payblok by INSTASUPPLY

The PayBlok Token

PayBlok is a cryptoasset that incentivizes B2B payments within the InstaSupply platform

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Executive Summary

Small and Mid-sized Businesses (SMB) are heavily affected by the impact of lengthy credit terms upon sale, with traditional financial products failing to cater to them. This leaves SMBs with few options when looking to alleviate cash-flow problems. Having identified this problem, InstaSupply is introducing PayBlok, a token aimed at solving SMB cash-flow problems.

The business-to-business (B2B) payments landscape totaled $18.5 trillion for 2016 in the United States alone, and relies heavily on credit (42-48% in most countries, according to Atradius Collection). Typically, SMBs lack the resources to run best practice administrative tasks focused on payment and collection. Further to this, they are in a **weaker position to negotiate payment terms with their suppliers.** These two factors result in SMBs depending on credit to survive; a dependence that is exacerbated by the fact that **half of all sales on credit failed to be paid on their due date**, creating demand for even more credit. Despite this, **banks have failed to offer any accessible solution** for SMBs.

With this in mind, InstaSupply are looking to further increase their support for SMBs by offering an early payment function on top of their existing platform—which connects buyers and suppliers matching purchase orders, deliveries, and invoices. This will enable provision of de-risked financial products to SMBs.

There are already 2000+ companies using InstaSupply every month, with the volume of transactions exceeding $60 million per year. The new early payment function will enable hosting of over $200m of transactions in the first year of deployment.

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1. Company Background

InstaSupply was founded in late 2014 by Lee Pruitt and Tim Huegdon with the vision to simplify all buyer and supplier business interactions online; born out of their prior experiences.

InstaSupply have spent time building and refining a robust workflow that captures, digitizes, and automates all the back-and-forth interactions that proceed payment. Whilst disruption of the problems in business related to ordering, delivering, invoicing, and accounting have been a key focus, managing payments has always been the company end game since inception.

Funded through rounds of investor financing since formation, the company has built a team of deeply experienced professionals who develop the platform, onboard and sustain thousands of businesses, and have processed over $60 million in transactional value.

2. Market Relevance

SMBs comprise 99% of the enterprises within the Organisation for Economic Co-operation and Development's (OECD) 35 member nations. The OECD's statistical analysis is echoed within the United States, as firms "with fewer than 500 employees" account for 97% of the total U.S. enterprises. Additionally, the World Bank posts similar statistics for emerging markets, citing "Small and Medium Enterprises (SMEs) play a major role in most economies, particularly in developing countries."

Formal SMBs contribute up to 60% of total employment and up to 40% of national income (GDP) in emerging economies. In the United States, small businesses produced 46 percent of the private nonfarm GDP in 2008 (the most recent year for which the source data are available). Additionally, when compared to the larger wellknown corporations, small businesses are more likely to be innovators in their industry. In fact, the smallest firms—those with fewer than 25 employees—develop more patents per employee than large corporations. However, despite all their economic and innovative contributions, SMBs face working capital pain that makes them financially vulnerable.

3. SMB Problems

3.1 The Payment Process

Before addressing the pain of payments faced by small businesses, it is important to first understand the business-to-business (B2B) payment process and how that differentiates from other payment processes:

When a consumer pays a business, one entity is the sender and the other the receiver. In B2B payments, businesses constantly manage both the send and receive sides of the equation.
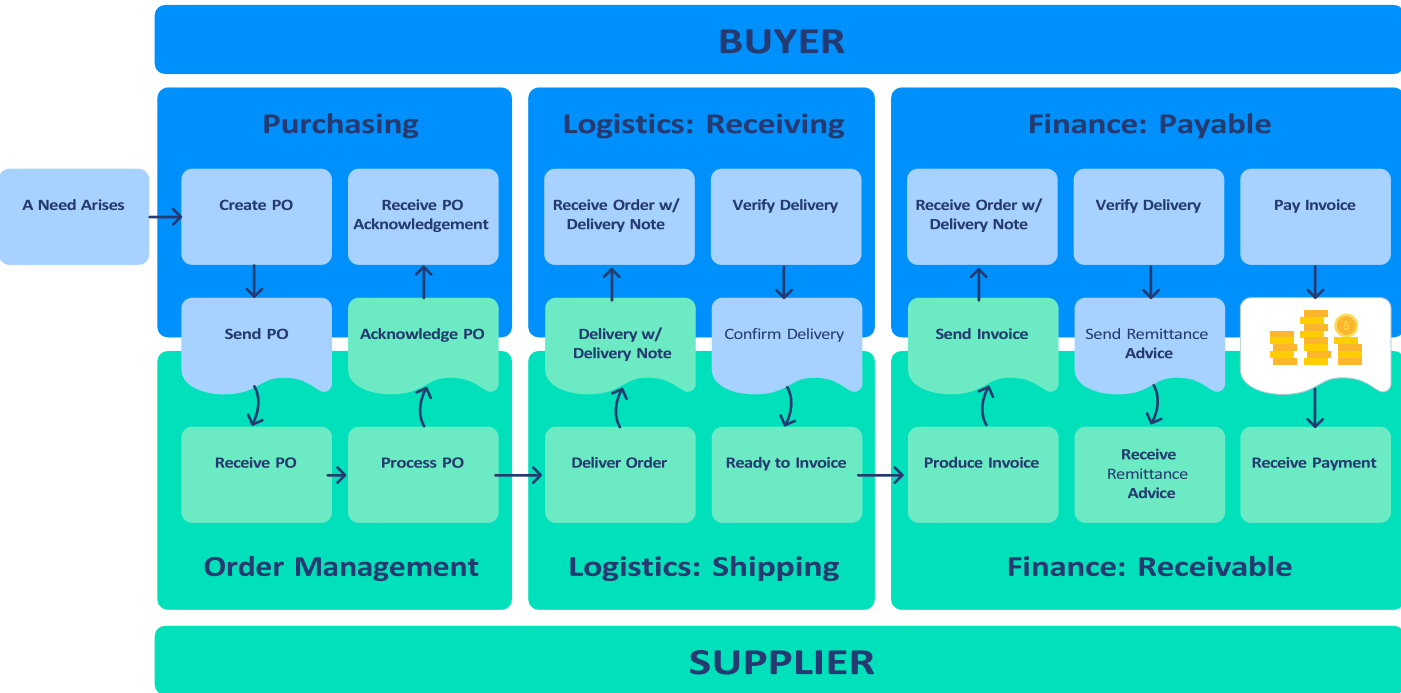
This back-and-forth cycle is commonly referred to as the purchase-to-pay process for a buyer, and the orderto-cash process for the supplier. This process spans days—sometimes months—before it is completed. The efficiency of these processes has a direct effect on a company's cash position. In general accounting, the symmetry of this interaction is that one company's payable is always another company's receivable.

Buyer - Payable	Supplier - Receivable
Recorded as a liability.	Recorded as an asset.
This account should have a credit balance.	The account should have a debit balance.
Credited for the goods/services on the invoice.	Debited for the goods/services on the invoice.
When the business pays the invoice, this account is debited.	When the seller receives payment for this invoice, this account is credited.
Accounts for the amounts that this business owes but has not yet paid.	Accounts for the amounts that this business is owed but has not yet collected.

3.2 Late Payment Problem

30% of SMB businesses quote late payment processing times as a major issue, and around 47% of businesses are paid late. Payment delays result from either an intentional delay in payment by customers, elongated processing methods, or both.

most impacted by late payments, where 56.4% of B2B invoices were paid late.

The Americas

Atradius reports that, on average in 2017 in the Americas, 48% of all B2B invoices were not paid when they were due. Late payments were the highest in the United States and the lowest in Canada.

Past due B2B receivables in the Americas (avg. %)
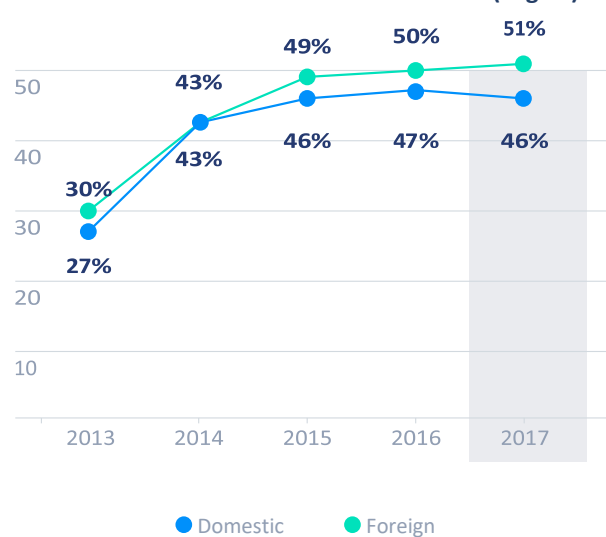
Sample: companies interviewed (active in domestic and foreign markets)
Source: Atradius Payment Practices Barometer - September 2017

Asia Pacific

In 2017 in Asia Pacific, 44.6% of domestic invoices were unpaid at the due date. India was the country

Past due B2B receivables in Asia Pacific (avg. %)

Sample: companies interviewed (active in domestic and foreign markets)
Source: Atradius Payment Practices Barometer - October 2017

Europe

In Western Europe an average of 41.9% of

Past due B2B receivables in Western Europe (avg. %)

	2013	2014	2015	2016	2017
Domestic	30%	43%	40%		40%
Foreign	29%	43%	35%	38%	39%

Domestic values: 43%, 40%, 42%

● Domestic ● Foreign

Sample: companies interviewed (active in domestic and foreign markets)
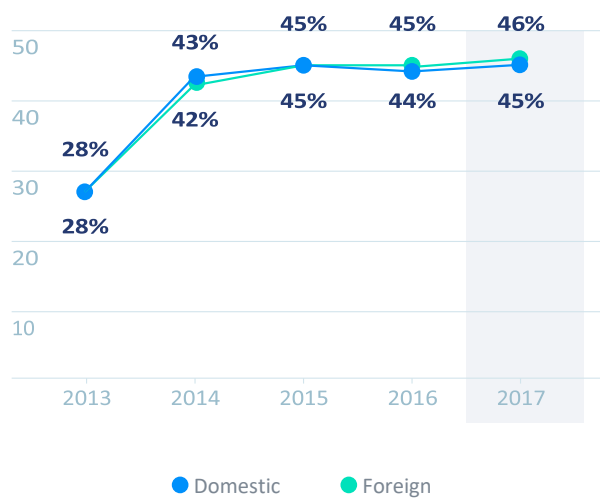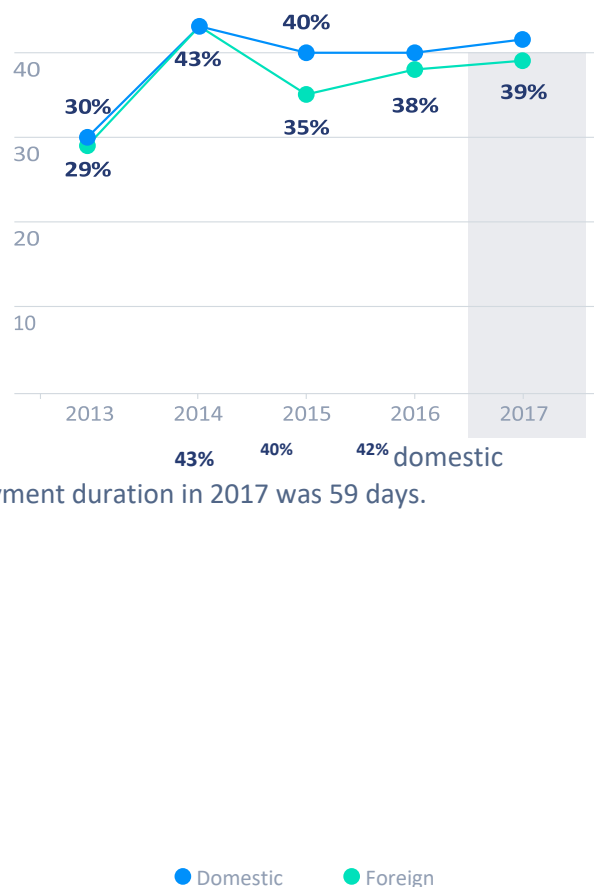Source: Atradius Payment Practices Barometer - Spring 2017

invoices remain unpaid past the due date. The average payment duration in 2017 was 59 days.

Not only are late payments a problem, but large banks have severely curtailed their small business lending following the onset of the financial crisis. Post-crisis lending from banks has disproportionately gone to large businesses. Because of this, SMBs are less likely to be able to obtain bank loans than large firms; instead, they rely on internal funds, or cash from friends and family to launch and initially run their enterprises. Approximately half of formal SMBs do not have access to any formal credit at all. The link between bank competition and SMB access to credit has become an urgent policy issue because the structure of the global banking system has been significantly affected by consolidation. Globally, access to finance remains one of the most significant constraints to the growth, productivity, and survival of SMBs and therefore the jobs they create.

The SMB credit gap is a problem on both sides of a B2B transaction: on the demand side, many SMBs cannot get access to credit because bankers cannot see the critical information they require to assess creditworthiness. For most bankers, this results in a lack of financial intelligence and insight to make credit decisions. On the supply side, banks consider SMBs as high-risk and unsuitable to serve at interest rates the banks are able to charge. Small business loans— often defined as business loans below $1 million—are considerably less profitable than large business loans. Transaction costs to process a $100,000 loan are comparable to a $1 million loan, but with less profit. For these two reasons, banks often prefer to lend to larger firms. As a consequence, financial instruments for SMBs continue to operate in thin, illiquid markets, with a low number of market participants.

4. Our Solution

InstaSupply provides a workflow for buyers and suppliers to manage their payments and collections. With over 2,000 businesses currently using the platform, over $60 million worth of invoices are passed through InstaSupply on an annual basis.

By creating a business network between buyers and suppliers, the platform collects data from both sides. InstaSupply empowers users to create and place purchase orders, track deliveries, and match orders to corresponding invoices; this enables buyers to track, manage, and control their spend.

Upon receiving an invoice, customers on the platform are able to review the invoice, and accept or reject it accordingly. Once the invoice has been accepted, invoices are paid outside the InstaSupply platform. Because the data is pushed to the customer's accounting software for record keeping and eventual payments, the customer is required to manually record when an invoice has been paid on the InstaSupply platform.

Purchase Order	Delivery or Service	Invoice	Payment

The additional steps of moving data between systems creates extra workload for finance departments; increasing the likelihood of human error, creating open space for fraud, and also delaying payments to suppliers.

4.1 PayBlok Tokens

PayBlok is a crypto-asset (token) that gives its owners/holders exclusive benefits on the InstaSupply platform. It will be developed under the ERC20 Token Standard.

As an asset, the initial sale of tokens will be subject to sales taxes according to the market where it is sold. Following this, a token belongs to its owner and can be traded without restriction or the need for consent or participation from InstaSupply.

The creation of the PayBlok token enables InstaSupply to offer a range of products solving the problems faced by SMBs as outlined in section 3 ("SMB Problems"). These products are:

- Integrated Payment Solution
- Supply Chain Financing
- Asset-Based Lending

4.2 Decentralized Community

One important element of our solution is the creation of a community of participants that can contribute and get rewarded for their work - *profit sharing.*
Every group that is part of the community has a key role to the overall success of the network.

Buyer	Order	Record Delivery*	Approve*		Pay*
Seller		Delivery	Invoice	Get Paid	
Validator			Match Records*		
Investor				Invest	Profit

activities that are incentivized/rewarded
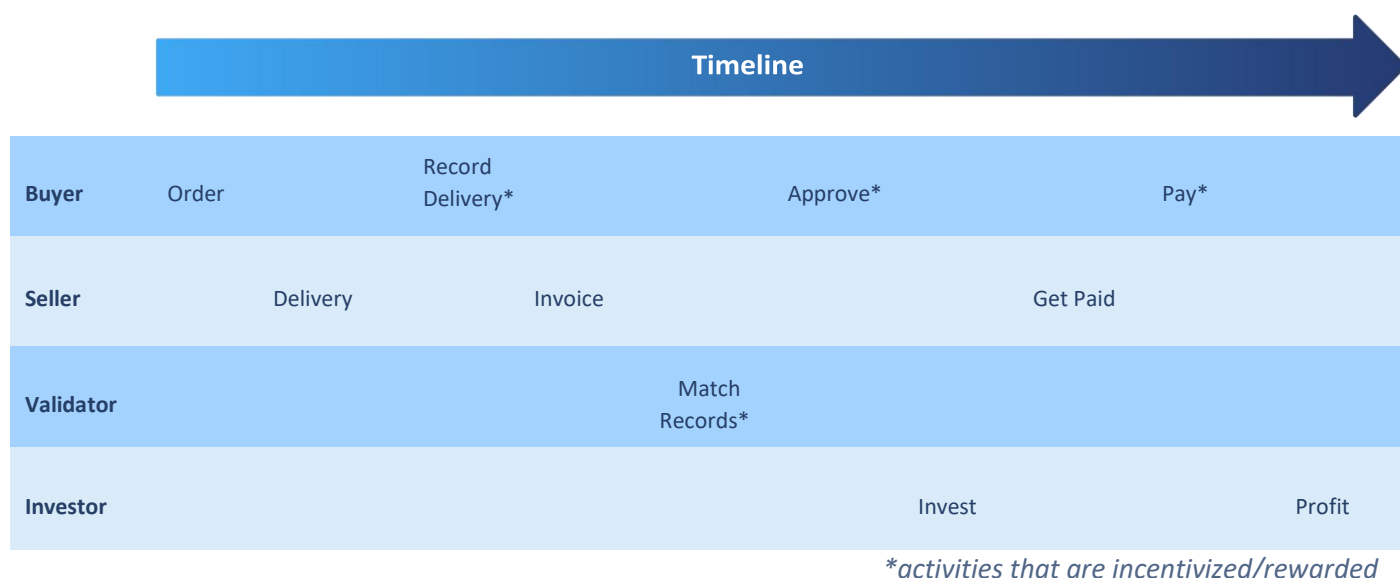
The diagram above describes InstaSupply's end-to-end solution from the Purchase Order to the settlement of a financed invoice.

4.2.1 Buyers Community

This community is formed by the users who raise Purchase Orders, Approve Invoices and Make Payments using InstaSupply.

Buyers pay an upfront monthly subscription for using the InstaSupply platform and as a result have access to all the features that help Businesses comprehensively control their spend.

4.2.2 Sellers Community

This community is formed of all businesses connected to InstaSupply. These businesses all receive Purchase Orders from Buyers and/or send Invoices to Buyers.

No fee is charged to any business that wishes to become a seller on the InstaSupply platform, because the costs are associated to the monetary benefit got from Supply Chain Finance. In addition to that, Sellers have to hold tokens in their InstaSupply Wallet to increase their credit limit for Supply Chain Finance on the platform. The volume of tokens held must have worth equal to or higher than 3% of the face value of invoices being financed. When tokens are used in this way to provide collateral against lending risk, they will be temporarily locked and therefore unable to be transferred.

To mitigate the risk to Investors, if the Buyer does not pay the negotiated invoices on-time, a portion of their held tokens will be sold through a third-party exchange to cover Investors' losses. In addition, when the invoices are fully settled the tokens are unlocked, giving the buyer the opportunity to get more invoices paid early using the same collateral.

4.2.3 Investors Community

Investors are the individuals that fund invoices at InstaSupply and get a reward (interest) for this funding. The reward will always depend on the term and the amount funded.

There's no fee to get access to the platform but the Investors need to stack tokens in order to have access to more invoices looking for early payment. The quantity of Tokens to be stacked must be equal to or higher than 3% of the face value of invoices that will be funded. Once the invoices are settled and the funds transferred to the Investor Wallet, these tokens will be unlocked and can be used on new investments.

4.2.4 Validators Community

The validator's role is to confirm if a Purchase Order is related to an Invoice. The system will suggest the most likely match and the validator will have to double-check if the system's suggestion is accurate.

InstaSupply, the Seller or the Buyer can be a validator on the InstaSupply platform. Also, all validators are rewarded for their work. An app will make this work easier and the right validation will be determined by consensus as a result of other accredited users' responses.

4.2.5 Community Profit Sharing

There are two different possible routes in the system and each one of them has a different calculation for profit sharing across the community.

- **Based on Buyer's Subscription**
Using this route, the subscription paid by Buyers is shared across the community according to each individual behaviour per document, considering each document as an incoming Invoice.

The InstaSupply's given value per processed document is 1 USD and the business retains 65% of this amount for support, providing infrastructure and continue with the system developments. The balance is then shared following the stakes each community member has on that document.

Community			
	Buyer	Recording a delivery	1 stake
		Incoming Invoice matches delivery	2 stakes
		Approving an unmatched invoice	1 stake
		Approving an invoice without PO/Delivery	3 stakes
	Seller	Upload invoice on CSV format	4 stakes
		Upload invoice on searchable PDF format	2 stakes
		Invoice comes with valid PO number	1 stake
		Duplicate document upload	-1 stake
	Validator	Invoice-PO matching	1 stake
	InstaSupply Data Entry	Invoice Data Entry	4 stakes

Each individual's reward is calculated by dividing 0.35 USD (1 USD given cost - 65% Instasupply cost) per the total number of stakes distributed for that document multiplied by the number of stakes each individual received on the same document.

A Buyer can have 0 to 4 stakes; a Seller can have 0 to 6 stakes; The validator and InstaSupply Data Entry might not exist on all documents but the maximum they can have is 1 and 4 stakes respectively.

These rewards indicate that a Buyer and a Seller, when engaged, can get up to 0.35 USD reward per document.

• Based on Supply Chain Finance
As this route is a complement of the route described above, the community has already collected benefits, the cost for processing the document has been covered and the risk reduced, with multiple data points matching.

The discount taken from the Seller who had its invoice paid early is shared across the community to reward correct behaviour and gain mutual benefit.

**Buyer to pay via
InstaSupply 10.0%**

InstaSupply Infrastructure 30.0%

Investor Interest 60.0%
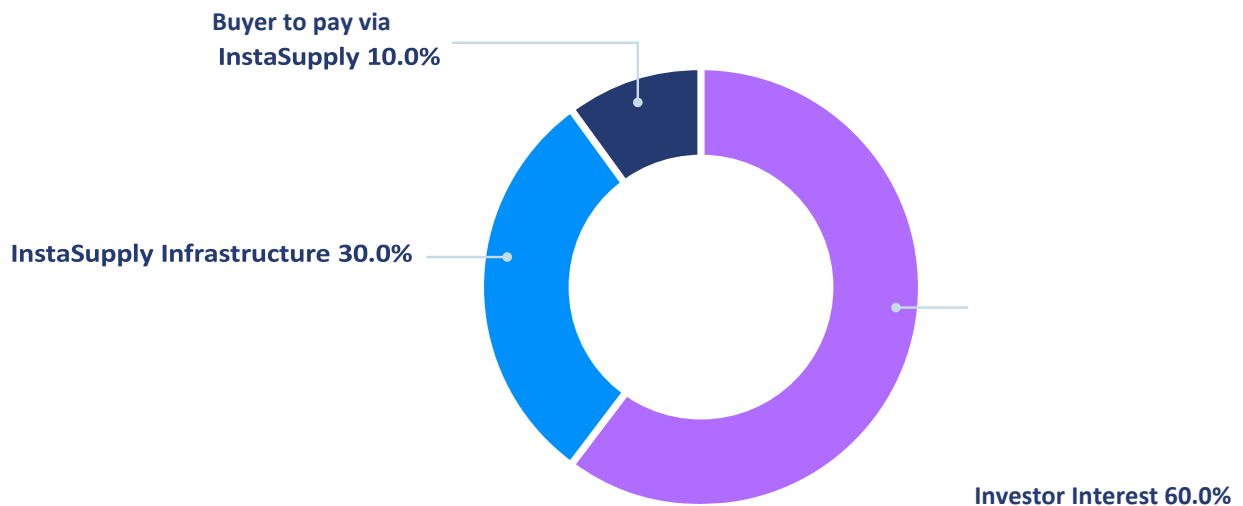
If the Buyer opts for not making the payments using InstaSupply, its rewards will stay with InstaSupply to cover the Accounts Reconciliation and Accounts Payable activities.
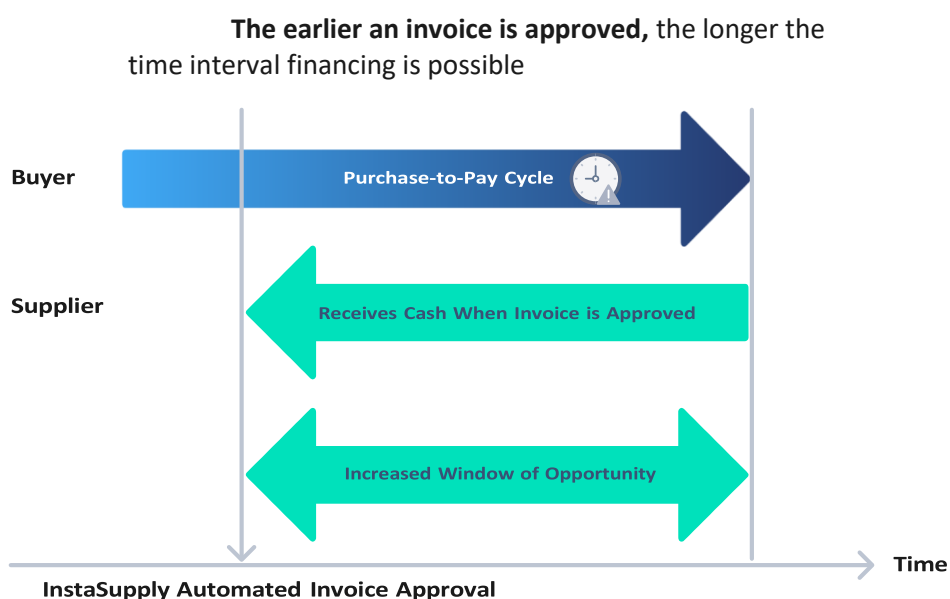
In a situation where there are 10,000 USD worth on Invoices, paid 30 days before the due date at 2% discount rate, the 200 USD discounted will be shared as follows:

o Investor: 120 USD

o InstaSupply: 60 USD

o Buyer: 20 USD

4.3 Automated Approval and the Window of Opportunity

Automated approval is a vital part of this project because it creates the opportunity to provide financing. Previously, without technology and automation rules, approving invoices was a very manual process.
Automation reduces human input by 90%, resulting in suppliers being paid quicker and more accurately.

The earlier an invoice is approved, the longer the time interval financing is possible

Buyer

Purchase-to-Pay Cycle

Supplier

Receives Cash When Invoice is Approved

Increased Window of Opportunity

Time

InstaSupply Automated Invoice Approval

We will utilise user-managed "Automation Policies" on our platform so that one of two actions can occur upon the approval of an invoice; if there is a PO and delivery already on the system that matches with the invoice in question,

the invoice is considered approved, alternatively, if there is no PO or if there is PO but it does not match with the invoice, then the approval will need to be manually implemented.

4.4 The Integrated Payment Solution

The development of payment facilities will benefit both buyers and suppliers, with the complete buying cycle remaining on a single platform; safe from external manual activities such as exports and reconciliations. Developing the payment portal within the platform will ensure that the complete procurement cycle will go through InstaSupply, creating security while also eliminating any risks associated with transferring data between platforms.

InstaSupply will provide accounts payable departments the ability to settle an unlimited number of invoices, send remittances and update their accounting books in a single transaction, revolutionising the way accounts payable departments operate, delivering a unique proposition that is applicable to any industry.

The only way a business can access this feature is by holding PayBlok Tokens, where a business holding more than:

- 0 USD worth in Payblok, can execute up to 1 payment runs per month
- 500 USD worth in Payblok, can execute up to 3 payment runs per month
- 1,000 USD worth in Payblok, can execute up to 20 payment runs per month
- 10,000 USD worth in Payblok, can execute up to 50 payment runs per month

A payment run is when an unlimited number of invoices are paid at the same time. PayBlok tokens on hold are not consumed during a payment run unless the buyer wants to use part of its balance for payment - In this case, the tokens are sold at market price and the funds received distributed according to the recipients designated in the payment run.

4.5 Supply Chain Financing

With the appropriate environment in place, an efficient workflow, automatic invoice approvals, and an integrated payment solution, the offer of Supply Chain Financing become viable. Similar financial products have historically ignored the kind of businesses that need it most: SMBs.

The process of providing supply chain financing is simple and bureaucracy-free. With the seller able to receive funds, net of fees, in less than 24 hours, benefitting from the transparency that Blockchain offers.

The process starts after invoices approval when they will be organized into 4 pools according to the days left to the due date: 15 to 30 days, 31 to 45 days , 45 to 60 days and 61 to 90 days.

The investors then select what is the pool they want to buy the invoices from also informing how much is the intended amount. Additional filters relating to originating country, currency, minimum invoice value, maximum invoice value and average interest rate can be applied.

Based on the selected options and the available invoices, the system will combine the invoices to meet the maximum of requirements, informing the investor how much is the investment, how many invoices, how many different sellers, how many different buyers and the expected return based on the payments the buyers will make on the due date and the platform fees.

The investor accepts and the existing funds in the InstaSupply wallet are automatically taken and distributed to all sellers that have invoices bought in this transaction. If the investor does not have enough funds available in the wallet, it can be topped-up, buying Payblok using the system interface or transfer Ether or PayBlok from an external wallet. The system gives up to 6 hours for this external transfer to be completed and if unsuccessful, the invoices return to the pool waiting for new funding.

At the invoice due date, the buyer should make the payment using the integrated payment gateway and the funds will be transferred to the investor's wallet, net of fees, instantly.

InstaSupply manages the risk associated to the transactions getting the buyer's confirmation on the invoices, tracking the buyer's credit rating and applying interest rates that are competitive for both the seller and the investor according to each country market condition.
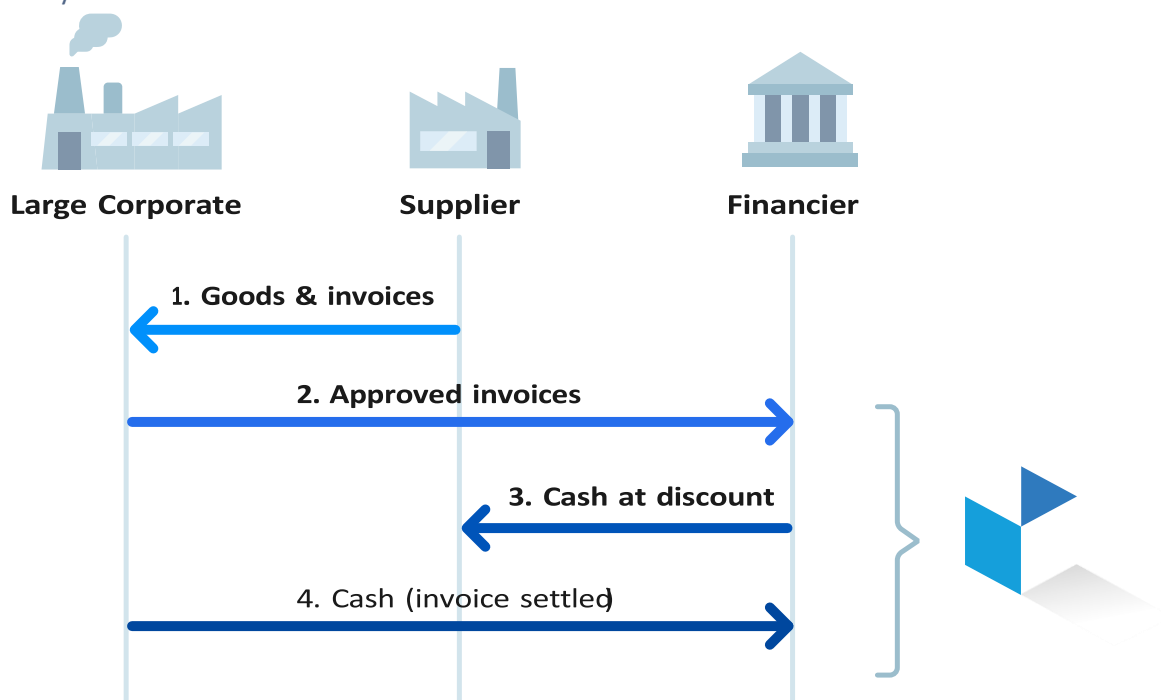
Supply Chain Financing will be available to all sellers within InstaSupply; but with a credit limit - the maximum value of invoices a seller can get paid early. Businesses can increase their credit limit by holding PayBlok as described below:

a. Less than 1,000 USD worth of Payblok releases a maximum credit limit of 5,000 USD

b. Above 1,000 USD worth of Payblok releases a limit that is 33 times the amount of Payblok on hold (ie: 2,000 USD worth of Payblok on hold puts a limit on invoices to be financed at 66,000 USD).

(These values and percentages will be in place when the platform goes live, but are subject to change, according to market conditions.)

If the seller does not have Payblok on hold and wants to have more than 5,000 USD of invoices paid early, the system will exchange part of the funds that would be released to the seller for Payblok and move to Seller's wallet where it will be blocked until the invoices are fully settled by the Buyer.

For detailed information around the technicalities, check section 6 ("Implementation").

4.6 Asset-Based Lending

This type of lending is based on using Payblok Tokens as a guarantee. If a loan is not repaid, that Payblok collateral will be taken by InstaSupply.

To release funds in this way, the applicant business can request a maximum of 60% of the value worth of PayBlok tokens in custody.
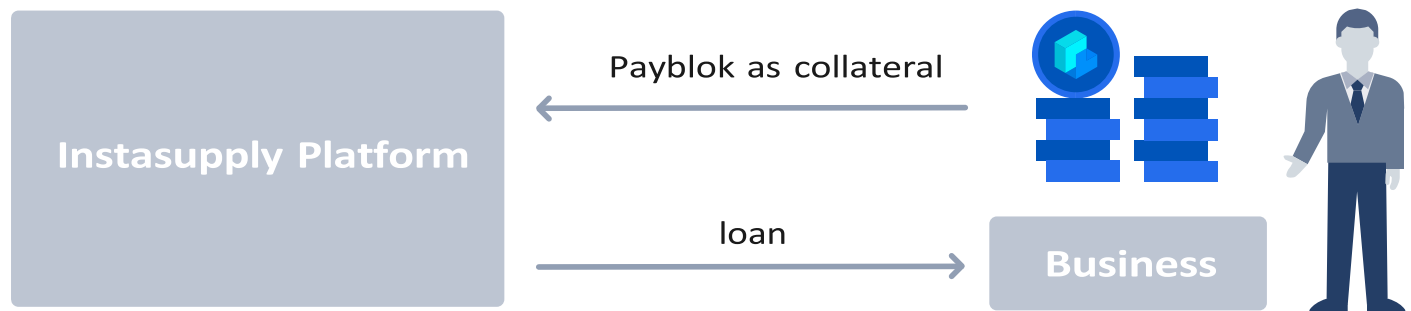
This request will be registered on the system and external investors can fund it, staking 3% of the value on PayBlok and the funds that will be dispersed to the applicant can come as PayBlok, fiat currency or Ethereum.

The interest rate applied on these transactions can be as low as 1%, since the transactions are de-risked using those assets to cover any loss. This saves businesses from having to sell assets during a market fluctuation.

If the value of PayBlok tokens in custody drops in value more than 30% from the lending point, InstaSupply is entitled to sell the tokens at market price to refund the investor and the balance will be credited at the original applicant's wallet.
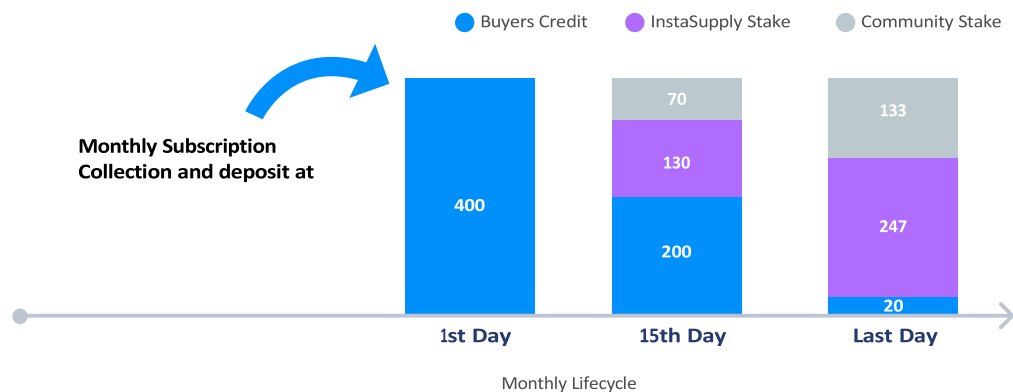
4.7 PayBlok Lifecycle

Payblok has two possible life cycles, depending on the scenario that is applied:

1. Buyers Subscription for using InstaSupply
The number of Payblok entering and leaving InstaSupply environment due to Monthly Subscriptions will always be the same and the dynamic is described on the infographic below.

○ Buyer pays the monthly Subscription and gets an allowance of documents to be processed

○ Every document processed described on the Diagram from session 4.1 deduces 1 USD from the Buyers' credit pool

○ 35% of the deduction (0.35 USD) is exchanged for Payblok and shared across the community as per session 4.2.6

○ By the end of the month, the remaining buyer credit (if any) remains with InstaSupply

The graph below exemplifies the breakdown between Buyers Credit, InstaSupply stake ad the Community stake along the month.

Monthly Subscription Collection and deposit at

Legend: ● Buyers Credit   ● InstaSupply Stake   ● Community Stake

	1st Day	15th Day	Last Day
Community Stake		70	133
InstaSupply Stake		130	247
Buyers Credit	400	200	20

Monthly Lifecycle

2. Supply Chain Finance

The Supply Chain Finance process starts after an invoice from a Supplier who wants to get paid early is approved (by either the Customer or based on matching data points) and following the same concept applied at the Subscription, the Community is rewarded by specific behaviour as per detailed at 4.2.6.
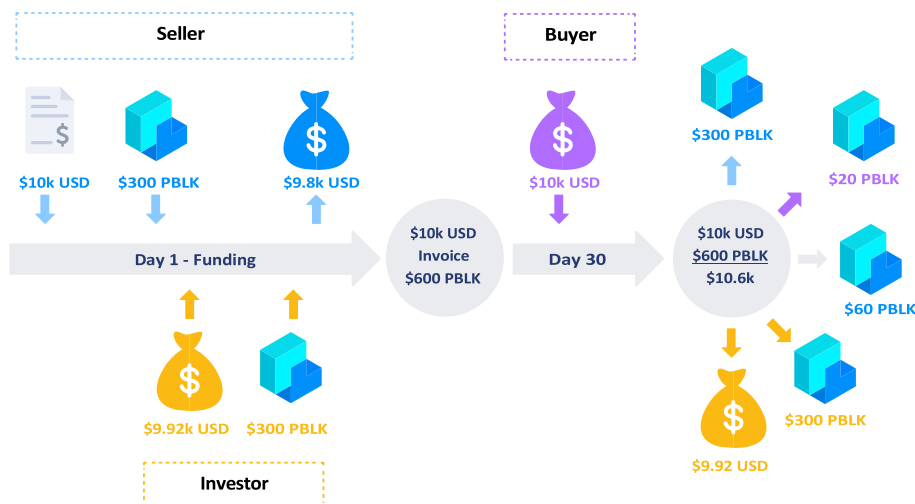
4.8 Value Exchange and The Network Growth

The number of end users engaging in the InstaSupply/PayBlok platform is vital to the success of Payblok. Consequently, we will be allocating a large proportion of our budget towards customer acquisition, adding to the 2000+ businesses already using the InstaSupply platform.

4.8.1 Sales & Marketing

With a specialist Sales & Marketing team already in place, we will look to build on previous successful campaigns, seeking to grow InstaSupply's user network via three approaches, reducing the reliance on one strategy. In utilising our three-fold approach, we will increase demand for our services and, consequently, for Payblok tokens.

Our strategy is split into three main approaches:

1. Inbound Marketing

This will consist of heavy search engine platform use, social media targeting, qualified publications coverage, and attendance to industry specific events. All leads generated will be assigned to the sales team, who will convert these leads into InstaSupply users.

2. Partnerships

Having previously secured customer acquisition partnerships, we will look to expand this approach, targeting and collaborating with businesses that can provide us with multiple customers. We have previously proved that our product is attractive for external accountants and financial advisors to formulate partnerships. Consequently, we will target these industries, amongst others.

3. Integrations

We also aim to offer technical integrations with other products, which in turn will bring more users to the platform. These options will be studied in a joint effort between Sales and Product Development to identify the right opportunities that justify the development effort.

4.8.2 The PayBlok Network Effect

In the same way one buyer joining the network brings a large number of suppliers to the network these sellers are encouraged to refer their customers as buyers to InstaSupply, creating exponential growth to the community of users.

These businesses that bring their current customers to the InstaSupply community will receive PayBlok according to the volume of transactions these businesses add to the network. The reward can be calculated multiplying the monetary value of transactions during the first six months multiplied by 1% and the corresponding volume of Payblok will be credited to the seller's wallet on a monthly basis.

4.8.3 Geographic Expansion

In addition to targeting the UK and US markets, in which InstaSupply have previously concentrated, we will also be targeting markets with a large demand for enhanced payment terms, and thus an opportunity for growth and profit.

Targeting worldwide markets, geographic expansion will be driven by the following factors:

- Market Size
- Market Average Interest Rate
- Collection Complexity
- Average B2B Payment Default Rate
- Participation of Credit on overall B2B transactions

In addition to the United Kingdom and United States, the other markets that we are in an advanced stage of analysing are Brazil, Australia, and Mexico. Our target markets can change at any time and the Payblok community will be informed via the available channels.

5. Other Solutions

The following are the 4 most popular credit options that currently aim address SMB short-term cashflow constraints.

5.1 Factoring

Invoice factoring is a process that is used by companies in order to borrow money on sales invoices that have closed. This process involves working with a finance company to obtain a short-term loan on an invoice. Then when the invoice is paid, the money will be paid back to the finance company. Invoice factoring transactions are typically structured so that a company sells its invoices in two installment payments. The first installment covers about 80% of the value of the approved invoice immediately and the remaining 20% is covered, less the finance fee, once the buyer pays the invoice in full.

A downside to factoring is that only 80% of the funds are released upfront. Additionally, invoices are used as collateral for a short-term loan, making it more difficult to get other types of more conventional loans.

5.2 Bank Loans

Bank loans can help with cash-flow, and help provide emergency cash when required through short term finance.

They may be either secured or unsecured. With a secured loan, the borrower pledges an asset (such as plant, equipment, stock or vehicles) against the debt. If the debt is not repaid, the lender may claim the secured asset. Unsecured loans do not have collateral, though the lender will have a general claim on the borrower's assets if repayment is not made. As a consequence, secured loans will generally attract a lower rate of interest.

Bank Loans involve heavy bureaucracy, reducing access to SMB's who might not have the personnel to file all required documents, businesses applying for bank loans must also be a mature business, making it inaccessible to new businesses. or doesn't have approved credit line due to business' age.

5.3 Dynamic Discounting

Dynamic discounting refers to a solution in which the buyer makes an early payment to the supplier using their excess cash. The supplier in return brings down the cost or provides the goods and services paid for at a discounted price. The word "dynamic" prefixed to the term explains the option given to the supplier to make the goods or services available at a discounted price based on the date the payment is made by the buyer. Thus, the discount given is not a static discount. In most cases, the supplier provides the buyer with a greater discount if payment is made earlier. Thus, in dynamic discounting, the earlier the payment is made, the lower the price of the goods and services provided will be.

A downside to dynamic discounting is that it is limited by the ability of a buyer to run their payments which is often limited by internal procedures. This affects both buyers that cannot benefit from the the discount and suppliers, not receiving the funds.

5.4 Marketplaces

Many invoice factoring marketplaces exist today where suppliers can offer up their invoices to financiers in an auction style format. While this model is attractive in having multiple investors compete to fund all or part of an invoice, the model has some challenges for all the parties involved. The first problem is that in some of these platforms the investor has to evaluate the creditworthiness of each individual supplier and buyer in order to price and accept the financing. The second problem is that the financier also must spend a lot of time and energy taking an active part in going through

all invoices on the marketplace to be able to compete against other financiers. While some platforms attempt to automate this process, it can often be very time consuming to participate. Most marketplaces also limit themselves to institutional investors and require substantial initial deposits in the tens of thousands just to gain access to the marketplace.

For the supplier the downside of marketplace platforms are the uncertainties around whether the invoice will be financed (if at all), the financing terms, and who the individual or multiple financiers will be in the end.

6. Implementation

As previously outlined, InstaSupply is already a functioning business marketplace for trade. We have been providing invoice management and spend control services to buyers for over three years. This means we are already mature in terms of data ingestion and storage of invoices, credits, and delivery notes, and we have a functioning platform for businesses and their users to engage with that data. We also already have a Payment Run product that provides the ability for buyers to manage the invoices they wish to pay, apply any credit that may have already been issued for a given supplier, and subsequently generate a "payment file" CSV that may be uploaded to their bank to facilitate payments from their accounts.

In order to provide the PayBlok payment gateway, so that buyers can make payments against invoices and suppliers can receive those payments, we will need to undertake the following steps:

1. Upgrade the InstaSupply invoice architecture to adapt how we track document payment state.

2. Upgrade the current InstaSupply Payment Run product to take funds directly from buyers, allowing full payment within the InstaSupply platform.

3. Provide funding dispersal to suppliers, in order to pay/purchase their invoices at specific points in the Payment Run Lifecycle.

4. Create vendor wallets that provide storage of PayBlok tokens for redemption within the InstaSupply platform.

5. Provide integration of PayBlok with Payment Runs in order to allow full or partial payment in PayBlok assets.

6. Provide PayBlok cash-out functionality so that assets can be exchanged for traditional fiat currency.

7. Provide PayBlok purchase functionality so that buyers and suppliers can buy assets within the platform.

8. Provide PayBlok transfer facilities so that buyers and suppliers can transfer assets into and out of the platform with external PayBlok-enabled crypto-asset wallets.

6.1 Payment State

Invoices in the InstaSupply platform are marked as "paid" by applying "settlements" to their total value. This provides users with the ability to track partial coverage of payment through a credit note, or a discount, before final payment is due. When an invoice is included within a payment run, we have already calculated the total amount outstanding for payment to be included. This avoids confusion when then applying further "customer account" type credits to payments for a specific supplier.

Payment settlements are currently applied to an invoice from the point of view of a buyer settling an amount directly with the supplier. However, in order to allow for situations where the supplier may seek early payment (invoice financing), or the buyer may seek more time to allow for payment (supply-chain financing) we will need to annotate settlements as relevant to either the buyer or supplier related to the document. In addition, we will then need to provide an "outstanding value" relevant to each of those parties.

6.2   Payment Run

Currently buyer users are able to create payment runs within the InstaSupply platform using our Payment Run product. In simple terms, a payment run is the creation of a group of invoices to be output as payments within a "payments file" (typically a CSV file to be uploaded to a bank), which can then be marked as paid once payment is complete. This process also provides buyers an opportunity to use credit issued by suppliers against payments to ensure accounts balance.

Implementing the PayBlok payment gateway within InstaSupply will not require a great deal of change to the Payment Run product, but we will undertake a significant upgrade of the interface and core functionality to provide instant payment dispersal to suppliers, and to allow partial or full payment of a payment run via PayBlok tokens.

6.3   Payment Dispersal

The PayBlok payment gateway will extend the Payment Run feature by allowing direct dispersal of PayBlok as payment to suppliers on completion of a buyer payment run. This will also automate the marking of invoices as paid, and the generation of remittances for each supplier. Payments will essentially be converted to PayBlok in the background, with

the supplier then being able to cash out to fiat currency whenever they choose. This also then enables purchase of the invoice assets using pools of PayBlok introduced by Investor users.

Since all payment transactions will involve conversion to PayBlok for transfer between wallets, this also means that all payments will be recorded on Ethereum as true ERC-20 token transfers.

6.3.1 Supply Chain Financing

As soon as we are able to disperse funds to suppliers, we will be in the position to purchase invoice assets on behalf of buyers. As soon as a buyer has validated/approved an invoice for payment, we will purchase that asset from the supplier less the fees outlined in section 4. This will be recorded on the invoice as a settlement with the supplier from InstaSupply. Once the buyer then finally makes payment for the invoice, that payment will be made directly to InstaSupply and again recorded on the invoice as a settlement from the buyer to InstaSupply.

Using this method we will be able to track outstanding settlements on both sides of the transaction. This allows us to:

    a. provide early payment for suppliers that request it without affecting payment terms for buyers, and also

    b. provide longer payment times for buyers without suppliers having to wait for their payment.

6.3.2 Asset-based Lending

Dispersal of funds also enables us to provide asset-based lending to businesses that request it. In this case we will simply disperse funds up to a maximum value based on the stored collateral outlined in section 4. Loans of this type will be tracked as separate entities in our data and will be delivered as a new product within the InstaSupply platform.

6.4 The PayBlok Wallet

Every vendor on the InstaSupply platform will receive a virtual wallet to hold their PayBlok tokens. Any tokens issued within InstaSupply as rewards will automatically be transferred into this wallet.

The PayBlok wallet will be built as a centralized virtual wallet within the InstaSupply application, specific to each business vendor (buyer or supplier). Users will be able to transfer PayBlok into their wallets from external sources using standard blockchain, and will also be able to transfer PayBlok back out again.

Since PayBlok will be implemented as an ERC-20 token, the InstaSupply PayBlok Wallet will also be able to store ETH in order to allow gas payments for transfers on the Ethereum blockchain.

6.4.1 Centralized vs decentralized

We have chosen to implement the PayBlok wallet *centralized* within the InstaSupply application, in order to provide the simplest interface to users. A good example of a centralized architecture within the current cryptocurrency ecosystem would be Coinbase, where a user simply logs into a cloud-based account and can transfer funds into and out of an online wallet.

Currently, most of our users are not deeply technical, nor should they be required to be. Enforcing a *decentralized* architecture for wallets would require an understanding of token storage in some form of separate application, browser extension, or hardware wallet. Examples of decentralized wallets in the current ecosystem would be

MetaMask, MyEtherWallet, Exodus, Jaxx, and Mist. In these examples, a user can only manage and transfer funds from the specific physical hardware that stores the cryptographic keys for these wallets. We have agreed that this kind of expectation of technical know-how on our users, at time of writing, would be unfair and a severe disadvantage to the platform as a whole.

However, it should be noted that the decision to implement centralized wallets over decentralized wallets will be constantly re-evaluated over time and should the implementation of a decentralized architecture become more viable, there is nothing that would prevent us prioritising the upgrade.

6.4.2 Wallet Security

The protection and security of funds stored within InstaSupply are of paramount importance. However, it is also important to us that the full lifecycle of funds associated with payment and financing of invoice assets is recorded on the public ledger of the Ethereum blockchain. It is for this reason that we are required to implement a full wallet for each business, with control of private keys within the InstaSupply application as a necessity. Our intention is that these keys will be stored using a managed hardware security module (most likely to be Amazon's CloudHSM AWS solution). Private keys will not be human accessible at any level within the system.

Control of private keys is necessary in order to enable InstaSupply to sell business assets as collateral against unpaid financed invoices. It is also necessary to enable InstaSupply to cover gas prices on the Ethereum blockchain without users having to pay themselves, thus reducing the impact of transaction costs on the end user.

6.4.3 Interaction with Ethereum

InstaSupply will maintain their own Ethereum nodes in order to reduce the overhead for interaction with the Ethereum JSON RPC interface. Our application will then interact with the Ethereum nodes using the official Ethereum Web3.py library.

6.5 Cashing Out PayBlok

Any business with PayBlok in their InstaSupply PayBlok wallet will be able to cash-out the PayBlok to fiat currency. To cash-out PayBlok, InstaSupply will simply buy back the assets at current market value, less a small exchange fee.

In order to avoid cash-out situations that may have significant effect on the InstaSupply PayBlok pool, and the overall market value of PayBlok, there will be transactional limits on the amount that may be cashed-out by one business over any given week.

On cashing out PayBlok, a business will receive the corresponding fiat funds representing their cashed out holdings in payblok transferred out to a standard bank account.

6.6 Purchasing PayBlok

Any business within the InstaSupply platform may purchase PayBlok at any point, by way of internal integrations with third-party cryptocurrency exchanges.

6.7 External Transfer of PayBlok

Any business within the InstaSupply platform may transfer PayBlok into (and out of) their InstaSupply PayBlok wallet. Transferal of PayBlok from or to external wallets will incur the usual ETH-based gas fees for the Ethereum blockchain, which will not be covered by InstaSupply (unlike transactions from internal wallet to internal wallet).

7. Our Sale

PayBlok token supply will fixed at 250,000,000 (two hundred and fifty million) and no further token issuance will happen

7.1 The Distribution

Tokens will be assigned to a variety of uses, per the distribution breakdown below:

1. 60% Token Sale (150,000,000)
2. 13% Blocked for future use (32,500,000)
3. 18% Company, Team and Advisors (45,000,000)
4. 5% Incentives | Rewards (12,500,000)
5. 1% Referral Program (2,500,000)
6. 3% Bounty Program (7,500,000)

7.2 Release Schedule

Immediately after the Token Sale, 172,500,000 tokens (69% of total supply) will be circulating and the volume remains the same during the first 6 months, when starts a gradual monthly increase until it reaches its maximum.

The circulating supply will match the total supply exactly 5 years after the token release and no more Payblok tokens will be issued. This strategy aims to balance offer and demand of those tokens during the first years of the project until it is mature.

The lockup and releasing periods are different according to the distribution stake

- Company, Team and Advisors: 6mth lockup + 1yr releasing time
- Blocked for future use: 2yr lockup + 3yr releasing time

7.3 Community Incentives

•	Three different programs have been constructed to incentivize community engagement. They are the (1) Bounty Program, (2) the Referral Program, and (3) the Discounting Plan.

8. Leadership

Lee Pruitt (co-founder/CEO) - 12 years commercial experience selling B2B ecommerce and eprocurement solutions. Lee led global B2B eprocurement solutions for Grainger (the world's largest B2B e-retailer) and started Tizaro, the largest online European ecommerce B2B distribution.

Tim Huegdon (co-founder/CIO/CTO) - 17 years development experience leading teams across top tech firms such as Yahoo, Amazon, and Betfair. Tim has experience in a huge number of languages, frameworks, technologies, and methodologies.

Riaz Shah (Director/Chairman) - 25 years as partner at accounting firm EY overseen London audit and global talent. In 2016 Riaz began serving in a part-time capacity at EY, dedicating the balance of his time serving as chairman at InstaSupply among many other directorships.

Michael Davies (Chief Technical Architect) - 19 years development experience having held various positions at IBM, Legal & General, Yahoo, and Amazon.

Jonny Ford (DevOps Engineer) - Jonny has over 10 years experience in server and database management for large global brands such as AKQA and FedEx.

Neil Crosby (Head of Technology) - 11 years software development and managerial experience having held positions at Yahoo, BBC, and Amazon. Notably, Neil is also credited as inventing the @reply format on Twitter.

Marcus Raphael (Head of Business Intelligence) - 8 years managing procurement processes for large companies across several industries including consultancy, mining, and telecommunications.

Martin Coxall (Digital Marketing Director) - Martin has over 10 years experience in digital marketing, amongst companies ranging from E-commerce, to marketing consultancy, and B2B services.

Lee Jordan (Head of User Experience) - 17 years experience as a web developer and user-experience specialist. Lee's previous experience includes having worked at Amazon and Graze.com.

9. Roadmap

- **May, 2018**
  - Begin marketing PayBlok and the subsequent new features within the InstaSupply platform.
- **June, 2018**
  - Begin pre-sale of PayBlok tokens to key individuals and early registrants.
- **July, 2018**
  - Open main sale of PayBlok tokens.
- **Q2, 2018**
  - Begin application for regulation and compliance in order to be a fully regulated global business bank and lender.
  - Begin applications for inclusion of PayBlok on third-party token exchanges.

○ Upgrade InstaSupply architecture to support full payments.

• **H2, 2018**

○ Build out of InstaSupply team to develop, support, market, and sell the extended product.

○ On-going development of new features.

• **Q1, 2019**

○ Deliver integrated payment gateway for receipt and delivery of fiat currency between buyers and suppliers.

○ Deliver PayBlok wallets in the InstaSupply platform.

○ Provide full in-platform payment runs.

• **Q2, 2019**

○ Provide transfer-in of PayBlok tokens to InstaSupply wallets.

○ Start providing PayBlok rewards to buyers and suppliers.

• **Q3, 2019**

○ Provide purchase of PayBlok within the InstaSupply platform.

○ Provide Supply Chain Financing and Asset-based Lending

• **Q4, 2019**

○ Provide transfer-out of PayBlok from InstaSupply wallets.

○ Provide cash-out of PayBlok tokens within InstaSupply.

• **2020 and beyond**

○ Further development of the PayBlok token as a reward within InstaSupply.

○ Delivery of more regulated financial services for businesses.

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Disclaimer

The sole purpose of this Whitepaper is to share information about the proposed establishment and operation of the InstaSupply platform to bring ultimate trust and transparency to the financial markets and the cryptographic blockchain PayBlok tokens ("PBLK Tokens") for use within the InstaSupply platform. The information set forth below may not be exhaustive and does not imply any elements of a contractual relationship. This Whitepaper does not constitute an offer or invitation to any person to subscribe for or purchase shares, rights or any other securities of InstaSupply or any affiliated entity.

Any agreement in relation to the purchase and sale of PayBlok tokens shall be governed by a separate document setting out the terms and conditions (the "Terms and Conditions") of such agreement, which shall be made available at http://www.PayBlok.io prior to the sale of any PBLK Tokens. In the event of any inconsistencies between the Terms and Conditions and this Whitepaper, the Terms and Conditions shall prevail.