



ARCADIERX

Enhancing inventory and
reputation distribution
through decentralisation

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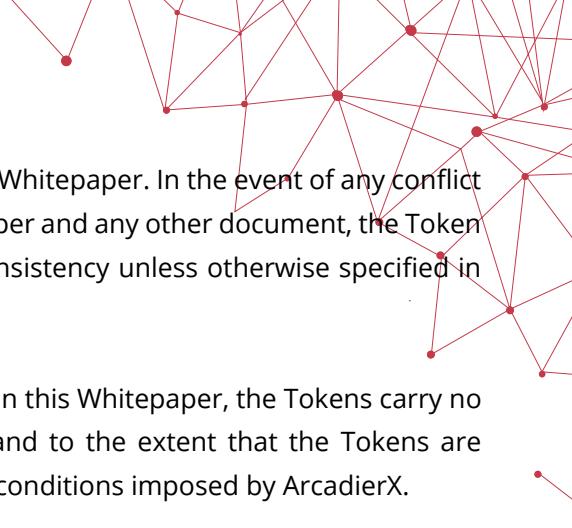
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01. Executive Summary

The tremendous growth of global eCommerce is accelerating. With online retail B2C sales projected to hit US\$2.8 trillion in 2018, and US\$4.5 trillion by 2021. In 2017, global online B2B sales dwarfed B2C sales with a gross merchandising value of US\$7.7 trillion vs. US\$2.3 trillion.

Online marketplaces form the engine that is driving eCommerce growth and prosperity.

International retail marketplaces like Alibaba, Amazon, eBay and Rakuten accounted for almost half of the retail market share. B2B eCommerce shows more fragmentation with industry verticals or regional B2B marketplaces competing strongly against the top players such as Alibaba and Amazon Business. In both eCommerce markets, it is important to recognise the dispersement of a very long tail of products which are generally sold by entrepreneurs, small-mid sized e-shops, sellers and marketplaces, aka long tail contributors. This long tail sustains a healthy and competitive global eCommerce ecosystem.

However, the long tail contributors face two mounting challenges which threaten their survival and expansion.

Despite digital proliferation and progress of online marketplaces, the long tail contributors face significant challenges. First, customer discovery and acquisition endeavours have become increasingly difficult and costly, mainly when those efforts rely on consumer trust across disparate sources. Second, as they often lack the access and bargaining power required for inventory sourcing, many smaller marketplaces and e-shops have trouble scaling efficiently and effectively in a highly competitive and fragmented market.

Arcadier is focused on prioritising and deploying marketplace solutions which could serve as high growth levers for both long tail contributors and B2B marketplaces globally.

Arcadier was born out of a global need for organisations of all sizes and types to capitalise on the eCommerce opportunities and efficiencies offered through online marketplaces. In just three years, our marketplace software-as-a-service (SaaS) has cemented our position as a market leader. With over 7,000 marketplaces operating from over 170 countries on our platform, Arcadier has proven global demand for its solution. Many of our clients are long tail contributors, seeking their niche and sweet spot in the competitive eCommerce market.

B2B marketplaces are booming, and growing Arcadier's enterprise customer segment is our strategic focus. We have three wins in 2018, the most recent was the appointment of technology marketplace partner by United Nations to help address the global health issue of non-communicable diseases, which has an estimated economic burden of US\$47 trillion over the next decade.

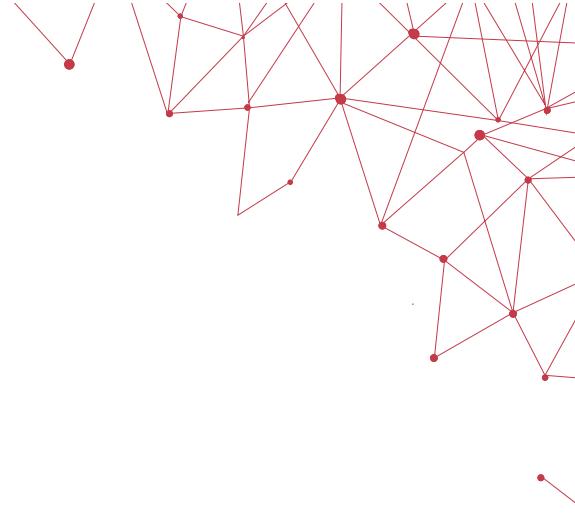
01. Executive Summary

At Arcadier, we understand that consumer trust, scalability and business interconnectivity are vital to eCommerce and marketplace success.

As we look to the future and serving the needs of our customers, blockchain technology will play a crucial role in our core marketplace SaaS and enterprise offerings, and will help convert eCommerce challenges into tremendous sales opportunities. We develop a plan to future proof our business and better serve our customers and their customers, including marketplace operators, sellers and buyers.

Our innovation and drive led us on a path to embrace decentralisation, integrate high value blockchain use cases relevant to our customers, and embed advanced predictive data analytics onto Arcadier marketplace platform.

Our existing solution will first be enhanced with blockchain-based inventory distribution and trust consolidation and portability systems as foundational solutions. Follow-on, additional platform enhancements will be deployed over the next five years, such as cryptocurrency payments, affiliate marketing and AI/ML driven capabilities. Our goal is to establish an intelligent and extended eCommerce ecosystem, connecting Arcadier's ecosystem of marketplaces to the online market beyond Arcadier.



02. About Arcadier

2.1. Vision & Mission

Arcadier's vision is:

To make marketplace technology accessible to anyone.

The genesis of Arcadier was driven by a clear market need: we had identified a global demand for a secure and reliable solution to enable individuals and organisations to create and manage their online marketplaces easily and affordably.

To satisfy this need, we developed our marketplace SaaS technology and acquired a massive customer base in more than 170 countries in just three years. We learnt quickly from our customers and developed our capabilities, so we now have even more to offer our current and prospective marketplace operators, sellers, and buyers. As Arcadier continues to evolve and anticipate future market needs and requirements, so too has our mission. Our focus is to connect people, build trust, and maintain integrity.

Today, our mission is:

To create connected communities where people discover, learn, trust and trade easily.

We strive to discover better ways of bringing people and businesses together to create commercial opportunities. We will innovate solutions to connect communities in a platform of trust where everyone can freely and easily discover, share and advocate anything they want. Driven by our mission, we will augment our existing platform with mechanisms that decentralise inventories and build trust between buyers and sellers, and uniquely, between sellers and sellers.

2.2. Our Current Business

Our acclaimed market-leading technology enables individuals, communities, and organisations to develop, launch, and maintain their marketplace concepts quickly, efficiently, and affordably. With the ability to generate revenue today, we are a proven viable commercial business that is doubling its revenues every six months, moving us swiftly into a cashflow-positive position.

02. About Arcadier

The swift, efficient scalability that the Arcadier platform offers to marketplace operators and sellers has been a critical growth and success driver. Since its launch in 2016, our platform

- Hosts over 7,000 marketplaces
- Supports marketplace operators in over 170 countries
- Hosts over tens of thousands of sellers and merchants
- Hosts over five hundred million of products and services
- Gains 300-400 new marketplace sign-ups per month



Arcadier marketplace platform is also sought after by enterprise clients. In 2018, we have won three engagements: a B2C parent-targeted marketplace for OCBC Bank (public listed and Singapore headquartered financial group), a B2B/G2B cocoa trading marketplace for the Cross River State in Nigeria, and B2B/B2G procurement marketplace for the United Nations. Our pipeline describes a trend of increasing global enterprise opportunities across various industries.

02. About Arcadier

Over the last three years, Arcadier has earned various accolades and nominations in recognition of our efforts in innovation and contribution to the eCommerce industry. These awards included Millennial 20/20 (Commerce Enabler), SME 100 (Fast Moving Companies), SITF (Best Innovative Company), OCBC & Business Times (Emerging Enterprise) and Growth Action Plan winner by Enterprise Singapore.



2.3 .Project ArcadierX Objective

Project ArcadierX was conceptualized to further harness the strength of Arcadier's ecosystem and to capitalize on the long tail opportunity as well as the growth of online B2B marketplaces globally. Three key questions were heavily debated in the process of Arcadier outlining an updated business model and plan for the next three to five years:

1. How do we allow sellers and inventory content from any Arcadier marketplace to be discoverable by other online businesses within our ecosystem? How can we extend this value to beyond Arcadier built marketplaces?
2. How do we quicken trust building between suppliers and marketplaces/e-shops so that these distribution channels are confident to on-board a new seller and its content for trading? How do we also establish buyer-seller trust quickly and efficiently to remove a key barrier to customer buying behaviour?
3. What new customer-centric solutions are essential for us to address these questions? How can we create synergies among the solutions and with our core platform?

The outcome is a future phased approach of deploying and integrating blockchain and advanced technological enhancements onto Arcadier's existing marketplace platform. These new capabilities will help develop Arcadier into a fully-connected intelligent eCommerce ecosystem, with a sustainable competitive advantage over our competition.

02. About Arcadier

For Project ArcadierX, the following will be our focus:

Our opportunity is to target these key customer segments...

Emerging and 'long tail' marketplace contributors

New enterprise B2B marketplace players

who face 2 key inter-connected problems which...

How to scale efficiently in a fast growing eCommerce market?

Access to product variety & quality

New markets & distribution

Cost of marketing & trading

Lack of trust in market

Manipulation of reputation system

Non-portable reputation

Arcadier will address in this ICO project and more

Access to a distributed inventory system connected to new distribution channels

Access to a decentralised reputation management system offering rating transferability



ARCADIERHUB



ARCADIERTRUST

Information Flow

02. About Arcadier

Arcadier Hub and Arcadier Trust are the two blockchain-based foundational solutions in Project ArcadierX. Four complementary platform enhancement features and solutions have also been prioritised for deployment, to drive greater value to our ecosystem users, boost platform performance and improve user experience.

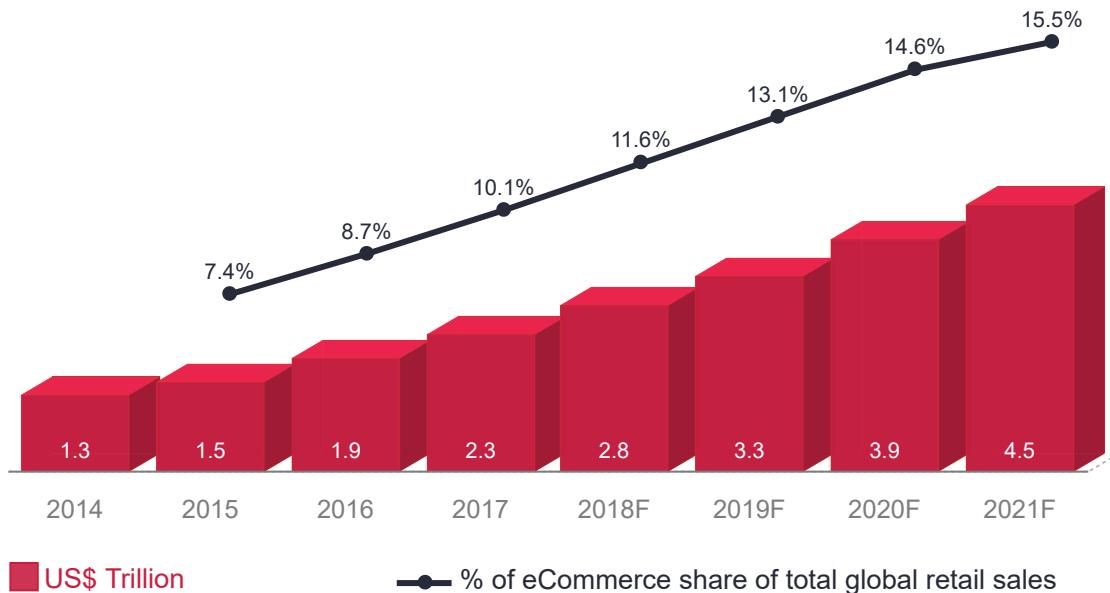
Project ArcadierX is focused on delivering the following six platform enhancements:

- Arcadier Hub
- Arcadier Trust
- ARCTX transaction token payment
- Artificial Intelligence/Machine learning enabled data analytics
- Blockchain-based provenance
- Blockchain-based trade financing

To stabilise our blockchain enhanced platform, we propose two tokens: utility tokens, named ARCX, and the stabilised exchange tokens called ARCTX. The ARCX token will primarily support the utilitarian service requests made within the Arcadier ecosystem. The ARCTX token, however, is designed for price stability and as a practical medium of exchange for transactions occurring on Arcadier marketplace platform.

03. eCommerce Market

According to eMarketer, global eCommerce retail sales will grow at a robust CAGR of 19% from US\$1.3 trillion in 2014 to US\$4.5 trillion in 2021, showing a threefold increase in online revenue. This growth is being driven by a considerable rise in online sales over total global retail business-to-consumer (B2C) sales, increasing from 7.4% in 2015 to 15.5% in 2021.



International online marketplaces like Alibaba, Amazon, eBay, and Rakuten accounted for 50% of global online retail sales in 2017; this share is forecasted to grow to about two-thirds by 2022¹. Internet Retailer reported that in 2017, the top 75 marketplaces accounted for more than 90% of global marketplace sales, with 35 out of these 75 being launched between 2010-2015².

¹ Global eCommerce Marketplaces Report 2018 by Researchandmarkets.com

² Internet Retailer's 2018 Online Marketplaces Report, 2018

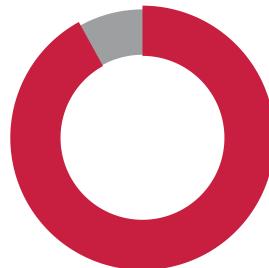
03. eCommerce Market

\$1.55 TRILLION

spent globally on the top 75 online marketplaces in 2017



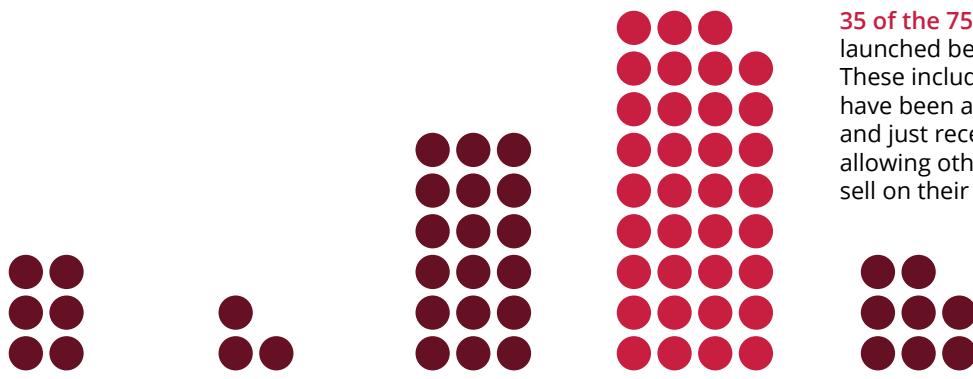
Marketplace sales account for **50%** global retail sales



Top 75 marketplaces account for >90% of global marketplace sales

More than half launched in the last 7 years

Online marketplaces broken down by year launched



35 of the 75 top marketplaces launched between 2010-15. These include retailers that have been around for a while, and just recently began allowing other merchants to sell on their sites.

03. eCommerce Market

Consumer behaviour is driving this trend: 64% of the respondents³ in a global Amazon and Pymnts.com survey stated that they begin product searches at marketplaces, citing product variety and price as motivators.

Retail eCommerce growth is also driven by a growing number of niche or more narrowly focused vertical marketplaces like Airbnb, Uber, Etsy and Wish. This growth driver is more prominent in Asia and Europe where language and cultural nuances play a major role in consumer buying behaviour and ability to penetrate the market.

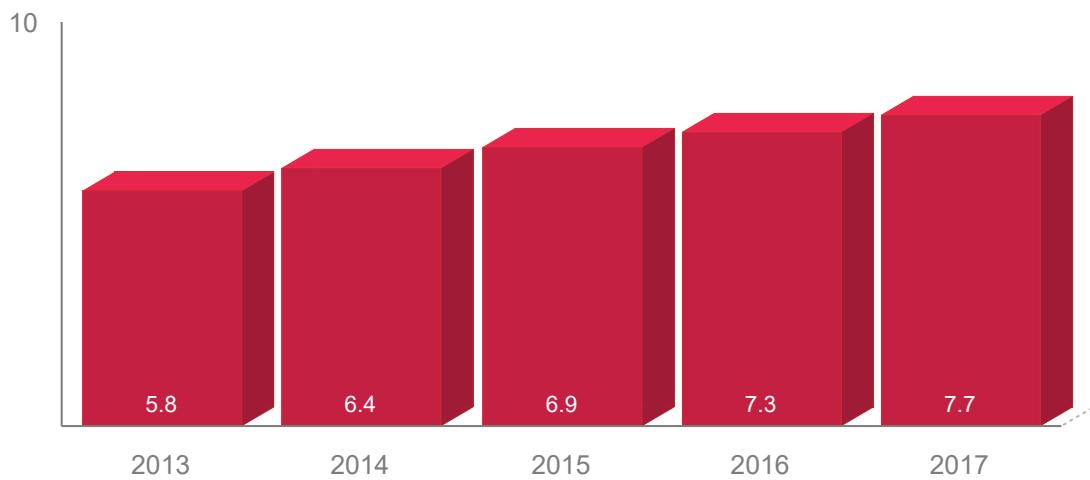
Online business-to-business (B2B) distribution is driving global eCommerce to even greater heights. In 2017, global B2B sales hit US\$7.7 trillion in revenue⁴, dwarfing B2C sales with a 234.8% difference in market size. The gap in market size remains high at 208% in 2020F as Frost & Sullivan projected that B2B eCommerce will hit \$12 trillion in sales worldwide by 2020⁵.

³ July 2015 survey conducted by Amazon Payments and Pymnts.com

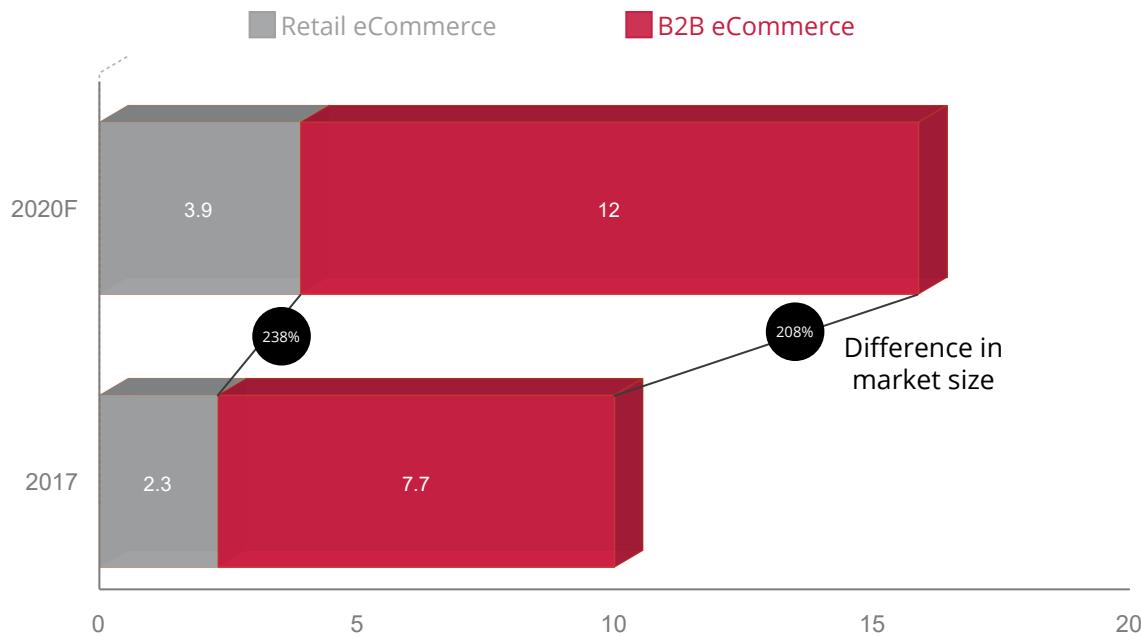
⁴ eMarketer, Statista's Global B2B eCommerce Gross Merchandising Value from 2013 to 2017

⁵ "Now Is the Time to Ride the Digital B2B Wave. Our Latest White Paper Provides Key Insight and Platform Considerations" Guidance, 3 Apr. 2017

03. eCommerce Market



B2C vs B2B eCommerce Sales, 2017 & 2020F
US\$ Trillion



03. eCommerce Market

B2B eCommerce is largely driven by the rising demand for self service as customers seek empowerment and process streamlining in their purchasing cycle, as well as a shift in consumer buying behaviour to online channels. Forrester⁶ reported 74% of B2B buyers in the US researched at least one-half of their work online and 56% to complete at least half of their work purchases online by 2017.

The massive B2B market is abundant with opportunity. For instance, Amazon Business, a Top-20 distributor with over \$10 billion in gross merchandising volume, set to grow at 20% month-over-month⁷. Alibaba⁸ traded more than US\$11 billion on its platform. Despite their market dominance, vertical-specific or regional marketplaces can still earn a considerable share of the US\$7.7 trillion B2B distribution industry.

In both the B2C and B2B markets, online marketplaces are proving to be a significant driver of global eCommerce growth and dominance.

⁶ Forrester's US B2B eCommerce to reach US\$1.1 Trillion by 2020, April 2015

⁷ "The Growth of Specialized Marketplaces in eCommerce" Cyber Infrastructure, 5 Jun 2018

⁸ Demery, Paul. "Alibaba grows its wholesale business with international sellers" DigitalCommerce360, 29 Aug 2018

04. Concept

4.1. Our Opportunities

Target long tail merchants and businesses

Marketplace dominance underpins the eCommerce growth story. Global online marketplaces like Amazon and Alibaba will continue to increase their market share, leading to the creation of massive centralized marketplaces and reducing the ability of small-mid sized marketplaces and e-shops with limited resources and low brand awareness to be discovered.

Research has shown that the eCommerce ecosystem is widely dispersed with a very long tail. Estimates as to the total number of eCommerce outlets range from 12 to 24 million⁹, which are the primary contributors to the long tail phenomena.

Unfortunately, eCommerce faces a roughly 80% failure rate¹⁰. 2015 estimated only 650,000 of the US eCommerce sites are selling more than US\$1,000 annual revenues¹¹, while another source reported just 110,000 websites are generating meaningful revenue¹². Achieving sustainable revenue is a real challenge for these long tail contributors as the vast majority are niche players selling long tail products with low volume and low frequency.

Arcadier sees a significant opportunity to facilitate interconnectivity between these smaller long-tail, hyper-local and hyper-vertical niche marketplaces and online businesses.

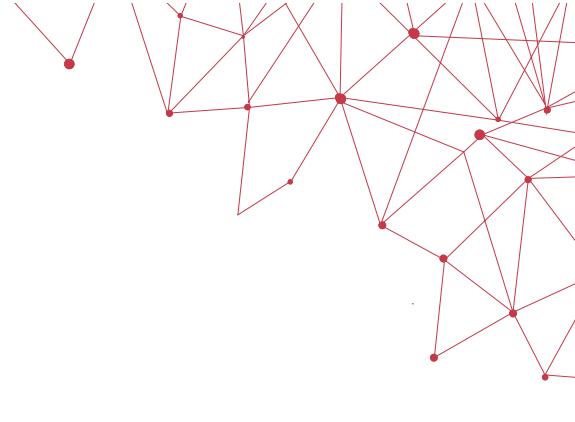
⁹ Rachamim, Omer. "How many online stores are there in the world?" Internet Retailer, 4 Dec. 2014

¹⁰ Labrien, Dianna. "5 Common Reasons Why Ecommerce Companies Fail" TechCo, 28 Oct. 2016

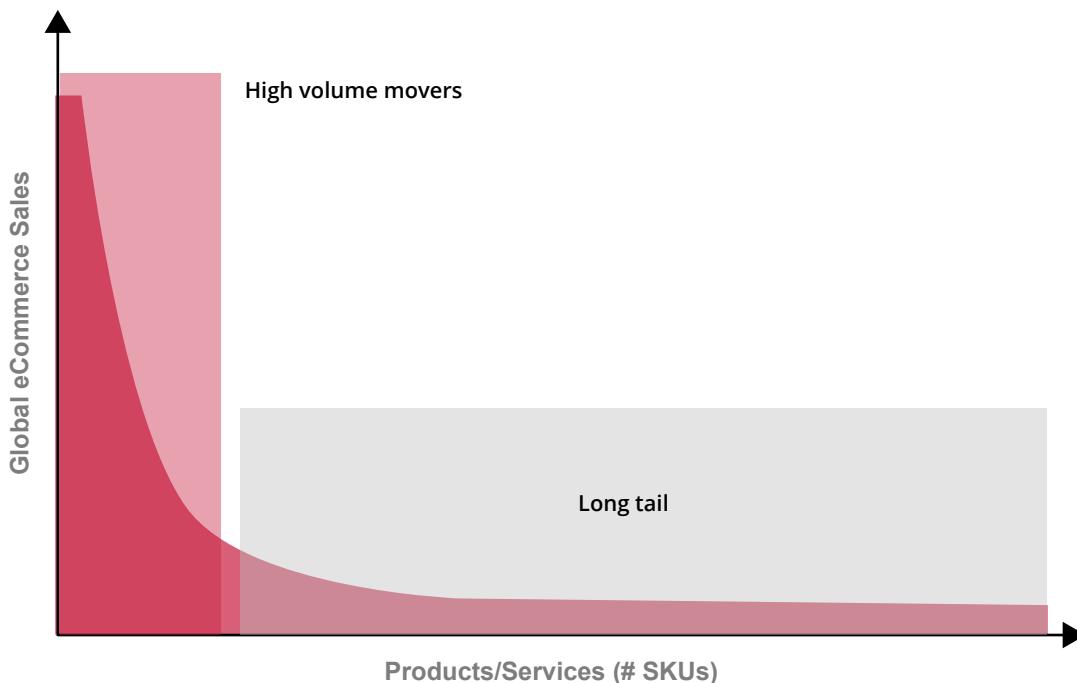
¹¹ Paul, Ross. "Just How Big Is the eCommerce Market? You'll Never Guess!" LemonStand, 26 Jun. 2015

¹² Moore, Robert J. "How many eCommerce companies are there?" RJMetrics's The Data Point, 18 Jun. 2014

04. Concept



Long tail in eCommerce



High volume movers

- B2C eCommerce: 50% are accounted for by global marketplaces - Amazon, eBay, Alibaba and Rakuten
- B2B eCommerce: Top wholesale or B2B eCommerce players dominate - GlobalSources, Alibaba, Amazon Business, IndiaMart, eWorldTrade, ThomasNet, Made-in-China.com and EC21

Long tail contributors

- Exists in both B2B and B2C eCommerce, wholesale and consumer buying
- 'Long tail' is largely contributed by low sales volume items managed by:
 - ✓ independent online brands and merchants or sellers
 - ✓ small-mid sized e-sellers or e-shops listed on eCommerce platforms
 - ✓ Emerging niche marketplaces

04. Concept

Target B2B Enterprises

In the B2B sector, growth of B2B marketplaces could be seen as driven by four business models – one stop shop, distribution channel extension, procurement network and business model transformation¹³. These marketplace initiators could reside anywhere along the supply chain – producers, distribution or service providers, or buyers. B2B marketplaces have always been more prevalent in the private sector, and are now branching into public sectors via B2G (Business to Goverment) and G2B (Government to Business) marketplaces.

Often, B2B marketplaces adopt more complex blockchain use cases and technology solutions to achieve specific purposes, including supply chain procurement, provenance of inventories, and trade financing.



Use case 1: The “Defeat-NCD” online marketplace as an e-procurement solution

The Defeat-NCD Partnership is a Private-Public-People Partnership which was established in January 2018 to tackle the most significant global health problem of the modern age: Non-Communicable Diseases (NCDs). NCDs kill more than 41 million people each year, equivalent to 71% of all deaths globally and are estimated to have an economic burden of US \$47 trillion dollars over the next decade. The sponsor for this Partnership is the United Nations, working through one of its larger agencies; the United Nations Office for Project Services (UNOPS).

In Sep 2018, Arcadier was appointed as marketplace technology partner by UNOPS to build and operate an innovative online marketplace for the Defeat-NCD Partnership; to launch by end Q1 2019. This marketplace will be made available to pre-approved buyers, including government agencies and non-governmental groups, who will be able to source for NCD supplies, including medicines, diagnostics and equipment, from manufacturers. This marketplace targets onboarding at least 100 resource-poor countries over the next three to five years.

Provenance is seen as a favoured use case for integrating blockchain technology into the marketplace as it ensures transparency in processes so that supplies are delivered without fraud.

¹³ “The Blossom of B2B Marketplaces” Roland Berger Focus, Jun. 2018

04. Concept



**Cross River State
Government**

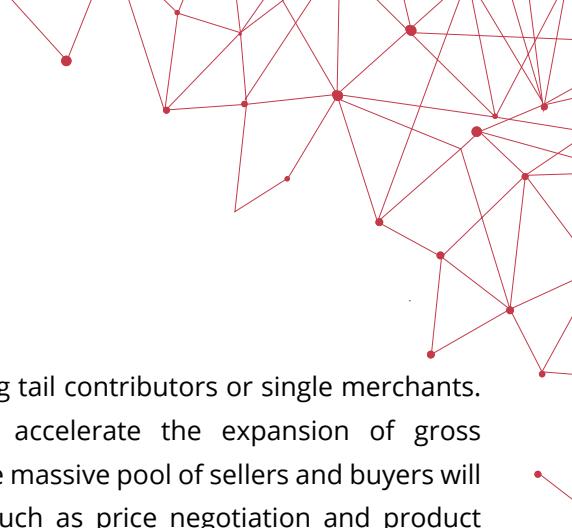
Use case 2: CocoaOne Marketplace for cocoa farmers in Cross River State, Nigeria to distribute their products directly and globally

Cocoa beans are the leading agriculture export of Nigeria. The country produces an average of close to 250,000 tons annually, 30% of which come from Cross River State. In 2018, the Cross River State government assessed the use of eCommerce marketplaces where farmers could premium brand their beans and sell directly to the world.

A memorandum of understanding (MOU) was signed in April 2018 for Arcadier to design and build a B2B/G2B online marketplace. This marketplace would operate with the support of the state government. Farmers in the state will form co-operatives that can sell their cocoa beans and other semi-processed produce such as cocoa butter, powder or liqueur, to chocolate producers directly, thus removing traditional middlemen and achieving the price premium.

Aside from deploying a marketplace, blockchain technology is being evaluated to help prove to the cocoa buyers the provenance of these products originating from Cross River State farmers and production houses. As a side effect, such provenance can help alleviate some of the fraud that can cause issues in both regular and fair trade of cocoa and coffee supply chains.

04. Concept



The average size of B2B marketplaces is generally much bigger than the long tail contributors or single merchants. Adding more B2B marketplaces into Arcadier customer portfolio will accelerate the expansion of gross merchandising volume stored and transacted on the Arcadier ecosystem. The massive pool of sellers and buyers will come from multiple countries and markets, giving rise to opportunities such as price negotiation and product portfolio management.

B2B marketplaces present an opportunity for Arcadier to extend its business services and support relevant cross-marketplace pollination through sourcing, distribution and partnerships, if trust and interconnectivity are enabled on our platform.

Since Arcadier's ecosystem consists of tens of thousands of sellers and millions of products and services, it is ideally positioned to create an inventory network. In this network, products and services may be distributed securely across Arcadier's large ecosystem.

We envision Arcadier enhancing its marketplace SaaS and enterprise offerings with an decentralised inventory network servicing all marketplaces and eCommerce business owners. Our customers could easily access a private marketplace that houses a wide range of inventories with reputational visibility across industry sectors, and secure them for their marketplaces. This presents a unique proposition to generate greater value to our buyers, sellers and marketplace operators while operating responsibly. Our first step would be to establish an interconnected ecosystem across all users. The interconnectivity would prioritise scalability and trust, which are vital for eCommerce marketplaces and the sharing economy.

04. Concept

4.2. Key Challenges

Three key challenges cripple the ability of most niche online marketplaces to scale. These are:

How to scale efficiently in a fast growing eCommerce market?

Access to product variety & quality

New markets & distribution

Cost of marketing & trading

Achieving sufficient product variety and quality is a coordination burden for most marketplaces, which must pursue various sourcing options, locally and internationally. They cannot be sure of the quality of these new offerings until stronger business relationships are fostered.

The ability to access new markets and increase distribution in a cost-effective manner is critical. Niche marketplaces can engage in growth expansion via consolidation or partnerships that drive sales referrals or generate new demand with an expanded portfolio in their respective turfs.

Digital marketing drives web traffic, raises brand awareness and increases sales. However, the fierce competition to rank high is raising the CPC (cost per click) rate year over year, resulting in increased customer acquisition cost¹⁴. For example, the CPC for branded text ads in Google Ads rose 28% year on year in Q1 2018 after growing 23% in Q4 2017.

Trade financing signifies another area of increasing uncertainty in cross-border trade and supply chain finance. For any business that distributes its products or services abroad or wishes to access a wider inventory supply from various locations, an effective trade finance mechanism is necessary. It helps build trust, reduces risk exposure and minimizes hefty transaction costs including letter of credit fees, import duties, insurances, custom broker fees and more. At times, the high cost of trading is passed on from sellers to buyers.

¹⁴ "What is Causing The Increase In Brand CPC?" Bright Vessel, 8 Sep. 2018

04. Concept

Trust is critical to sales success and often listed as the most commonly identified reason for business collaboration failure.

Why gaining trust is hard?

Lack of trust in market

Manipulation of reputation system

Non-portable reputation

Buyer-seller trust must be built in a prospective commercial relationship. A seller's reputation, in the form of ratings and reviews, is the foundation on which this trust is built. Establishing an excellent reputation for creating trust across eCommerce platforms can be an extremely time and resource intensive exercise.

Lack of buyer trust is also concerning. In 2017, eBay was accused of failing its sellers as fraudulent buyers manipulate its system to effectively steal goods via unfair refund/return requests¹⁵. If buyer reputation were more transparently shared, the pattern of suspect behaviour could have been flagged and prevented.

Manipulation or gaming of the reputation system via fake online reviews or "incentivised reviews" is a huge problem¹⁶. This leads to artificially high ratings¹⁷ that increase the visibility of potentially fraudulent products or sellers. The rise of bots, where natural language processing advances are producing more authentic-sounding fake reviews¹⁸, may worsen this situation at hand.

In addition, product, brand or seller reputation is not portable across marketplaces¹⁹, limiting a seller's ability to scale efficiently. According to eRater, 90% of sellers are active on more than one marketplace, but unable to port existing reputation to another platform²⁰. A buyer's reputation is similarly not transportable across marketplaces, limiting sellers' confidence in prospective new buyers.

¹⁵ "Ebay accused of failing its sellers as fraudulent buyers manipulate the system" The Observer, 21 May 2017; Gail, Elizabeth. "Scammers Manipulate Ebay System To Defraud Sellers, Ebay Accused Of Failing Them" Inquisitr, 21 May 2017

¹⁶ "What are the trust issues in e-commerce for buyers?" Monetha, 17 Dec. 2017

¹⁷ "Analysis of 7 million Amazon reviews: customers who receive free or discounted item much more likely to write positive review" MetaReview, 3 Oct. 2016

¹⁸ Nicholson, Mitchel. "The bot army — the latest threat to open review systems" Reevoo, Oct 2017

¹⁹ Stewart, Patrick J. "Reputation And The Sharing Economy" Business Insider, 23 Oct. 2014

²⁰ O'Hear, Steve. "Online Seller Profiling Startup eRated Raises \$1.7M" Techcrunch, 19 Jan. 2016

04. Concept

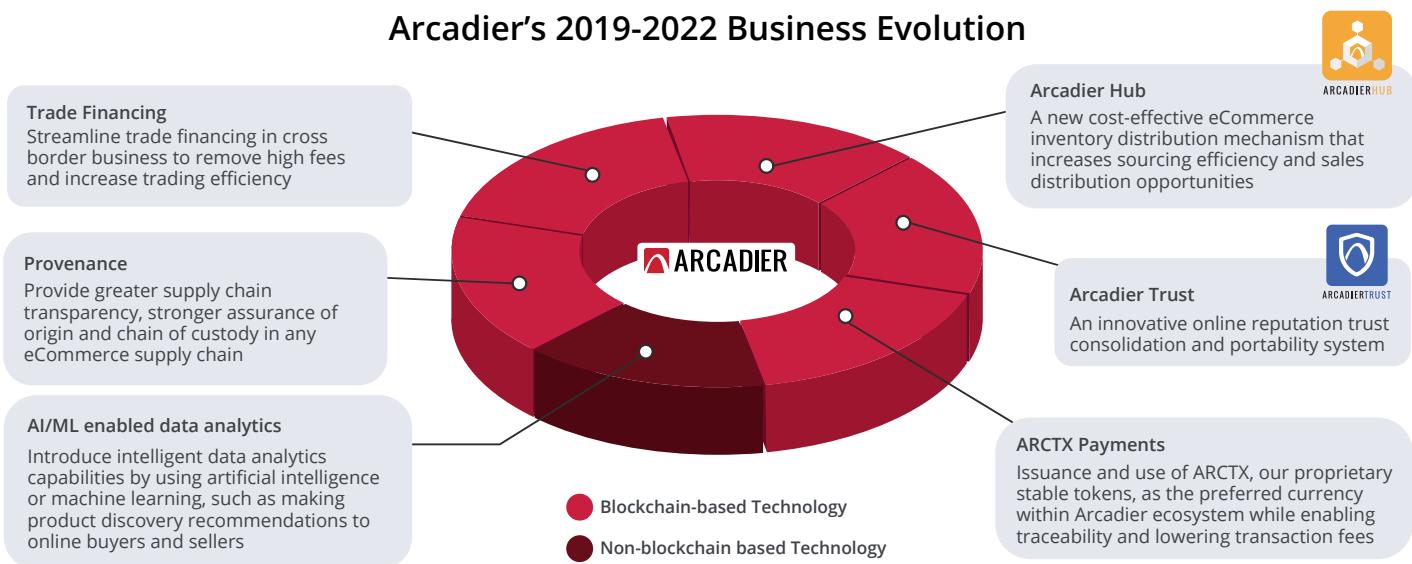
4.3. Value Proposition & Arcadier's Evolution

To capitalise on the opportunities stemming from the long tail phenomena and growth of B2B eCommerce, while staying true to our vision and mission, Arcadier will become a fully-connected intelligent eCommerce ecosystem over the next four years. The adoption of blockchain technology - with its characteristics of immutability, transparency and decentralisation - will assist in this endeavor, as will artificial intelligence / machine learning enhancements.

The marketplace economy is anticipated to move towards greater decentralisation. However, considering the nascent nature of blockchain technology, Arcadier will implement the decentralisation of the marketplace platform features in phases, taking into consideration its development and rate of technology maturity.

With our extensive marketplace knowledge, the new decentralised capabilities will replicate the desired user experience but have improved functionalities. Below provides an overview of Arcadier's next four years of business evolution and its key deliverables:

Arcadier's 2019-2022 Business Evolution



Platform enhancement	Customer value proposition
Arcadier Hub <i>(blockchain-based)</i>	<ul style="list-style-type: none">A decentralised network of global inventoriesEase of connectivity between Arcadier users, third-party platform merchants and marketplaces, as well as independent websitesAccess to vast product varietyVetting of online suppliersMitigate global discoverability issue in a crowded market of online merchants and marketplacesEngage offline merchants for online discoveryOffer affiliate marketing to a ready pool of publisher assets; reduce digital marketing cost and lower customer acquisition cost

04. Concept

Platform enhancement	Customer value proposition
Arcadier Trust (blockchain-based)	<ul style="list-style-type: none">• A distributed system based on verified reviews• Transferable reputation across various platforms• Help establish buyer-seller trust efficiently• A trust mark for newcomers or sellers• Reduce gaming of reputation system
ARCTX payments (blockchain-based)	<ul style="list-style-type: none">• Creation of ARCTX, i.e., Arcadier's stable currency peg to fiat to be used for trading within the Arcadier ecosystem• Build eWallets to receive ARCTX tokens• ARCTX tokens will be issued as a preferred payment method within our ecosystem to lower cost of transaction and enable fund traceability via smart contracts
AI/ML enabled data analytics	<ul style="list-style-type: none">• Power Arcadier marketplace with Artificial Intelligence (AI) or Machine Learning (ML) enabled data analytics and predictive analysis capabilities• Potential features include product discovery and recommendations, listing automation, supply matching, seller and buyer reputation assessment and chatbots• ArcadierX will prioritise developing AI-based discovery and product recommendations capability
Provenance (blockchain-based)	<ul style="list-style-type: none">• Provide stronger assurance of origin and chain of custody in any supply chain• Facilitate communication of quality, provide evaluation by ecosystem participants of quality assertions made, and offer greater supply chain transparency
Trade Financing (blockchain-based)	<ul style="list-style-type: none">• Streamline trade financing in cross-border business to increase efficiency and performance, and remove significant transaction fees• Advantages include real-time review, transparent factoring, disintermediation, reduced counterparty risk, decentralized contract execution and settlement automation

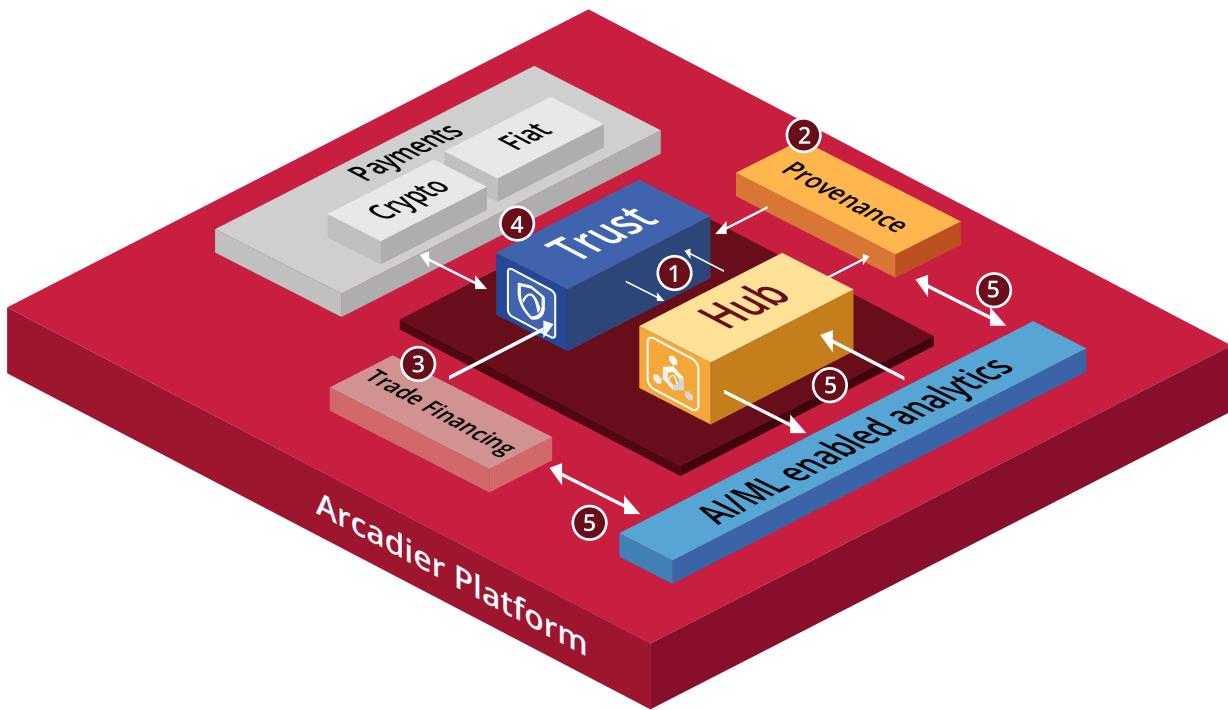
Project ArcadierX will add these six enhancement to our marketplace platform, with Arcadier Hub and Arcadier Trust forming the foundation and ARCX tokens being used for utility payment.

04. Concept

Bringing it together: Interrelationship between ArcadierX's Initiatives

All users should capitalise on the value of ArcadierX by understanding the synergistic relationships among the six enhancements and with Arcadier marketplace platform. Each enhancement, aside from being connected with the Arcadier Platform, will also work with one or more of ArcadierX's other enhancements in form of data exchanges which will increase the reliability and quality of data housed in each blockchain solution. In addition, an ARCX token holder will be able to utilise any required services of ArcadierX depending on their business requirements.

Synergistic Interrelationships between ArcadierX Enhancements & Core Platform



① Cross pollination between Arcadier Hub and Arcadier Trust

Both decentralised applications are in a symbiotic relationship at the core of a blockchain enhanced marketplace platform. Arcadier Hub will be seamlessly connected to Arcadier Trust which will enable relevant content sharing between buyers, sellers and marketplace operators. For example, new authenticated reviews lodged in the Arcadier Trust will be reflected on the sellers' profile in the Arcadier Hub. Sellers' inventories, ratings and reviews ported via the Arcadier Hub's merchant plugins can be referenced by the Arcadier Trust for historical purchasing trend assessment and trust score computation. Users of Arcadier Hub and Arcadier Trust could utilise all features of both distributed systems.

04. Concept

② Utilising Provenance

In transactions where tracing the chain of custody to prove origin and ownership history is of upmost importance, users of the Arcadier Hub and Arcadier Trust can utilise the provenance blockchain, applying the proof of source and authentication along the supply chain, from production through manufacture, and assembly to final distribution to the end buyers.

③ Utilising Trade Finance

The blockchain-enabled trade finance network can benefit all ArcadierX users by easing financing and reducing friction from the logistical and operational inefficiencies across trade supply chain. Users could leverage existing history records and reputation ratings stored in Arcadier Trust and Arcadier Hub and more efficiently share their business records across financial institutions and bring transparency to businesses' credibility. This is invaluable to the small and mid-sized online businesses who face a lack of credit access.

④ Utilising ARCTX Payments

Cross-border eCommerce trade often involves foreign exchange and high transaction costs. Arcadier marketplace users can use ARCTX stable token as an alternative payment to fiat, enabling business-to-business or person-to-person payments across borders on a blockchain-based ARCTX payment system.

⑤ Utilising Artificial Intelligence (AI) or Machine Learning (ML) enabled analytics

ArcadierX's five blockchain enhancements and Arcadier marketplaces will generate, accumulate and share massive amount of data and records. Arcadier intends to harness this information wealth and strategically partner or acquire AI & ML solutions with business intelligence capabilities. We will boost Arcadier's predictive analytics, enhance automation of the five ArcadierX blockchain initiatives, thereby delivering better user experience and drawing relevant information to drive business results.

04. Concept

4.4. Solution: Arcadier Hub – Blockchain-based Inventory Distribution System

Arcadier Hub

Arcadier Hub will be a global provider of new products and services for all merchants connected to it. The Hub houses all posted product and service listings pushed or pulled from opt-in merchants, including third-party eCommerce platforms.

With 7,000+ marketplaces hosted on our platform, Arcadier can kickstart inventory building by inviting them to list and distribute their products and services outside of their marketplaces. Individual online merchants or vendors from third-party platforms can also participate by simply installing the plugin. Arcadier will additionally pursue partnerships with third-party eCommerce platforms. Finally, traditional offline sellers will be offered an online storefront entry to digitise their inventory catalogue and participate in the Arcadier Hub.

Merchant plugins

Sellers and marketplace operators can participate in our inventory distribution system by installing an opt-in API plugin.

Affiliate marketing

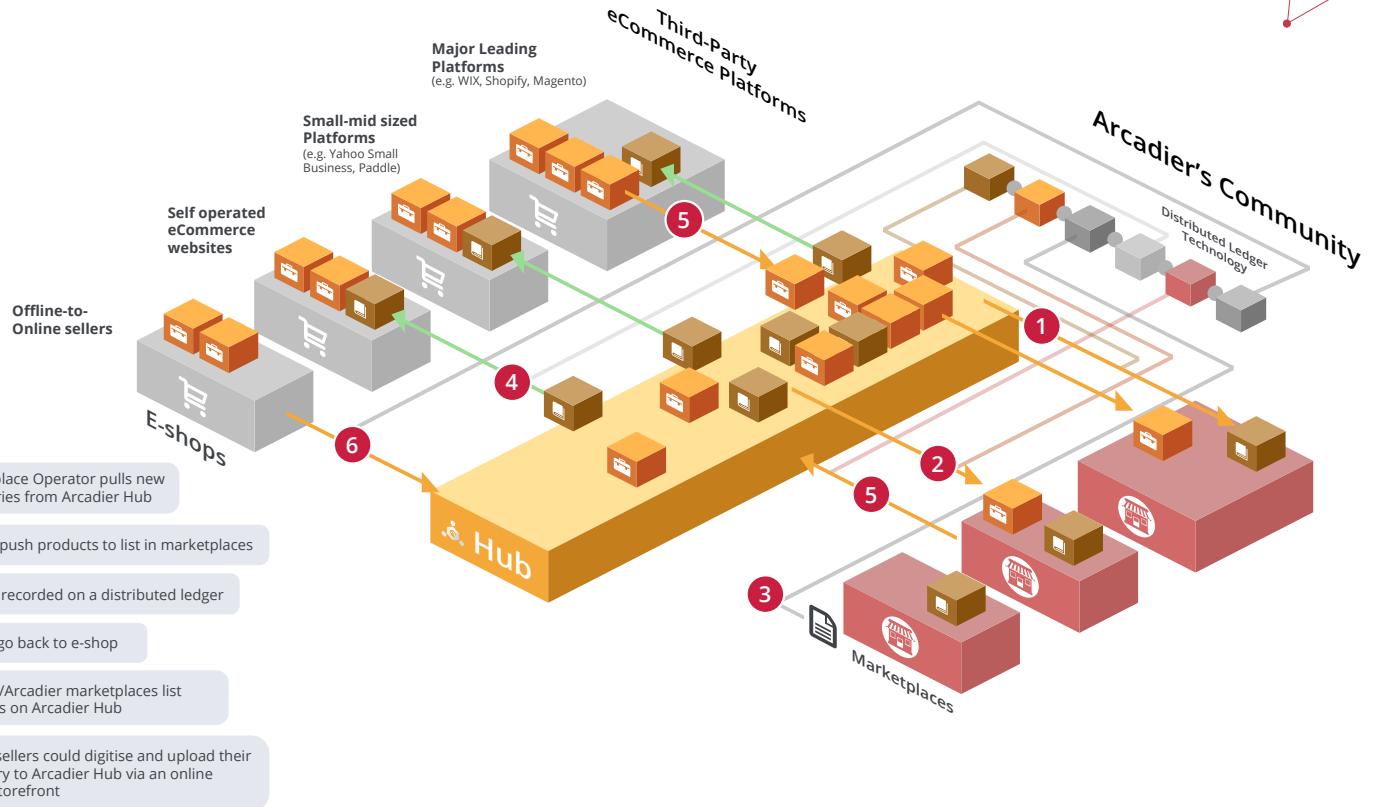
Arcadier's affiliate marketing program will enable merchants to feature their inventories in participating marketplaces either by pull-requests of inventory from the Arcadier Hub or by push-requests from merchants to promote their products or services on other marketplaces. Smart contracts will facilitate traceability of request tracking, reporting, and payment processing.

Smart contracts with escrow

Arcadier will open up a range of new blockchain powered trading and trust enhancements to its marketplace platform, such as using smart contracts to facilitate peer-to-peer (P2P) transactions, with the option of funds escrow and token staking to underwrite trader reputations, thereby eliminating the need for costly intermediaries and making fraud practically impossible.

04. Concept

Arcadier Hub is an inventory exchange for **push** and **pull** requests.



Our ecosystem users will enjoy these benefits while utilising Arcadier Hub's core features:

Highlighted Features	Core Benefits	Who will participate?		
		Buyers	Sellers	Marketplace Operators
Arcadier Hub	<ul style="list-style-type: none"> Faster inventory discovery Provide access to inventory pool 			✓
Merchant/Seller plugins	<ul style="list-style-type: none"> Easy to install and participate Opt in mechanism 		✓	✓
Affiliate marketing	<ul style="list-style-type: none"> Alternative channel with lower acquisition cost for marketers New revenue stream for publishers 	✓	✓	✓
Smart contracts with escrow	<ul style="list-style-type: none"> Immutable and incorruptible records Reduce forgery with escrow security Reduce intermediary commissions 	✓	✓	✓

04. Concept

4.5. Solution: Arcadier Trust – Blockchain-based Reputation Consolidation and Trust Distribution System

Arcadier Trust

With the goal of establishing buyer-seller trust, Arcadier Trust is a decentralised reputation aggregator and trust distribution mechanism that helps users create, access, consolidate, and transfer verified seller/buyer and product ratings and reviews, housing them in a decentralised system.

Arcadier Trust will compute a trust score using both pre-primed relevances (where Arcadier or the marketplace operator will manually intervene and determine a reasonable relevance from the details presented) and statistically determined relevance dimensions. Trust score adjustments will only be adjusted following completion of a purchase and submission of a verified review.

The trust score will consider multiple attributes, such as how the seller has maintained their inventory presence on a marketplace, the time-weighted volume of successful sales transactions over a specified period, and the balance of ARCX tokens held.

The system will assess buyers' historical purchasing patterns to flag potential fraudulent behaviour, to highlight and/or reject fraudulent reviews, and to provide inputs to arbitrators during dispute resolutions.

Ratings, reviews, and trust scores will all make use of the Arcadier blockchain, allowing anyone within our ecosystem to access and verify them.

Ratings comparability

The reputation system will display ratings pulled from their sources. In future, we will permit rating adaptation on a per marketplace basis, varying due to the type and relevance between marketplaces.

Buyer widget

Buyers who want to contribute reviews to the Arcadier Trust reputation system will be able to install a widget in their web browser, permitting them to inspect the authenticity of product and seller ratings and reviews. It will also serve as a form of identity recognition for buyers.

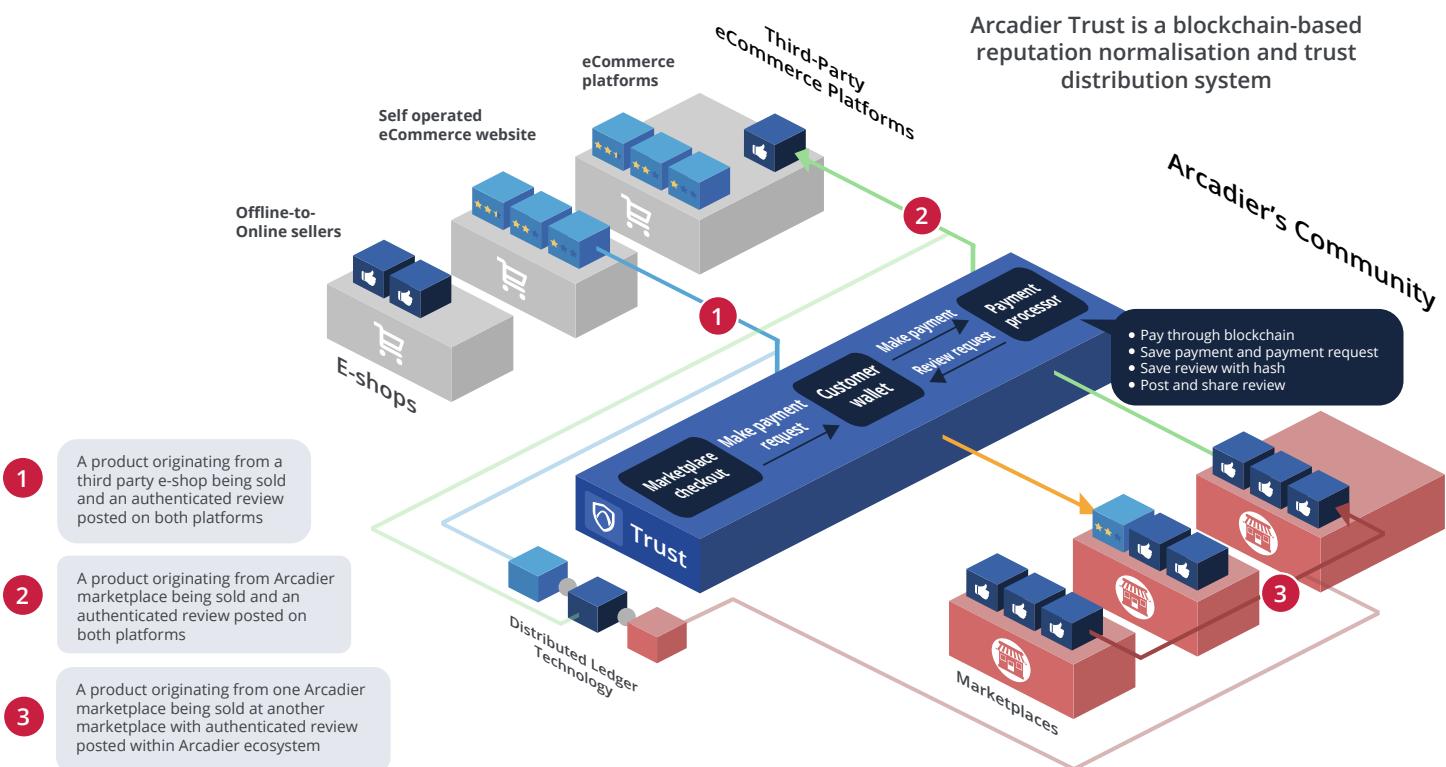
04. Concept

Transferable ratings & reputation

Arcadier Trust enables users to quickly and easily transfer ratings and reviews across eCommerce platforms, including outside of Arcadier.

Verified incentives

An incentive scheme will drive engagement with buyers and increase the quality of ratings and reviews. Reviewers will receive tokens for contributing content to Arcadier Trust and participating marketplaces can offer star reviewers special discounts or early product trials.



04. Concept

Arcadier Trust aims to deliver these benefits to its ecosystem users:

Highlighted Features	Core Benefits	Who will participate?		
		Buyers	Sellers	Marketplace Operators
Arcadier Trust	<ul style="list-style-type: none">• Able to inspect trust score easily• Permit access to new seller pool• Instill buyer confidence on sellers• Trust algorithm to consider relevance of seller rating dimensions from different platforms	✓	✓	✓
Rating comparability	<ul style="list-style-type: none">• Draw and display unfiltered source ratings from original platforms		✓	✓
Buyer widget	<ul style="list-style-type: none">• Easy to participate	✓		
Transferable ratings & reputation	<ul style="list-style-type: none">• Reduce sellers' speed to market• Vetting of sellers and buyers• Easy to transport buyer status	✓	✓	✓
Verified Incentives	<ul style="list-style-type: none">• Offer incentives for verified content• Improve buyer engagement	✓	✓	✓

04. Concept

4.6 Core Customer Value Proposition

Knowing now the symbiotic relationship between Arcadier Hub and Arcadier Trust as well as the synergies drawn among the six ArcadierX solutions, what is the impact on our ecosystem users who will determine our success or failure?

Earlier in Section 4.2, we have described the key challenges faced by the eCommerce participants. Below, we summarize both the user scenarios pre and post-ArcadierX, highlighting the challenges and core benefits experienced by each ecosystem user group, i.e., buyer, seller and marketplace operator.

We offer a quick insight into each user group's perspectives and articulate their daily struggles to compete in the eCommerce market, such as lack of trust and product discoverability. ArcadierX, especially Arcadier Hub and Arcadier Trust which form the two foundational solutions, offer our buyers, sellers and marketplace operators a haven to achieve their eCommerce goals efficiently in a "trustless" ecosystem. The user benefits are tremendous and will significantly improve the user experience on our marketplace platform and drive user engagement.

04. Concept

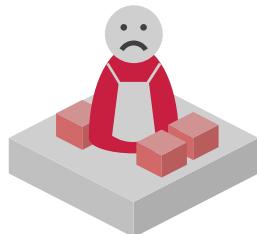
Our Customers' Problems

Buyer



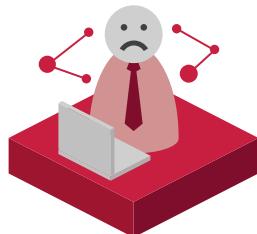
- ✗ Seek products and variety but must search different places
- ✗ Is the seller trustworthy?
- ✗ Unverified reviews and ratings

Seller



- ✗ Struggle to present inventory in multiple places
- ✗ Customer reach is limited by small marketing budgets
- ✗ Hard to verify trustworthiness

Marketplace Operator



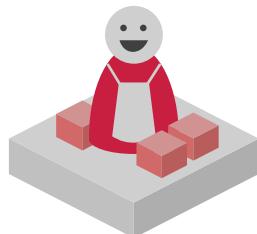
- ✗ Limited range of products/services
- ✗ Seller collaboration difficult due to lack of cross platform integration
- ✗ Hard to assess user trustworthiness



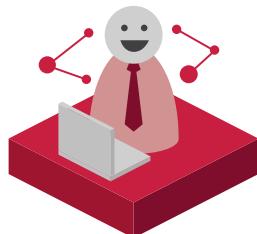
Our Customers' World after ArcadierX



- ✓ Access more products
- ✓ Immutable normalized trust
- ✓ Verifiable item details
- ✓ Recognised ratings



- ✓ Greater distribution
- ✓ Reduced marketing spend
- ✓ Piggyback marketing spend
- ✓ Portable trustworthiness
- ✓ Control where stock's sold
- ✓ No effort to relist
- ✓ Rewarded for participation



- ✓ More verified inventory, supply and sellers
- ✓ Easily onboard new suppliers
- ✓ Everyone is securely verified
- ✓ Opportunistically remarket
- ✓ Rewarded for participation

05. Technology



5.1. Overview

Our solution creates a place where merchants can offer their merchandise for sale by others, and where marketplace operators can go to source complementary items for sale, or vice versa. It is called the Arcadier Hub. This necessitates the creation of a platform of trust, i.e., Arcadier Trust, which shall run in parallel to the Arcadier Hub.

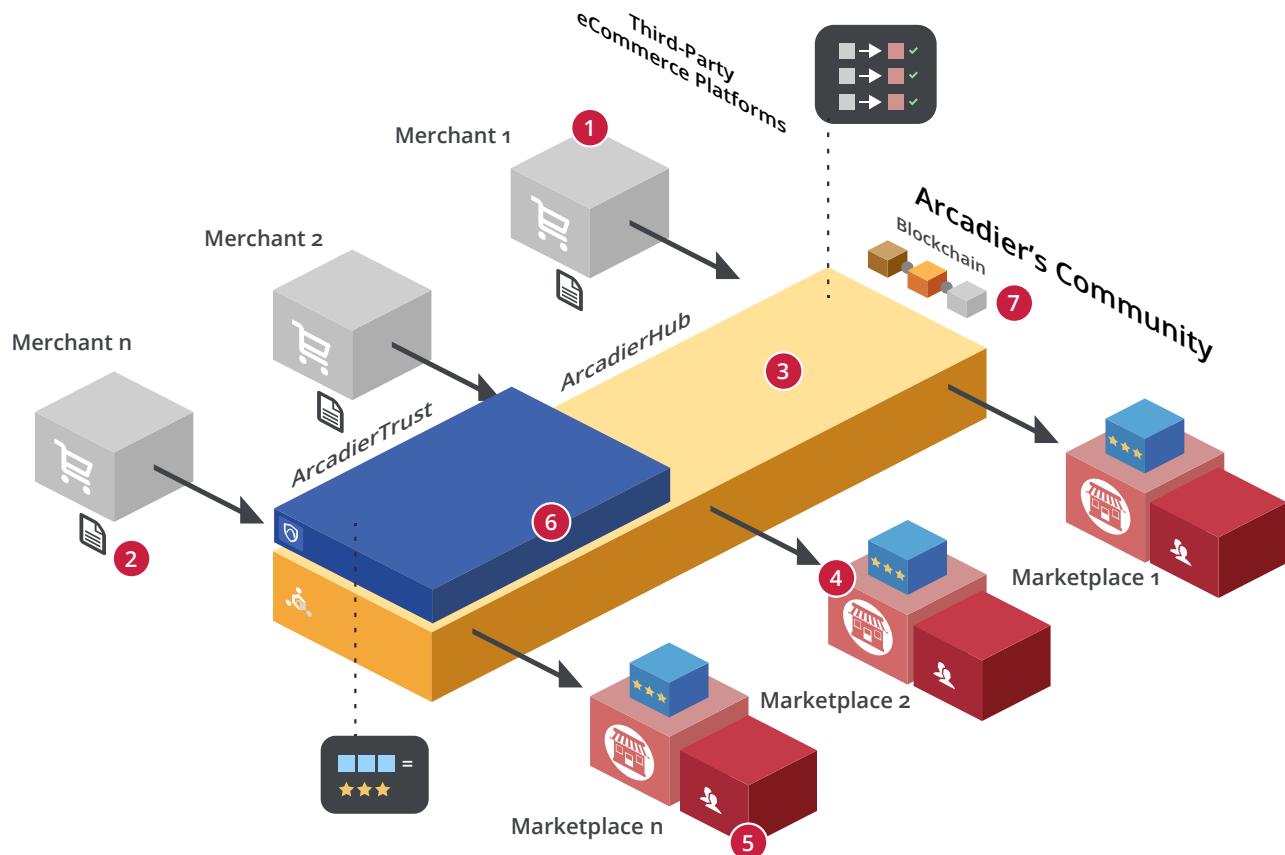
For this to operate, a few mechanisms must be in place:

- The merchants need to already have their merchandise listed in an existing Arcadier marketplace or web-based system; or
- Merchants must be prepared to upload merchandise content that they want distributed directly into the Arcadier Hub.
- The marketplace operators need to be certain that what they select from the Arcadier Hub for re-listing will not damage their reputation.
- They need control over how that reputation is assessed for each merchant, and preferably each item.

Our solution has 7 key components:

1. Merchants
2. Items and their details, e.g. stock levels
3. The Arcadier Hub and the relationships established within it
4. Marketplace operators
5. Consumers
6. The Arcadier Trust
7. The Arcadier blockchain

05. Technology



Note:

1. This section does not display the proposed tokenomics or incentives used in our system. Though these may be acting in parallel this section focuses on how trust is determined and assured through blockchain and other mechanisms. For tokenomics, please refer to Section 7.2 Ecosystem Token (ARCX).
2. In this section, for the purpose of simplicity, we have described how the blockchain technology and flow of process within the inventory distribution system works from the perspective of merchants. We start from intermediaries pushing inventory into the Arcadier Hub and continue until Arcadier marketplace operators pulling selected inventory for re-listing on their website. The solution would work in the same manner but reverse if sellers from Arcadier marketplaces choose to list their inventory in the Arcadier Hub for third party e-shops and merchants to access.

05. Technology

5.2. Key Blockchain Data Points

At what points in the system is information encoded in the blockchain

It is said that actions speak louder than words, and it is for this reason that we record human interactions with our system as a way to reliably determine a user's trustworthiness. Though it would be ideal to store every piece of data in our blockchain, we know that merchants and marketplace operators deal with vast databases and it would be impractical to import all of this information. Instead, we will ensure that data veracity through hashes and tracking of user interactions. To identify the best points to record, we will provide an overview and then focus on the associated interaction points.

The main components of the proposed system are:

- Item details from the originating merchant 
- Representation of that stock in the Arcadier Hub 
- Relationships between merchants and marketplaces 
- Purchases and deliveries of the listed items 
- Users of all types and their expressed satisfaction 

Key Interaction Point 1: When inventory is loaded

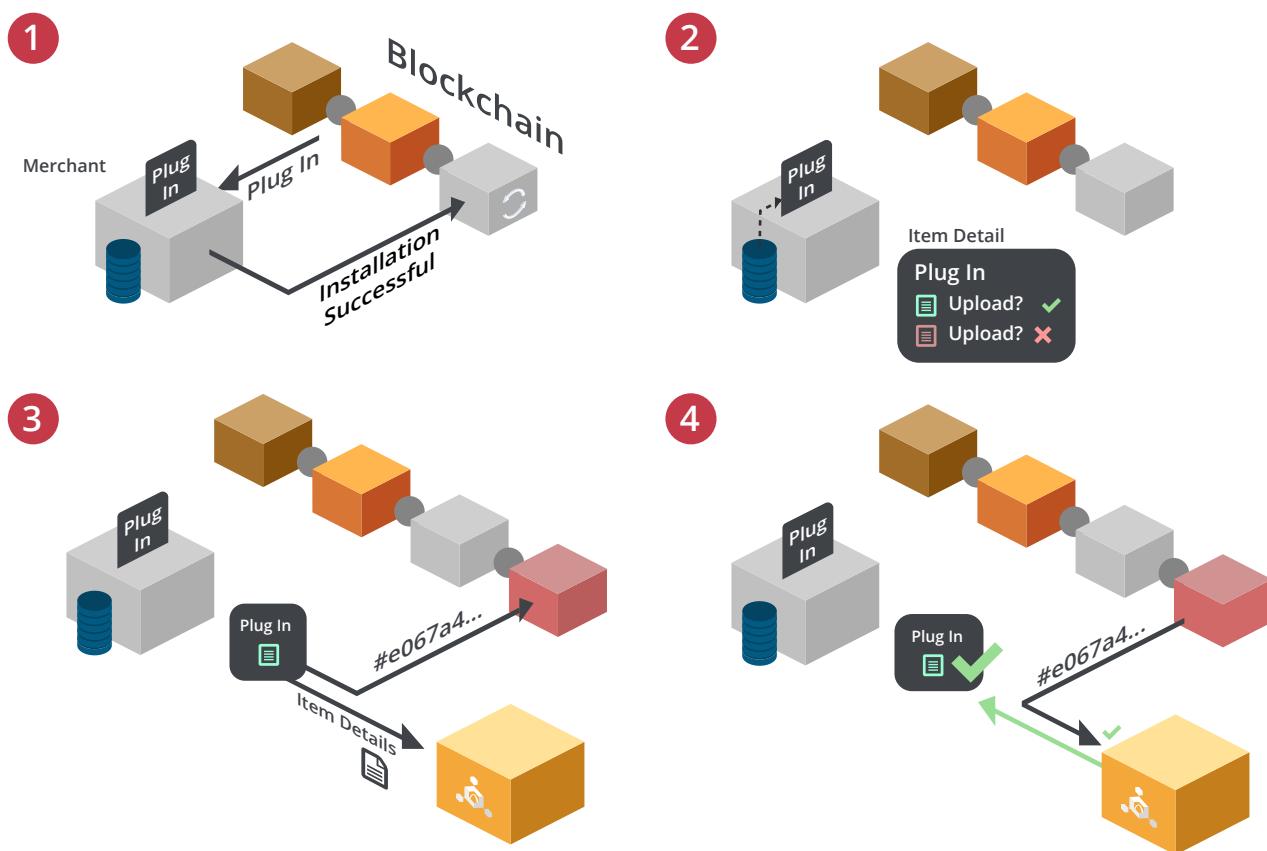
Through the item details, merchants will know what is being listed, its price and availability. But, to feel comfortable with listing someone else's content, the marketplace operator would want to know:

- the item detail accurately matches the actual description of the goods;
- that those goods are in stock;
- that the merchant will drop-ship those items to their buyers and not try to circumvent the marketplace for future sales; and
- that they will do all this in a timely fashion.

To achieve that sort of comfort level, the marketplace operator needs to inspect the merchant's reputation and trust what they have said in their listing. By using appropriate data stored in the Arcadier blockchain, it can help achieve this assurance. Shown below are some of key points of blockchain implementation.

05. Technology

The representation of the stock in the Arcadier Hub must be trustworthy, otherwise a marketplace operator may find themselves listing something they didn't expect, and that listing affecting their own reputation. Through blockchain technology, Arcadier can eliminate the possibility that the description of the goods has been tampered with. The technology to achieve this will be the implementation of a blockchain node within the item import tool used by each merchant, and the storing of a hash of the imported item details within the blockchain (for more information on the location of nodes in our blockchain see the section "Where is our blockchain stored").



The practical process will be:

1. Merchant downloads the import tool (aka merchant/seller plugin) and installs it on their existing web server or IMS.
 - The software tests connecting to the merchant data and writes a registration of its own installation to the blockchain.
 - The inventory blockchain is synchronised with the other nodes.
2. Merchant selects items to offer to the Arcadier Hub.
 - The tool locally prepares the data for vetting by the merchant, but nothing is committed to the blockchain as no interaction with the Arcadier system has been done.

05. Technology

3. Merchant posts the selected items to the Arcadier Hub.

- A hash of each item description is committed to the blockchain while in parallel a copy of the item details is transferred to the Arcadier Hub, using a ubiquitous and unique sequence number for each item.

4. Merchant gets confirmation that the items they chose to upload are available to be re-listed by marketplaces that select them.

- The Arcadier Hub verifies the item detail received against the blockchain and marks the items as valid for re-listing in its database, the merchant/seller plugin retrieves this confirmation from Arcadier Hub.

Key Interaction Point 2: When users rate merchants

If the item details communicated to the marketplace operators and then onto the consumer is unadulterated, the next key factor in determining the merchant trustworthiness is matching of those descriptions with the actual item description. The best person to verify this is the buyer, and so it will be on the strength of the buyer's feedback that this will be rated.

Buyers interact with a marketplace and so their feedback is specific to that marketplace. Additionally, marketplace operators must be allowed to tailor the parameters by which merchant assessment occurs, as these may be unique to each of their marketplaces.

For example, on-time-delivery is a fairly common metric but is meaningless for digital goods. Condition of goods is a similar metric, which is meaningless for travel tickets. So instead we propose that within the marketplace the operator can specify meaningful parameters to assess merchants in their marketplace, and buyers can rate against those metrics. For example:



Market 1, a marketplace selling **produce** may use these rating dimensions:



On time delivery



Freshness



Quality



Market 2, a **clothing** marketplace, may use these rating dimensions:



On time delivery



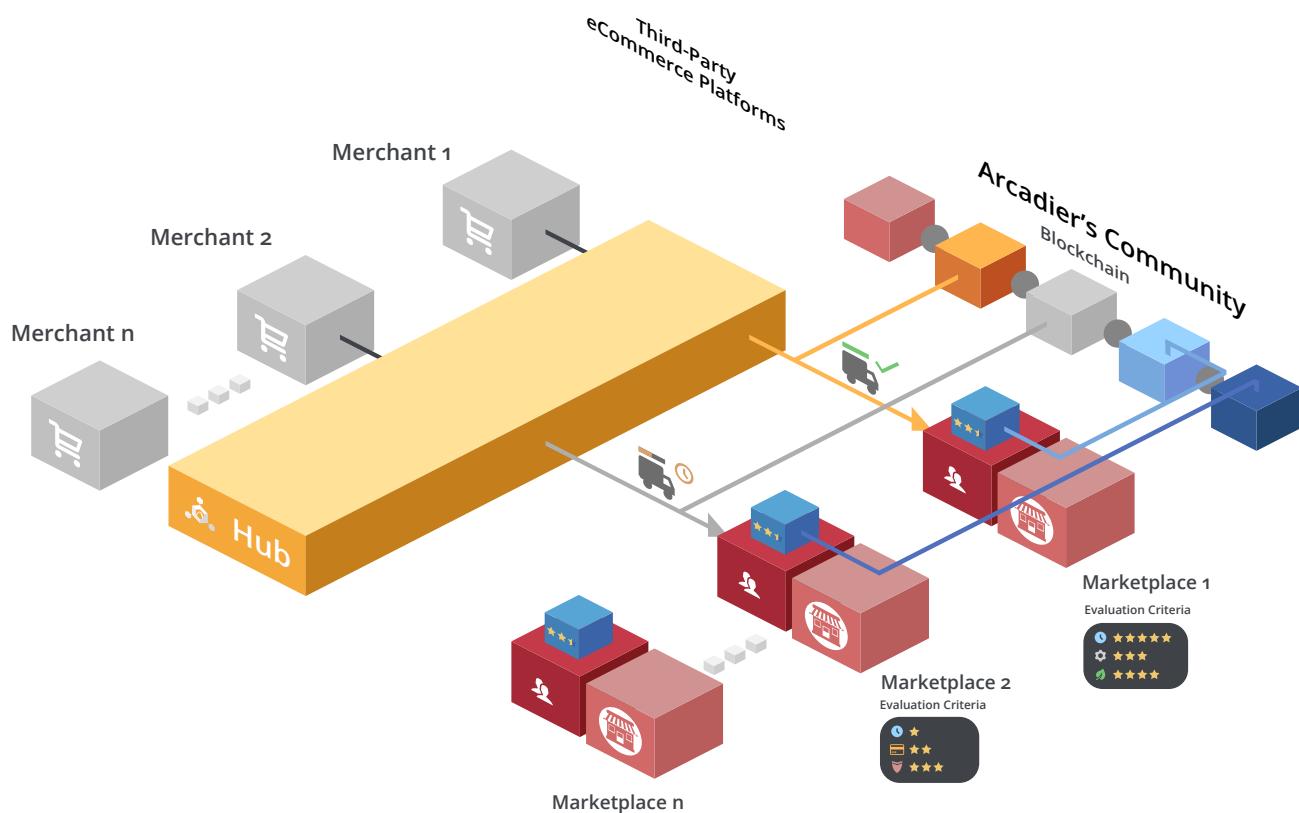
Picture matches what was delivered



Value for money

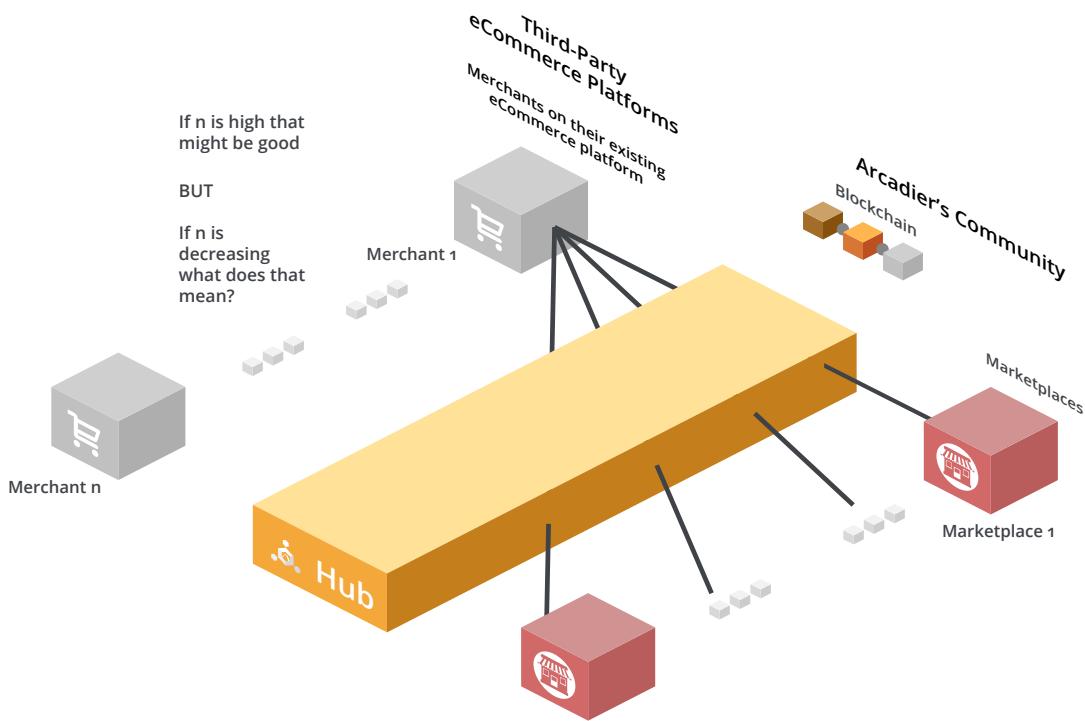
05. Technology

When buyers have completed their purchase and the goods delivered, they will be asked to rate the merchant according to the marketplace's chosen metrics. In addition, after a buyer has made a purchase, the Arcadier marketplace system will track the delivery status of the goods sold. As the delivery status is updated, the details will be written into the blockchain. Delivery status is relatively uniform in the types of status recorded, but as shown previously that may not be reflective of what is important. The marketplace specific dimensions will be recorded in the blockchain in parallel, and in the case of delivery information, will be written even if it is similar or identical to the information collected from the delivery status monitoring.

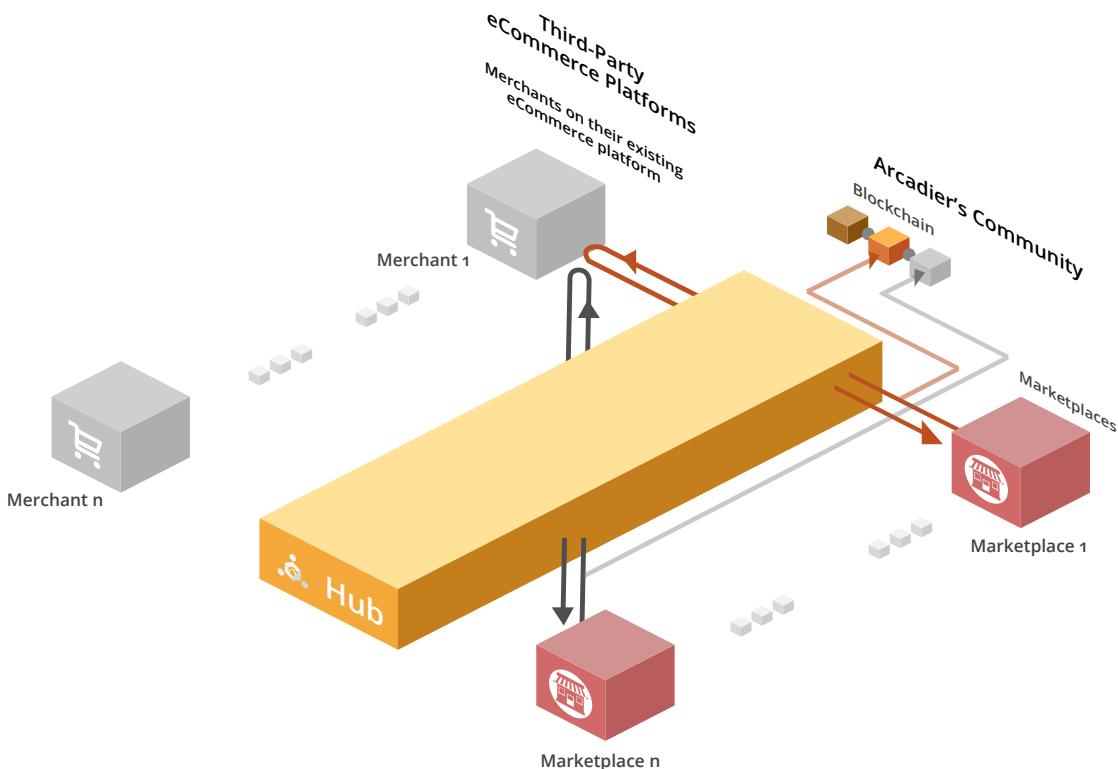


The relationships between merchant and marketplaces offer the marketplace operator another way to inspect the merchant's trustworthiness. Though multiple connections to a merchant may not necessarily correlate to a stronger degree of trust, a trend of reduced connections to a merchant (after the connections had been previously established) may be a sign of an undetermined factor affecting relationships that marketplace specific metrics do not expose.

05. Technology



For this reason, it is proposed that as marketplace operators add and remove links to items that action is recorded against the blockchain.

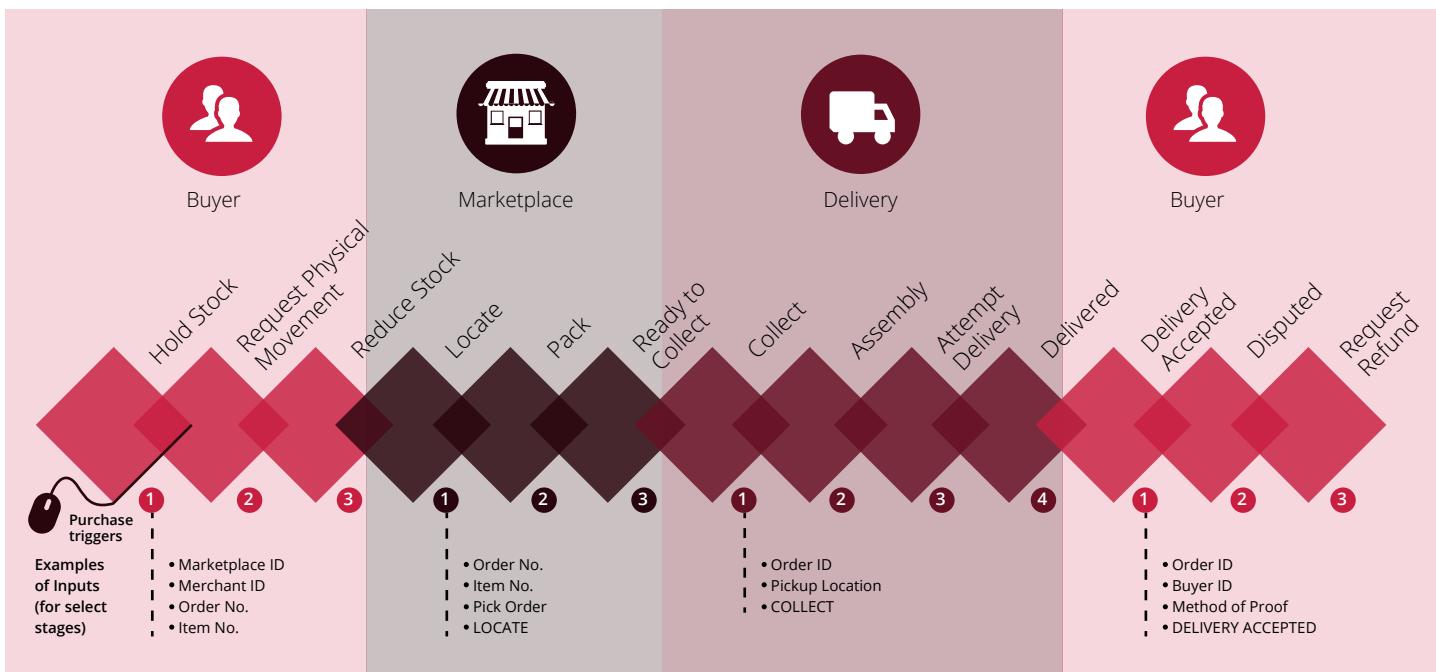


05. Technology

Key Interaction Point 3: When stock moves or is updated

i) Each status update, who triggers it and what is input into blockchain

It is important to note that due to Privacy and Data Protection laws, such as the European Union's GDPR including "the right to be forgotten", the "Who" stored on the Blockchain is not personally identifiable information (PII), nor a consistent reference like a persistent public key, as users must be able to delete or port their personal data by law in multiple countries. This means that identity and reputation will rely heavily on attestations.



ii) Safety stock levels

The Arcadier Hub and the inventory connectors installed by the merchants have controls allowing the merchant to determine not just what stock to share but also what stock levels to indicate. Though merchants cannot indicate levels greater than they actually have, they will be able to list levels lower than in stock or indicate that once a certain level is reached, sales of that item are to be stopped.

This is important to permit the listing marketplace to be assured that the merchant will have stock of the item if synchronisation should fail or not be fast enough. The system will suggest 1 day movement as a safety level.

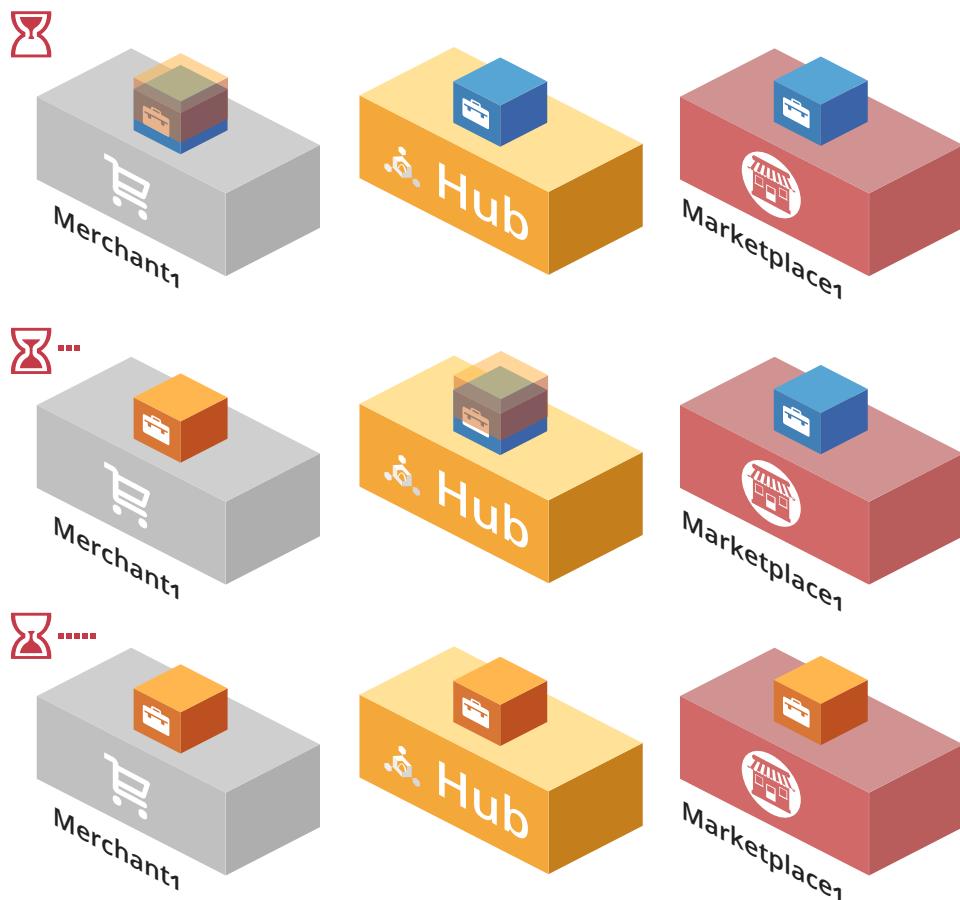
05. Technology

iii) When does stock get allocated and deducted at source

Specifically as detailed above, stock is marked as allocated to an order at the time it is purchased, and can thus no longer be sold. It is then marked as decremented when the item is shipped. During shipping, the item may be lost or damaged, but those flows are handled through exceptional transactions and do not alter the stocked amounts without affecting the stocked quantity and dollar value.

iv) How does that stock change propagate back to marketplace

As changes are made to the detail of an item, the associated hash changes, thus the updated hash shall be written to the blockchain referencing the earlier hash to create a chain of changes in the ledger. All hashes are inspectable by both users of the Arcadier Hub and the Arcadier marketplaces. The users will automatically indicate there is synchronisation required and offer the marketplace operator the option to block old, no longer current item descriptions.



05. Technology

5.3. Arcadier Hub – Forming relationships

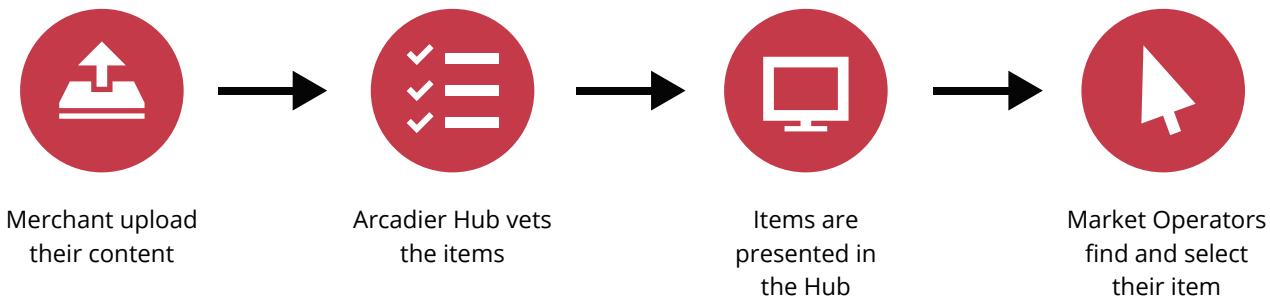
What is the Arcadier Hub and how does it operate?

The Arcadier Hub is a marketplace of content. In a similar way that media networks syndicate programs and cultivate the creation and delivery of new content, Arcadier Hub will do the same with merchandise.

As the eCommerce market grew, physical stores have made their merchandise available online. In so doing, they have made the merchandise details of their business digital. This was also fostered in parallel by many accounting systems run by many business extending their reach to stock management and the growing use of Inventory Management System (IMS) and Point-of-Sales (POS) systems.

Many businesses have a digital version of their stock. The Arcadier Hub and its connectors simplify the process of making that available for others to sell.

The basic end to end flow for content listing is:



How marketplace operators choose items from merchants

In multi-sided marketplaces, the ability to source and list additional products to broaden the marketplace offering is a key aspect to kickstarting the network effects that help marketplaces grow. Whether identifying potential lighthouse items, looking for complementary products to existing offerings, or building a new portfolio or a new market segment.

We can expect that commonly marketplace operators would:

- Search for an item - keyword, tags, incomplete text
- Respond to suggestions made based on their existing marketplace items - AI driven
- Browse categories looking for relevant items - Faux taxonomy

05. Technology

Merchants should tag items or use item detail as metadata

Merchants will be given the option to explicitly tag their items. Additionally, they use the existing item details as source content for tagging. This will permit less manual intervention importing.

Arcadier is additionally reviewing AI classifiers that would be able to perform keyword tagging based on the item data, including pictures. Presently, we are still determining a more powerful solution to integrate with.

Category-less importing

The range of inventory consolidated from Arcadier marketplaces defy categorisation. Permitting the import of such a diverse range of items is much like permitting the addressing of the internet itself, it is so broad and with overlap that explicit classification would be impossible. We have been asked what taxonomy the Arcadier Hub will use and we believe that any imposed hierarchy would limit discovery. As such, we propose that items are loaded in raw and are presented based on discovery through tag-based search. This will permit overlapping categories, direct discovery, deep discovery and new categorisations to be created.

Faux categories based on tagging

Users may want to browse categories searching for inspiration. Such human navigation depends at the moment on predefined classification. This can be achieved with the data we import by making a pre-supposing the tags associated with a category. In such a system, the user will be presented with a taxonomy and navigate down it to a level that offers valuable results.

5.4. Arcadier Trust – Platform of trust

What are ratings and why do they matter, and who needs to trust what?

In eCommerce ratings matter, whether they are against a buyer, seller, marketplace, item or service. Ratings allow the buyers to be confident in their purchasing decision, and sellers can attract more buyers. Ratings often have depth to them, offering an assessment of different capabilities, and allowing the person inspecting those ratings to quickly see a summary of performance.

05. Technology

Arcadier's offering aims to expand the circle of supply and distribution for all parties involved. This will mean that frequently parties unknown to each other will want to interact. When they do, it may be a one-off interaction, but each time they will want to determine their risk exposure. It is imperative that the rating system we offer for this assessment has the utmost reliability and certainty.

Those inspecting a rating and the rated are aware that rating systems can be gamed. What we hope to achieve is a way to expose such gaming and make the ratings meaningful in every interaction.

Our solution will offer the following types of trust based on ratings:

Stakeholder Group	What are their needs and expectations?
For the end buyer of goods & services	<ul style="list-style-type: none">They want to trust the items they are buying and any assurances they are given.
For the merchant of the goods	<ul style="list-style-type: none">They want to be assured they will receive money for the goods they are selling.They want to know their item is not deliberately being presented against competing items just to inflate the competitors' pricing or sales.They want to be confident that if they have paid for their items to be listed on a site, their said volumes and exposure are real.
For the marketplace operator	<ul style="list-style-type: none">They need confidence that their merchants are legitimate and not endangering their clients or reputation.

How merchants are rated on any specific marketplace

Arcadier marketplace platform permits a high degree of configurability, and that's through necessity, as every marketplace needs to commercially differentiate its offering. Their customisations strengthen the bond they have with their client base.

In that respect, it is vital that we also permit operators to define the factors by which merchants are rated in their marketplace. This will ensure the most relevant assessment of the merchants.

05. Technology

Marketplace operators will define the number of dimensions or metrics they want measured. They will also define how those metrics are measured, such as true or false, a number of stars or a rating out of 100 or some other base. For example:



Marketplace 1 may use:

⌚ Did the goods arrive on time?



💬 How did you rate the communications of this seller?



💰 Value for money



1 2 3 4 5



Marketplace 2 may use:

📋 Were the goods as described?



💬 How did you rate the communications of this seller?



⌚ Speed of delivery



Transferable Rating

i) Sharing merchant ratings between marketplaces when they use different dimensions of assessment

The issue around permitting individual marketplace configurability is that dimensions of assessment in each marketplace may not align. So how then do the merchants port their reputation from marketplace to marketplace with our platform? Arcadier will permit transformation of the ratings between marketplaces using both pre-primed relevance (where Arcadier or the marketplace operator will manually intervene and determine a reasonable relevance from the details presented) and statistically determined relevance. But in many cases that will not be possible in real time, so we will also allow automatic display or source marketplace assessment (showing the unfiltered rating from the originating marketplaces) to allow first time interactions to occur with as much trust as plausible.

05. Technology

ii) Sharing of item rating between different marketplaces

Product items and services are themselves independent. They can be seen as embodying the item described and their virtues are bound to that item. Hence adapting the item to a different marketplace may be useful but not mandatory. Where an item is use specific, it will less likely need adaptation. Multi-use or general-purpose items though may sell better with adapted descriptions and ratings. For example, a pair of gloves may protect the user both mechanically and thermally. In this case, it would help to tailor descriptions and ratings.

In the first incarnation of the Arcadier Hub, our intention is to permit the absolute reporting descriptions and reviews made directly on the item. In future, we will permit the adaption of the rating on a per marketplace basis varying due to the type and relevance between marketplaces.

iii) Ratings from third party eCommerce platforms (e.g, eBay, Amazon and Alibaba)

Arcadier intends to leverage strategic partnerships with companies such as eBay and Blue Whale Foundation. eBay has an existing rating system and merchants who are looking for new avenues to sales, can achieve their demand through Arcadier Hub. Blue Whale Foundation is establishing a network of service freelancers who will want the more channels to sell their services so they can saturate their availability. It is important that the ratings they have already obtained are transferable to ours.

The approach of showing the source rating may be something the merchant chooses to continue with for indefinitely as their source rating (if it is presenting an existing eBay rating for example) may be something that is always more up to date than the one garnered on Arcadier marketplaces.

Marketplace platforms often try to discourage multi-homing as it is thought to negatively impact both the listing locations. The reality is that merchants who want to multi-home their content will do so regardless, and will seek the tools that assist them. Arcadier Hub is one of those tools, which will enable portability of their rating across different locations.

iv) SSL verification of identities to create verified sources

Merchants using their existing site as a source of data are likely to have used a Secure Sockets Layer (SSL) certificate to secure their site. These SSL certificates, as in the case of enhanced validation SSL's, possess a significant degree of vetting to obtain. Arcadier will leverage this to enhance the strength of their identity.

05. Technology

Merchants will be asked to upload or indicate the source of their data by an SSL-based bath, and Arcadier to inspect the certificate. The details pertinent to verification will be written to the blockchain against their identity.

5.5. Why is this a blockchain-based solution?

Could Arcadier have done this without blockchain?

The principles of what we propose themselves (distribution of inventory and supply and trust) are not themselves blockchain-based. They are concepts that existed before independently of blockchain and would form on their own merit a good justification to implement the platform we are creating. In the initial stages, in fact, Arcadier is the trusted third party designing, developing and issuing currency for this platform, playing a pivotal and centralized role within the system. This allows for speed and efficiency of building the marketplaces to a point where marketplaces can be launched in a completely “trustless” (anonymous and automated) fashion, and the levers of governance can be gradually handed over to the users of the system itself.

Arcadier asserts this is a pragmatic compromise, as a completely democratic movement will lack the coherence and efficiency needed to develop the required functionality in a suitable timeframe.

The distributed nature of blockchain allows us to build marketplaces where no single party (including Arcadier) can falsify the historical information trail, reducing or eliminating fraud from the marketplace (A seller might still be able to claim they sell the “best” toothpaste in the world, but not that it was manufactured in Europe if it wasn’t).

How blockchain produces immutability?

Blockchains are often described as being immutable, meaning that they cannot be changed. Immutability is an important feature for the trustworthiness of the Arcadier Hub and Arcadier Trust. Different blockchains vary in their consensus models, and therefore in the degree to which their blockchains are immutable. Although the Bitcoin Blockchain is considered immutable unless 51% of the network colludes to change history, Hyperledger Blockchains using SBFT (Simple Byzantine Fault Tolerant Consensus) are safe unless 33% of actors collude, for example. Two other key tricks to ensure immutability include having multiple parties sign transactions, preventing those transactions from being altered without all the counterparties to those transactions being party to the change (which defeats the purpose of many types of abuse, and doesn’t circumvent the need for a 34% or 51% majority, either). In addition, less immutable chains can “piggyback” on more immutable chains by occasionally “backing up”, or checkpointing, a hash of their chain to the more secure chain, so that both chains would have to be overpowered to change transactions.

05. Technology

Why blockchain is essential for ArcadierX?

ArcadierX's platform enhancements include a number of features that are made possible through the use of blockchain technologies, including distributed inventory discovery and objectively verifiable trust metrics.

A key value proposition for Arcadier Hub is to provide multi-homing inventory control for Marketplace Operators and Merchants (Sellers). DLT functionality can prevent double-handling or double-listing of stock items, simplifying inventory control across multiple marketplaces.

Integrating distributed ledger technology into the ArcadierX platform makes it much easier to allow truly peer-to-peer transactions, including product and services transactions.

Blockchain technology permits the future extension of the platform to create tokens as credit created from (and therefore backed by) a smart contract agreement for future purchases. The ability to lower the cost of credit and transaction costs through DLT technology alone significantly improves the value proposition for any marketplace.

The open nature of the majority of blockchains enables ArcadierX to establish standard product protocols and APIs that can allow people to directly interface with the blockchains and list products on other channels and platforms. The use of the ARCX utility token within the platform for paying fees and exchanging services means that participants can exchange value, without having to rely on credit card networks or traditional payment gateways.

Many of these functions will rely on the ARCX token, but the sale and purchase of products for any cryptocurrency can be much simpler if the atomic swaps for product purchase are already established.

Today, DLT technology for on-chain governance is not yet as sophisticated as the legacy off-chain equivalents (early chains with on-chain governance such as Tezos and EOS have faced significant challenges). Nevertheless, building Arcadier Hub and Arcadier Trust with blockchain integration 'from the ground up' will allow for gradual shifts in both the on- and off-chain governance structures when the technology and standards mature to the point where aspects of decision making can be made more democratic and distributed to the users and investors who are directly impacted by them. Having interactions already recorded on-chain in a trustworthy fashion eliminates the need for creating oracles or trusting third parties to confirm such information.

Substantially automating and decentralising the decision making and governance of interactions between participants in the ArcadierX ecosystem can be achieved in future, at the point where DLT governance technology has matured sufficiently.

05. Technology



What we store in our blockchain

The Arcadier blockchain will at time of release permit the storage of:

- Financial transactions;
- Stock movements;
- Party to party rating hashes;
- Item detail signatures; and
- Custom fields agreed to be added from Arcadier Blockchain Extensibility Forum.

The Blockchain itself will not store any Personally Identifiable Information, nor information reasonably at risk of being de-anonymised in future. This type of information will be stored in a highly secured Arcadier SaaS server farm until a more secure, more distributed storage solution is feasible.

Breaking up elements we could list a high-level view as follows:

Participants	Assets	Transactions
<ul style="list-style-type: none">• Buyers• Merchants/Sellers• Marketplace Operators	<ul style="list-style-type: none">• Items• Item detail and stock levels• Trust & ratings scores	<ul style="list-style-type: none">• Item listing• Item movement• Item sales• Buyers, merchants and operator trust• Buyers, merchants and operator ratings

Where is our blockchain stored

1. The Arcadier SaaS server farm; A blue cylinder icon with a red database symbol on top.

2. On every eCommerce data import extension installed by one of our participating merchants; for example,



3. On the workstations of sellers wanting to use our browser-based import tools; for example, seller/merchant workstation registered with Shopify ; and

4. On the workstations of buyer and sellers wanting to use our browser-based identity/fact verification tool.



05. Technology

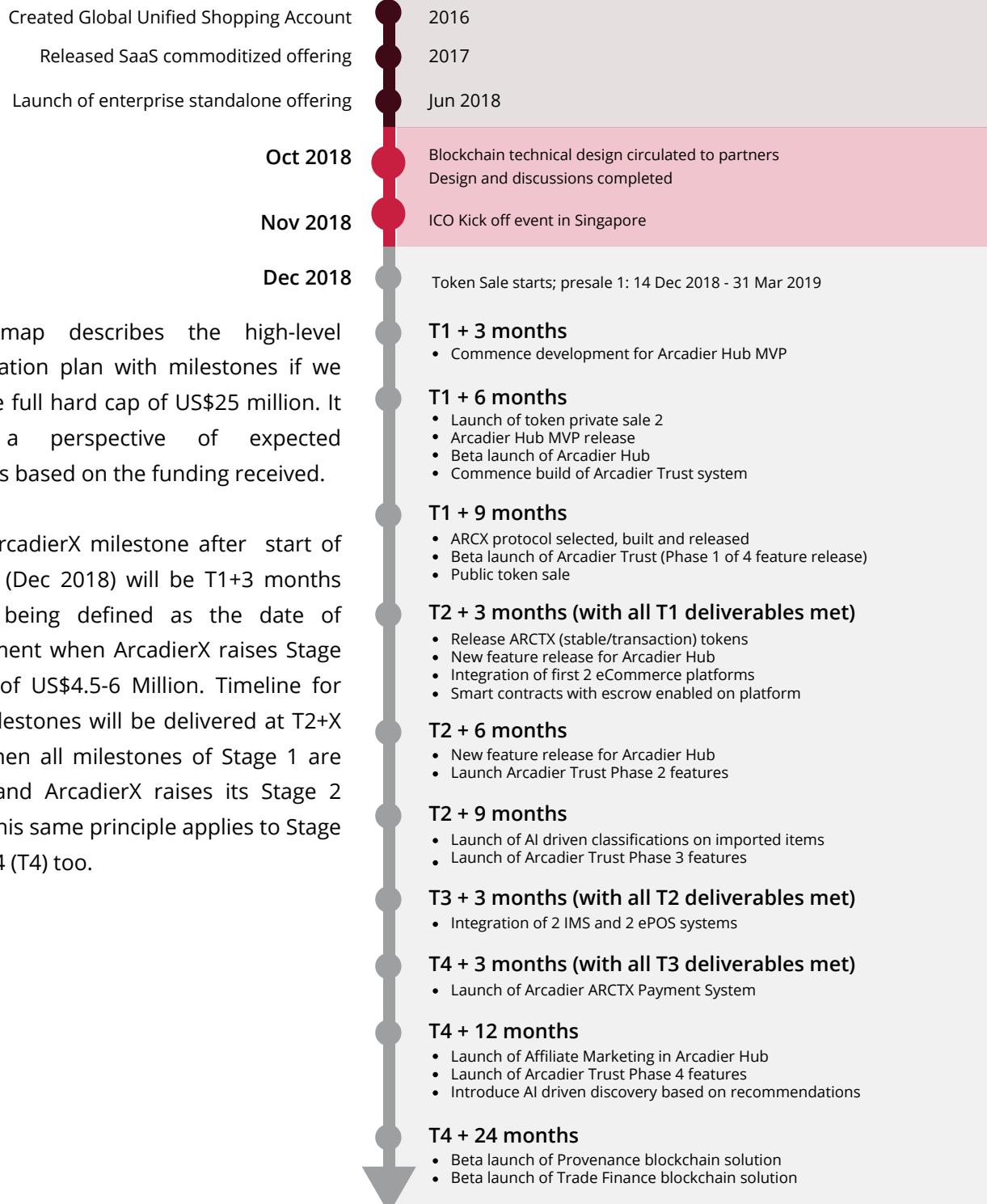
A public or private blockchain?

At present, the intention is to create a hybrid consortium/permissioned/public blockchain on the basis that enough certainty can be obtained on the participants. This goes against the principle of pure public pseudonymous blockchains that have no authentication, thus permitting anonymous parties to join. It may be that the use of soft certification techniques will not be enough to achieve a level of confidence that other participants need.

If that's the case, we would implement a hybrid Public/Authenticated Read, Private Write blockchain, also referred to as a consortium chain. Anyone can inspect the chain, but only registered parties can modify certain parts of the chain. Additionally, some B2B marketplaces will require a high degree of privacy for contract terms, so publicly readable information can be hashed or encrypted to allow only counterparties to access the sensitive information. We will only take this approach if there is enough evidence and user demand to confirm it will assist in increased system usage. The high volume of transactions expected across the large number of marketplaces Arcadier is operating today prevents the use of a public chain with highly variable transaction fees for the vast majority of transactions.

06. Execution

6.1. Roadmap



06. Execution

The table below offers a quick overview of the deliverables with each tranche funding made available to Arcadier. Once the soft cap is reached, we will be able to activate select utility use cases using the ARCX token. As more funds are invested, additional features and system enhancements, as well as token utility will be added.

Proposed deliverables based on ArcadierX raising funds of:				
	Stage 1 (T1) US\$4.5-6M Simplified Hub	Stage 2 (T2) US\$6-13M Basic Hub	Stage 3 (T3) US\$13-19M Full Featured Hub	Stage 4 (T4) US\$19-25M Extended Hub
 ARCADIER HUB	Merchants upload portal Third party eCommerce solutions integrated 2 Merchants can PUSH all content to Arcadier HUB Operators can PULL select content to marketplace from HUB Merchants select content and re-arrange taxonomy No of IMS and ePOS systems integrated Browser-based import tools Affiliate marketing	                                <		

06. Execution

6.2. Go-to-Market Strategy

The Arcadier's blockchain applications will optimise existing infrastructure as well as sales and marketing resources of the Arcadier marketplace SaaS and enterprise businesses.

20% of the funds raised will be assigned to sponsor sales and marketing activities, including the delivery of the go-to-market plan described below. Another 10% will be allocated to help develop strategic partnerships and integration as well as new market expansion activities.

Arcadier's Go-To-Market (GTM) strategy will focus on five tracks with these objectives:

1. Branding and marketing	Reposition and promote Arcadier's unique differentiator as a blockchain enhanced marketplace platform to the market and key stakeholders
2. Strategic partnerships	Secure strategic partnerships that will empower the blockchain-based solutions
3. Buyers/Customers reach out	Build and expand Arcadier ecosystem by gaining user buy-in to participate in our blockchain systems and platform
4. Performance management	Define, track and report on KPIs to ensure GTM success for both blockchain models
5. Market education	Promote understanding and application of new blockchain features to the market and Arcadier users

06. Execution

Go-to-Market Strategy

Supplementary to Arcadier's Core Business Sales & Marketing Activities

	Brand Positioning & Marketing	Strategic Partnerships	Buyers/Customers Reach Out	Performance Management	Market Education
Target Customer Segments	<ul style="list-style-type: none"> ✓ Arcadier's target industries and markets ✓ Users of current Arcadier ecosystem ✓ Arcadier/s blog subscribers ✓ ICO Communities 	<ul style="list-style-type: none"> ✓ Small-mid sized third party eCommerce platforms-priorised ✓ Decentralised marketplaces 	<ul style="list-style-type: none"> ✓ Arcadier ecosystem users ✓ Sellers/e-shops on partnering third party platforms ✓ Offline businesses ✓ Standalone e-shops 	<ul style="list-style-type: none"> ✓ Arcadier management ✓ Arcadier's investors ✓ Arcadier's ICO investors ✓ ICO Communities 	<ul style="list-style-type: none"> ✓ Arcadier marketplace operators ✓ End buyers of Arcadier marketplaces and third party platforms ✓ Arcadier Team ✓ ICO Communities
Planned Activities	<ul style="list-style-type: none"> • Activate relevant communication channels to promote Arcadier's blockchain enhanced platform • Update Arcadier's marketing collaterals • Establish blockchain in marketplace thought leadership via content marketing • Promote early adopter incentives 	<ul style="list-style-type: none"> • Develop partnership collaterals supported with use cases and cost-benefit analysis to participate in Arcadier Hub and ecosystem • Screen and perform prioritisation • Engage partners and secure agreements 	<ul style="list-style-type: none"> • Prioritise and develop vertical use cases with cost-benefit analysis • Promote Arcadier's blockchain features to target customer groups • Roll-out seller / marketplace referral, product review and rewards incentive programmes • Promote early adopter incentives 	<ul style="list-style-type: none"> • Establish Treasury Board; set up, implement and monitor token governance and market mechanisms • Embed blockchain reporting KPIs into regular investor updates and presentations • Develop and roll out a post ICO communication plan 	<ul style="list-style-type: none"> • Develop training and education materials to help users adopt and participate in the blockchain feature • Roll out phased communication activities to inform Arcadier users and market players
Key Comm. Channels	<ul style="list-style-type: none"> • SEO, SEM • Digital - web, mobile and social • PR • Telegram 	<ul style="list-style-type: none"> • Referrals and personal references • Industry newsletters • Select email marketing 	<ul style="list-style-type: none"> • Arcadier notifications • Email marketing • Messaging, social • Telegram 	<ul style="list-style-type: none"> • Email, meetings • Arcadier financial reporting • Investor reporting 	<ul style="list-style-type: none"> • Arcadier notifications • Arcadier knowledge resources - e.g. blogs • PR

These GTM activities will be integrated with the sales and marketing activities of Arcadier's current marketplace business over the next 18 to 24 months, leveraging existing communication channels, resources and business networks. However, the mentioned timing for roll out will be dependent on us at least achieving the required soft cap.

06. Execution

In the first 2-3 months, Arcadier will prioritise brand positioning and B2B marketing among the five GTM tracks. Arcadier will be approaching third-party eCommerce and marketplace platforms for partnership negotiations to connect their online merchants and sellers to the Arcadier Hub. For the first 12 months, we will prioritise engaging Arcadier ecosystem users, followed by small-mid sized eCommerce platforms, standalone websites and offline businesses with interest to go online. However, we will initiate preliminary conversations with select leading eCommerce platforms given existing business connections.

Additionally, market educational programmes and promotional campaigns will be rolled out to raise blockchain awareness and understanding within Arcadier ecosystem, followed by the broader market. The goal is first to educate and promote the adoption and utilisation of the Arcadier's blockchain-based inventory distribution system. This would generate initial fluidity and velocity required to circulate Arcadier's tokens, and also serve as a proven use case for third-party platforms, merchants and buyers to come onboard.

Arcadier is a metrics-driven organisation. Key performance metrics will be defined, monitored and reported to ensure timely delivery and achievement of sales, partnerships and engagement milestones and intended outcome. Communication with key stakeholders, including ICO investors, blockchain communities, Arcadier's investors, and internal teams, will be clearly defined in a communication plan and executed to ensure Arcadier continuously engages its essential audience groups. Announcements and updates will be conducted on both traditional and digital media.

6.3 ArcadierX Treasury Board

ArcadierX will establish a Treasury Board, headed by the Treasurer of ArcadierX.

The purpose of the Treasury Board is to manage the ARCX (and potentially ARCTX) tokens held by ArcadierX for the maximum benefit of the health, longevity and operational viability of the ArcadierX platform.

The remit of the Treasury Board and the Treasurer will be to balance the token reserves and the project's exposure to other cryptocurrency assets and fiat holdings in a manner that optimises token price growth over both the short and longer timeframes.

Choosing the ERC20 token standard for ARCX tokens means that Arcadier is limited to a fixed issuance of tokens. This means there is no flexibility in the token supply itself, although tokens themselves can be subdivided if required.

06. Execution

In this scenario, monetary and fiscal policies will have to rely on a Treasury to manage a reserve pool of funds and set policies to support the token economy, allowing the number of tokens in active circulation to fluctuate according to the level of market demand.

The Treasury Board will create a viable currency over the long term by monitoring and maintaining an oversight on the actual economic activity to prevent price shocks or liquidity issues.

Over the short to medium term, the Treasury Board will be responsible for governance and market mechanisms that support both the short-term expectations of investors as well as the long-term health of the marketplace. The Treasury policy would aim at providing a steady gradual value growth rate per annum.

This will reflect the ongoing increase in the value and utility of the ARCX token as the platform matures and user adoption continues to scale.

07. Token Model



7.1. Dual Token Structure

Arcadier recognises that for our decentralised marketplace platform to function properly, we have to balance the needs of our investors and users in the token design.

A dual token structure is therefore proposed: utility tokens, named ARCX, and a stablecoin called ARCTX. The ARCX token will primarily support the utilitarian service requests made within the Arcadier ecosystem, while the ARCTX token, designed for price stability, will be a practical medium of exchange for transactions occurring on Arcadier marketplace platform.

For the purpose of ICO, only the ARCX token will be issued for both the private and public token sale to the investors. ARCTX tokens will only be launched when the foundational blockchain-based solutions are operational.

7.2. Ecosystem Token (ARCX)

Arcadier will introduce ARCX tokens to primarily support the service requests made within the Arcadier ecosystem. It will be used as a reward for sharing information, token redemption in purchases, content contribution to Arcadier Hub and Arcadier Trust, requesting publisher assets for affiliate marketing, governance in system bug and feature prioritisation.

As the platform evolves over time and adjusts to user's behavior, the Arcadier team will continue to refine and add more features and uses for the ARCX tokens. For example, of many things we are considering, one is the use of token staking as an alternative means to paying tokens as monthly listing fees to access the Arcadier Hub. The use of staking for the privilege of performing work for an ecosystem, whether it be human or electronic work has proven to be a more effective way for tokens to capture value.

Allowing staking makes sense for ARCX, if we look at ways to estimate the value capture of tokens. Essentially, the equation of exchange holds that $MV = PQ$ (Money X Velocity = Price X Quantity). This suggests the total market cap of tokens used to purchase services is the total Quantity of services * the average Price, divided by the (V) number of times tokens are spent ($M=PQ/V$).

07. Token Model

Tokens staked for the right to perform work, on the other hand, can be compared to an investment in a business, where a common way to value a business is to use some multiple (weighted for risk) of the revenue earned over a year, placing total market cap at $PQ * \text{Multiple}$.

References: These common token valuation models are referred to in multiple places. Academic articles²¹ are referenced with respect to $MV = PQ$ for those interested in further understanding the token economics behind these formulas.

²¹ Samni, Kyle. "New models for utility tokens" Multicoin Capital, 13 Feb 2018;
Evans, Alex. "On Value, Velocity and Monetary Theory - A New Approach to Cryptoasset Valuations" Medium, 18 Jan 2018

07. Token Model

How to earn and spend ARCX?

Examples of how users within Arcadier ecosystem could earn and spend ARCX tokens in various ways are shown, but not limited to the following:

Services	Token Utility	Legend:			
		Buyers	Sellers	Marketplace Operators	Arcadier
Subscription	Pay for monthly SaaS subscriptions				
Arcadier Hub	Pay/Stake for monthly Hub listing				
	Pay tokens to push and list inventory on Arcadier marketplaces				
	Pay for transaction commission sold on third party platforms				
	Stake to provide customer support/dropship				
	Pay/Stake to boost seller search ranking in Arcadier Hub				
	Add seller endorsement to boost ratings				
Arcadier Trust	Contribute verified reviews				
	Stake high value transactions involving sellers with no/low trust score				
	Flag fraudulent sellers/buyers within ecosystem				
Features Enhancements	Bug bounty				
	Up-vote system bug fixing or feature release				
Affiliate Marketing	Request for affiliate marketing on marketplaces				
	Refer new buyers or successful referrals				
Loyalty & Redemption	Pay for purchases made on marketplaces				
	Pay for token gift vouchers				
	Stake to issue loyalty or reward tokens per marketplace				

07. Token Model

The staking functions are only possible with ARCX tokens and we will propose incentives to motivate users to engage. For example, with SaaS subscription fee or Arcadier Hub listing service payments, Arcadier could charge 25% less for advanced quarterly or semiannually payments made in ARCX. This would drive usage of the ARCX tokens for fee payments, without penalizing users, and ensures utility for the ARCX token.

The Treasury Board may also decide to honour ARCX tokens at a premium to the open exchange rate for fee payments to encourage token usage and reduction in overall supply. For example, users could redeem tokens for fees, with the Treasury periodically adjusting the minimum fee peg to support a strong and viable utility for the ARCX token.

If the pool of staked tokens grows too large and create liquidity challenges, the Treasury Board can release larger portions of the growth pool into the market to support liquidity.

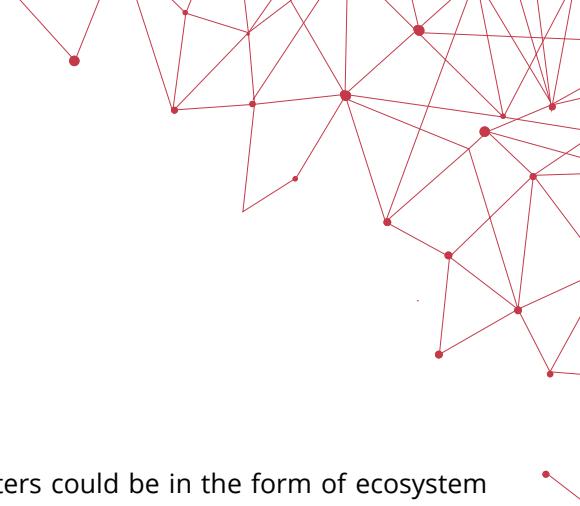
The general rule underlying our staking design in the ARCX token model is to reduce excess liquidity. Payment of fees and release of tokens as incentives should remain approximately balanced while encouraging general platform adoption and growth. Initially, marketplace operators will only be able to use ARCX tokens to incentivize their marketplace users. Once the core Arcadier Hub functionality is built and we achieve a level of stability with Arcadier marketplaces, Arcadier can potentially allow market operators to generate loyalty or reward tokens by staking ARCX.

Alternatively, the modular architecture will allow connections to different blockchains, and once APIs are opened up, capable marketplace operators can add any additional loyalty or reward programs they may require.

To power Arcadier's blockchain functionality, up to 260 million ARCX utility tokens will be created and issued to our network participants, fee payments in the ArcadierX ecosystem could be discounted by a certain percentage, such as 30% (at a level set by the Treasury Board from time to time) when paid in ARCX.

Strategic partnerships will be leveraged to stimulate token velocity and increase the value of ARCX tokens. An example would be to extend our existing agreement with Blue Whale Foundation to build a decentralised referral reward system plugin for Arcadier to generate sales leads, and reward referrers with ARCX tokens so they could engage our blockchain services.

07. Token Model



7.3. What are the Early-Adopter Incentives?

Arcadier will reward early adopters to generate token demand. Early adopters could be in the form of ecosystem users, or strategic partners who will actively engage and participate in the Arcadier Hub and Arcadier Trust. Specific allocation of free ARCX tokens will be offered to the users of these strategic partners as incentives to pay for the Arcadier services.

Temporary early-adopter incentives could be as follows:

- Waive 1st year listing fees for Arcadier Hub
- Reward for paying subscriptions in advance
- Reward for early merchant sign-ons and inventory push to Arcadier Hub Reward for installation of buyer widget
- Monthly user awards for highest activity level in content contribution to Arcadier Hub (inventory, service requests to system) and Arcadier Trust (verified reviews)
- User refers new merchants or marketplace operators
- User contributes ratings and reviews
- User contributes blog article(s)
- Buyer becoming a seller or marketplace operator
- User contributes marketplace support documentation
- User contributes bug reports

The above incentives will be offered over a period of 6 to 12 months. Exact commencement date will be determined by the Treasury Board, reviewing the level of platform and token adoption and monitoring the ARCX activity. The goal is to create a functional token and encourage people to use the marketplaces as intended.

From time to time, the Treasury Board will issue guidance on eliminating or amending incentives that are found to have unintended side-effects (e.g. users creating fake accounts or 'bots' to game the system, or an over-supply of tokens vs. real activity and fees accrued on marketplaces).

Given Arcadier is an existing ecosystem of over 7,000 marketplaces created on our platform, our users will be given first priority to enjoy the early-adopter incentives. We will then prioritise and target the online sellers and merchants of small-mid sized third party eCommerce platforms and self managed marketplaces to participate in both Arcadier Hub and Arcadier Trust. The goal is to achieve some quick wins and deliver preliminary benefits proposed in the blockchain use cases, and activate early token demand.

07. Token Model

7.4. Token Sale Structure

ARCX is a multi-purpose utility token. Our current decision is to use fully ERC-20 compliant Ethereum utility token.

Symbol	ARCX
Standard	ERC20
Token Feature	Multi-utility token
Total token maximum supply	650,000,000 ARCX (100%)
Total token supply for sale	260,000,000 ARCX (40%)
Soft cap	4,500,000 USD
Hard cap	25,000,000 USD
Par value for token sale	1 ARCX = 0.15 USD
Minimum investment amount	100 USD
Public token presale	30% bonus for private presale 1 Effective Price = 0.115 USD per token 10% bonus for private presale 2 Effective Price = 0.136 USD per token
Token contract address	Will be available and published only at https://www.arcadierx.io

The ICO will end when either the maximum number of ARCX is issued or the contribution period has ended. If less than the minimum soft cap of tokens are issued, token sale contributions would be refunded. Unsold bonus will be burned.

Purchasers who commit to purchase a large amount of ARCX Tokens during the sale period ("Presale or Private Sale"), will be eligible for the optional extra bonus. All such bonuses will be discussed individually with each potential buyer, with vesting conditions.

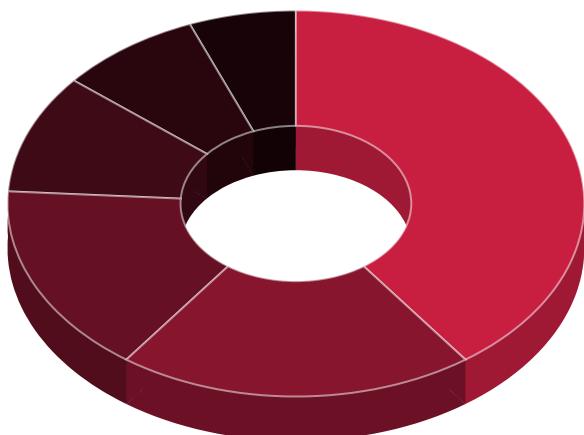
07. Token Model

The platform technology selection is still in progress for Arcadier Hub, and the need to integrate across multiple blockchains may mean that wallets and tokens will need to be upgraded to a different base protocol. Should the most optimal blockchain solution necessitate a change in token protocol, investors will be given the opportunity to exchange ARCX ERC20 token for an equal value in the new token type. Given these requirements and the shifting standards within the DLT technology space, the system architecture will need to be modular, allowing for component interchangeability at the key levels of the DLT technology stack.

At a minimum, the transaction protocol layer, storage, business logic or smart contract layer, the legal (arbitration and contract enforcement) infrastructure and the User Interface layers (Arcadier Hub, Arcadier Trust, and wallets) will be replaceable when technological advancements require it, allowing for each layer to be developed and tested independently in parallel. This means token functionality can be developed and tested while the marketplace integration is still in progress, and smart contracts, chaincode or RPCs will be thoroughly tested before being trialed in specific marketplaces, before being rolled out more broadly.

7.5. Token Distribution

The ARCX token supply will be distributed as follows:



Token Sale	40%
Community & User Growth	20%
IT Development	16%
Arcadier Team & Investors	10%
Sales & Marketing	8%
Advisors & Legal	6%

07. Token Model



40% of all ARCX token supply will be made available in a token sale, for both presale and main sale. 20% of the token will be reserved to incentivise early adopters to utilise our services. Incentives will help build the community and encourage testing, feedback, and general content contribution to the ecosystem. In addition, judicious use of airdrops will encourage event attendees to get started on Arcadier. 16% is reserved for further technology development to further enhance the Arcadier platform with advanced or blockchain technology. 8% is reserved to finance future sales and marketing activities, which include product launches, brand awareness and business development in new additional markets and industry sectors.

10% of ARCX tokens will be distributed to strategic investors, management and key team members with a vesting structure that will ensure the team's interests are aligned with those of the investors and that the team's efforts will be channeled towards the creation of a profitable and sustainable business. The remaining 6% will be distributed to Arcadier's Board of Advisors and utilised for ensuring compliance with multi-jurisdiction legal requirements and engaging near-term legal services.

Fees paid to Arcadier will replenish the Treasury, effectively contributing to all but the Token Sale budgets to cover ongoing running costs. The Treasury Board will rebalance the allocations annually to match the forecast budgets for the year, as these will shift over time.

The community and user growth pool and any unspent tokens will also serve as a liquidity pool to manage undesired volatility under guidance from the ArcadierX Treasurer and Treasury Board, who have the directive to drive marketplace adoption and maximise the utility of the ARCX token for all the participants.

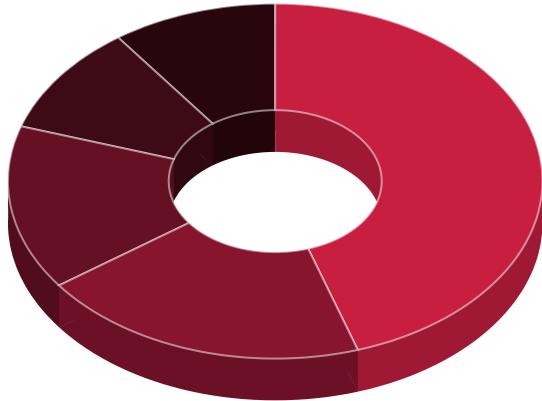
Vesting

The vesting schedule for relevant participating groups is as follows:

- **Arcadier Team:** 3 years with a 1 year cliff;
- **Investors & Advisors:** 12 months with a 6 months cliff; and
- **Large volume purchaser:** Vesting will be imposed and discussed on a case-by-case basis.

07. Token Model

7.6. Fund Distribution



Ecosystem IT Development	45%
Sales & Marketing	20%
Administration and Operations	15%
Market Expansion & Development	10%
Finance, Legal and Compliance	10%

Budget allocation	Description
Ecosystem IT Development	<ul style="list-style-type: none">Development of Arcadier Hub dApp, Arcadier Trust dApp and network features and connectivityDevelopment of Arcadier Trust dApp, features and connectivityDevelopment of stable token, crypto and blockchain-based payment system optionsDevelopment of predictive data analyticsIntegration of Arcadier marketplace platform with wallets and dApps featuresContinuously introduce new features, user interfaces, and language support on the main platform to support the marketplace ecosystem
Sales & Marketing	<ul style="list-style-type: none">Go-to-Market plan implementationBrand awareness and market educationContinuous social community managementAccount management for key enterprise and strategic partners to the ecosystemBusiness development activities for the network
Market Expansion & Development	<ul style="list-style-type: none">System integration with third-party service providers in different countries to perform added variety of services and payment in new marketsStrategic partnerships
Administration & Operations	<ul style="list-style-type: none">Accounting and administrative activities to support blockchain and global business expansion
Finance, Legal & Compliance	<ul style="list-style-type: none">KYC, legal, compliance and regulatory requirements

07. Token Model

7.7. Transactional Token (ARCTX)

One of the most criticised aspects of cryptocurrencies is its price volatility that changes in value dramatically over short periods of time.

To solve this problem, Arcadier proposes to create and use ARCTX as the digital currency for all purchase transactions in Arcadier marketplaces. The ARCTX token is a stable token that combines the stability of the U.S. dollar with the advantages of cryptocurrencies. This is to achieve faster, safer and more efficient transaction processing across the world's economy. This will be exceptionally useful for government agencies, banking institutions or large enterprises, by providing transparency and accountability in the flow of funds through their marketplaces. The ARCTX token will be the preferred method of transactional payment, but fiat money will continue to be accepted on our marketplace platform.

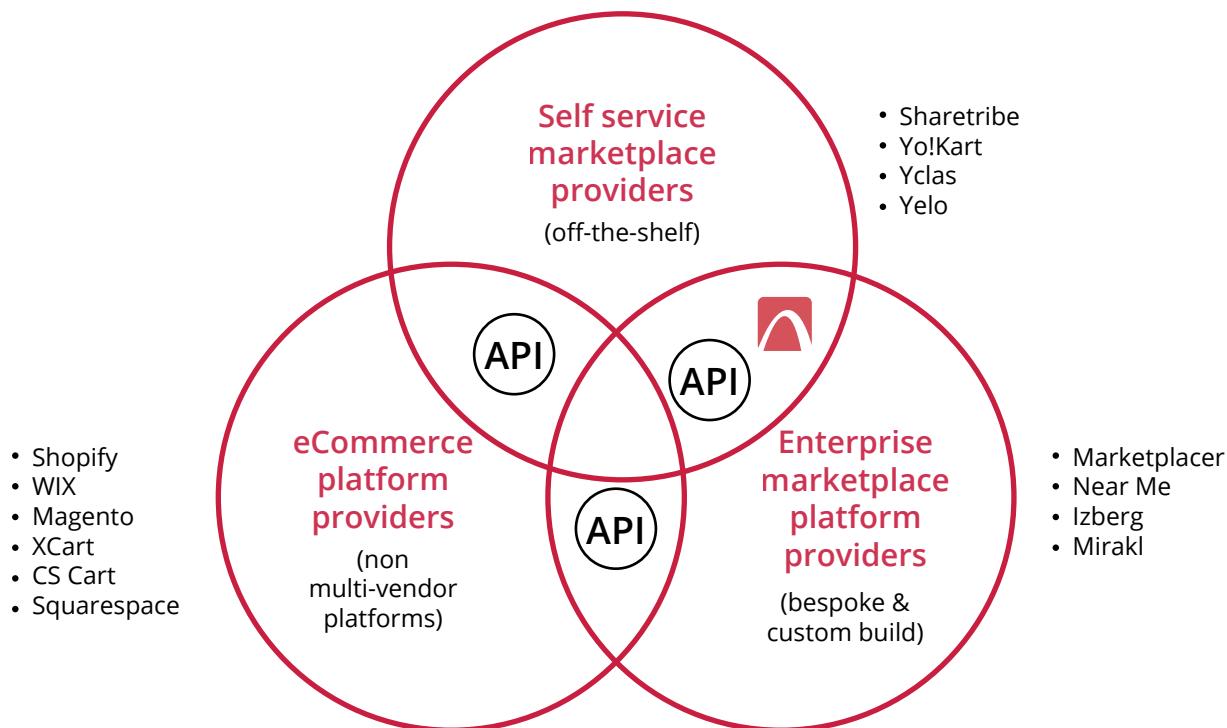
We propose that every ARCTX will be strictly pegged 1:1 to the U.S. dollar. Each ARCTX token will be asset backed at 1:1 U.S. dollars per token with reserves held by a state-chartered trust company. Regular audits on the custodian account will be performed and offered when requested.

Assuming that ArcadierX raises the full hard cap, Arcadier will launch ARCTX tokens in the proposed T2 + 3 months, after all T1 deliverables are achieved (refer to 6.1 Roadmap).

08. Competitors

In the last 3 years, number of companies offering multi-vendor marketplace platforms has increased, as a response to the rising adoption of marketplace business models. Players can be broadly categorised into 3 groups:

Key competitive eCommerce & marketplace platforms



Arcadier competes in both the self-service and the enterprise marketplace spaces. It is the fastest growing multi-marketplace platform with more than 7,000 e-commerce clients in more than 170 countries.

Most eCommerce platform providers differ significantly in pricing, support and flexibility. Izberg, Mirakl, Marketplacer, Sharetribe, Near Me, and Arcadier are among the more widely known in the industry.

Arcadier and Sharetribe are two of the most prominent players in the self-service marketplace sector. Both offer subscription-based SaaS products and are geared towards painless setup and supported scalability. They minimise the financial and technical challenges of building the marketplace from scratch.

08. Competitors

Arcadier is the only marketplace SaaS platform that allows customisation via use of APIs. Our API platform was launched in 2017, while Sharetribe does not currently provide an API. Sharetribe is an open source platform, Arcadier has developed its proprietary marketplace platform technology with high flexibility and performance. Arcadier also partners with expert web developers to help SaaS clients without technical knowledge and enterprise customers to build Arcadier-powered marketplaces.

Arcadier's competitive advantage also lies in the broader range of use cases and features with more templates and customisability to different marketplace sectors including retail goods, service bookings, space rental and goods rental.

Marketplacer, Izberg, Mirakl and Near Me offer custom and bespoke marketplace models for enterprise customers. Their fully hosted end-to-end solutions are geared towards complex marketplace projects and customers with robust funding given the high fees and cost of implementation. To compete for enterprise clients, Arcadier leverages the solid architectural foundation, low fees and development costs, and high customisability resulting in the high value-for-money proposition.

Some of the popular e-commerce platform providers like Shopify, Squarespace and WIX are not direct competitors of Arcadier. They are not multi-vendor marketplaces but focus on delivering secure and customisable single brand e-commerce website or shopping carts for the brands.

Others like CS.Cart, Magento with Marketplace and X-cart do offer multi-vendor e-commerce platform solutions but target small and medium business owners and are rarely seen competing head-to-head with Arcadier within this market.

Arcadier is already a competitive and successful player in the market. With Project ArcadierX, we aim to introduce and integrate the innovative blockchain technology into our multi-vendor marketplace platform. The decentralised model for inventory distribution and reputation system will position Arcadier as the first blockchain innovator among the competitors and allow third-party platforms to connect and collaborate with our ecosystem. This will give us an emergent platform for sustained competitive advantage in the coming AI driven decentralised marketplaces of the future.

09. Strategic Partners

Arcadier is continuously identifying and developing strategic partnerships that will accelerate and improve the development of its blockchain model and improve the delivery of its marketplace model. We are currently engaged in blockchain and non-blockchain partnership discussions that could deliver the following:

- Inventory content loading and access
- Lead generation
- Logistics to enable last-mile delivery in different vital markets
- Crypto-currencies acceptance
- Universal trust enablement

9.1. Blue Whale Foundation (BWN)

The Blue Whale Foundation has created a blockchain-based decentralised ecosystem for freelance workers to find gigs and projects for fair remuneration.

In July 2018, Arcadier and Blue Whale Foundation announced their partnership aimed at empowering participants of the gig economy and changing the global resource-sharing scene.

Blue Whale will build blockchain-based Referral Reward System (DAN) plugin where individuals can be rewarded with BWN tokens on the network for referring others to make purchases on Arcadier's marketplaces, thereby driving demand and traffic to Arcadier's ecosystem, increasing BWN token utility, and reducing the overall marketing costs. Arcadier's marketplaces will also gain access to users of BWN network: small businesses and freelancers.

Arcadier intends to expand the scope of partnership to help drive our token velocity and benefit Blue Whale ecosystem users. Small businesses and freelancers could register and list their inventories on the Arcadier Hub to increase their inventory distribution. Referrers to the Arcadier marketplaces will be incentivised with ARCX tokens when transactions are successfully completed. Buyers residing in Blue Whale ecosystem will earn ARCX tokens if they contribute verified reviews to our reputation system.

09. Strategic Partners



9.2. Alchemy

Alchemy is a newly established crypto-currency payment gateway provider, headquartered in Singapore. It has a vision is to attain the role of Visa within the global world of crypto-currencies.

In Nov 2018, Arcadier signed a MOU with Alchemy to offer Alchemy as a crypto-currency payment gateway option on Arcadier's platform. The terms of partnership included:

1. Offer Alchemy as an online crypto-currencies payment option on Arcadier's platform which may include Arcadier's future crypto-currency;
2. Offer Alchemy as an Arcadier white-labelled online crypto-currency payment option on Arcadier's online solutions;
3. Offer Alchemy as an Arcadier white-labelled offline crypto-currency payment option on Arcadier's offline solutions; and
4. Jointly explore strategic growth opportunities in China and South East Asia.

9.3. Leverage Arcadier's Existing Ecosystem of Partners

Arcadier manages close to 45 partnership agreements for its current business.

Blockchain & Crypto	Logistics	Marketing & Design	Development Partners
Payment			
Technical & Professional Services			

09. Strategic Partners

As Arcadier continues to expand its global presence, we systematically identify and grow the ecosystem of reputable partners that could support our new venture as we scale the Arcadier's new blockchain solutions. Arcadier's partners provide commercial and technical services across various industries. Our partners form part of consortia to support the growth of the Arcadier Hub and Arcadier Trust and add to our competitive advantage vs the competition. We envisage that our network of collaborations will help support the blockchain use cases and encourage faster growth and adoption of the Arcadier Hub and Arcadier Trust.

There are three ways in which our partners can participate in the Arcadier Hub, and the participation possibilities are discussed below:

1. Mutual pollination of potential buyers and sellers

Many of Arcadier's ecosystem partners are large technology companies with a substantial number of engaged users, for example, the payment gateway partners with global user base such as PayPal, Stripe, Braintree, QF Pay and Paystack.

As Arcadier Hub's client base grows, these payment gateway partners would become interested in tapping into Arcadier Hub's marketplaces user base to enable payment systems. Likewise, users of these payment gateways are likely to have an online store whom Arcadier could market to and increase our inventory base.

2. Blockchain workflows for Consortia partners

As the usage of the Arcadier Hub grows so does the trust and dependency on the Arcadier blockchain workflow. Some of our partners who serve users on the blockchain may quickly become part of the Arcadier blockchain workflow.

For example, logistics partners such as Shippo and its affiliated 3PL companies could log the delivery status of products bought or sold from the Arcadier Hub through submitting statuses into the blockchain. Payment gateway partners can also participate in a similar manner for logging the payment transactions. Arcadier will continue to create useful blockchain workflows that could directly benefit the ecosystem partners in their day-to-day activities.

3. Partners who are users of the Arcadier Hub

Arcadier's ecosystem of partners can themselves be users of the Arcadier Hub benefiting from the escrow services when engaging with users of their services to offer secure payments for their services.

10. Team Overview

Arcadier is headquartered in Singapore with offices in Australia, the US and Philippines. We are a team of 40, organized into key functional groups: Product, Front End Design, Development, Marketing and Business Development, Strategy, Customer Service and Finance. We are founded and operated by multi-disciplinary experts who are proficient in marketplaces, payments, mobile technology, internet security, banking, mergers and acquisitions, and eCommerce strategy. There are eight nationalities within our organisation but we work as one team with one vision.

10.1. Management



Dinuke Ranasinghe, Chief Executive Officer & Co-Founder

Dinuke was one of the founding members of PayPal Asia Pacific, and led the team in strategic development and business expansion. He specialises in new product development and market expansion, utilising knowledge he gained studying engineering, global business, business and major programme management. Dinuke has also served as Head of Emerging Products & Technology Innovation as well as Head of eCommerce and Mobile for Visa Australia and New Zealand.



Paul J Cascun, Chief Technology Officer & Co-Founder

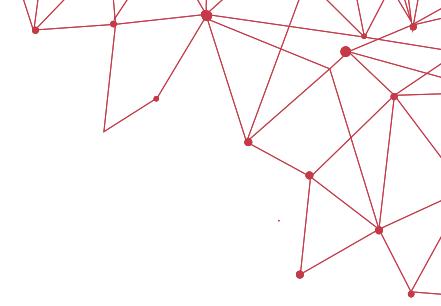
Paul has 25 years' experience in infrastructure and software design/development, taking on roles like Asia Pacific Head of IT for a worldwide designer, manufacturer and supplier of power industry devices. He is the founder of two other companies including X Information Technology, a tech-infrastructure consulting firm serving blue chip clients such as Deutsche Bank, Unilever and Vodafone. Paul led the design and implementation of Arcadier's proprietary multi-vendor marketplace platform technology.



Kenneth Low, Chief Commercial Officer & Co-Founder

Kenneth has over 18 years' experience leading cross cultural teams in executive appointments including Asia Pacific Director of Alliances and Strategy for PayPal, and Asia Pacific Head of Strategy and Corporate Development for InterContinental Hotels Group. He is a proven leader with expertise in strategy, corporate planning, business development, mergers and acquisitions, partnerships and alliance development. Kenneth is also financially trained and certified as a Chartered Accountant in Singapore and a Certified Practising Accountant in Australia.

10. Team Overview



Jiunn Shyong Tang, Group Financial Controller

Jiunn Shyong has 20 years' experience in accounting, financial reporting and business processes, including Group Finance Manager of Inchem Holdings International, Senior Finance Director of Sherwin-Williams Paints and Business Leader in Accounting and Reporting of MasterCard. He focuses on optimising fund utilisation, enhancing financial reporting and improving corporate planning processes.



June Boo, General Manager of North America & Head of Group Strategy

As a business consultant, June has been a Project Leader with Boston Consulting Group (Greater China), a Strategy Manager with PricewaterhouseCoopers (Singapore and New York) and Senior Consultant with BearingPoint Singapore. As a corporate leader, she has served in executive roles at InterContinental Hotels Group, including Head of Channels and Head of Strategy for the Asia, Middle East & Africa region. Her expertise resides in strategy, digital marketing, mergers and acquisitions, corporate planning, performance management and project management.

10.2. Team



Jerome Lasic, Lead Engineer

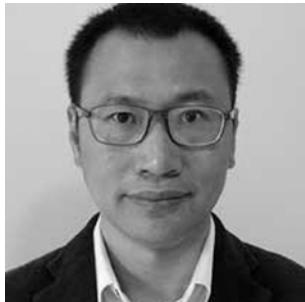
Specializing in .net development, Jerome has 16 years' software development experience including design, architecture, documentation, and support.



Thien Nguyen, Software Development Lead

Thien has been with Arcadier since day one, designing and building our core system. He has a strong background in computer science, graduating with Honours in Engineering from The University of Technology, Vietnam, where he also researched and taught. He has held positions with Fairfax and Fujitsu.

10. Team Overview



Hailing (Henry) Tang, Integration Specialist

With a Masters in IT from the University of Technology, Sydney and 10 years' airline and financial systems development experience, Henry specializes in system design, integration, development and maintenance.



Joseph Long, UI/UX Lead

Joseph leads both the design and the front-end development teams. He is widely recognised as a design expert and had received recognition both as a student as well as professionally. Joseph is responsible for taking product ideas and translating them into interactive experiences for Arcadier's users.



Rachael Chin, Product Lead

Rachael is responsible for product strategy, design and planning for Arcadier products. Rachael's expertise resides in identifying customers' needs, monitoring competitors and market activity, and developing and implementing strategies to support the company's value proposition.



Mak Hesson, Customer Service Lead

Hesson leads the customer service team and is responsible for customer satisfaction and success performance, where his strengths in using design-thinking methodologies to solve customer problems effectively and quickly has built customer loyalty and trust.



Evelina Ip, New Business Manager

Evelina has international experience in marketing, strategy and partnerships including roles in a Shanghai startup, a Singapore food and beverage concept house and at Hyatt Hotels Group in China and Indonesia.

10. Team Overview

10.3. Advisors

**Dunstan Teo**

Dunstan's unique 8 years' experience in blockchain/cryptocurrency industry makes him an invaluable asset as he offers expertise and insights on the global geo political, social economic climate on the latest blockchain technology, market making, and tokenomics. He is currently the founder and Chief Consultant of Kryptotia and holds other ICO roles including Chief ICO Consultant and/or Tokenomist at Wis Xe, YouRoot, BLMP and Oasist.

**Sridhar Nagarajan**

Sridhar is an expert in bringing customer-focused SaaS products to a global market. He spent almost a decade at PayPal, scaling their product team and building a global payments solution for SMBs. More recently, he built the Payments and POS platforms at Ecwid, a startup helping democratize e-commerce, and led the go-to-market team.

**Bradley C Hughes**

Bradley is a highly experienced digital strategist and digital marketing project manager with a 25-year track record of delivering digital business development capability. He has spent the last three years full-time in blockchain startups, consulting, strategy, project management, and marketing execution.

**Professor Lawrence Loh**

As chief facilitator for Singapore's National Technology Plan, Prof Loh has consulted for Fortune 500 companies and international organizations on technology strategy. A Certified Blockchain Expert, Prof Loh is a speaker at blockchain and cryptocurrency conferences, and a regular commentator for Singapore media. Currently a director at the National University of Singapore, Prof Loh received a PhD in Management from MIT where he wrote a thesis on technology governance that was awarded first prize in the worldwide doctoral dissertation competition in the field of IMS.

10. Team Overview

10.4. Arcadier Investors Highlight

The following is a small representation of the prominent professional who believe in Arcadier and have invested both their time and financial resources into us and our people:



Edmond Ip

Hotelier

With over 40 years' hospitality experience, Edmond Ip is recognized as an innovator, credited with growing the number of InterContinental Hotels in China from 30 to 250. Edmond is the co-founder of Banyan Tree Hotels & Resorts.



Daqing (David) Ye

Co-Founder, Chairman and Chief Executive Officer, RONG360 Inc.

David recently led Rong360 to a public listing on the New York Stock Exchange with a market cap of over \$1 billion dollars. He has 20 years' experience in operations and management of internet business and consumer financial institutions in China and the US. He has served as head of marketing for PayPal China, Director of Digital Marketing Capabilities of American Express Company's, Risk, Information & Banking Group in New York, and Senior Manager of Marketing Analysis at AOL.



Hilt Tatum

Entrepreneur

Hilt Tatum is a highly successful serial entrepreneur. Hilt started as a co-founder of the ground-breaking Absolute Poker, which revolutionized online gambling. In recent times Hilt has diversified and become a successful property developer, but has maintained interest in investing behind technology companies with strong management teams.

10. Team Overview



Kenneth Oh

Senior Partner, Dentons Rodyk

A senior partner in Dentons Rodyk's Corporate practice, Kenneth advises on capital markets licensing and compliance, and on a wide range of general corporate advisory work for both public listed and private companies including private equity investments, joint ventures, corporate restructurings, debt restructuring and franchising.



Julie Bainbridge

Director & Head of APAC Merchant Operations at PayPal

Julie Bainbridge currently heads Merchant Services at PayPal for International markets including cross-border and emerging markets. She has led risk management, operations, outsourcing and business support teams globally for PayPal, Facebook, Uber, Amazon and Twitter over the last 15 years.

11. Risks

There are a number of risks that may materially and adversely affect your participation in the Token Sale. Although some of these risks have been described in this section, the information in this section should not be taken as comprehensive or exhaustive.

You should carefully consider and evaluate the following risk factors and all other information contained in the Token Sale Terms and Conditions before participating in the Token Sale. To the best of ArcadierX's knowledge and belief, all material risk factors in making an informed judgement to participate in the Token Sale are set out below.

Risks relating to participation in the Token Sale

Purchase of products from start-ups involve a high degree of risk

Financial and operating risks confronting start-ups are significant and ArcadierX is not immune to these. There are unexpected problems often experienced by start-ups in the areas of product development, marketing, financing, and general management, among others, which frequently cannot be solved.

There is no prior market for the Tokens and the Token Sale may not result in an active or liquid market for the Tokens

The Tokens are intended to be native tokens to be used on the Arcadier ecosystem, and ArcadierX has sole and full discretion in deciding the timing and the cryptocurrency exchange to facilitate any secondary trading or external trading of Tokens. There is also no assurance that the market price of the Tokens will not decline below the value at which it was purchased for. ArcadierX cannot ensure that there will be any demand or market for the Tokens, or that the par value is indicative of the market price of the Tokens after they have been made available for trading on a cryptocurrency exchange.

Negative publicity may materially and adversely affect the price of the Tokens

Negative publicity involving Arcadier, the Arcadier ecosystem, the Tokens and/or any of the key personnel of Arcadier, may materially and adversely affect the market perception or market price of the Tokens, whether or not such publicity is justified.

The trading price of the Tokens may fluctuate following the Token Sale

The prices of cryptographic tokens in general tend to be relatively volatile, and can fluctuate significantly over short periods of time. The demand for, and the corresponding market price of, the Tokens may fluctuate significantly and rapidly in response to numerous factors, some of which are beyond the control of ArcadierX.

11. Risks

Risks relating to ArcadierX

ArcadierX may experience system failures, unplanned interruptions in its network or services, hardware or software defects, security breaches or other causes that could adversely affect ArcadierX's infrastructure network, and/or the Arcadier ecosystem

ArcadierX is unable to anticipate when there would be occurrences of hacks, cyber-attacks, distributed denials of service or errors, vulnerabilities or defects in the Arcadier ecosystem, the Tokens, ArcadierX's cryptographic wallet, or any technology (including but not limited to smart contract technology) on which ArcadierX, the Arcadier ecosystem, the Tokens, ArcadierX's cryptographic wallet or any other blockchain. Such events may include, for example, flaws in programming or source code leading to exploitation or abuse thereof. ArcadierX may not be able to detect such hacks, cyber-attacks, distributed denials of service errors vulnerabilities or defects in a timely manner, and may not have sufficient resources to efficiently cope with multiple service incidents happening simultaneously or in rapid succession.

ArcadierX's network or services could be disrupted by numerous events, including natural disasters, equipment breakdown, network connectivity downtime, power losses, or even intentional disruptions of its services, such as disruptions caused by software viruses or attacks by unauthorised users, some of which are beyond ArcadierX's control. ArcadierX will be taking steps against malicious attacks on its appliances or its infrastructure. However, there can be no assurance that cyber-attacks will not be attempted in the future, and that any of ArcadierX's intended enhanced security measures will be effective. Any significant breach of ArcadierX's intended security measures or other disruptions resulting in a compromise of the usability, stability and security of ArcadierX's network or services may affect the trading price of the Tokens.

ArcadierX is dependent in part on the location and data centre facilities of third parties

ArcadierX's infrastructure network will be in part established through servers that it owns and houses at the location facilities of third parties, and servers that it rents at data centre facilities of third parties. If ArcadierX is unable to renew its data facility lease on commercially reasonable terms or at all, ArcadierX may be required to transfer its servers to a new data centre facility, and may incur significant costs and possible service interruption in connection with the relocation.

11. Risks

These facilities are also vulnerable to damage or interruption from factors which are outside the control of ArcadierX. The third-party providers of such facilities may suffer a breach of security. As techniques used to obtain unauthorised access to, or to sabotage systems change frequently and generally are not recognised until launched against a target, ArcadierX and the providers of such facilities may be unable to anticipate these techniques or to implement adequate preventive measures. Any such security breaches or damages which occur may impact upon ArcadierX's infrastructure network and/or the Arcadier ecosystem and may adversely impact the trading price of the Tokens.

Blockchains may face congestion and transactions may be delayed or lost

Most blockchains transactions are prone to periodic congestion during which transactions can be delayed or lost. Individuals may also intentionally spam the network in an attempt to gain an advantage in purchasing cryptographic tokens. This may result in a situation where block producers may not include the purchaser's transaction when the purchaser intends to transact, or the purchaser's transaction may not be included at all.

Risks relating to Arcadier's Cryptographic Wallet

ArcadierX's cryptographic wallet may be compromised and the cryptocurrencies may not be able to be disbursed
ArcadierX's cryptographic wallet is designed to be secure. However, in the event that ArcadierX's cryptographic wallet is, for any reason, compromised, the funds held at the wallet may not be able to be retrieved and disbursed, and may be permanently unrecoverable.

The loss or compromise of information relating to your wallet may affect your access and possession of the Tokens

Your access to the Tokens in your wallet depends on the safeguards to the information to such wallet. In the event that any of the information is lost or compromised, your access to your wallet may be curtailed and thereby affect your access and possession to the Tokens.



ARCADIERX

www.arcadierx.io