bank accounts. The extensive management possibilities of user finances are complemented by in-depth market analysis and purchasing/trading advice. Spending habits of a single user encompass a large amount of data that needs to be processed. By analyzing the flow of user's fiat funds and crypto assets, ORCA Smart Advisor will provide recommendations for improving one's choices in order to achieve the desired results (e.g. saving money, making a large purchase without limiting your spending possibilities, restraining financial operations and etc.) ORCA Smart Advisor will even be able to provide the user with insight and advice that would be impossible for the person to notice otherwise.
Smart Spending is a feature of the ORCA platform that allows the user to wisely manage funds and assets. For example, if a person wants to pay a monthly bill, upgrade his computer or buy a car, Smart Spending can provide advice on the correct timing for making the purchase of the specific goods and services, as well as recommend whether to use fiat or crypto funds for payment.

The Smart Spending feature is a system consisting of self-learning algorithms that constantly monitor the situation in the crypto market and advises on which asset (fiat or crypto) is better to spend.

Each crypto asset (currency or token) has its own features: amount in circulation, price level, price movement patterns, trading volumes, volatility, etc. Thus, a different strategy will be utilized for each crypto asset. Accordingly, a strategy defines how an algorithm or a group of algorithms are used, and when and how learning and testing are done. Each algorithm must produce the probability of the reliability of given advice. The challenge is to present this reliability to the ordinary user in an easily understandable way.
Every user will have an option to choose the level and profile of smart spending advising:

Spend most appreciated assets – algorithms evaluate the difference between the purchase price and the current market value of the asset. The system will recommend best options, evaluate risks and propose which assets to sell.

- The smart advising feature is able to evaluate risks, provide analysis on the possibility of a price drop in relation to the user selling a large portion of an asset, analyzes the level of liquidity of an asset in a given market, and monitors exchanges, suspending deposits and withdrawals of assets.

Balanced spending – user can decide how much of crypto assets he or she wants to spend while preserving a portion of crypto assets for further appreciation.

Leasing repayment – user is advised to acquire a product using leasing or lending services. For example - according to your income analysis you can acquire the product, but it might be more appropriate to buy with leasing and repay later on after crypto assets have appreciated. Or you can use a lending service provider as an option to use your crypto assets as collateral to borrow the missing funds.
You want to buy a bicycle

Selection of a credit/debit card connected to ORCA platform

Item you want
You want to buy a bicycle

Price and date
Input price, details and payment units of the purchase order

External merchants/online retailers

Additional funds
How much additional funds do you have?

Open banking data

Enough fiat and crypto assets?

Is lending / leasing recommended? (According to spending habits)

ORCA Open Banking platform

ORCA Smart AI

Recomendations
AI options with recommendations

Options
Detailed options for several scenarios

Confirmation
Confirmation of chosen option

Execution
Execution of scripts

Notification
Notification about successful transaction

Transfer from third-party providers using ORCA API

Congratulations
You bought a bicycle!
An example

John uses ORCA platform every day. He is very satisfied with the Smart spending feature, as last month he has received 3200€ salary bonus, and he has bought 1000 X tokens for the entire amount. He also has 5000€ in his bank account. Today he decided to buy a new fancy laptop just released by the RedPear company. This laptop costs 4000€, and his 1000 X tokens now are worth 4000€. Thus the main question is - how many of the tokens should John sell? He can either sell all tokens and buy the laptop, or he can sell a part of his tokens and take the other part of funds from his bank account (Balanced spending feature). In this case, the Smart Spending feature is available for assistance.

**Step #1:**

1. User enters price of item he wants to acquire

   Pricing
   
   Currency: EUR
   Enter the price of item you wish to purchase: EUR 4000.00

   Enter timeframe for your purchase
   - Months
   - Days
   - Hours
   Next

2. User enters time frame available till acquiring

**Step #2:**

1. User is asked to enter amount of EUR available in cash (balances of bank accounts are shown automatically)

   Funds
   
   Currency: EUR
   Amount of flat currency available: EUR 5000.00

   Choose bank account: HSBC

2. User is asked about any other incomes/crypto funds he has in exterior platforms
Step #3:

1. Smart Advisor offers several scenarios to acquire desired item (grouped options, big buttons) (4 options: only Fiat, Fiat/Crypto, Lending/Leasing, Alternative)

2. User selects group

3. User reviews options and selects one (or presses Back button to explore other scenario)

4. After user selects an option, Platform generates a script of actions and offers it for user confirmation. After script is confirmed, Platform initiates actions to achieve the goal.
Don't miss your chance with ORCA!

www.orcaalliance.eu