



# raincheck<sup>®</sup>

## WHITEPAPER

A global loyalty & rewards points exchange aggregator based on the Stellar blockchain.

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### Abstract

There is currently no effective decentralized medium of exchange for rewards points between loyalty programs. We propose a decentralized peer-to-peer loyalty and payment network that does not rely on a central authority to maintain trust and enables a dynamic value token. Prior to decentralized ledger technology, attempts to create an exchange of value for loyalty and reward points were centralized, making them almost valueless and very inflexible. RainCheck aims to solve these problems. By using Distributed Ledger Technology (DLT), RainCheck aims to develop a platform which will incorporate loyalty and rewards points using a unique digital token for use by any organization. In the future, this may also include allowing the sharing of loyalty and rewards points at unique values using smart contracts from any organization, while maintaining their stored value. The main focus and traction is with retail brands, airlines and travel organizations. The RAIN Token will pave the way for the disintermediation of the loyalty and rewards industry.

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## Disclaimer

This document is a technical whitepaper setting out the current and future developments of both the RainCheck Platform, which is the underlying cloud based system and RainCheck Ecosystem, which combines the platform system with other services such as eCommerce, payments, proximity, location, loyalty schemes and other third party systems by Rain-Check.It Pty Ltd (RainCheck). This paper is for information purposes only and is not a statement of future intent. Unless expressly specified otherwise, the products and innovations set out in this paper are currently under ongoing development and are not currently in deployment. RainCheck makes no warranties or representations as to the successful development or implementation of such technologies and innovations, or achievement of any other activities noted in the paper, and disclaims any warranties implied by law or otherwise, to the extent permitted by law. No person is entitled to rely on the contents of this paper or any inferences drawn from it, including in relation to any interactions with RainCheck or the technologies mentioned in this paper. RainCheck disclaims all liability for any loss or damage of whatsoever kind (whether foreseeable or not) which may arise from any person acting on any information and opinions relating to RainCheck, the RainCheck Platform or the RainCheck Ecosystem contained in this paper or any information which is made available in connection with any further enquiries, notwithstanding any negligence, default or lack of care.

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PLEASE NOTE: USA, Canada, China, and New Zealand residents are excluded from purchasing RAIN Tokens during the RainCheck Token Sale.

## Executive Summary

RainCheck has always had a mission of transcending the online and offline worlds for brands and over the past three years has maintained that mission by filing patents<sup>1</sup> in relation to the platform technology and winning global innovation awards.

The existing RainCheck O2O Commerce platform has completed a successful pilot phase and is now embarking on a mission to disrupt the retail and travel sectors globally. We are underpinning that effort by extending the existing platform using distributed ledger technology with a cryptographic based utility token called the RAIN Token built using Distributed Ledger Technology (Blockchain), that aims to close the loop on the online-to-offline (O2O), shopping and travel commerce experience.

If successful, RainCheck will be one of the first organizations in the world to have a commerce platform that reaches all points and players in the cycle and the first to finally close the loop between online discovery and offline purchase. This involves offering benefits for both the consumer and the brand while utilizing all the other players in the commerce journey such as payment card schemes, banks, payment service providers, loyalty schemes & coalitions and of course brands themselves.

Unlike many other ventures that are attempting to tackle this lucrative sector, we have been building out the cloud based platform for over three years, and will now bring it all together with Blockchain technology. The RainCheck Platform, utilizing the distributed ledger technology will enable people to earn loyalty and reward points in a seamless way from any brand, and in the future, this may also include allowing the sharing of loyalty and rewards at unique values using smart contracts from any organization, while maintaining their stored value.

Where our solution is different is that we will focus at Stock Keeping Unit (SKU) level and not solely on merchant and spend level. Up until now the payment card schemes (including Visa, MasterCard and American Express) could only offer incentives or rewards at a merchant level; but through our patent-pending method, we can now take that a step further directly to the product level.

This enables us to measure when someone discovers a product online and when, and where, they made that purchase offline. The data that is gathered along that journey was believed to be impossible to gather until now. Data is at the core of what we do and we measure multiple data points throughout the RainCheck Platform.

To be able to design, build and launch a Contextual Commerce Platform takes experience, skill and great partnerships. Our RainCheck Platform has attracted some of the most advanced global organizations, along with some very forward thinking innovative start-ups that all contribute in their own way and allow us to deliver the solutions we do.

So far, our journey and Roadmap is solid and now is the time to take advantage of the Distributed Ledger Technology (DLT), that is the Blockchain, and deliver a platform that we aim to have become the de-facto O2O Commerce Platform for all brands. We've chosen the Stellar DLT protocol platform as the

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<sup>1</sup> <https://patents.google.com/patent/WO2017096437A1/en?assignee=rain-check.it&oq=rain-check.it>

underlying technology, as it was designed specifically for frictionless global payments. We made the decision as we felt Ethereum was too slow, too expensive and too insecure. We've seen many projects utilizing an Ethereum token standard (ERC-20), encounter these problems.

It is always about the people behind the project, our team is both highly experienced in ICT and also well versed in that latest technology and methods for building out data driven solutions. Good projects attract good people and we continue to attract talent from many places.

We encourage you to read this whitepaper and see how we plan to change shopping, travel and commerce forever.

# 1. Introduction

## 1.1 The New Commerce Era

“Between the promise and the purchase lies the shadow” - T.S. Elliot

Everyone is shopping and discovering products online, but only a small percentage overall actually purchase online. It is important to break the online channel down further to find out what is actually going on.

Ever since the late 90's the promise of eCommerce has been the ease upon which someone can go online, find an item they wish to purchase, complete a transaction and have the item delivered or downloaded. Today that promise remains and yet despite most retail businesses now being online, the share of online purchases in retail is less than ~10%<sup>2</sup>.

We think it's important to split items purchased online into two categories 'high-touch' and 'low-touch'. With low-touch items, if you are browsing and purchasing an airline flight or hotel room then online is a no brainer, you know the quality of the experience going into the transaction and price is paramount. However, with high-touch you might be looking for a pair of shoes and can traverse different retail brand sites quickly to find something of interest, but you will tend to want to touch and try-on the shoes before making the final purchase.

Many bricks & mortar retailers, despite recording less foot traffic, are experiencing higher revenue<sup>3</sup>. One of the reasons for this may be that people have done their research and when they arrive at the store they are ready to try and buy. The traditional window shopping experience is now carried out through a glass screen on your chosen device.

Many retailers have started online businesses and run them by different people than their store business. Online retail sales have seen a nice growth for many, however they are new to the game (last 5 years), sooner or later the growth plateaus and drops back to slight growth. Also, many retailers never include their return rate in their online sales figures, which can often run up around 30%<sup>4</sup>.

If in fact people are omni-channel shopping then much more focus should be placed on transcending the online shopping to in-store purchasing, however this is often not happening. Click and Collect was one strategy but there are costs associated with this practice and it is hard to get right. Mobile is probably the best channel to achieve this.

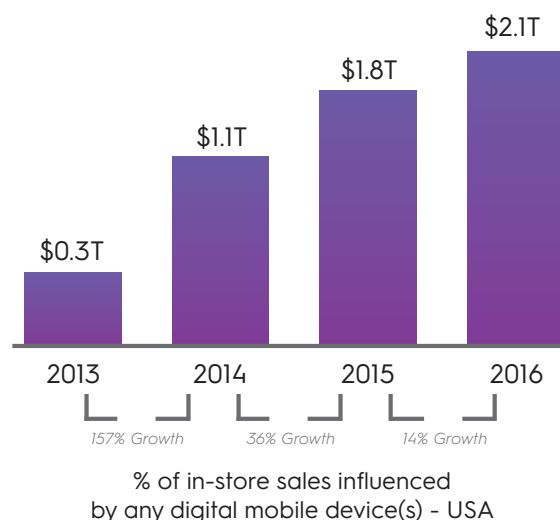
The sales that Mobile influenced in 2016 account for over one-third of total retail (online and offline) sales. More importantly, mobile phones influenced \$1.4 trillion in offline sales over five years<sup>5</sup>.

2 "Worldwide Retail Ecommerce Sales Will Reach \$1.915 Trillion This Year." 22 Aug. 2016, <https://www.emarketer.com/Article/Worldwide-Retail-Ecommerce-Sales-Will-Reach-1915-Trillion-This-Year/1014369>. Accessed 14 May. 2018.

3 Consumer insights about habits and behaviour 2018: PwC." <https://www.pwc.com/gx/en/industries/consumer-markets/consumer-insights-survey/new-consumer-habits.html>. Accessed 14 May. 2018.

4 <https://www.forbes.com/sites/stevendennis/2018/02/14/the-ticking-time-bomb-of-e-commerce-returns/#58f2e3a54c7f>

5 <http://www.geomarketing.com/mobile-influenced-2-trillion-in-retail-sales-in-2016>



Source: Forrester<sup>6</sup>

All retailers know that “sales run the shop” and online shopping has not only created a simple discovery channel, but more importantly, influenced mechanisms such as price comparisons, location/proximity, reviews and inventory data.

Many people talk about the “good old days of retail” a time when you could walk into a store and the shopkeeper knew your name, your personal story and also your shopping preferences. You were instantly offered options when it came to colour, size and fit, the likes of which most Gen Y and Millennials will never have experienced today.

While this old-school, personal interaction and customer experience is considered golden, it’s also something that many bricks and mortar retailers believe they are unable to now effectively replicate. However, there is no better time to get personal with your customers. The reason? Today the shopper controls the retailer; they decide when they purchase, where they purchase and what they want. With 90% of purchases made in store, there is a huge opportunity for global retailers to take back some of the power and change the face of the shopping experience for consumers.

To explain why, we need to take a look at the background of online retail. In the late 1990’s, when eCommerce came to fruition, the promise of being able to sit in your sleepwear and shop online, all while sitting at home in front of your setup of a 17" 20kg screen and large desktop PC, was amazing. The ability to order anything you wanted saw people flocking to buying online in droves, yet the reality of the experience was nowhere near as easy as the promise.

Fast forward to today where we are living in an online world, those large cumbersome PC’s have been replaced with devices that fit in the palm of the shopper’s hand; and are much more powerful. The challenge? Hardly any stores are connected in a fully integrated way, and the retailer’s strategies are still aimed at people sitting at home, browsing for bargains, whilst in their sleepwear.

A large volume of retailers have developed, and implemented, strategies solely based on a fixed web

<sup>6</sup> Graph source: Forrester Data Retail Forecast, 2016 to 2021 (US); Forrester Research Web-influenced Retail Sales Forecast, 2015 to 2020 (US); and Forrester Data: Mobile And Tablet Commerce Forecast, 2016 to 2021 (US). (Note: Does not include travel).



approach. With the use of social media feeding into their online store, they have been able to give a responsive mobile experience and search. Time and time again, we are seeing retail brands that are struggling with the value of apps, knowing that consumers won't readily download a large number of retail based apps on their device, that in reality is just an extension of their website and offers nothing new to the user. As it stands, eCommerce only accounts for a total of 10%<sup>7</sup> of all retail sales and has a five year global growth rate of just 2.9%<sup>8</sup>.

Add to this, the fact that shopping cart abandonment rates are sitting at 75%-85%<sup>9</sup> and there is a global total of \$4.6 trillion<sup>10</sup> (of seemingly unwanted) goods that are never purchased.

As it is, 85% of people say they are likely to browse online and make a purchase in-store, revealing there is still the need for retail storefronts<sup>11</sup>. While the shopper's journey hasn't changed much from the original 'Discover, Desire, Consider & Purchase' pathway, that journey now takes place starting in the online world and moving to offline (O2O); people are now browsing online and buying in store with an omni-channel approach.

It's understandable that retailers will want to harness this behaviour and in store shopping habits. Just like the shopkeepers that knew what you came into the store for, there is the opportunity for retailers to give the same experience to their consumers. The technology platform to enable this and allow an unprecedented shopper experience for customers, is mobile.

By the time most people enter the store, as a result of online browsing habits, they will know more about the product than ever before. They have discovered, desired and considered the purchase. It then comes down to the role of the shop assistant, and retailer, to offer the "last mile" experience. The consumer will have advance knowledge of price points, reviews and in some cases stock availability, so it is becoming increasingly challenging for the shop assistant to add value.

It's indisputable that as a result of this browsing behaviour, an eCommerce site is vital for any retailer and allows maximum opportunity for consumers to browse and understand a product. However, for stimulating desire, once the shopper leaves the site, the retailer has no idea where they went.

Did they visit a store? Did they make a purchase? Where was the purchase made?

The challenge for retailers is to step up to the plate and take control back from the shopper. If over 90% of retail sales are happening in stores, there is an untapped opportunity for retailers to look at innovation. It's about using technology to close the sales at the point when it's both contextual and relevant, while also building real relationships with shoppers and helping influence the sale and experience.

7 E-commerce share of total global retail sales from 2015 to 2021' - Statista 2018  
<https://www.statista.com/statistics/534123/e-commerce-share-of-retail-sales-worldwide/>

8 <http://www.geomarketing.com/nrf-and-forrester-digital-touchpoints-impact-nearly-half-of-all-retail-sales>. Accessed 14 May. 2018.

9 <https://www.barilliance.com/cart-abandonment-rate-statistics/>

10 <http://www.businessinsider.com/shopping-cart-abandonment-merchants-now-leave-46-trillion-on-the-table-and-mobile-is-making-the-problem-worse-2016-11/?r=AU&IR=T>

11 "How Many People Shop Online? [Infographic] - CPC Strategy." 25 May. 2017, <http://www.cpcstrategy.com/blog/2017/05/e-commerce-statistics-infographic/>. Accessed 14 May. 2018.

This will allow retailers to regain control from the shopper and shift the future. Ensuring they once again hold the balance of power to increase loyalty and measure data in the process.

## 1.2 Customer Loyalty is Broken

"Every once in a while, a new technology, an old problem, and a big idea turn into an innovation." - Dean Kamen

Almost 70% of shoppers globally belong to a loyalty program<sup>12</sup>, yet most people, although accumulating these reward and/or loyalty points, seem to hardly use them. The main reason being that they can never accumulate enough points required to exchange for a worthwhile reward and when they do, it is difficult to achieve – like a seat or class upgrade with an airline<sup>13</sup>.

Many loyalty programs and coalitions have major issues with massive accumulations of points sitting on their balance sheets as liabilities. These points are viewed as money that is owed to people, sometimes this in the hundreds of millions of dollars.

Both display clear problems that are on each side of the equation, for the consumer and the brand loyalty program.

Loyalty in many cases has become a sales tool, like a discount or sale campaign in disguise, to look like a benefit for a customer's purchases. Choice is the main driver when it comes to shopping today and people have many screens and of course windows to see merchandise. Despite this, many gravitate back to where the loyalty program resides and that, in many cases, is in-store and not always online<sup>14</sup>.

Onboarding consumers to a loyalty program in the digital age is a lot easier and faster than ever, but there is often a large gap between the number of programs in which shoppers are enrolled and the number in which they actively participate<sup>15</sup>. Make no mistake, loyalty programs are intended to ultimately increase a retailer's share of the consumer's wallet. While two-thirds of global respondents who participate in loyalty programs (67%) somewhat, or strongly agree, that they join these programs only to get free products or discounts<sup>16</sup>. The advent of digital channels opens up loyalty programs to be personalized for the consumer through the use of mobile apps, email and in-store interaction. This allows the loyalty program to be more customized for each member of the program and influence repeat purchase behaviour.

Financial rewards are the most highly-valued loyalty program benefits for members of all ages<sup>17</sup>. But product discounts, cash-back or rebates are rated higher by older respondents than by their younger counterparts, where personal offers and products are seen as a benefit.

12 CodeBroker 2017 Shopper Loyalty Survey Results - Codebroker." <https://codebroker.com/landing-page/codebroker-2017-shopper-loyalty-survey-results/>. Accessed 20 Apr. 2018.

13 <https://www.prnewswire.com/news-releases/customers-sitting-on-100-billion-of-unredeemed-loyalty-points-623828294.html>

14 <https://blog.accessdevelopment.com/customer-loyalty-statistics-2017-edition>

15 "Loyalty Deciphered—How Emotions Drive Genuine Engagement" <https://www.capgemini.com/resources/loyalty-deciphered/>

16 "GET WITH THE PROGRAM - Nielsen." <http://www.nielsen.com/content/dam/niensenglobal/eu/docs/pdf/nielsen-global-retail-loyalty-sentiment-report-Italy.pdf>. Accessed 7 Apr. 2018.

17 <http://www.nielsen.com/au/en/insights/news/2016/discounts-dominate-but-loyalty-program-rewards-go-deeper-than-dollars.html>

Having a loyalty card or other form of loyalty identification at checkout is still required in just about all major programs. In many cases this has led to large, heavy wallets and/or loyalty card apps on our mobile phones. In 2018 this should not be the case as loyalty should seamlessly be part of the payment process.

Loyalty should be like other new technologies, simple, seamless, cross-border and rewarding.

## 2. The RainCheck Story

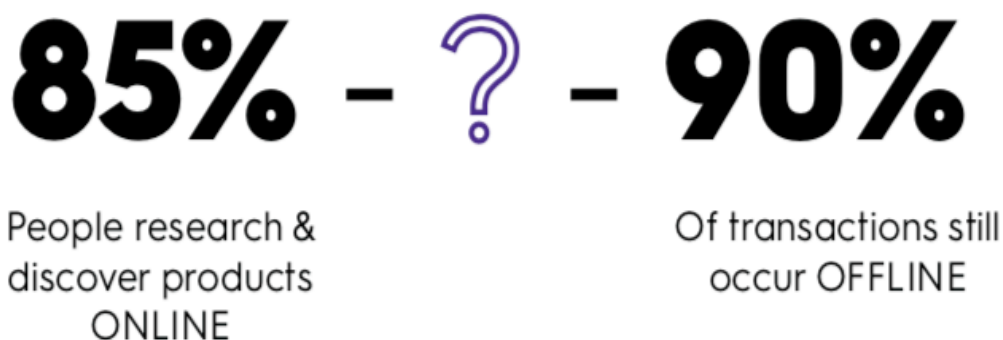
RainCheck was formed in November 2014 to enable online-to-offline (O2O) commerce. Created to influence and measure the high level of online product discovery/research and to connect those findings with the corresponding in-store sales transaction.

RainCheck is a Contextual Commerce Platform, meaning that contextual and relevant information can be presented to a user at the right time and place specific to that user, bridging the gap between online-and-offline shopping. The platform allows users to save products they discover online and be notified at a contextual and relevant time when the product is available in nearby stores; while also being notified of offers and rewards available.

With 85% of people discovering products and researching their shopping online<sup>18</sup>, it is astounding that ~90% of transactions still happen in physical stores. There is a huge disconnect and an estimated \$16 Trillion in digitally influenced sales globally. Using RainCheck, retail brands will now be able to measure the online-to-offline conversion of sales and can make targeted online offers that can be tracked to actual subsequent in-store activity and transactions.

### THE PROBLEM

Being able to measure & influence online discovery to in-store sales.



RainCheck provides a solution that not only provides the user with a personalized shopping experience, both online and offline, but also offers retail brands a way to measure digital marketing spend offline where most sales occur. This allows the merchants to go on and secure a higher percentage of the estimated billions in lost sales each year.

RainCheck has built an online-to-offline commerce platform that allows retail brands to both track and influence online product discovery to in-store sales, while also offering card-linking capability to users debit and credit cards. Card-linking is a way for consumers to save money on purchases by "linking" their payment card(s) to a merchant's digital offer, cash-back or loyalty program. The main difference, and secret source, is that we can do this at SKU (Stock Keeping Unit), level not just at the merchant level.

<sup>18</sup> "How Many People Shop Online? [Infographic] - CPC Strategy," 25 May. 2017, <http://www.cpcstrategy.com/blog/2017/05/ecommerce-statistics-infographic/>. Accessed 14 May. 2018.

Over the past 18 months most of the platform has been developed and partnerships formed to secure the components needed to finally close the O2O commerce loop. Currently we are developing the final phase which is linking the offline purchase transaction to the online discovery at SKU-level. This is the basis of our key intellectual property. In order to achieve this we work closely with payment card schemes such as Visa, MasterCard, American Express, along with Payment service Providers (PSP) and payment solution providers.

In 2017, during a six month pilot phase in the Australian market with approximately 3,000 users, the following results were achieved:

### Platform Pilot(AU)

Apparel retailers only in AUS market during Pilot - Based on 2675 active users.

<b>250+</b>	Shopping Areas	<b>\$1,823,266</b>	Total Value of Items
<b>300+</b>	Retailers	<b>8,246</b>	Total Items RainChecked
<b>10k+</b>	Stores	<b>\$221</b>	Avg. Item Value
<b>500+</b>	Proximity Points	<b>184,065</b>	Shopping Location Visits



These results support our hypothesis: that people in fact did save items they discovered online for a later action. With 2,675 active users throughout the trial a total of \$1,823,266 in value of items saved from online shopping averaging 12.2 items per user. The fact that shopping location visits during the period averaged 68, over a six month period, confirms that the physical store is still the most important channel for retail brands when it comes to closing the sale.

With the pilot completed and the data gathered it was clear that in order to pass true value to retail brands, we had to confirm that an in-store purchase was completed from an online discovery. Over the past ten months we have been working hard to solve that problem and close the O2O purchase loop. This work to close the loop will be completed by the end of 2018 once card-linking and payment authorization has been integrated including the retrieval of product information at SKU-level.

## 2.1 Current Platform

The entire RainCheck Platform has been built from the ground up to be open and fully scalable with all instances running on the AWS Cloud Environment. The modular approach enables our team of engineers to work on separate modules as opportunities or client needs arise.



The platform is broken into ten modules that all interconnect and can be run at multiple instances, or individually, depending on the services required at the time. Each system module has been built as open as possible, using the latest tools to ensure a very wide acceptance from almost any third party integration.

### Product Feed (Online)

The product feed module handles the ingestion of product information data including stock levels from various eCommerce platforms such as Magento, Shopify, Demandware, Neto and many others. The system can also handle existing feeds that service Google, Channel Advisor etc.

### Inventory Feed (Stores)

The Inventory feed module handles the ingestion of product and inventory information data from ERP systems that handle in-store inventory. In most cases, the data feed is separate from the online data feeds. The RainCheck platform can aggregate this data for the customer.

### O2O Wishlist

This API allows users to discover a product item online and save it into the Cloud. This can be executed using a simple browser interface or JavaScript integrated button or even a browser extension. The saved product data can include image, description, price and SKU.

## Payments/Wallets

This module is very important to the entire infrastructure as it involves backend integration to payment scheme API's, PSP's and banks. This allows us to offer services within native Apps and/or via third party eWallets. Split payments, Digital receipting and cash-back can also be handled here.

## Location/Proximity

Our Location Services are handled using Geo-fencing technology, where the average range is set at 150m and covers all shopping centres, shopping precincts and airports. We also offer BLE Beacons to offer Proximity services at a more granular level, 1-40 meters in most cases. These are generally at a store level.

## Connected POS & Card-Linked Offers

This module is by far the most important and most difficult to build out. This allows us to target offers at SKU level. Being able to match payment data with POS data is a very difficult process, but the data collected from such matches is very rich. This module allows segmented marketing at actual product level.

## Push Notifications

Self executable push notifications are paramount on mobile and the system can now handle all delivery options from a central place. Location based in simple text, rich, in-app or SMS notification, designed uniquely for the requirement on each application.












## Data Analytics

The platform monitors and collects hundreds of data points and stores it all in defined data repositories that can be retrieved, and visually displayed, via our web interfaced Dashboards.



## Developer API's & SDK

The platform has been built from the ground up as an open platform and we welcome developers to use the basis of what we have built, and continue to develop, to build other innovative applications.

 <b>Product Feed(Online)</b> (Shopify, Magento, Demandware, Neto etc)	 <b>ConnectedPOS &amp; Card-Linked Offers</b> (Mobile Wallet, Offers & CashBack)
 <b>Inventory Feed(Stores)</b> (API, XML & CSV etc.)	 <b>Loyalty Integration</b> (Distributed Ledger - Blockchain)
 <b>O2O Wishlist</b> (RainCheck API)	 <b>Push Notifications</b> (Rich Push, SMS & Email)
 <b>Payments/Wallets</b> (Mobile Wallet, Digital Receipts, Offers & CashBack)	 <b>Data Analytics</b> (Smart Dashboard, AI, ML & Weather Data & Hyper-personalisation)
 <b>Location/Proximity</b> (Geofencing & BLE Beacons)	 <b>Store Associate App (option)</b>
 <b>Developer API's &amp; SDK</b>	

## 2.2 Closing the O2O Loop

Over the past several months we have extended the platform as we transition from discovery into the transaction area with integrations with card scheme API's, PSP's and Point Of Sale (POS) solution providers. It is important for the platform to encompass all touch points to finally close the O2O path to purchase loop.

Without identifying the actual purchase transaction of a SKU item you cannot attribute an online product discovery to an offline purchase. Successfully linking that data requires working with the payments ecosystem.

The obvious mechanism to channel and control purchases is the payment card itself, both debit and credit issued cards. Most transactions are executed globally using bank issued payment cards and the data, that is held against these cards, links to a personal account holder or Primary Account Number (PAN). This card data can now be tokenized for each individual card.

### Tokenization & Card-linking

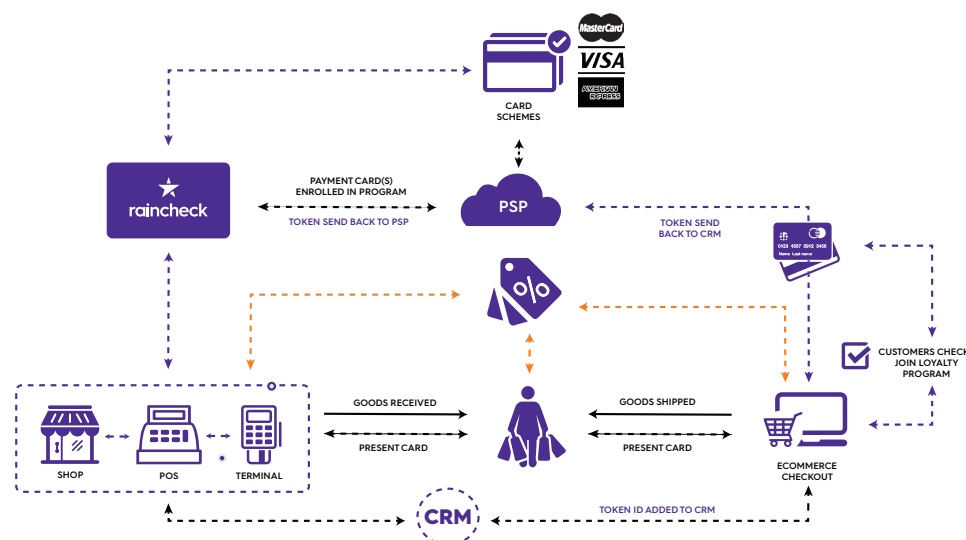
Tokenization replaces the Primary Account Number (PAN) with a secure, randomly generated token. If intercepted, the data contains no cardholder information, rendering it useless to hackers. The Primary



Account Number (PAN) cannot be retrieved even if the token and the systems it resides on are compromised, nor can the token be reverse engineered to arrive at the PAN.

By implementing a token based system it opens up the connections needed to capture online and offline purchases, not only at merchant level but also at product level. Rather than offering a merchant level offer e.g. spend \$300 at merchant X this weekend and receive \$40 cash-back, promotions can be executed at SKU-level e.g. purchase product Y this weekend and receive 10% cash-back or 25 loyalty points.

In fact loyalty scheme cards can now be built into payment cards so there is only one single action to receive the benefits. Neither the cardholder nor the store associate needs to know that there is an offer that exists, it is all automated within the payment process.



By linking tokenized payment card data within loyalty Customer Relationship Management (CRM) systems opens up a truly personalized experience for consumers. For the omni-shopper it doesn't matter if the discovery was made either online, offline or where the eventual purchase took place, the reward/offer is still valid.

The tokenization of card data is just the start, soon we will be able to tokenize certain merchant purchases and even SKU-level transactions. For example, consumer A can receive Reward Y for shopping at merchant B or for purchasing Product X.

Tokenized payment cards can be virtual and even deployed within a few minutes or easily added to a Mobile App Wallet. Tokenization is facilitated by a Token Service Provider, (TSP) which is an entity within the payments ecosystem that is able to provide registered token requestors with 'surrogate' PAN values, otherwise known as payment tokens. These payment tokens can only be used in a specific domain such as a registered RainCheck user or retail brands POS.

If a retail brand decides to run a online social media campaign to a specific demographic, currently that can be tracked online from most touchpoints, however if a purchase was made in-store from that campaign it can now be attributed to that specific campaign.

## 2.3 Product Overview

The O2O commerce loop product offering involves shoppers, retail brands, payment service providers, financial institutions and channel partners. The core functionality enables a seamless way to track, measure and reward users from product discovery to purchase. Most existing solutions are web based and only really are able to measure online activity, however with the RainCheck solution it becomes omni-channel and transcends online and offline worlds together.

The data points captured are now extended to offline activity including location services, basket size in-store, visitation, SKU-level data and even weather data. We use IBM Watson cognitive computing power via the API's provided to execute machine learning which is matched to existing online data to generate a complete O2O dataset. This data is invaluable for retail brands to be able to target true omni-channel marketing campaigns and can also provide a true personalization layer for each customer.

### For Shoppers

People can save items they discover online that they are interested in considering for purchase and have these linked to payment methods (payment cards), they would use to make the purchase. If a purchase of a saved product is executed either online or offline at a later time then the user is rewarded with either cash-back or reward points. This can all be done right down to SKU-level, not just at merchant level like most offers.

The value proposition is a free service that can reward people for discovering and saving products online and making a purchase from a retail brand at a later time either online or more importantly offline.

### For Retail Brands

Retail brands know that most of the product discovery comes from online channels yet most purchases are made in-store. RainCheck offers a platform that can now measure the originating discovery point all the way to point-of-purchase. The data points collected can now expose online to offline sales attribution which until now has not been available. Online data methods can still measure digital marketing attribution to a landing page or website however if a user leaves online and visits a physical store and makes a purchase we can track that sale all the way from the digital marketing call-to-action (CTA).

The value proposition is O2O sales attribution being able to reveal online product discovery that resulted in an offline purchase. The data points that collect the data being able to be used to influence sales and offer a contextual marketing channel. The cashback and reward offers are offset from the cost of fulfilling an online order and also gathering the rich O2O data collected.

### For Payment Service Providers (PSP)

Existing payment service providers charge fees and/or make a commission from successful online payments, however are also in a good position to capture offline transactions as well. At the point of cart abandonment a PSP can offer a single click method to add product data to a payment card and

be rewarded for tracking the purchase in-store.

The value proposition is incremental revenue from O2O sales activity by capturing in-store sales from online discovery. PSP's such as PayPal, Adyen, Wirecard, WorldPay etc. can finally loop online discovery to offline or in-store sales.

### For Financial Institutions

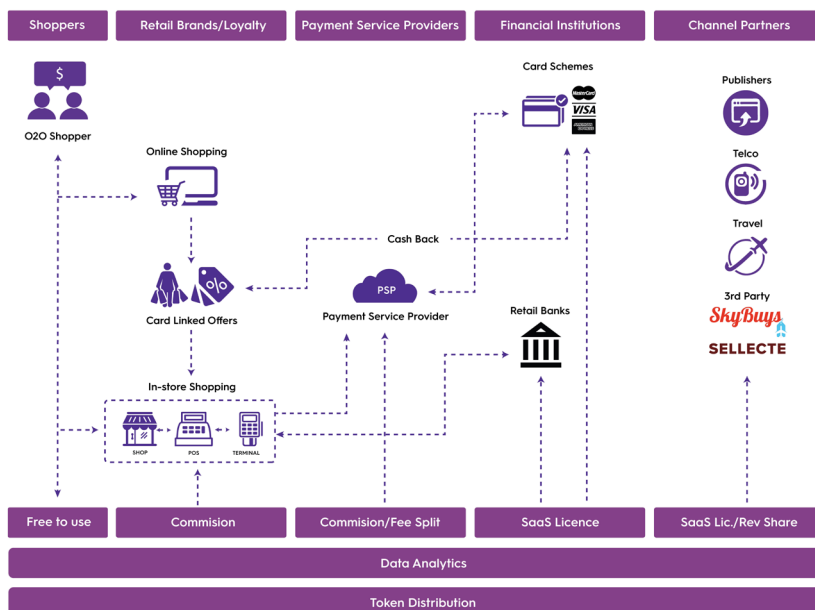
Banks and card schemes can now bring the shopping experience closer to their business models by offering a great customer experience to their base by either including shopping tools within Apps or even Mobile Wallets. Banking Apps and Wallets like Mastercard MasterPass, Visa Checkout or even ApplePay can now track O2O shopping activity while being able to offer data at SKU-level to not only their customers yet also their merchant partners.

The value proposition is offering a much better customer experience when people are using their platforms and increased transactions on their networks by incentivising transactions.

### For Channel Partners

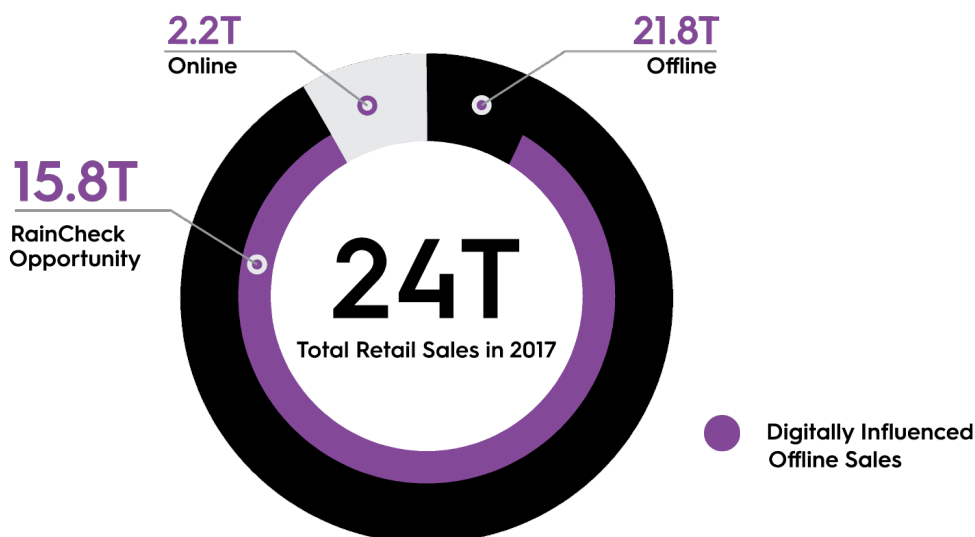
The fundamental ability to be able to track online-to-offline sales attribution extends the capability to many products and services and therefore many other industry sectors. RainCheck has started to explore partnerships with online publishers who can now provider for the first time offline attribution models to their brand customers. The travel sector is also a huge market opportunity with pilots and proof-of-concepts underway with airlines and duty-free concessionaires via our partnership with SkyBuys. Other opportunities also exist with the telco market as well.

The value proposition is opening up new revenue channels in the offline attribution area where over 80% of transactions occur.



## 2.4 Market Opportunity

In 2017 the global Retail market was approximately \$24 trillion<sup>19</sup> with \$15.8 trillion of that figure representing digitally influenced sales<sup>20</sup>. The value of the loyalty rewards market is almost \$500 billion annually with global marketing spend soon reaching \$1 trillion (\$225B Digital).



The \$15.8 trillion of digitally influenced sales combined with the estimated \$500 billion in loyalty rewards<sup>21</sup> is the opportunity that RainCheck focuses on. In 2016 debit/credit payment cards and eWallets accounted for 60% of global transactions<sup>22</sup>; in 2021 that figure will jump dramatically for eWallets and debit/credit cards<sup>23</sup>.

Given the sheer size of the opportunity it is important to point out that very few players in the commerce ecosystem can cover the data points, from discovery to purchase, during the complex omni-channel path to purchase today. It is paramount that the RainCheck platform collects these data points at each iteration of the commerce journey. This data becomes invaluable to brands as personalization becomes the new normal for marketers.

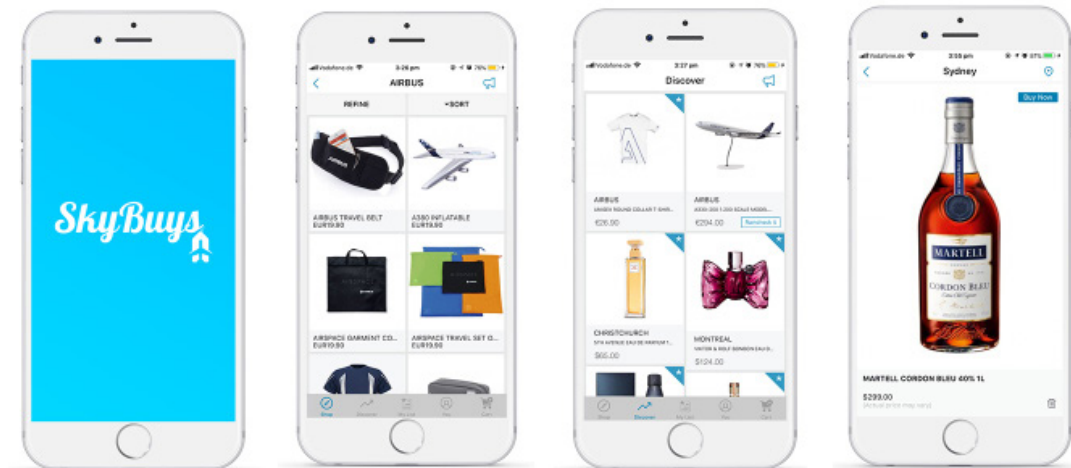
We have noticed another area that is growing quite rapidly, the Direct-to-Consumer (D2C), market. This is when a brand manufacturer builds a digital strategy to influence consumers directly. We have been approached by some large global players in this space and expect to see developments later in 2018.

<sup>19</sup> "Total retail sales worldwide from 2015 to 2020 (in trillion U.S. dollars)" <https://www.statista.com/statistics/443522/global-retail-sales/>  
<sup>20</sup> "Retail Trends 2017: What is digital's impact on the retail sector?" <https://www.digitalpulse.pwc.com.au/retail-trends-2017-paul-zahra/>  
<sup>21</sup> "Trading on loyalty, exchange seeks rewards from points programs." 31 Jan. 2017, <http://www.reuters.com/article/us-usa-exchange-loyalty/trading-on-loyalty-exchange-seeks-rewards-from-points-programs-idUSKBN15F25C>. Accessed 18 Apr. 2018.  
<sup>22</sup> <https://www.rba.gov.au/publications/annual-reports/psb/2014/trends-in-ret-pay.html>  
<sup>23</sup> "Your definitive guide to the world of online payments - Worldpay ...." <https://worldpay.globalpaymentsreport.com/>. Accessed 10 Apr. 2018.

## 2.5 Channel Opportunity

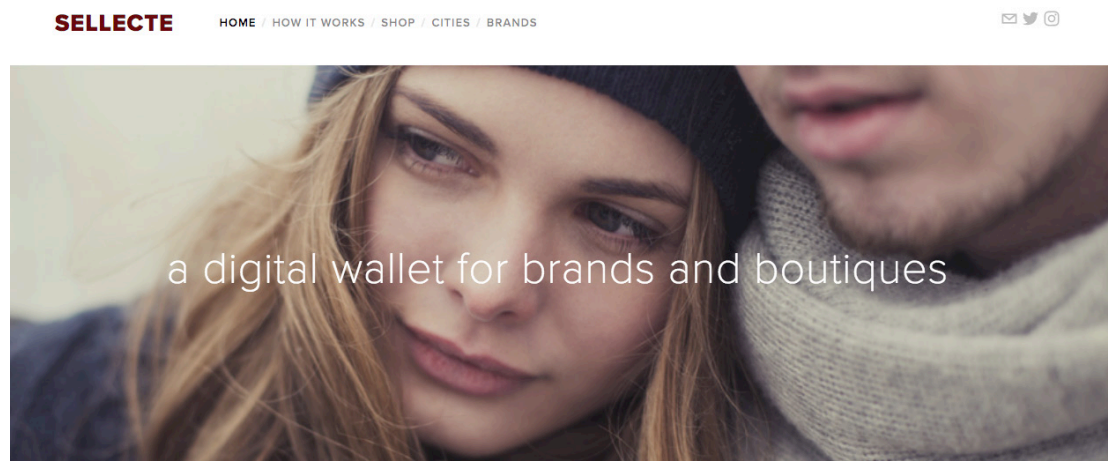
One huge advantage of having a fully open cloud based commerce platform is that it can be accessed by third parties, via APIs and software development kits (SDKs). We truly encourage and believe partners in different niche areas can build truly amazing things with the RainCheck platform.

We have some vertical partners using our platform to solve problems in other sectors, such as SkyBuys and Sellaete who power their own apps using our platform. These customers are SaaS based and operate on both a subscription and revenue share model.



SkyBuys integrates our Mobile Commerce platform to improve the airline passenger Duty-Free shopping experience by linking online duty-free browsing to both in-store and in-flight purchases. RainCheck collects a large revenue share on all purchases and are working to trial with major airlines, concessionaires and OTA travel organizations.

<https://www.skybuys.net/>



With Sellecte you can locate exclusive brands or discover boutiques and unique labels in cities around the globe. Sellecte is an online platform and app that helps build brand loyalty through linking users online search to in-store special offers and rewards around the world.

Sellecte is designed to let users search online and buy in-store. These users can wishlist favourite brands, in a way that makes them easy to access, to update and to share. Users simply search and tag items from any of the brands or boutiques listed on Sellecte. Then when they travel or visit the shops, they can buy in-store and collect items with special offers. The Sellecte platform is aimed at luxury brands and boutiques alike. RainCheck collects a licence fee and revenue share on all purchases.

<https://sellecte.com/>

## 2.6 Awards

Throughout the RainCheck journey we have been involved in, and won, several awards including: being runner up and winning the Visa Everywhere Initiative and also the Accenture Consumer Tech Award in Singapore in late 2017.


















**“RainCheck was the best example I saw on the show floor  
That transcends the digital and physical worlds.”**

NIKKI BAIRD (RSR'S 2016 DEBRIEF POST NRF BIG SHOW NEW YORK)

## 2.7 Partners & Vendors

Partnerships both strategic and technical are very important to the RainCheck mission and in achieving our mission. RainCheck integrates and partners with the following platform and API providers.

## RainCheck Partners

<b>RainCheck Platform</b>	The foundation of the RainCheck platform is built on the world's leading global Cloud environment AWS offering best in class services.	
<b>Payments/Offers</b>	All major payment platforms are supported within the RainCheck Apps offering digital and traditional payment methods.	  
<b>Location/Proximity</b>	Location is paramount within the RainCheck platform, and uses the best geospatial and short range proximity solutions available offering a seamless user experience and rich data.	 
<b>Analytics/AI</b>	Data is the new currency, and we gather hundreds of data points which are integrated with both industry and payments data which is processed using machine learning to produce artificial intelligence.	 
<b>Messaging</b>	The glue that binds users with personalized communication is essential with any Mobile solution and we always use the best available in the market.	 
<b>Product/Inventory</b>	Getting product inventory in real time across all channels is the holy grail for any retailer. We are working hard to make that a reality by leveraging our cloud platform and integrating leading vendors.	 
<b>Payments/Offers</b>	Payment service providers that bind the POS and payment infrastructure together allowing a seamless O2O experience.	  

### 3. Decentralized Loyalty & Rewards Platform

The Decentralized Ledger Technology (Blockchain), that is available to us today will revolutionize every industry sector on a global scale. What has taken the Internet and World Wide Web to achieve in 25 years we predict will be transformed in far less than half that time.

We will decentralize stored value, accumulated via a loyalty program or scheme, into a stored value transferable unit. Here we not only have a clear offering to a loyalty scheme participant, but also to the organization distributing the reward units, or points, via their proprietary loyalty scheme.

Today's consumer shops via the omni-channel method, starting their path to the final purchase from a call-to-action from one of many screens, (mobile, laptop, desktop, digital billboard etc.), researching on Social media, talking with friends and of course visiting stores. Loyalty has now been reduced to the approach that a repeat purchase will equal more reward points.

Having so many brands available to the average consumer, via digital channels, means that there are hundreds of reward programs run by multiple loyalty programs. In many cases these programs are unified in larger scheme coalitions and run by large global organizations such as airlines or payment card schemes.

After many months of evaluation, the team at RainCheck believe that the best DLT platform to build our technology on is the the Stellar<sup>24</sup> platform.

#### Why Stellar?

We have decided to build this decentralized loyalty platform on the Stellar Blockchain platform. Stellar is an open-source protocol forming a global value exchange network. On a high level Stellar connects banks, payments systems and people around the world. You can think of it as infrastructure for payments—designed from the start to make it easier for financial institutions to issue tokens representing fiat currencies.

#### Liquidity

There are thousands of tokens being issued currently and each one will seek being issued on 3rd party exchanges. However the exchanges don't have the capacity to list all the tokens, they can make you wait a long time and they charge considerable funds. With Stellar we don't need to depend on these 3rd party exchanges to list our token because the Stellar Blockchain platform features a decentralized exchange—that means we can offer from day one, discoverability and transferability.

#### Performance

Stellar is significantly cheaper and faster than other protocols, including Ethereum. For example Stellar has a median settlement time of 3-5 seconds<sup>25</sup> whereas execution and secure confirmation can take up

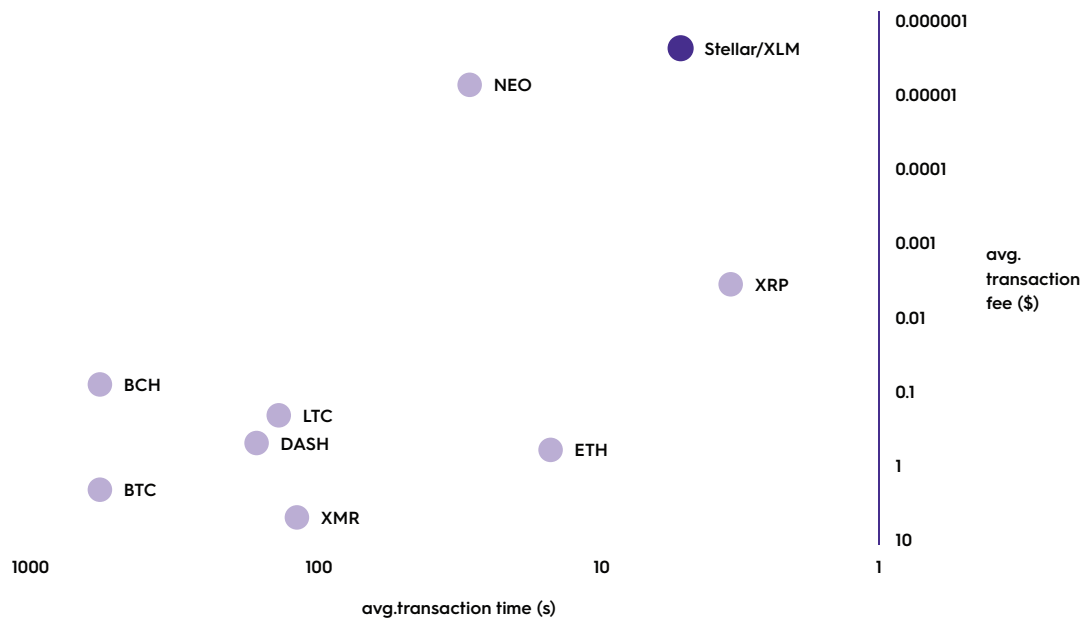
<sup>24</sup> "Stellar." <https://www.stellar.org/>  
<sup>25</sup> <https://www.cnbc.com/2018/01/24/stellar-jumps-20-percent-after-stripe-says-it-may-add-support-for-the-digital-coin.html>



to 3-5 minutes on Ethereum. Further, it costs one cent to make 100,000 transactions on Stellar, whereas Ethereum \$0.20-1.45 per transaction<sup>26</sup>.

### CoinMarketCap Top 10, Platform Performance

(platforms that have been deployed for >12 mo. - as of Feb 28 2018)



Source: CoinMarket Graph<sup>27</sup>

## Security

Stellar’s expressive but purposely limited system for smart contracts, limits potential to write exploitable code. Ethereum has a Turing-complete programming language, which means you can code any complicated smart contract; whilst the flexibility is nice, in practice it allows the developers to produce exploitable code. Anonymous hackers have stolen millions of dollars by exploiting vulnerabilities. The simplicity of the Stellar model helps avoid these situations. It’s ideal for applications that don’t require the full generality of Turing-complete smart contracts (which includes RAIN Token).

## Ease of Use

Launching a token on Stellar is quite simple. Tokens can be created in a matter of hours and more complex ones take a few days. Because Stellar supports simple programming, we don’t need to hire expensive solidity smart contract developers.

<sup>26</sup> <https://bitinfocharts.com/comparison/ethereum-transactionfees.html>  
<sup>27</sup> <https://www.stellar.org/blog/Q1-2018-stellar-and-state-of-crypto/>

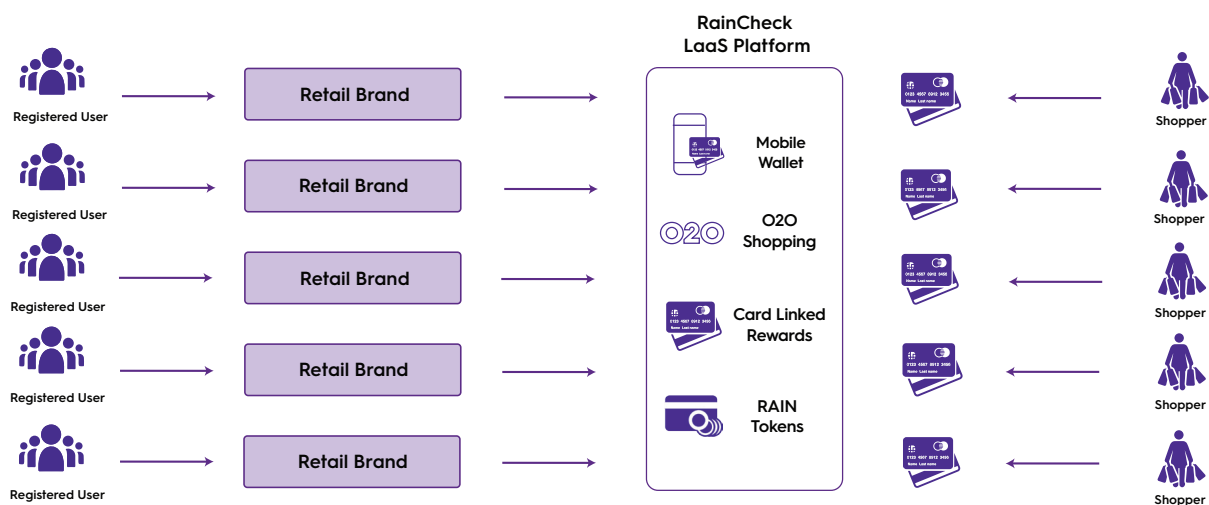
## 4. Business & Revenue Model

The RainCheck Commerce Platform operates as a Software as a Service (SaaS) business model for retail brands, payment providers and loyalty schemes. Revenue will therefore be generated by subscription, transaction handling fees and loyalty marketing and data services. Other revenue will be derived from commission and payment fee sharing and revenue sharing depending on the solution implementation.

Once the RAIN Token features have been built and integrated, we see that the platform will create a two-sided loyalty and rewards marketplace, with retail brands on one side and shoppers on the other. Shoppers will be able to sign up and enrol their payment cards via the Wallet App or website, they then can join any retail brands loyalty program listed on the platform with one click

Users can register on loyalty schemes through the RainCheck mobile wallet. The mobile wallet will list all active loyalty schemes and users can choose to activate their favourite ones and check their existing loyalty points and transfer loyalty points to RAIN tokens. The mobile wallet feature is planned to be re-released in early 2019.

Retail brands can join and immediately have access to an integrated loyalty program, or extend their current program.



Users will be rewarded with RAIN Tokens for signing up and registering with RainCheck and receive bonuses when referring others to also sign up. Users will also be rewarded with Tokens for simple tasks such as RainChecking products online, visiting stores and completing a purchase. The anonymized data points that are collected will be used for reverse marketing for all participating brands. This data will reveal the online-to-offline attribution of sales for the first time for all brands.

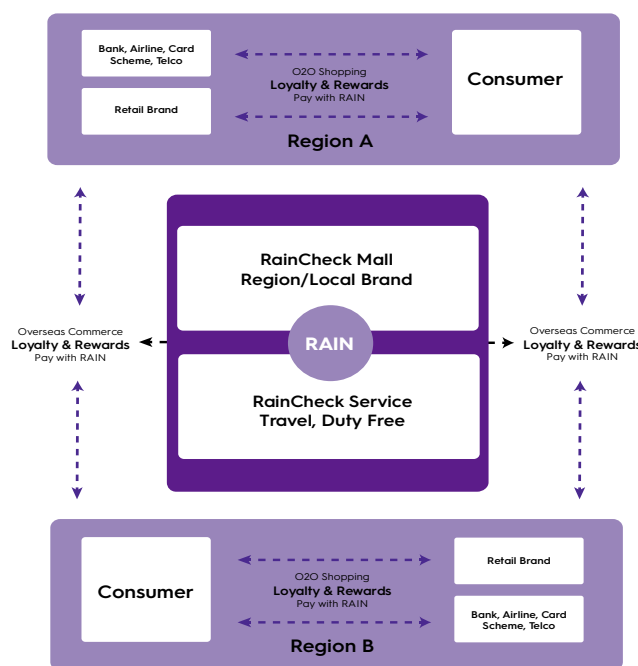
Existing members of a brands loyalty program will be able to simply opt-in to the new services and enable card-linked offers, reward points and cash-back; not just at merchant level but down to SKU-level. These offers, rewards and cash-back will not only be rewarded for online purchase, yet also in-store maintaining the O2O shopping journey.

The data points that are captured will create a relevant and contextual method for brands to personalise the shopping experience for each user. Knowing what you like and where you actually shop can create a very satisfying shopping experiences.

The larger loyalty schemes and coalitions such as airlines and banks might take some time initially to transition to such a decentralized loyalty ecosystem. We predict the scale of the RainCheck platform will grow, making the offering more compelling.

Not only will existing large schemes and coalitions be able to join the platform, they can also use the technology within their own environment. We envisage that the use of smart contracts will allow for unique and sophisticated arbitrage of loyalty value between loyalty schemes and brands.

Loyalty schemes will be able to create and configure their own smart contracts with a template provided by RainCheck. In the future, we anticipate that loyalty schemes can define the value metrics between loyalty points and RAIN tokens, start and expire date of the smart contract etc. RainCheck aims to continuously build more smart contract templates to fulfil the upcoming requirements from loyalty schemes and brands. The loyalty scheme smart contract is planned to be released in 2019 Q1.



## 4.1 O2O Shopping

The user interface will be via a native App built on the Apple iOS and Android platforms. The Apps are free to download and use, and will include functionality to build and maintain a Wishlist as well as provide location services.

With the integration of card schemes (card-linking), and POS software, consumers will be able to get cash-back and loyalty points as rewards.

Users will be able to register their payment cards through the RainCheck mobile app. The card will be to-

kenized and linked with a unique user ID through the RainCheck platform. When users purchase goods through an offline store, the payment transaction will be picked up by the platform and rewards will be gifted to specific users who are eligible for these rewards. With the POS integration, the SKU of the goods will be identified and users will be able to get rewards specific to that SKU. The cash-back feature is planned to be released in 2018 Q4.

If the merchant supports the RAIN Token, consumers will have the option to receive RAIN Tokens as rewards. Consumers will also be able to manage their loyalty points with the RAIN Token Wallets.

- Organizations such as brands, banks, airlines, card schemes, telcos etc. will be charged a licence, setup and maintenance fee to access the RainCheck Commerce Platform. The fee can also be paid in RAIN Tokens with significant discount. RainCheck will be able to issue merchants complimentary RAIN tokens to encourage them to join RainCheck platform, or as part of the on-boarding process. Organizations could also purchase RAIN Tokens from an exchange to pay for the service. Merchants could be able to also choose to pay for the service with fiat currency. The RAIN token payment feature is planned to be released in 2019 Q1.
- Merchants could be charged a licence, setup and maintenance fee to access decentralized loyalty and rewards solution of the RainCheck Platform.
- For those merchants who don't have a loyalty program, they will be able to use the RainCheck platform to offer RAIN Token as their loyalty points.
- Subject to receiving any necessary regulatory approvals, RAIN Tokens may be integrated to enable consumers to pay for goods and services directly with RAIN Tokens. Any such payment would be subject to a service fee
- To maintain the balance of the token velocity, RainCheck will periodically buy back and burn RAIN tokens using the profit generated from the O2O shopping business.

## 4.2 Overseas Commerce

A majority of O2O transactions happen in local regional areas. Consumers may also want to buy products directly from local brands hosted in RainCheck or inside the mobile application. However, we believe most of the online or in-app purchases are overseas transactions and will happen across various regions and countries.

The RainCheck Platform technology can also be integrated in other vertical industries, such as duty-free and travel industries, as a platform-as-a-service (PaaS) model. Consumers will have the same experience as the RainCheck App for these RainCheck services.

- Both regional and local brands will be charged a licence, setup and maintenance fee to be hosted

on the RainCheck Platform online or inside the mobile application.

- Merchants will be charged for licence, setup and maintenance fee to use decentralized loyalty and rewards solution.
- Merchants will be charged a commission fee when consumer buy products inside RainCheck Mall.
- Same as the O2O shopping, in order to maintain the balance of the token velocity, RainCheck will periodically buy back and burn RAIN tokens using the profit from the overseas commerce business.

### 4.3 Loyalty Marketing & Data Services

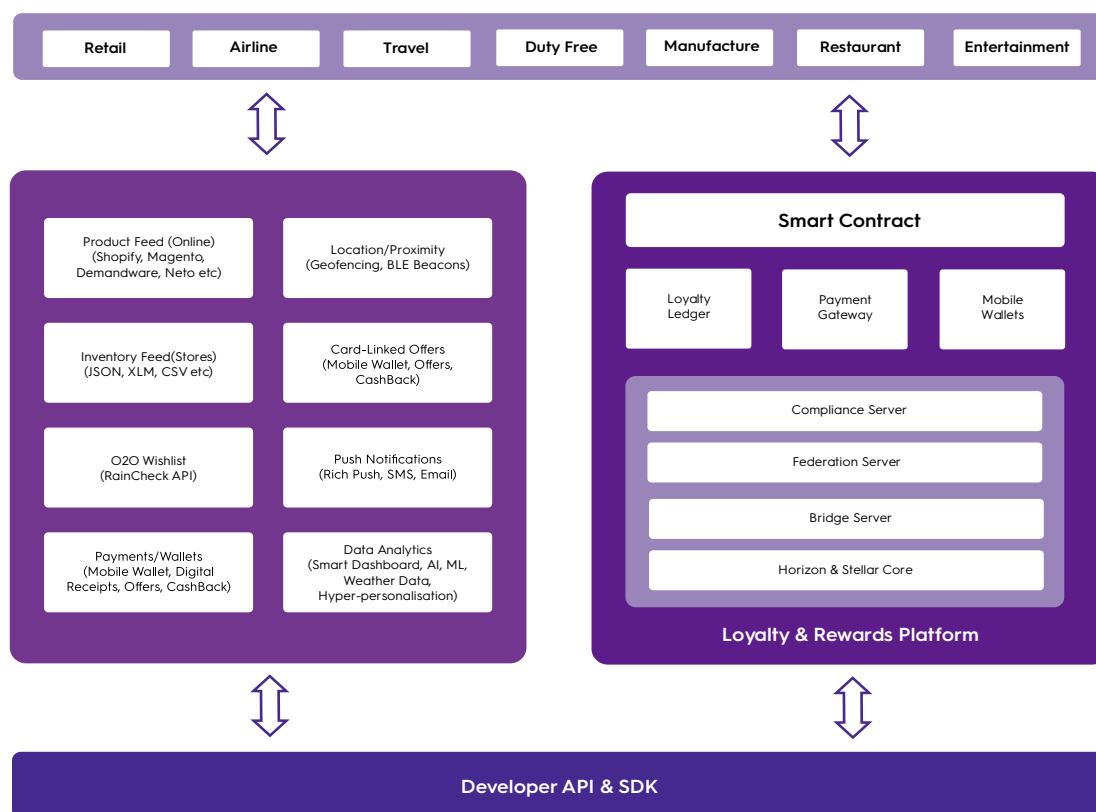
Everyone shops, purchase goods and services, all from multiple retail brands. Each retail brand can only work with customer data that is directly involved with that brand. As RainCheck can aggregate product interest, purchase and rewards across multiple brands, it paves the way for a truly personalized customer experience.

In order for brands to access this valuable data we can make it available via our data dashboard interface in an anonymized format. The platform collects over 100 customer data points including product, location, in-store data, payment & rewards data. The data that we gather has not been available up until now and can now expose, for the first time, online-to-offline attribution.

If loyalty members decide to opt-in to the data programs they can be truly targeted at SKU level on products that they actually like and purchase rather than randomly being included in a blanket promotion which is available today. Data is the key to any tech platform, it has to be managed correctly.

## 5 RainCheck Platform

RainCheck platform is composed of existing context commerce platform and decentralized loyalty & rewards platform, which will be built based on Stellar network.



### 5.1 Stellar Network

Behind the scenes every Horizon server connects to Stellar Core, the backbone of the Stellar network. The Stellar Core software does the hard work of validating and agreeing with other instances of Core on the status of every transaction through the Stellar Consensus Protocol (SCP). The Stellar network itself is a collection of connected Stellar Cores run by various individuals and entities around the world. Some instances have a Horizon server you can communicate with, while others exist only to add reliability to the overall network.

Anchors are entities that people trust to hold their deposits and issue credits into the Stellar network for those deposits. All money transactions in the Stellar network (except lumens) occur in the form of credit issued by anchors, these act as a bridge between existing currencies and the Stellar network. Most anchors are organizations like banks, savings institutions, farmers' co-ops, central banks, and remittance companies.

Please visit <https://www.stellar.org/developers/guides/get-started/index.html> for more details.

## 5.2 Stellar Consensus Protocol

The SCP provides a way to reach consensus without relying on a closed system to accurately record financial transactions. SCP has a set of provable safety properties that optimize for safety over liveness—in the event of partition or misbehaving nodes, it halts progress of the network until consensus can be reached. SCP simultaneously enjoys four key properties: decentralized control, low latency, flexible trust, and asymptotic security.

MECHANISM	DECENTRALIZED CONTROL	LOW LATENCY	FLEXIBLE TRUST	ASYMPTOTIC SECURITY
Proof of work	✓			
Proof of stake	✓	Maybe		Maybe
Byzantine agreement		✓	✓	✓
Tendermint	✓	✓		✓
<b>Stellar Consensus Protocol</b>	✓	✓	✓	✓

Please visit <https://www.stellar.org/developers/guides/concepts/scp.html> for more details.

## 5.3 Loyalty Ledger

RainCheck plans to build the loyalty ledger based on Stellar network. Each time a consumer transfers their loyalty points for RAIN Tokens, the transaction will be recorded forever in the Stellar distributed ledger and will be synced to all anchors in the Stellar network. Consumers will be able to trace back all previous transactions recorded with RAIN Tokens.

Through Stellar smart contracts, merchants can easily integrate into the decentralized loyalty ledger through Stellar Horizon API service. Merchants can define their own value and policy for loyalty point transfer through multi signature, backed Smart Contract, and so on.

Stellar can be used to build sophisticated smart contracts. Smart contracts are computer programs that can automatically execute an agreement based on programmed logic. Smart contracts combine protocols with user interfaces to formalize and secure relationships over computer networks. Objectives and principles for the design of these systems are derived from legal principles, economic theory, and theories of reliable and secure protocols. In recent years, blockchain technology has enabled a new breed of smart contracts with immutable storage of agreement terms, cryptographic authorization, and integrated transfers of value.

For the Stellar Network, smart contracts are manifested as Stellar Smart Contracts. A Stellar Smart Contract (SSC) is expressed as compositions of transactions that are connected and executed using various constraints. The following are examples of constraints that can be considered and implemented when creating SSCs: Multisignature is the concept requiring signatures of multiple parties to sign transactions stemming from an account. Through signature weights and thresholds, representation of power in signatures is created.

## 5.4 Payment Gateway

Currently RainCheck is using Stripe as the payment gateway to handle all transactions through the RainCheck mobile application. Stripe has announced a roadmap to support Stellar and Stellar based ICO tokens<sup>28</sup>. RainCheck will work closely with Stripe to develop a proxy layer based on Stripe payment gateway to process all transactions using RAIN Tokens.

RainCheck will eventually develop its own payment gateway and become a Stellar anchor by deploying its own Stellar Core, Horizon, Bridge Server, Federation Server and Compliance Server.

## 5.5 Mobile Wallet

RainCheck will add the new digital currency capability into the existing mobile wallet. Consumers will be able to check the balance of their digital currency, track digital currency transactions, check loyalty points from different merchants, manage loyalty points with RAIN Tokens etc.

The mobile wallet will also have all the existing shopping features that people enjoy today allowing users to save items they discover online and maintain a universal wishlist.

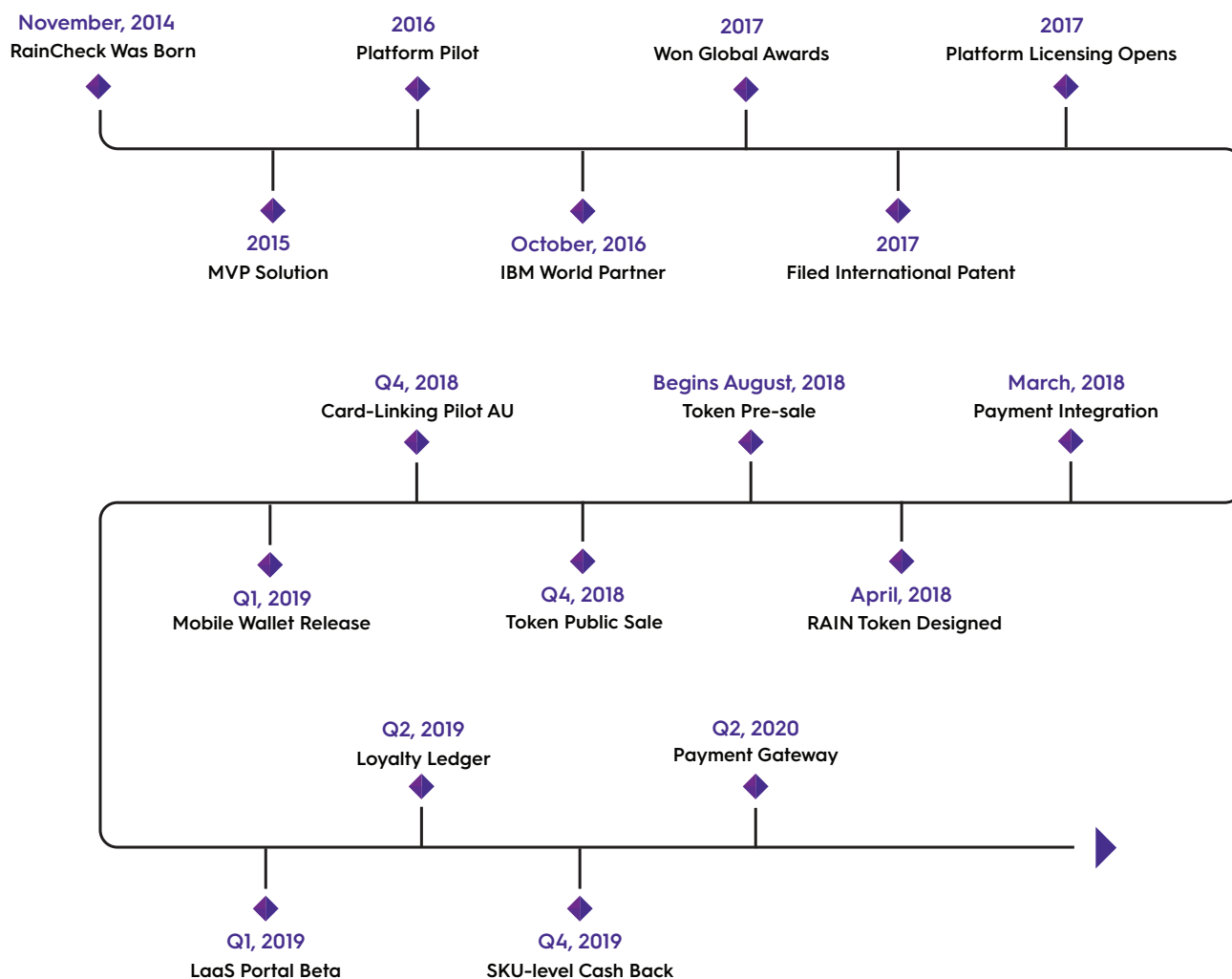
## 5.6 Roadmap

The milestone plan sets out RainCheck's indicative goals and targets only. RainCheck does not promise to fulfil any or all of the actions detailed in this section.

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28 <https://stripe.com/blog/stellar>









## 5.7 Competitive Analysis

The decentralization of loyalty is a very compelling solution and therefore makes a lot of sense to be built on the Blockchain. While there are several solutions that have been launched and no doubt there will be more arriving, the RainCheck solution is much more holistic than most. By offering a complete O2O solution that can encapsulate all points of not only the shopping journey yet the resulting loyalty aspects as well places RainCheck in a different class.

The most advantageous aspect of the RAIN Token project is that it is built on the Stellar Protocol. If you are serious about building a transactional based loyalty system the speed, cost and scalability must be paramount. Below is a breakdown of how RainCheck compares to other Blockchain solutions.

### RAIN Token Competitive Analysis

	 RAIN Token	 LOYALCOIN	 BitRewards	 INCENT
<b>Blockchain Platform</b>	Stellar	Ethereum	Ethereum	Ethereum
<b>Avg. Transaction Speed</b>	3-5 sec	5-7 min	5-7 min	5-7 min
<b>Avg. Transaction Cost</b>	\$0.0000015	\$1.05	\$1.05	\$1.05
<b>Consensus</b>	SCP (FBA*)	Proof-of-work	Proof-of-work	Proof-of-work
<b>Smart Contract</b>	SSC*	Turing Complete	Turing Complete	Turing Complete
<b>SKU-level data</b>	✓	✗	✗	✗
<b>iPhone/Android App</b>	✓	✓	✗	✗
<b>Online &amp; Offline Rewards</b>	✓	✗	✗	✗
<b>Browser Extension</b>	✓	✗	✗	✓
<b>Card Linked Offer</b>	✓	✗	✗	✗
<b>Merchant Dashboard</b>	✓	✗	✗	✗
<b>POS Integration</b>	✓	✓	✗	✗
<b>Major Partnerships</b>	✓	✗	✗	✗
<b>Patent Reach</b>	41 Countries	Nil	Nil	Nil

## 6. The RAIN Token

### 6.1 Token Profile

The RAIN Token has been created to carry out a transfer mechanism on the RainCheck Commerce Platform. This token is based on the Stellar protocol, which was specially designed to enable micro-payments that can handle very fast transactions at very low cost.

To facilitate access to the RainCheck Platform and its functions, such as rewards trading, a new Stellar based token will be created, called the RAIN Token. At the time of issue, the RAIN Token will be used as the value unit within a loyalty DAO. RAIN Tokens will be staked by brands in relation to their community membership.

Thanks to the micropayments feature, RainCheck is able to monitor rewards points value available from organizations in real time, and thus inform consumers of the current value and the exact source of rewards in real-time.

People who receive or purchase RAIN Tokens will be able to trade these between loyalty programs and schemes. They also have the ability to trade them at any time on exchanges that support the RAIN Token.

Merchants and brands can use the RainCheck platform to issue RAIN Tokens for carrying out tasks such as saving discovered items online and actually purchasing items from merchants, also engaging with marketing campaigns from brands.

### 6.2 Future Use of RAIN Tokens

The RainCheck Platform, when fully developed, will aim to provide a decentralized platform through which token holders will be able to manage and aggregate reward points across multiple loyalty schemes. To enable this, RainCheck plans to provide consumers with the option to combine reward points from multiple loyalty schemes into one digital unit, the RAIN Token. Once established, participating merchants will be able to offer their customers the option to exchange existing loyalty points into RAIN Tokens at a value set by the market instead of the merchant itself. In this way, it will prevent merchants from setting an extremely low exchange rate or centrally planning the exchange rate which are not market efficient.

Given that such loyalty schemes are often a growing liability on company balance sheets, it is envisaged that participating merchants will be able to reduce the growing “debt” that is owed, while maintaining the level of loyalty satisfaction toward its program members.

As part of this future development, RainCheck intends to use Distributed Ledger Technology to offer consumers the ability to share or transfer RAIN Tokens for goods and services from any organization.

Implementation of these features is subject to receiving all necessary regulatory approvals or licences prior to offering this service. For the avoidance of doubt, these features are not currently available, and token holders may not have any such rights now or in the future.

### 6.3 Token Economics

The total supply of RAIN Tokens that will ever be created is 2,000,000,000. During the public sale we will have 35% of the total tokens available to supporters of the project and the RAIN token ICO price set at \$0.04 USD. A soft cap is marked at \$6M USD which will enable us to commence developing the DLT (blockchain) phase of the platform. In order to meet the time-lines set out in our roadmap, our target is \$12M USD. The hard-cap will be set at \$28M USD, reaching our hard cap will allow us to accelerate our time to market and expand into global markets much faster.

We will allocate 15% of the total tokens as strategic tokens for the future operation of the business. These strategic tokens will be reserved over a 3 year period and will be allocated to strategic partners and enterprise organizations to stimulate participation and traction. For these organizations RainCheck will offer the opportunity to purchase RAIN tokens from the strategic token pool at market rates. All employees of RainCheck will be allocated tokens as part of this sale, with a maximum total of 5% of the total tokens allocated for all employees combined, including management. These tokens will vest 12 months from the start date of the sale period.

An additional 3% of the total token allocation has been reserved as an option pool for team members. These tokens will not be allocated before 1 July 2019, at which point they will vest over a 24 month period.

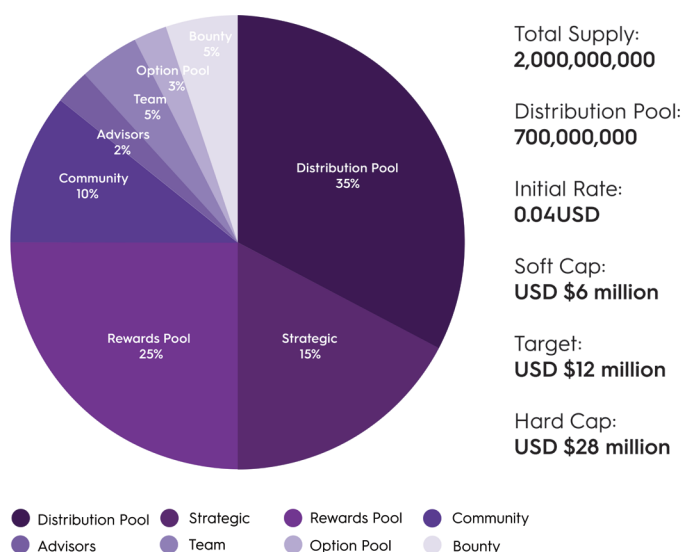
All RainCheck ICO advisors will be allocated a maximum total of 2% of the total tokens. These tokens will be frozen for 6 months from the end of the public sale period and will then vest over a 24 month period.

We will allocate 5% of the total tokens toward a bounty program to promote the RainCheck mobile application and to attract early users and supporters who utilize the O2O shopping, overseas commerce, loyalty marketing and data services.

We will allocate 25% of the total token supply as part of the reward pool. Tokens left in the public token sale will be added into the reward pool to allow more people to join the RAIN token ecosystem. The tokens allocated for the reward pool will be used as incentive to promote the RainCheck App for the O2O shopping and overseas commerce business when consumers download the app, link their payment card, save items and buy products etc. In order to maintain the balance of the token velocity, RainCheck will periodically buy back and burn RAIN tokens using the profit generated from the O2O shopping and overseas commerce business.

Community support is also important for the RAIN token ecosystem. We welcome all kinds of contributions from the community to support the project. We will allocate those community contributors a variable amount of tokens as a gift for their support from the community pool which holds 10% of the total tokens.

### RAIN Token Distribution



Total Supply: **2,000,000,000**

Distribution Pool: **700,000,000**

Initial Rate: **0.04USD**

Soft Cap: **USD \$6 million**

Target: **USD \$12 million**

Hard Cap: **USD \$28 million**

### 6.4 Key Dates

- The RAIN Token sale KYC process will be conducted through OST KYC, one of the world's leading identity verification companies.
- The public token sale event will commence Q4, 2018 and will last for 4 weeks. Supporters will have chances to purchase tokens with early bird discount when public token sale starts.

### Key Dates & Bonus Structure

	Bonus RAIN Tokens Awarded
<b>Public Sale Week 1</b>	5% to 15% bonus, dependant on volume and supply
<b>Public Sale Week 2</b>	3% to 10% bonus, dependant on volume and supply
<b>Public Sale Week 3</b>	Up to 5% bonus, dependant on volume and supply
<b>Public Sale Week 4</b>	No Bonus

## 7. The Team

### 7.1 Team



**Cameron Wall: Co-Founder & CEO**

25+ years experience running development & design teams building web & mobile platform solutions for global enterprise clients. Founded six startups the most recent being RainCheck (2014), an online-to-offline (O2O) commerce platform that allows retail brands to both track and influence online product discovery to in-store sales; ZapMe (2010) a Mobile Marketing Technology startup that provided services to agencies, aggregators and brands on Mobile strategy, technology and development processes. Expertise in Mobile and Cloud based back-ends, including working with teams on Machine Learning (ML) and Artificial Intelligence (AI). More recently on projects involving solution design for DLT (Blockchain) mainly on Stellar protocol and crypto-economics and tokenization.



**William Lin: Co-Founder & CTO**

20+ years experience in software engineering with an MBA working on retail, media & financial platforms. Skilled in cloud based backend and front-end development of web platforms and mobile applications. Rich management experience as Senior Development Manager at Motorola to manage a multinational team across different internal departments. While working in Westpac, manage and deploy the award winning mobile banking application. Expertise in the development of public and private BlockChain system. Experienced in Artificial Intelligence (AI) and Machine Learning (ML) technology.



**Peter Bremner: Chief Partnerships & Strategy Officer**

27+ years experience building business relationships with International vendors and major corporate clients. In the fast-paced world of technology, forming prosperous relationships for his corporate clients/ vendors, is the pinnacle of success. Leveraging long-term experiences, has enabled understanding of what vendors have to offer and how they can add value to partners and corporate clients. Including the partnership development between RSA and Content Security, which went on to win APAC partner of the year award.



**David Henderson: Project Delivery Manager**

Extensive experience in managing large ICT organizations in both public and private sectors. Significant experience in governance, risk, compliance, IT project management and service delivery. Highly skilled in risk management, service operations and delivering on time and on budget. Demonstrated ability in managing vendors, leading support teams and engaging with other service management groups to ensure optimum business outcomes.



**Maddison Bremner: Marketing & Communication**

Working as a buying team executive – specialising in product evaluation & negotiations – and leading Omni-channel, Marketing/ Communications and Social Media development. Coordinated flash sales with required marketing to over 15 different websites through Mysale & leading social media campaigns for RainCheck. She has 10+ years sales and leadership experience working alongside international companies Mysale, RainCheck and the Betts Group.



**Cathy Wang: Finance**

Experienced accounting professional with a demonstrated history of working in financial services industry. Proven experience in compiling, analyzing, and reporting financial information. Equipped, through hands-on experience, with technical accounting skills and a practical understanding of how to apply accounting and business knowledge.



**Julius Zhang: Deep Learning**

Masters in Professional Engineering (biomedical), with experience essential for deep learning, mechanics and signal processing. He is highly skilled in Python, Tensorflow, Keras, MATLAB, ANSYS and Solidword.



**Wei Wang: Mobile & Web**

Android system and App developer with experience in the retail sector as a Technical specialist at Alibaba Group. Wei currently works as iOS and Android Developer at LEAP legal software. He is highly skilled as a WebKit Browser specialist, Node.js programmer and Full-stack software engineer.



**Bin Wang: BlockChain & Big Data**

Over 15 years in software engineering, Bin is skilled in developing mobile software and in Big Data Technologies. He has extensive experience in the development of public and private Blockchain system.



**Feng Yang: Mobile & Embedded**

17+ years as a software Engineer, Feng has extensive knowledge of coding, from C/ C++ to Java. He has further experience with Motorola self-developed platform and to Android open source. He is highly skilled in embedded systems, development, software design and wireless technologies.



**Yulia Repetska: Product Manager**

Experienced in product and project management, Yulia is highly skilled in market research, business development and pre-sales.

## 7.2 Our Advisors



### **Aaron Smith: Payments Strategy Advisor**

Business leader with management experience of global multi-site teams with a focus on targets, strategy and product responsibility. Aaron has an MBA and multiple degrees from an engineering background, with commercial acumen and a lateral thinker aiming to bring best value proposition solutions to market.



### **Enrico Tam: Technology Advisor**

Providing start-up & Tech strategy, business development, AI, AR/VR, Blockchain, IoT, digital Marketing With an MBA, a PhD in engineering sciences and several years of business experience in management and sales, Enrico has also launched several successful businesses.



### **Bill Kemmery: Finance Advisor**

25+ years in management roles with a range of listed and government agency employers, including work in overseas markets in Asia, Europe, USA and South America. Providing financial media advisory, business intelligence and investor communications services to a range of private and public sector clients.



### **Lester Miller: IP Advisor**

Obtaining patents, trademarks and designs for new products, software, clean energy solutions, medical devices, Fintech, banking, UX, IoT, O2O consumer, luxury goods, automotive, camping, gaming, construction, food and fashion. Assists innovative firms find the most cost-effective and powerful IP protection appropriate for their technology.



### **Danny Naidoo: Retail Technology Advisor**

Formerly CIO at Woolworths Holdings, he has been at the forefront of emerging technology and developments for over two decades. He is highly skilled in the retail sector particularly in Enterprise Architecture, Program Management, Business Development, IT and Business strategy.



### **Laura Doonin: Digital Strategy and Innovation Advisor**

A leader in digital strategy and transforming retail business, with a focus to meet the fast evolving expectations of customers through omni-channel and global strategies. Her background is all things tech and retail, having worked for some of the biggest global companies including eBay and Pitney Bowes. She is an active speaker/contributor who has been featured in Women In Tech, Retail Global, Thrive Global.





**Gaurav Patni: Retail Technology Advisor**

Senior executive experienced with Oracle, developing winning strategies and technology focused change programs for prominent Retail and CPG companies Walmart, Nordstrom, Best Buy, Procter & Gamble, JCPenney, Loblaws, Tesco and David Jones. Highly experienced in business intelligence, Strategy and business Analysis.



**Leigh Founders: Strategy & Market Advisor**

Skilled in Business Strategy, Analysis and Management, Leigh has worked at an executive level with innovative global technology brands such as Baidu, Alipay, WeChat and JDPay. He has a deep knowledge of the Blockchain, as seen in his advisor roles for Lina.Review and Smart Links Swiss.



**Mitchell Pham: Technology & Asian Market Advisor**

A technology, business and social entrepreneur who is Cofounder, Director, Board member and head of Marketing & International Development for 25+ years in various fields. Currently he serves as a Trustee of the Asia:NZ Foundation, and an Advisor at the Ministry of Business, Innovation and Employment. Cofounder of Smart Links Swiss - a tech company solving real world problems with Blockchain technology.



**Peter Knock: Retail Brand Advisor**

Senior retailer, rich with industry experience in omni-channel, cultural and digital transformation. Peter has elevated business performance and results in a variety of retail environments by leading changes in e-commerce, marketing, merchandising and business development. Resulting in increased brand equity, customer engagement, and profitable business expansion.



**Mani Amini: Security Advisor**

An open minded Principal Security Consultant with over 12+ years of experience, capable of understanding executive objectives and commercial aspects of the business in order to form adequate information security management framework and enterprise security architecture.



**Bob Lu: Technology Advisor**

+18 years experience in start-ups, software engineering, product management and go-to-market across UK, China, Brazil, and Australia. He is a China Internet specialist and knowledgeable Blockchain technology enthusiast and advisor.

## Final Note

When I started out in my tech career the year after leaving school, Steve Jobs had just launched the first Macintosh PC in 1984.

I was always destined to end up in the technology industry, just as my father had been involved all his career; founding Computer Manufacturers Australia (CMA), which built and installed the first computer systems at Qantas and the Australian Tax Office, and he later sold the company to Fujitsu.

During my time I have seen the reign of Novell in the 80's, the birth of Microsoft Windows, client-server networks, the Internet, Mobile and now (of course) the Blockchain. Make no mistake that this new decentralized distributed computing era will surpass all before it. Of course it is made possible by what has preceded it, however, it opens up the possibility that every industry and the way they operate will be changed forever.

The issue in the 90's that caused the .com bubble to finally burst wasn't that the business ideas and models were flawed yet there simply wasn't enough users connected at the time to sustain those models. The Blockchain is vastly different as the same IP protocol that the users of Internet operate on is the same as one that users of Blockchain use only with a trust layer.

Being able to now operate in a world where universal digital utility can be created and one that holds a unique store of value, that anyone can access, is a great leap forward. The RainCheck venture, its platform & platform token, will change the way loyalty and rewards are both distributed and redeemed globally.

We are three years into our mission and it is still on the same trajectory, only now with the help of the community and supporters of the RAIN project in general we can arrive faster than previously planned.

~ Cameron Wall, CEO.

