



Clear Factor Ecosystem *in partnership with*  decimal**Factor**

White Paper v1.08

25th July 2018

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1. Founders' Note

During the 2008 financial crisis, the UK banks changed their criteria for invoice finance overnight. SMEs were given **very short notices**, some as short as 48 hours, to find alternative providers. We were among the SMEs* impacted by this but just about survived. Many other perfectly profitable businesses weren't so lucky and went under.

This trail of destruction impacting the lives of people, their families and the economy as a whole wasn't restricted to UK alone. It was a **global** phenomenon with debilitating negative consequences on societies across the world that included SME owners committing suicide. The world is still recovering from the aftermath of the 2008 financial crisis.

It is clear that the existing financial systems in place across the world are **not** designed to meet the needs

of the societies across the globe. According to a recent World Bank report (please see bibliography), **600 million jobs** need to be created in the next 15 years to absorb the growing global workforce and prevent poverty.

The same World Bank report states that it is the **SMEs** who create 4 out of 5 jobs. Yet the vast majority of them (nearly 250 million in emerging markets alone) **lack** access to viable **credit**.

These are staggering numbers and with the current global financial industry not prepared to deal with these challenges, the **funding gap** for the **SMEs** is estimated at **\$2.6 trillion** (World Bank) which is a big threat to the overall well-being of societies across the world over the next decade.

Our aim is to create a community

driven, incentives stimulated, neutral, decentralised, borderless and censorship resistant protocol based ecosystem that can contribute towards **bridging** this funding gap while also allowing fair rewards for those who participate and most importantly creating a self-sustaining environment wherein the catastrophic consequences of banks' unilateral decisions are not allowed to be **experienced** again.

Clear Factor has partnered with Decimal Factor to launch this ecosystem whereby we begin with the onboarding of the 10 year old Decimal Factor community into our ecosystem and reach out to the world.

Kind regards,
Clear Factor Founders
(Decimal Factor, Ricky Shankar, Nick Carter, Kaloyan Georgiev and Sanjay Padhee)

*Small & Medium Enterprises

2. Decimal Factor

In the United Kingdom, Decimal Factor Limited is authorised and regulated by the Financial Conduct Authority, FCA. We arrange responsible funding for small and medium businesses (SME) and Merchants across the UK through a panel of Alternative Finance Lenders.

We are a credit broker and not a Lender. We offer a bespoke **Payments Services Platform** that cleverly connects products, services and payments seamlessly with retailers. This helps our customers i.e. SMEs, Merchants and Retailers to take payments from consumers and allows them to offer bill payments, prepaid vouchers and other payment services to their consumers. We are also a master service provider for Credorax in UK & Europe. Our **Credit Brokerage Platform** offers mainly 2 lending products to SMEs through our

Lender panel – 1.Cash Advance and 2.Business Loans.

In the **absence** of high street Banks lending to SMEs, Decimal Factor, along with our panel Lending partners, assists small businesses by providing them working capital to grow their businesses. We have assisted tens of thousands of small businesses in the UK to secure funds. Since 2008, we have arranged over **£15 million** in various types of funding products. We have strong partnerships with lenders such as Liberis, Funding Circle, Lloyds Banking Group, IWOCA, Fleximise, Boost Capital to name a few.

We have created our own platform where we use our knowledge of SMEs to make decisions using **Artificial Intelligence algorithms** to help predict the readiness and affordability to fund a SME. We call

this our **DF SCORE**. We have two unique revenue streams from Payments Services Platform and Credit Brokerage Platform. However the biggest value in the business comes from knowing our **DF SCORE**. Collectively our staff can speak in **15** languages i.e. in Turkish, Polish, Portuguese, Spanish, Chinese, Urdu, Punjabi, Hindi, Gujarati, Somali, Nigerian, Swahili, Ethiopian, Eritrean and English.

We are delighted to **partner** with **Clear Factor** to form the decentralised and democratised Clear Factor ecosystem that has the potential to help SMEs globally by empowering the Clear Factor ecosystem community.

Kind regards,
Manoj Karkhanis, CEO, Decimal Factor & Ricky Shankar, Chairman, Decimal Factor

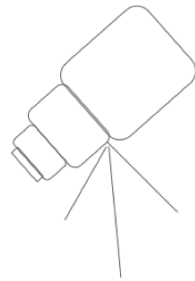
3. Vision, Mission & Value

Clear Factor is creating the **World's** best Invoice Finance ecosystem.



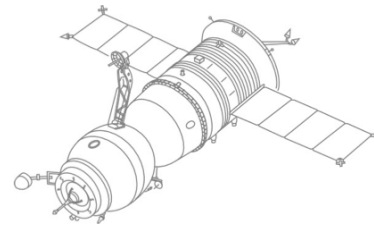
Clearfactor.io

Clear Factor Ecosystem



our vision

Our vision is to have a world where every **viable SME** business has access to fair interest rate working capital and every **small business** has access to low interest rate finance via a **democratised** and **decentralised** ecosystem.



our mission

Our mission is to create a **global ecosystem** of SMEs, Debtors, Investors and Underwriters where the community is **empowered** to digitally **fund** the SMEs and **govern** the Clear Factor ecosystem, also **deciding** its future scope and direction.



our value

Every member of the Clear Factor community – the SME, the Individual Investor, the Trade Investor, the Debtor and the Underwriter – **benefits materially** from using the Clear Factor ecosystem while also being **empowered** to govern it.

4. Executive Summary

Clear Factor



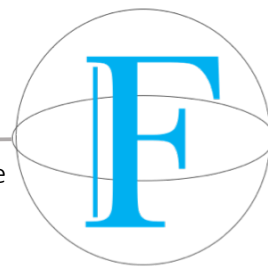
**Invoice
Finance**



**London
United Kingdom**



**Clear Factor +
Decimal Factor**



Clearfactor.io

- ✓ Decentralised provisioning of low cost invoice finance solutions to SMEs globally
- ✓ Delivers high potential investment opportunities
- ✓ Experienced team in blockchain and invoice finance

idea

Clear Factor is building a driven, incentives stimulated, neutral, decentralised, borderless and censorship resistant protocol based ecosystem to bring quick and low cost finance to SMEs struggling for cash flows while taking away the contractual binds, minimum factoring requirements, hidden bank charges, exit barriers, PGs & performance measure covenants imposed by banks. With a combination of incentive-based underwriting, DF-CF score, the facility to replicate successful investment strategies, ecosystem-collateralised Fx solutions and levered by smart contract driven consensus, it will provide excellent investment opportunities open to everyone globally in an industry traditionally open only to banks and large funders.

token model

Clear Factor will operate with a dual token model, deploying both a staking-cum-utility token called Fact and a price-stable token called Stat that will be pegged to a local currency and subjected to Mint and Burn process over the lifetime of an invoice sales & repayment cycle within the blockchain protocol ecosystem. The staking-cum-utility token, Fact, will be available outside the ecosystem and can be acquired either during the ICO process or bought and traded like any other cryptocurrency via participating cryptocurrency exchanges post ICO.

the market

£260 billion

UK

- ✓ UK govt. wants invoice finance to be accessible to more SMEs
- ✓ Clear Factor will focus on UK, EU, US, India and China currencies to begin with

£1.3 trillion

EU

- ✓ UK, France, Germany and Italy in that order account for 66% of the European market, which in turn accounts for 66% of the world market.

£2.0 trillion

WORLD

- ✓ Invoice financing has the support of government offices and central banks in most countries.

Invoice finance is the same the world over – the problem definition and the Clear Factor solution are relevant across the world.

5. The Opportunity

5.1 What is Invoice Finance?

Managing cash flow is essential for any business, and SMEs in particular, to deal with daily operating expenses and an invoice is the single biggest asset an SME has that can be traded for cash flow.

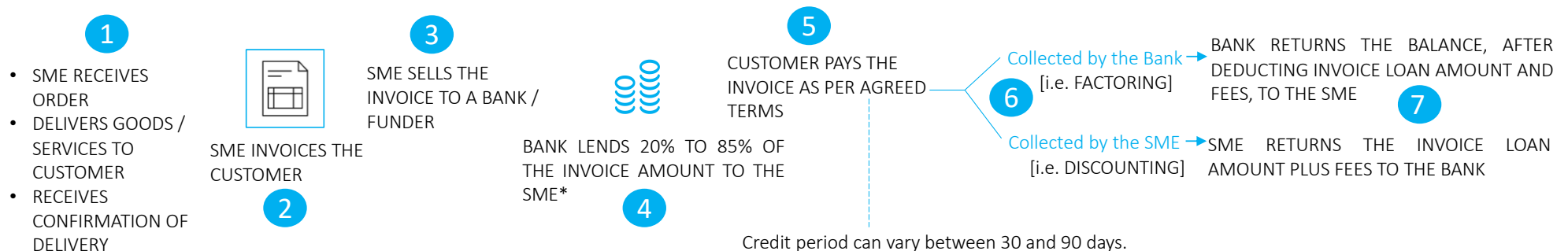
The biggest obstacle to growth for the majority of UK SMEs is a **shortage** of **cash** and a World Bank survey carried out across 119 countries reveals that this is true for most SMEs across the globe. A recent survey found that **76 per cent** of UK

SMEs are primarily relying on cash flow (Fenton, 2017) from their operations to deal with both seasonal and unforeseen **demand fluctuations** to sustain themselves and grow yet there is a funding gap that exists globally that cripples the SMEs.

More than a **million** small and medium-sized businesses in the **UK** alone have missed out on at least one new business opportunity in the past year because of a **lack** of funding. On an average, lost business deals caused by finance concerns

cost SMEs nearly £80,000 a year, according to a research carried out by specialist bank Aldermore, costing the UK economy **£80 billion** annually. The global SME funding gap is estimated at \$2.6 trillion (World Bank).

Invoice Finance key steps



Invoice Seller
= SME

Debtor = SME's
Customer

Concentration limit = % of Amount
lent against the Invoice value

As a highly profitable investment instrument, traditional invoice finance is open **only** to banks and very large funders.

*subject to approval

5. The Opportunity

5.2 Market

British Business Bank, Small Business Finance Markets Report 2018

SME businesses in the UK rose to **5.7 million** at the start of 2017, of which 5 million are in England. The UK is leading G7 countries in startup rates. The SME sector overall (firms with 0-249 employees) represents **99.9%** of all private sector firms in the UK, **60%**

of employment and at £1.9 trillion, **51%** of gross turnover. Data on Direct Traditional Bank Lending to SMEs has shown a continuing decline since SME Finance Monitor began in 2011. In addition, there has been a **decline** in SME

confidence that they would get a loan from a **traditional** bank. Confidence was down 43% in November 2017. Despite modest economic performance in 2017 credit conditions remained unchanged and broadly accommodative.

In the UK, the SME sector represents:

- ✓ 99.9% of all private sector firms
- ✓ 60% of all employment
- ✓ 51% of gross turnover (£1.9 trillion)

- *Global Factoring Statistics, 2017, &
- ABFA News, 2016

Invoice Finance Market Globally*

£260 billion

UK

- ✓ UK govt. wants invoice finance to be accessible to more SMEs

£1.3 trillion

EU

- ✓ UK, France, Germany and Italy in that order account for 66% of the European market, which in turn accounts for 66% of the world market.

£2.0 trillion

WORLD

- ✓ Invoice financing has the support of government offices and central banks in most countries.

Invoice finance is the same the world over – the problem definition and the Clear Factor solution are relevant across the world. Chosen currencies are based on current market size and the world's emerging markets in invoice finance.

5. The Opportunity

5.3 Problem

5.3.1

Banks/Funders impose minimum factoring requirements such as low concentration limits, minimum service charges and covenants around performance measures...

5.3.2

Banks/Funders apply costs that are hidden in-between the lines of the contract agreement written in the smallest font allowed by the law...

Traditional invoice finance (full assignment) provided by banks often turns out to be an obstacle on the SME's' path to expansion as traditional finance methods assume that the business will continue to be run in the same way and provide for the same type of clients.

Traditional products lack the flexibility that is required in the ever changing economic climate. In most cases, **banks/funders will have a degree of control** over a company's financial affairs by imposing 'minimum factoring requirements' such as low **concentration limits, minimum service charges** and **covenants around performance measures** and controlling its ledger.

Banks/funders impose concentration limits to mitigate risk, in case an invoice isn't paid. For example, if an SME's concentration limit is 20% and its total ledger is £100,000, then the bank will only consider £20,000 of

funding with any single debtor. Thus, in case of SMEs that get the most of their revenue from one client, **traditional invoice finance doesn't substantially help with either cash flow optimisation or growth capital.**

Traditional providers like banks market themselves by using outline offers that make their pricing seem very attractive. In reality, they charge a lot more by applying various costs that are **hidden** in-between the lines of the contract agreement, **written in the smallest font size allowed by the law.**

The **hidden** cost of invoice finance, besides the Service Fee and Discount Margin, that the SME won't see initially can be substantially higher than just these two fees as these are just the headline rates and an SME will find it almost impossible to avoid some of the extra charges (given that some are always **mandatory**). In order to explain the hidden costs, here are the most common charges that are

separate to the Service Fee and Discount Margin:

- Copies of any reports – £40 to £60
- Copies of legal documents – £100 to £120
- Credit check on a debtor – £22
- Breach of agreement – £500
- Audit visit – £500
- Cancellation of audit visit – £500
- Monthly Management Fee – £500 to £1000
- Payments to 3rd parties – £270 to £290
- Payment request outside of normal processing hours – £250
- Overpayments exceeding one week – £6000 or 6%
- Standard solicitors letter – £30 to £40

These are **just some** of the fees an SME can face in traditional invoice finance. There are many, many more – and some carry much **larger** charges.

5. The Opportunity

5.3 Problem

5.3.3

Banks/Funders often require a PG (personal guarantee) and sometimes a second charge to a SME's home or property...

5.3.4

Banks/Funders apply contractual binds and the lock-in is vicious ...

In short since 2008 UK banks/funders have been shielding themselves from SMEs who need funding the most while ripping off the ones they take on.

Banks/funders often require a PG (personal guarantee) and sometimes a second charge to a SME's home or property. Then suddenly a business can be facing a heavy burden. Once an SME starts borrowing money against its invoices through traditional providers i.e. banks, it is difficult to leave as it will continuously borrow more while repaying back the past debts. With the threat of a PG, the SME becomes yet another cash cow to the banks/funders while the SME lacks the breathing space required to innovate, expand and grow.

Another fundamental issue is the lengthy contract "tie-in" which is the hidden gem in any agreement for the bank. When an SME receives an offer, its absolute first focus is on the known base costs – Discount Margin and the Service Fee – and an SME looks at these two costs first. Often, it will pay little or no attention to the length of the minimum contract period which can in some cases be up to 2 years.

It is a vital element of the proposal because the minimum contract period effectively secures the bank's/funder's income for that period. In all cases if an SME decides it wants to leave the bank prior to the end of the contract it will have to pay the exit fee.

To give an example of how the minimum contract is calculated and how much the SME would need to pay to come out of the contract, here is a typical example :

- ABC Ltd has an annual turnover of £5m and has a Factoring Facility with an UK bank
- The Discount margin is 3% over Base rate of 0.50% thus making this a fee of 3.50% for borrowing
- The service fee is 1.25% with a Minimum Fee of £5,200 per month (Generally a bank will calculate the service fee x turnover to set the Minimum Service Fee)
- ABC Ltd is in a "Minimum Contract for 1 Year" and it must give 3 months

notice to leave (hence the actual contract period is 15 months)

- ABC Ltd decides after 3 months that it is not happy and wishes to leave immediately as it has found a better deal that is more suited to it and provides greater funding levels. It gives notice, however the bank advises that it must pay the "early termination fee" to leave.

- This would be calculated as follows: 15 months minus 3 months (the period it has already been in the contract) leaves 12 months remaining. The bank would then charge ABC Ltd £5,200 (minimum service fee per month) x 12 months (the remaining contract period)
- So the fee to leave early would be £62,400

It is important to note that the bank/funder is absolutely not obliged to release ABC Ltd from the contract, even if it agrees to pay the Termination Fee.

5. The Opportunity

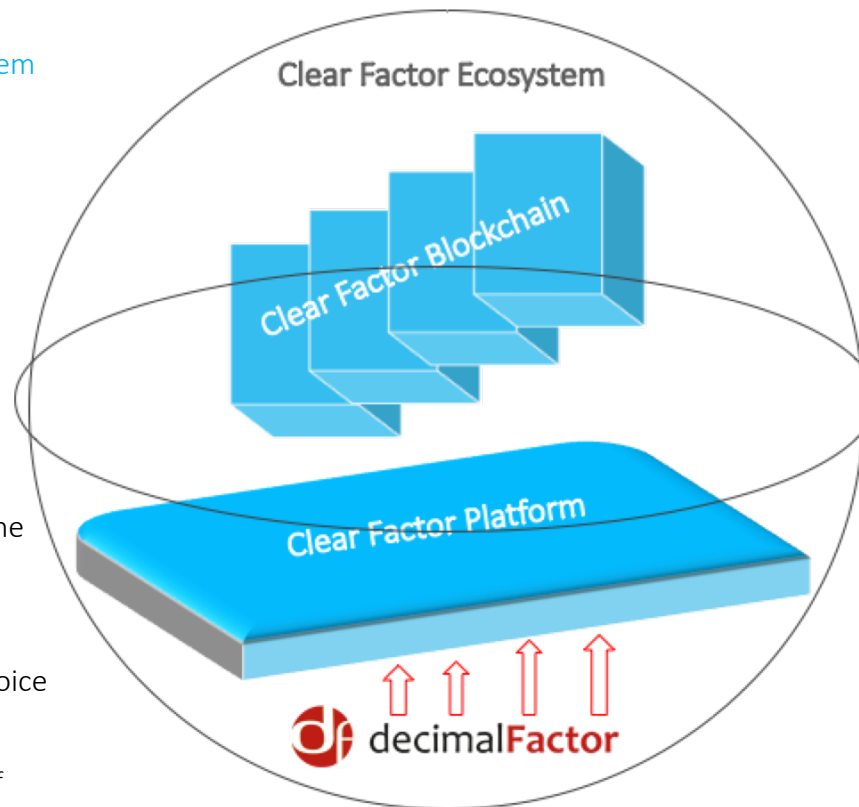
5.4 Solution

5.4.1 Overview of Users and their Benefits

Users* of the Clear Factor ecosystem are:

1. The **SME**, i.e. the Invoice Seller
2. The **Individual Investor**, i.e. the Invoice Buyer
3. The **Trade Investor**, i.e. the professional investor
4. The **Underwriter**, i.e. registered professional who underwrites the invoice
5. The **Debtor**, i.e. the SME's Customer who confirms the invoice as accurately raised

* Broker, Advertiser & Auditor are not part of the core process flows and mentioned separately in this document.



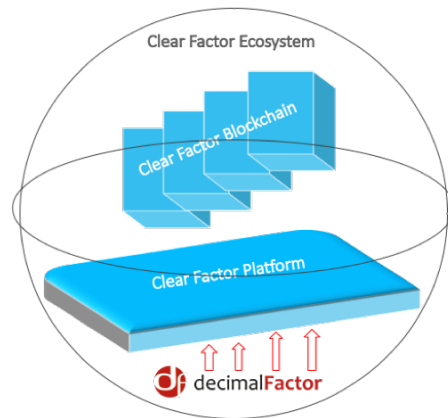
There are no 3rd party intermediaries, only mutual consensus

Benefits of the Clear Factor ecosystem are:

1. For **SME** – cheap and transparent way to sell invoices globally and rewarded for good repayment behaviour
2. For **Individual Investor** – a new profitable investment instrument with 2-Layered underwriting is accessible and the option to earn more by offering Facts as collateral
3. For **Trade Investor** – new revenue source via 'Portfolio Replicate'
4. For **Underwriter** – new freelance revenue source
5. For **Debtor** – paid for verifying invoice

5. The Opportunity

5.4 Solution



Benefits for the SME

- ✓ No minimum service charge
- ✓ No covenants around performance measures
- ✓ 85% concentration limit
- ✓ No PG (personal guarantee)
- ✓ No indemnity
- ✓ No hidden charges
- ✓ No contractual bind
- ✓ 12 to 24 hour turnaround
- ✓ 100% transparent – 0.5% Clear Factor ecosystem transaction fee upon withdrawal of monies
- ✓ SME to accept or decline interest rate offered by investors

It is all about the SME having the control to sell its invoice in an ecosystem at its preferred rate of interest. **Further** to that, the SME is also rewarded for **good repayment behaviour** – at every year end (March), the SME is rewarded with **1%** of the **total** value of invoices it has sold and repaid in that year.

Benefits for the Individual Investor

Today, traditional invoice finance is open only to the banks and large funders. In the Clear Factor ecosystem Invoice finance as a profitable investment instrument with an ROI higher than the average interest offered in a bank's savings account is open to everyone.

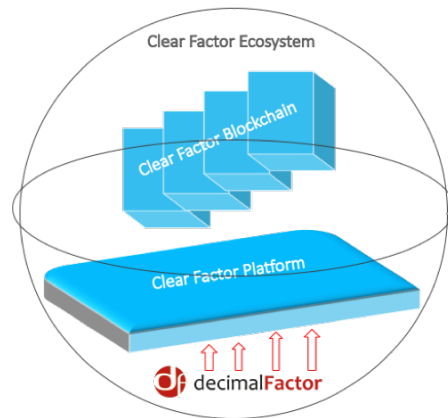
- ✓ 100% inclusive – open to everyone
- ✓ No minimum investment amount
- ✓ Choice of interest rates to apply
- ✓ Easy to invest and earn returns in 30 to 90 days
- ✓ 0.5% transaction fee
- ✓ 2-Layered Underwriting
- ✓ Portfolio Replicate – option to copy trade investor's strategy

In addition to the above, all Clear Factor investors who are token (Fact) holders have the **option** of staking their tokens as **collateral** for Cross Border invoice finance solutions (similar to Fx currency forwards) described in section 7, Token Economics, of this paper and earn a reward of **0.5%** of the value of the invoice in **proportion** to the tokens staked.

5.4.2 Benefits in more detail ...

5. The Opportunity

5.4 Solution



5.4.2 Benefits in more detail (continued) ...

Benefits for the Underwriter

Underwriting in the Clear Factor ecosystem is **2-layered** – one is automated and a **CF-DF score** is produced (explained later in this white paper) and the other by a registered professional **underwriter** who is a part of the Clear Factor community and will receive **0.25%** of the value of the invoice, for the invoices he/she has underwritten. This fee is paid out **after** the SME has repaid the invoice finance amount along with the agreed interest amount to the investor(s).

Benefits for the Trade Investor

The trade investor, i.e. professional investor, will have his/her portfolio open to individual investors who will have the option to copy a particular trade investor's investment strategy (**Portfolio Replicate**) in order to optimally spend their time focussing on investment without worrying about the details of analysis required to assess each individual invoice. The commission fee will be set by the trade investor and the investment amount will be set by the individual investor.

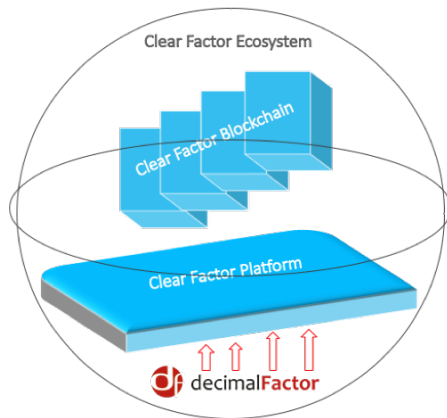
Benefits for the Debtor

The Debtor (i.e. the SME's customer) will receive **0.25%** of the value of the invoice for **verifying the accuracy of the invoice** put on sale by the SME (i.e. the Invoice Seller) in the Clear Factor ecosystem. The process is automated and is done electronically – Debtor contact information is part of the SME invoice submission process. This payment is made **after** the SME has paid back the invoice finance amount along with the agreed interest amount. The Debtor could accrue, as an option, the revenue generated from this verification to pay off future invoices.

5. The Opportunity

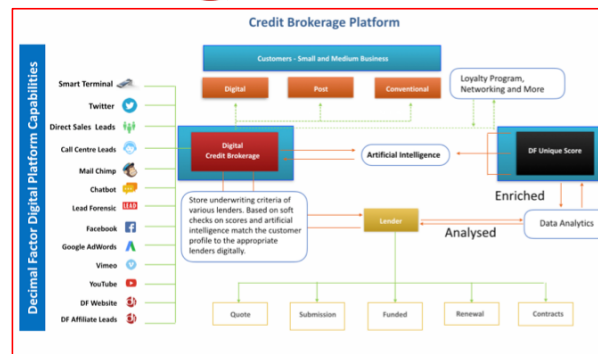
5.4 Solution

5.4.3 2-Layered Underwriting



In the UK alone, Decimal Factor has DF scores in place for 0.6 million SMEs and this score is dynamic i.e. updated periodically.

Current decimalFactor Platform



DF (Decimal Factor) Score

The current Decimal Factor brokerage platform stores the underwriting criteria of several lending partners that includes major high street banks, and

besides the data collected for those criteria it also stores and analyses other SME data using AI & Machine Learning to formulate the DF scores.

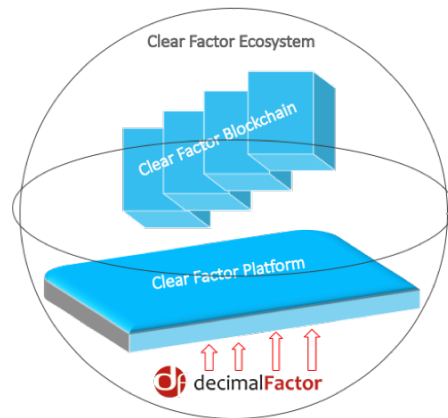
An example of a sub-set of data required from the SME in the UK in the Decimal Factor platform, in response to the underwriting criteria of lending partners of Decimal Factor, is: Latest management accounts (P&L and Balance Sheet), latest audited accounts (from Companies House), latest aged debtors & creditors, latest 3 months bank statements, last HMRC return. This is a small subset but the majority of information required from the SME are on similar lines and applicable to most countries.

The other SME data analysed by Decimal Factor platform with the help of AI and Machine Learning and subject to periodic updates is sourced from Credit Safe, social media (big data analytics) spectrum and feedback from Decimal Factor foot soldiers (on-the-street-salesforce) who collectively speak 15 languages.

5. The Opportunity

5.4 Solution

5.4.3 2-Layered Underwriting (continued)



2-layered underwriting comprises of CF-DF score and the judgement of the community underwriter.

1st Layer

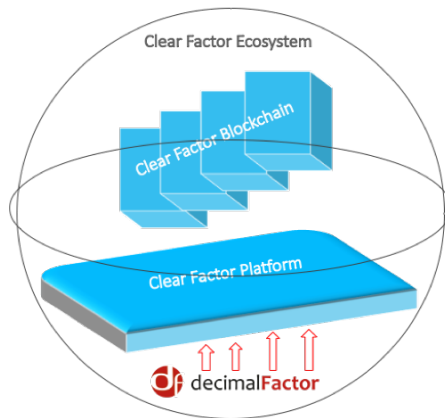
Of the 5.7 million SMEs in the UK, Decimal Factor has a DF score (Decimal Factor score) for over 600,000 SME profiles (and aims to complete the DF scores for all the 5.7 million SMEs by 2021). All of these 0.6 million scores will be on-boarded into the **Clear Factor Platform** as **CF-DF scores** along with all related data. For new SMEs outside of this existing 0.6 million dataset, the Clear Factor Platform will replicate the Decimal Factor Brokerage Platform to produce the **CF-DF scores**. The CF-DF score is the 1st layer of underwriting.

2nd Layer

The 2nd layer of underwriting comes from the professional underwriter who is a part of the **Clear Factor ecosystem community**. All the SME data (including the CF-DF score) related to an invoice is open to everyone interested in investing in that invoice. Professional underwriters in the Clear Factor community local to the country of origin of the invoices will be **allocated** invoices to underwrite such that the invoices are as **equally** distributed as possible among the underwriters both in **value** and **volume** for that country. This prevents potential bottlenecks in the system while also ensuring a fair spread of the earning opportunities. The underwriter is paid a fee of **0.25%** of the value of the invoice finance amount for his effort after the invoice is repaid in full and may also **request** more information from the SME on the Clear Factor ecosystem to help him rate the invoice. When an invoice is **successful** in an auction (described later in this document), all the relevant information including **underwriting** details related to that invoice will be available on the Clear Factor Platform and an immutable hash (SHA3-512) of the invoice will be stored forever on the **Clear Factor Blockchain**.

5. The Opportunity

5.4 Solution



Invoice auction is levered by Smart Contract driven consensus.

5.4.4 Invoice Selling – the Auction

Interest Rate Groups

Interest Rate (per month)
Groups on the Clear Factor Platform start at 2% and end at 16% with intervals in decimal quarters. For example, 2%, 2.25%, 2.5%, 2.75%, 3.0%, 3.25% and so on.

Offer to the SME

Smart Contracts

Once an SME's invoice is put up for **auction**, the investors have a choice of **interest rate groups** to invest in, using Clear Factor ecosystem **tokens**, based on their assessment of the CF-DF scores and the underwriter's ratings.

The interest rate group that fills up the earliest (i.e. reaches the invoice finance amount under auction) constitutes the first formal **offer** to the SME via the **Smart Contract** in the Clear Factor Blockchain. The SME has 3 choices: Accept, Reject or Cancel the Auction.

In the case of SME **accepting** the offer, the Smart Contract is **executed** on the Blockchain, the immutable ledger entry is committed and the invoice finance amount in tokens are transferred to the SME. The tokens in the other interest rate groups are transferred back to the investors by the Smart Contract. If the SME **rejects** the offer, the tokens in the offer interest rate group is returned back to the investors by the Smart Contract and the auction starts again.

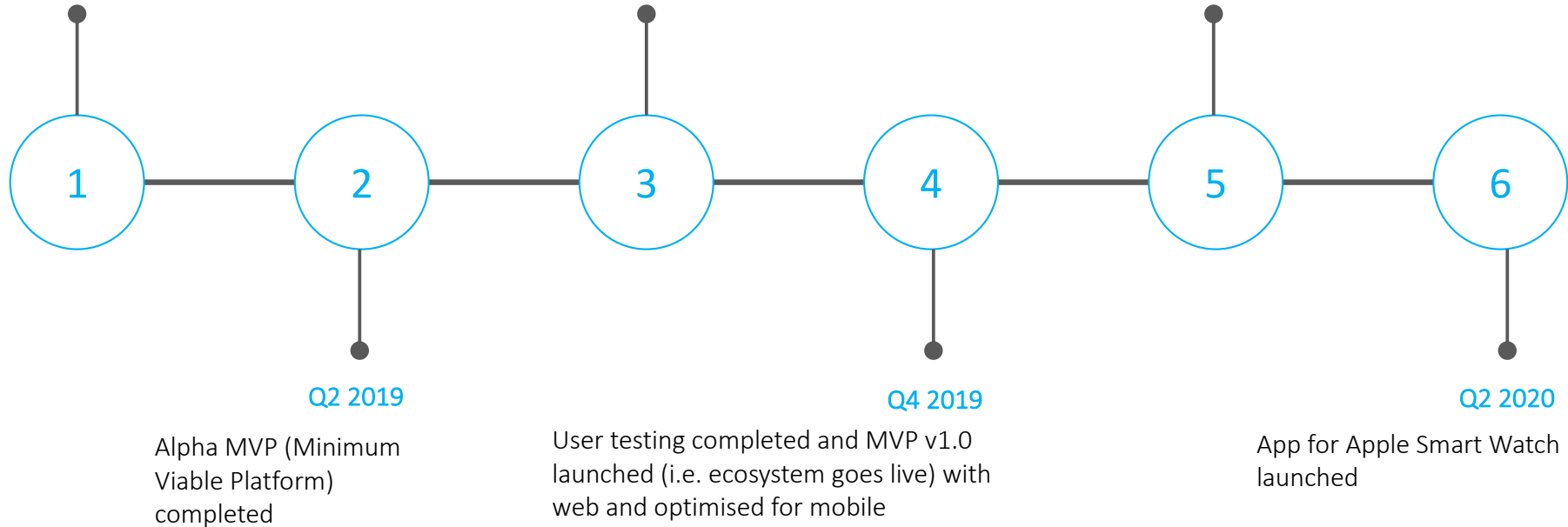
In all cases if there are no offers within 24 hours of an auction going live, the auction is **cancelled**, all tokens are refunded and the SME has the option of putting the invoice up for auction again.

6. Timeline and Road Map

Post-ICO Road Map for Clear Factor Ecosystem

- ✓ Ethereum Smart Contracts completed
- ✓ Stellar Integration completed
- ✓ All ecosystem User journeys mock-ups completed
- ✓ Data migration (from Decimal Factor) completed

Q1 2019



7. Token Economics



Fact is the Clear Factor ecosystem staking-cum-utility token while Stat is an internal token pegged 1:1 to local currencies of USA, UK, EU, China and India.

7.1 Quick Overview

Clear Factor will operate with a **dual token model**, deploying both a utility token called **Fact** and a price-stable token called **Stat** that will be **pegged 1:1** to a local **currency** and subjected to **Mint** and **Burn** process over the lifetime of an invoice sales and repayment cycle within the Clear Factor ecosystem. The **utility** tokens, **Facts**, will be available outside the ecosystem and can be acquired either during the ICO process or bought and traded like any other cryptocurrency via participating cryptocurrency exchanges post ICO.

The price stable **Stat** will be **pegged 1:1** to **5** currencies – there will be a **USD Stat** pegged to the US dollar, a

GBP Stat pegged to the British pound, an **EUR Stat** pegged to the Euro, an **INR Stat** pegged to the Indian Rupee and a **Yuan Stat** pegged to the Chinese Yuan. Stat is **internal** to the Clear Factor ecosystem and is **minted** during the auction process in **2 stages** – **once** when investors invest in different interest rate groups and **then** when the offer to the SME is accepted by the SME (the accepted offer defines the interest rate to be applied and hence the second stage of minting). Once an offer is accepted, the **burning** takes place in **3 stages** – **first** to burn the Stats for those who were unsuccessful in the auction and return them their fiat currency (**no** ecosystem fee is charged) or

Facts and **second** when the SME withdraws the fiat money (the invoice finance amount) from the Clear Factor ecosystem, 0.5% of the Stats are burned to account for the ecosystem transaction fee. The **third** burn happens when the SME returns the invoice finance amount along with agreed interest amount – this burn accounts for return of the money back to the investor(s) and the 0.5% transaction fee when the investor(s) withdraws the amount from the ecosystem.

In cases where the auction expires or is **cancelled**, all Stats minted will be burned and the money returned to the investors. In this case, there will be **no** ecosystem fee applied.

7. Token Economics



Stat

Fact

Fact is the Clear Factor ecosystem staking-cum-utility token used for paying the Debtor, the Underwriter, the Trade Investor, the Broker and the Auditor while allowing Fact holders to participate in the governance of the Clear Factor ecosystem.

7.2 Facts and Stats

Stats are **internal** to the Clear Factor ecosystem i.e. they don't exist outside it. The primary purpose of Stat is to ensure a price **stable** currency during the process of the invoice-sales-to-repayment life cycle. They are pegged to 5 national currencies – the US Dollar, the Great British Pound, the Euro, the Chinese Yuan and the Indian Rupee (INR) – with a **corresponding** Stat for each of these five currencies. Besides these 5 currencies, Stats can also be acquired with Facts or any other Fiat currency – in this case, the **type** of Stat (i.e. GBP Stat, USD Stat, EUR Stat, Yuan Stat or INR Stat) for purchase will need to be specified. Stats are **minted** and **burned** within the life cycle of an invoice-sales-to-repayment process.

Fact is the **staking-cum-utility** token of the Clear Factor ecosystem – the **fee** to the Debtor, the Underwriter and the Auditor, the **reward** to the Broker and the **commission** to the Trade Investor are all done using **Facts**. Fact **holders** will be able to vote towards the future direction of the Clear Factor ecosystem, for example – introducing **more** Stat currency types. Facts will be offered for sale during the **ICO** and immediately after ICO any tokens left **unsold** will be burned. From the 2nd year onwards, **20%** of Clear Factor's **revenues** each month will be used to **buy** back Facts from the open market and **burn** them subject to a yearly **maximum** of **10%** of total Facts in circulation. This policy will be executed for a period of **5** years before it is reassessed. More details are available later in this document in section 12.1.3.

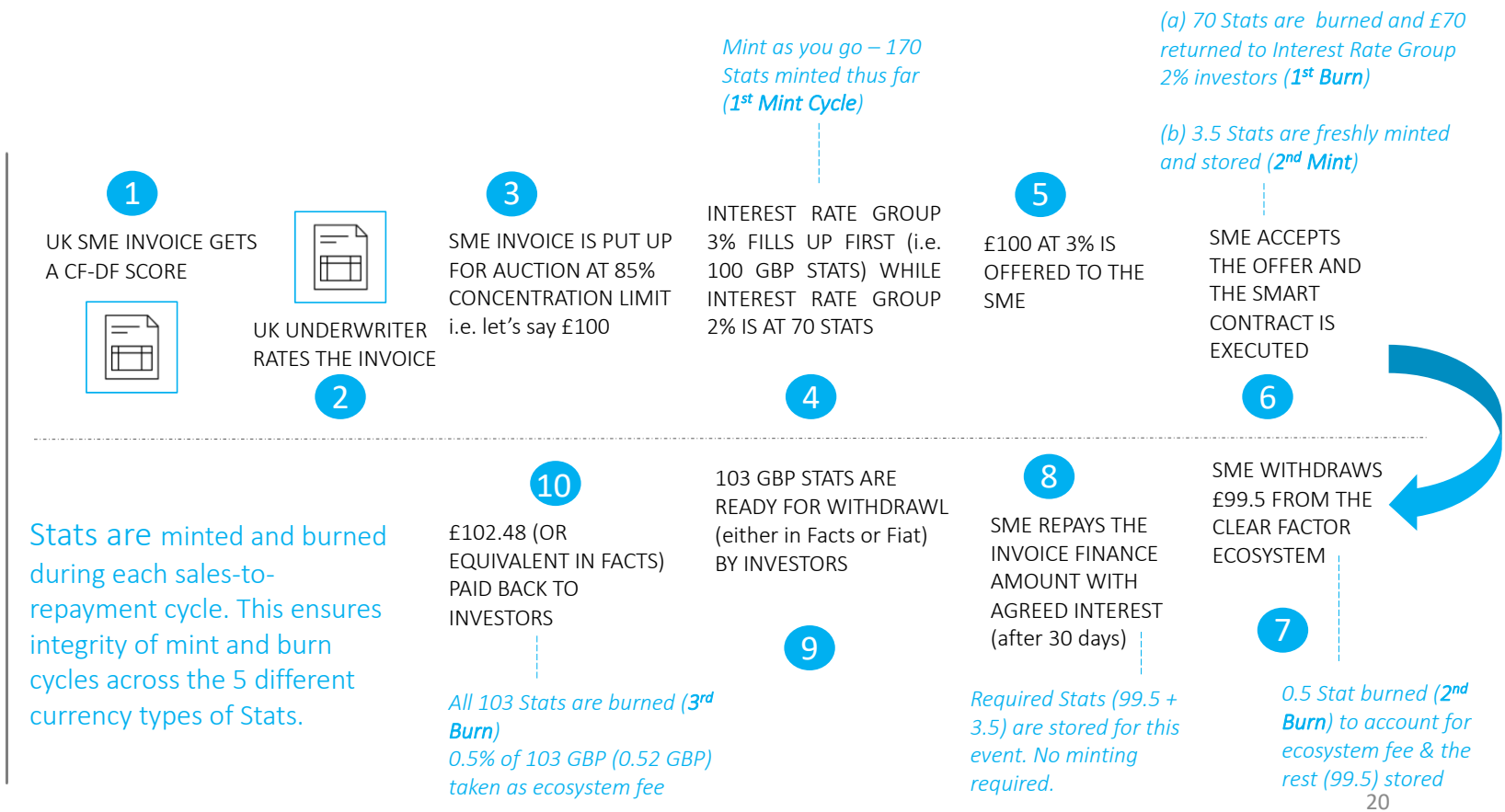
7. Token Economics

Independent quarterly audits shall be carried out to validate the functioning of the Stat as a Stable coin.



A firm or a University Blockchain Council of international repute shall do the quarterly auditing of the Stat Mint & Burn Cycle.

7.3 Stat Mint & Burn Cycle in the Clear Factor ecosystem



7. Token Economics

7.4 Same Border Invoice Finance

UK Investor investing in a UK invoice

For example, UK investor investing in a UK invoice...



Converts £100 to 100 GBP Stats in the Clear Factor ecosystem



Invests 100 GBP Stats in a UK invoice at an agreed interest rate, let's say 3%



Receives 103 GBP Stats after the UK SME pays back (30 days)



Withdraws £102.485 after paying 0.5% ecosystem fee

Same border invoice finance applies only to UK, US, EU, India and China.

Same border invoice finance scenario described above applies **only** to these 5 places – UK, US, European Union, China and India – with local **investors** investing in local **invoices** of their **respective** countries (i.e. UK investor in the UK, US investor in the US and so on). All other **scenarios** (including for example Egyptian investors investing in Egyptian invoices) fall under **Cross border** invoice finance scenarios described in subsequent sections.

7. Token Economics

7.5 Cross Border Invoice Finance Scenario 1

US Investor investing in a Nigerian invoice but invoiced in USD to a US customer

For example, an SME in Nigeria trades in the US and invoices its US customers in USD ...



Converts \$100 to 100 USD Stats in the Clear Factor ecosystem



Invests 100 USD Stats in a US invoice at an agreed interest rate, let's say 3%



Withdraws \$102.48 after paying 0.5% ecosystem fee



Receives 103 USD Stats after the SME pays back (30 days)

No Fx solution required in this scenario.

When SMEs **outside** of EU, UK, US, India and China but **trading** in those countries and **invoicing** in Euro, GBP, USD, INR and Yuan put those **invoices** up for **sale** on the Clear Factor ecosystem, the investment scenario is exactly the **same** as the Same border invoice finance scenario described in the previous section wherein local **investors** invest in local **invoices**. There is no **Fx** (foreign exchange) solution required for this scenario.

7. Token Economics

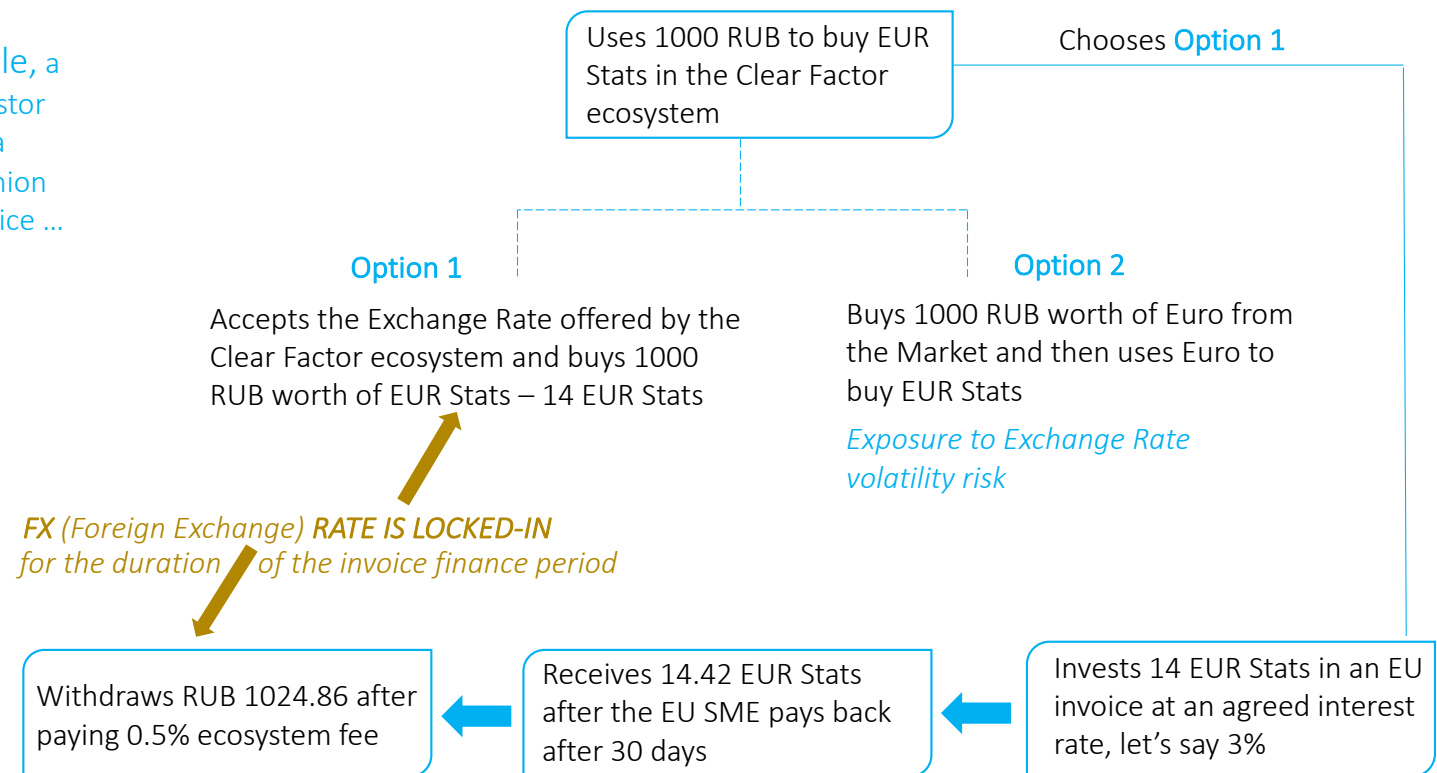
7.6 Cross Border Invoice Finance Scenario 2

Russian Investor investing in an EU invoice



For example, a Russian investor investing in a European Union country invoice ...

This scenario applies to **all** investors outside of EU, UK, US, India and China and investing in invoices of these **5** countries.



7. Token Economics

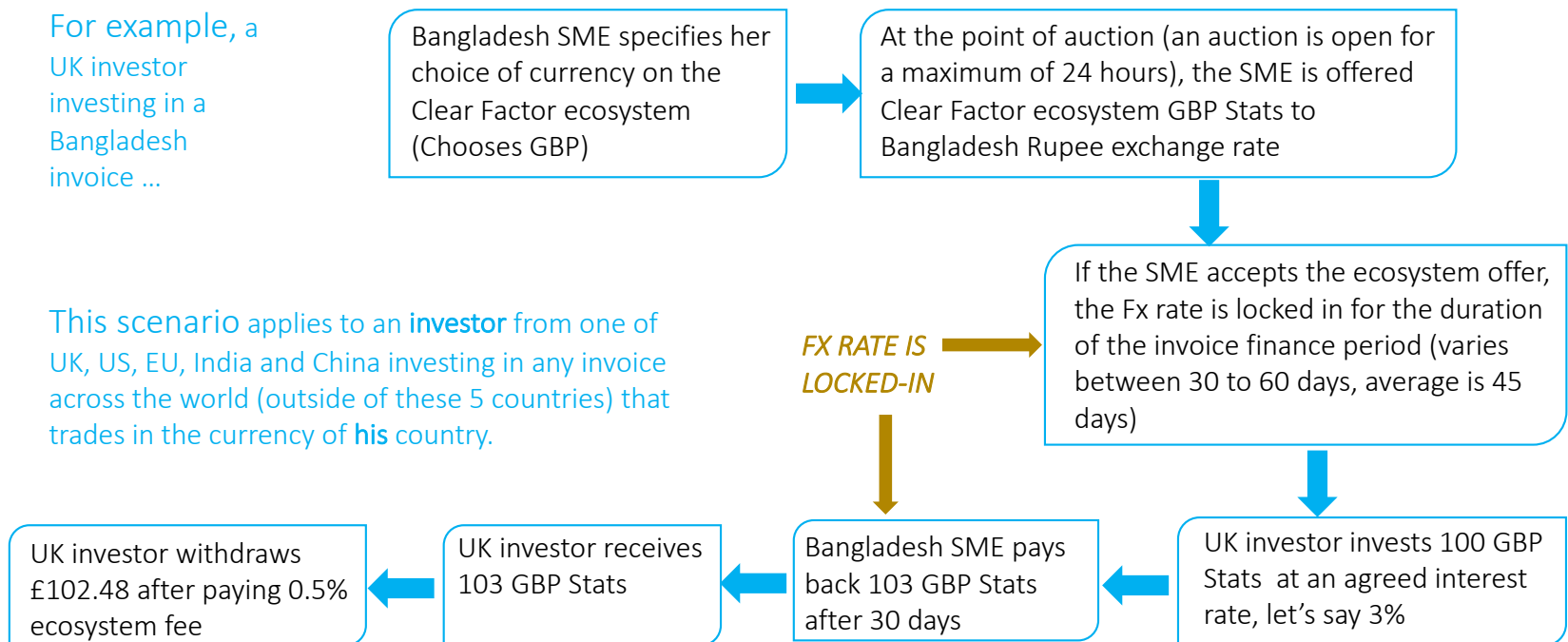
7.7 Cross Border Invoice Finance Scenario 3

UK Investor investing in a Bangladesh invoice



For example, a UK investor investing in a Bangladesh invoice ...

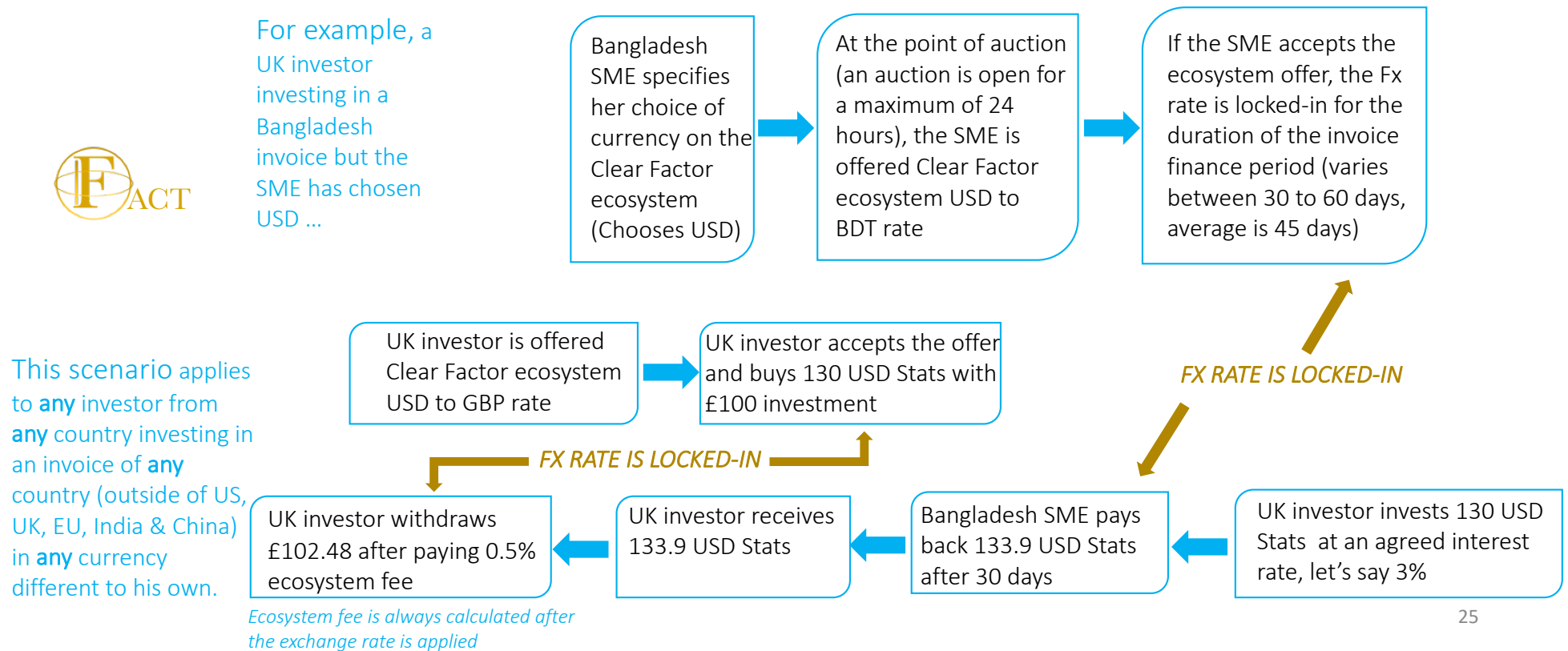
This scenario applies to an investor from one of UK, US, EU, India and China investing in any invoice across the world (outside of these 5 countries) that trades in the currency of his country.



7. Token Economics

7.8 Cross Border Invoice Finance Scenario 4

UK Investor investing in a Bangladesh invoice



7. Token Economics

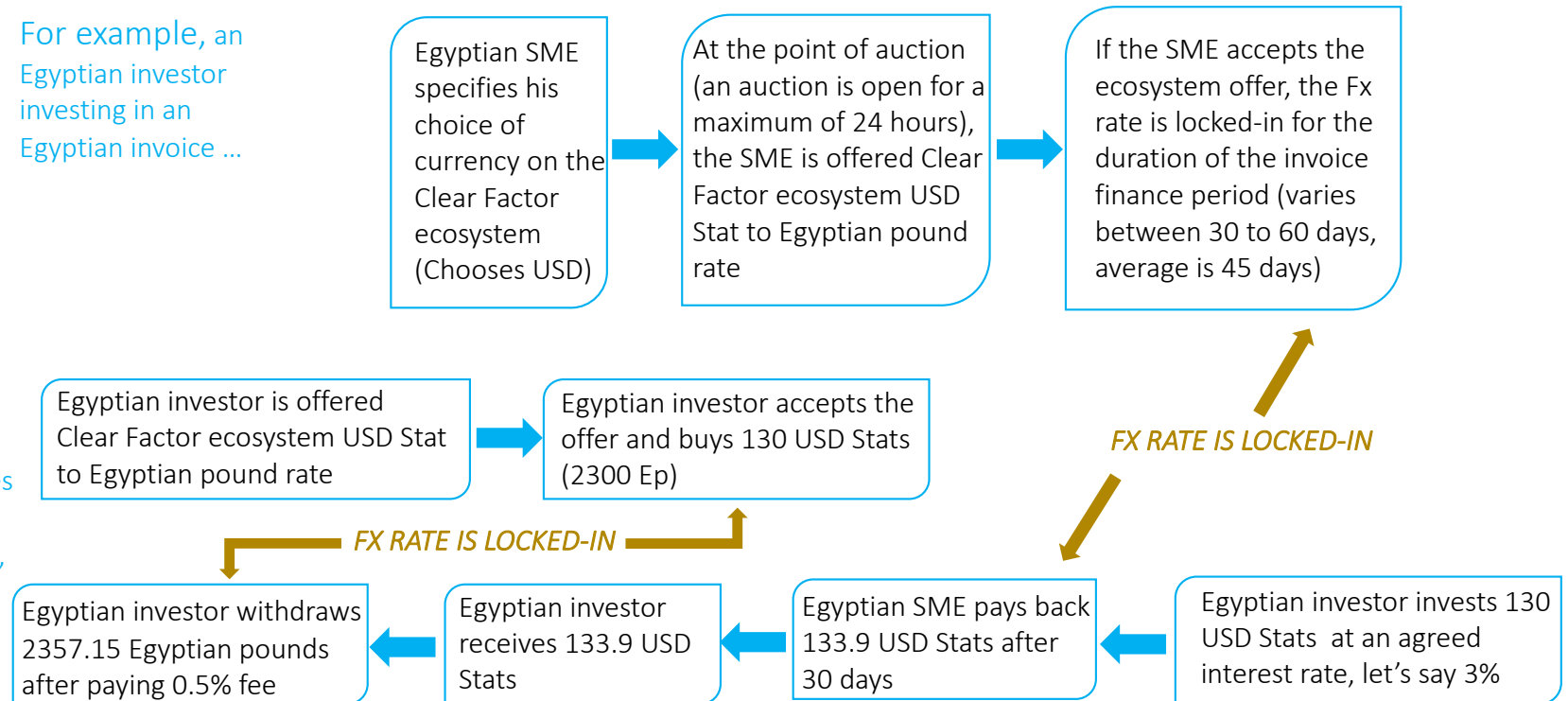
7.9 Cross Border Invoice Finance Scenario 5

Egyptian Investor investing in an Egyptian invoice

For example, an
Egyptian investor
investing in an
Egyptian invoice ...



This scenario applies
to same border
(outside of UK, US, EU,
India and China)
invoice buying and
selling across **any**
currency.



7.10 Collateral for Cross Border Invoice Finance



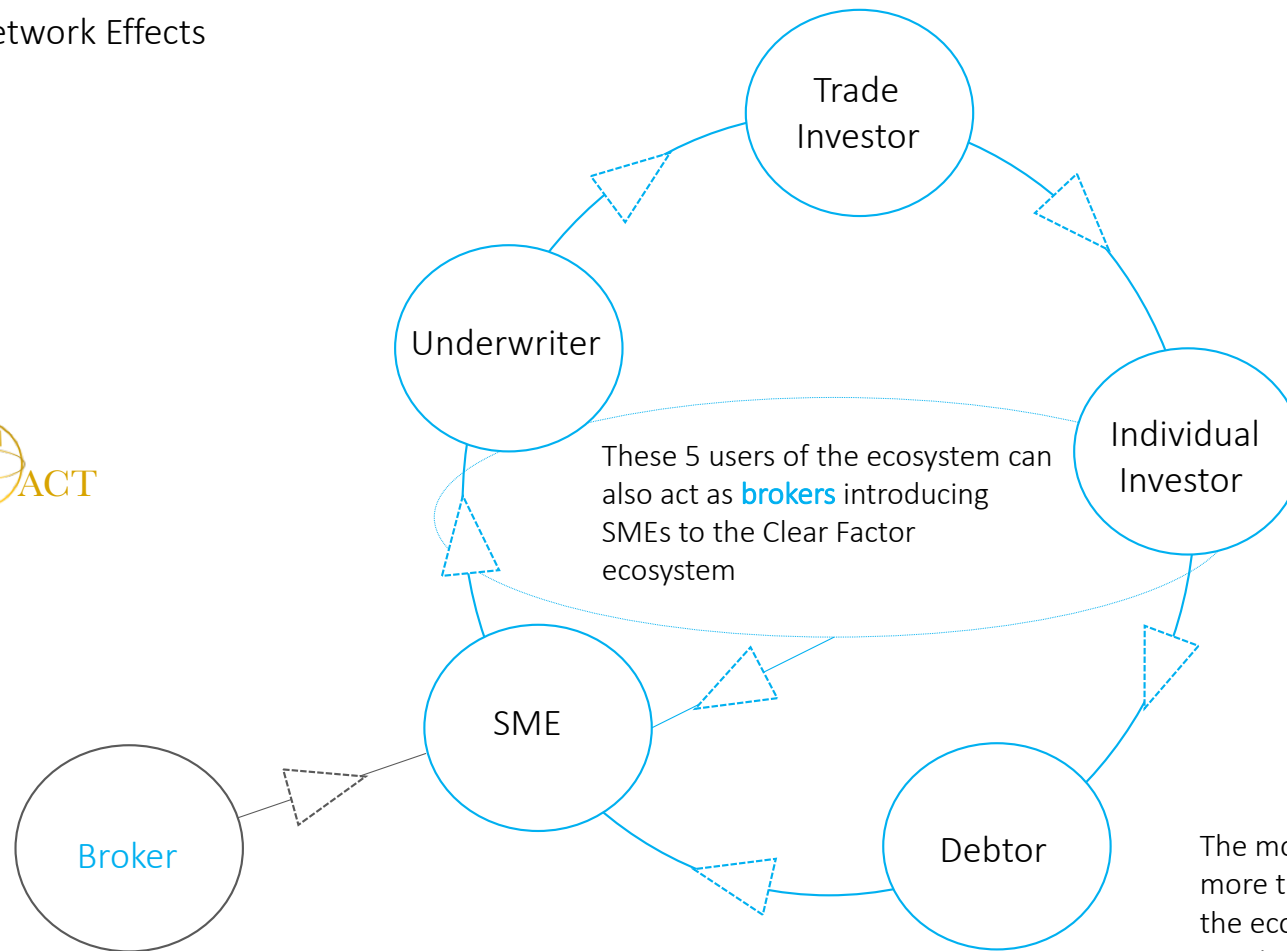
Clear Factor **Fx rate lock-in** operates similarly to the concept of a binding contract in the foreign exchange market that **locks** in the exchange rate for the purchase (or sale) of a currency on a **future** date. Generally, currency forward settlement can either be on cash or delivery basis provided that the option is **mutually** acceptable and agreed **beforehand**.

Similarly, the mechanism of Clear Factor's Fx rate lock-in is a hedging tool that does not involve any upfront payment and the lock-in period is for the duration of the invoice finance life cycle. The Stat:Fiat forward exchange rate offered by the Clear Factor ecosystem will, of course, be a **function** of the **duration** of this life cycle and is mutually **agreed** (between the ecosystem and the **SME** or the **investor** as the case may be) before the ecosystem proceeds with the transaction.

The Clear Factor ecosystem will, by default, **provide** the collateral requirements (in Facts converted to cash and deposited in the ecosystem bank account) for all the Stat:Fiat forward exchange rate offers on the ecosystem. However, these scenarios also present an **opportunity** for the Fact holders to earn more **rewards** from the ecosystem.

All Fact holders will have the option to offer Facts as **collateral** for the Clear Factor ecosystem's Stat:Fiat forward exchange rate offer in any given invoice sales to repayment life cycle. And for this they will be rewarded with **0.5%** of the value of the **invoice** amount. This reward, like any other reward or payment by the Clear Factor ecosystem, will be paid out in **Facts**.

8. Token Economics and Network Effects



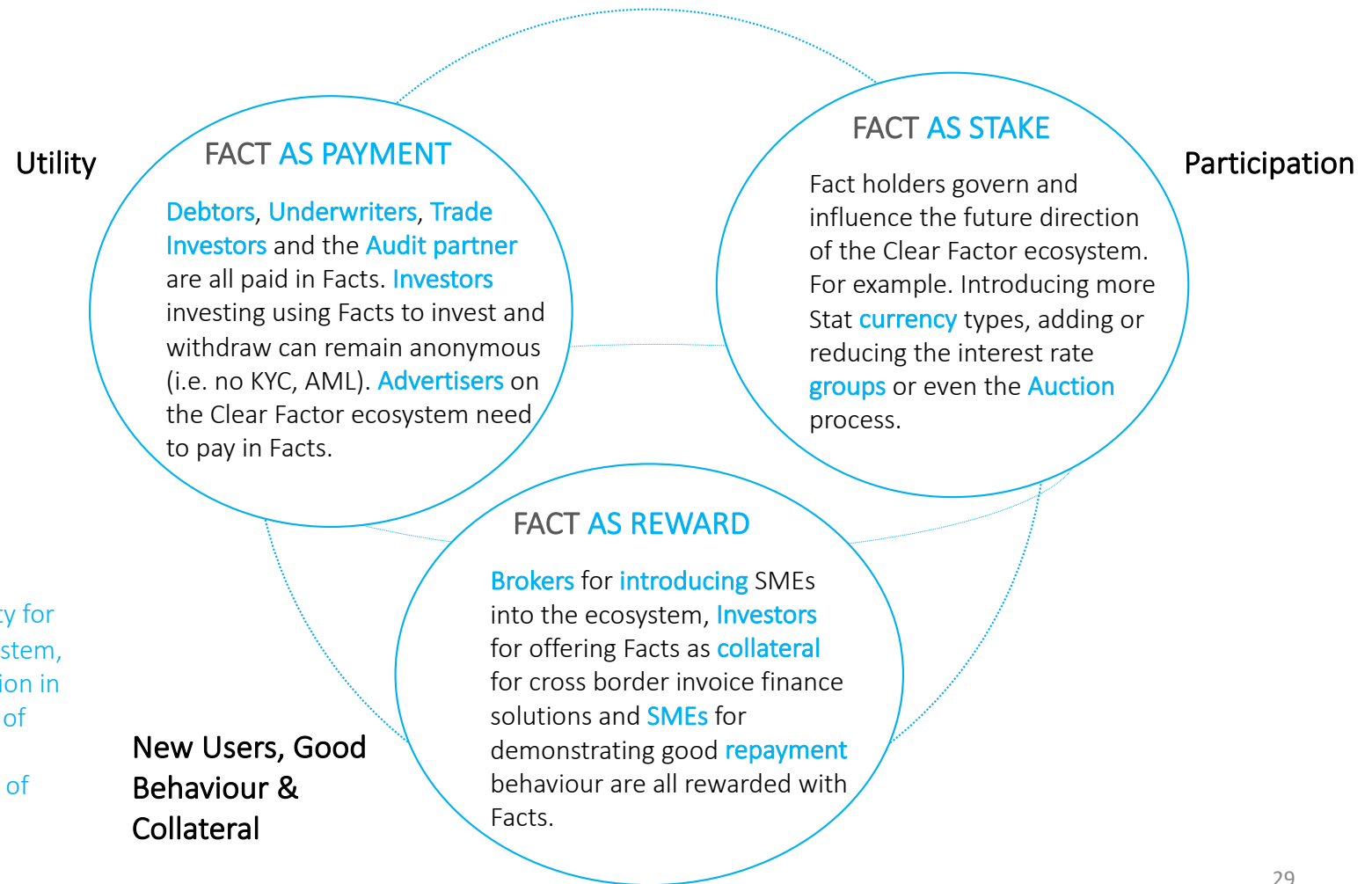
Besides the **traditional** brokers (including Decimal Factor), any of the **5 users** of the Clear Factor ecosystem can introduce SMEs into the ecosystem acting as **brokers**. For each invoice the SME trades on the ecosystem, the broker shall receive 0.5% of the value of the invoice in **Facts** (after the sold invoice has been repaid with the agreed interest amount). **Network effect** comes from every interaction on the ecosystem potentially **increasing** the price of **Facts**.

The more the network effect, the more the volume of **advertising** on the ecosystem and more **audit** required too.

9. Multiple Uses of Fact

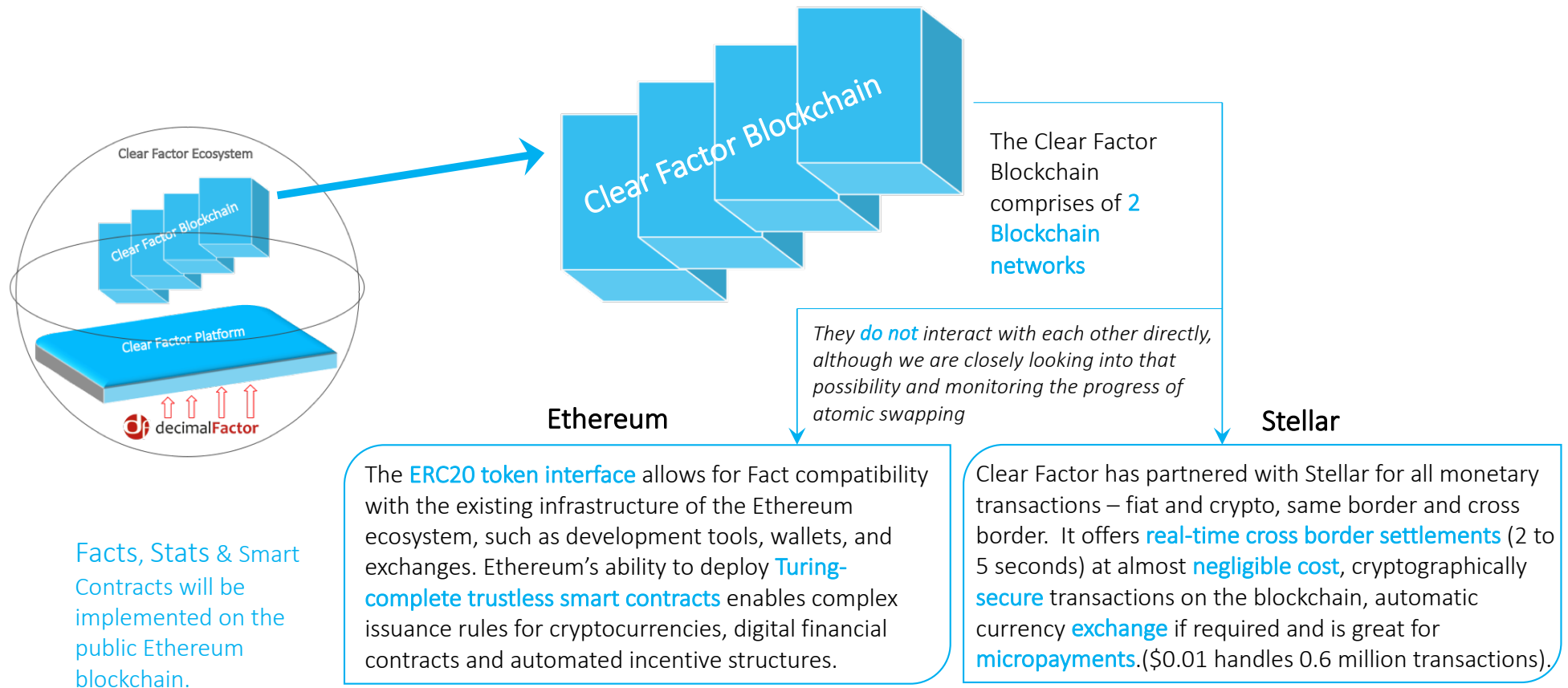


Fact increases utility for the users of the ecosystem, encourages participation in defining the direction of the ecosystem and promotes onboarding of new SMEs into the ecosystem.



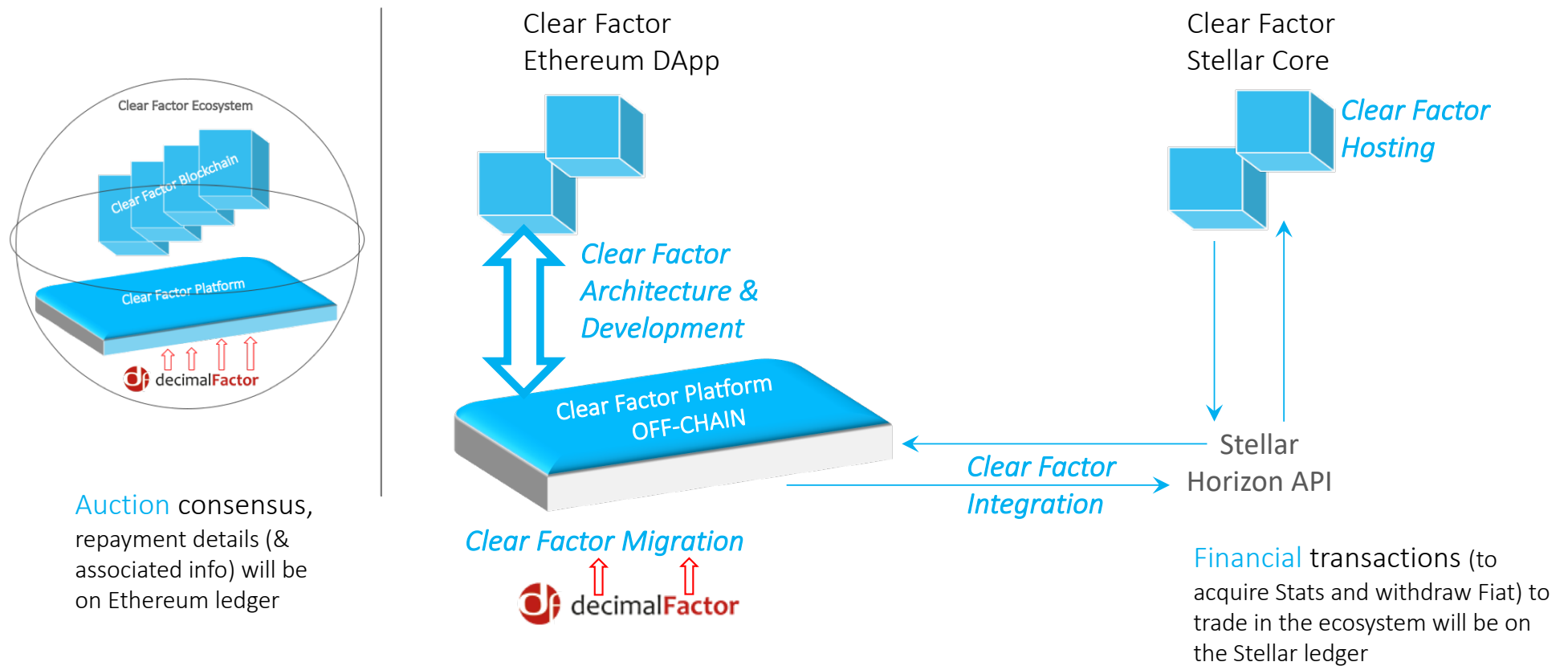
10. Blockchain, Smart Contracts & Technology Stack

10.1 Overview of Clear Factor Blockchain Networks



10. Blockchain, Smart Contracts & Technology Stack

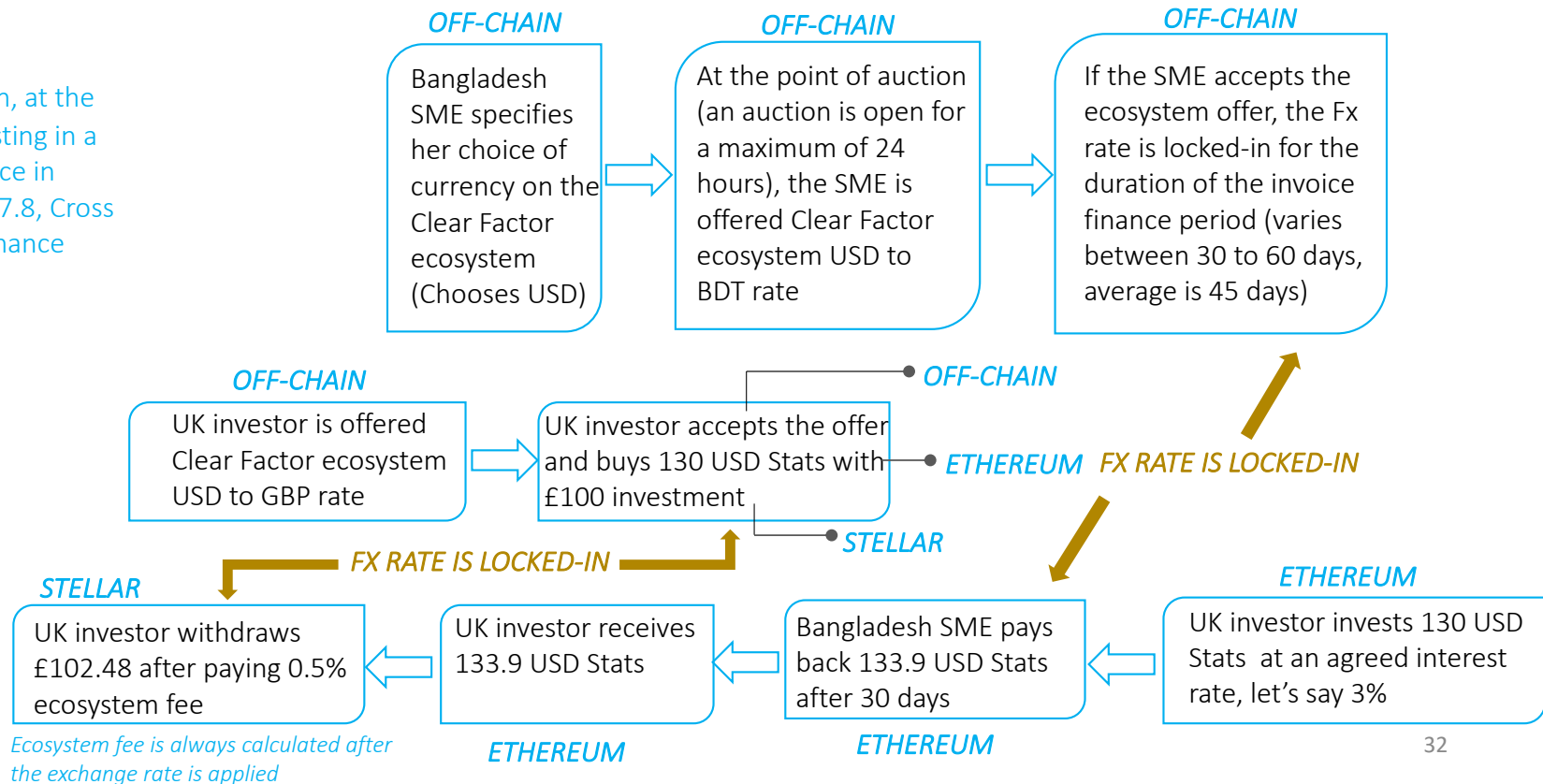
10.2 Technology Platforms of the Ecosystem



10. Blockchain, Smart Contracts & Technology Stack

10.3 Business Flow using the Ecosystem Technology Components

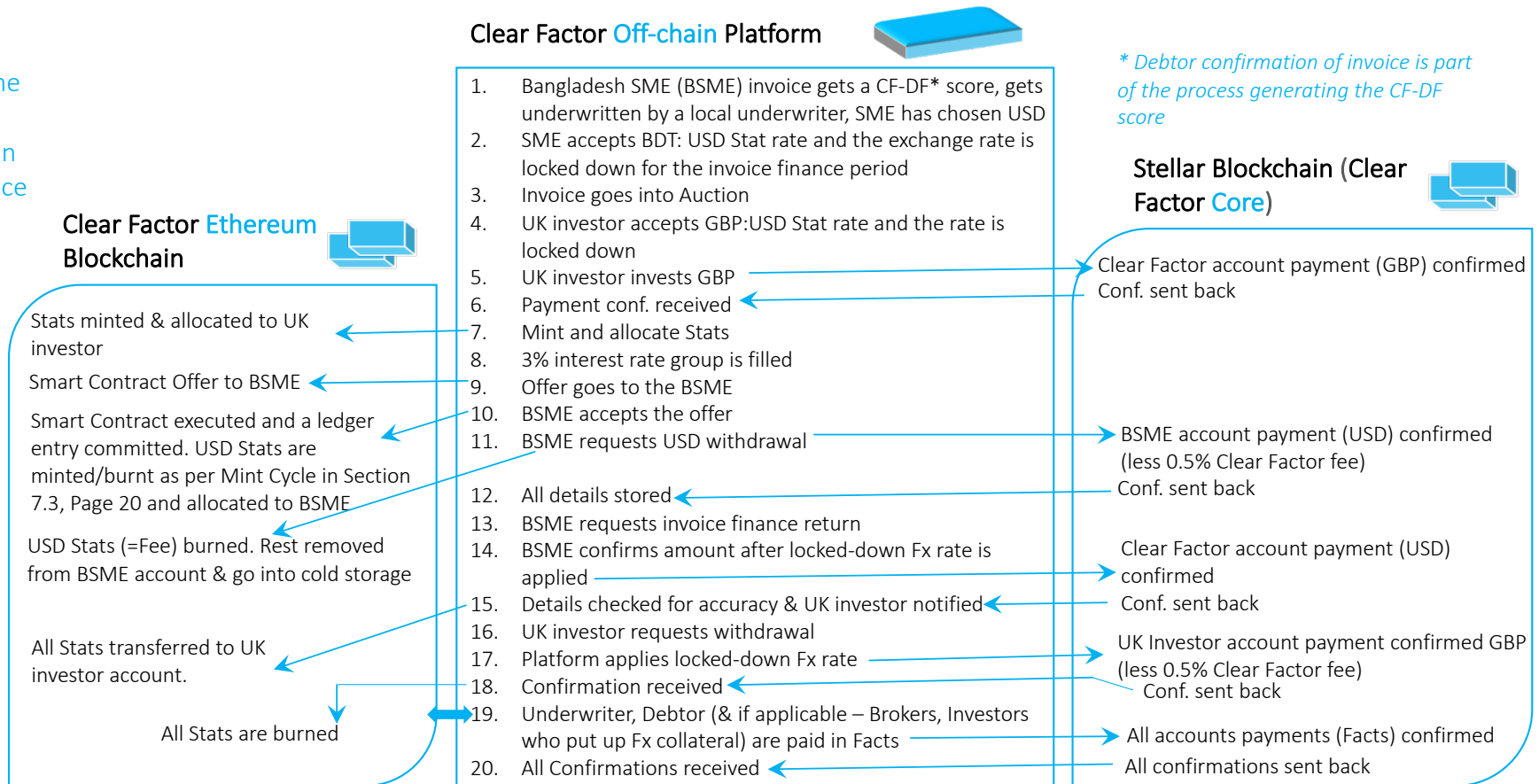
Let's look, again, at the UK Investor investing in a Bangladesh invoice in USD, i.e. section 7.8, Cross border invoice finance scenario 4.



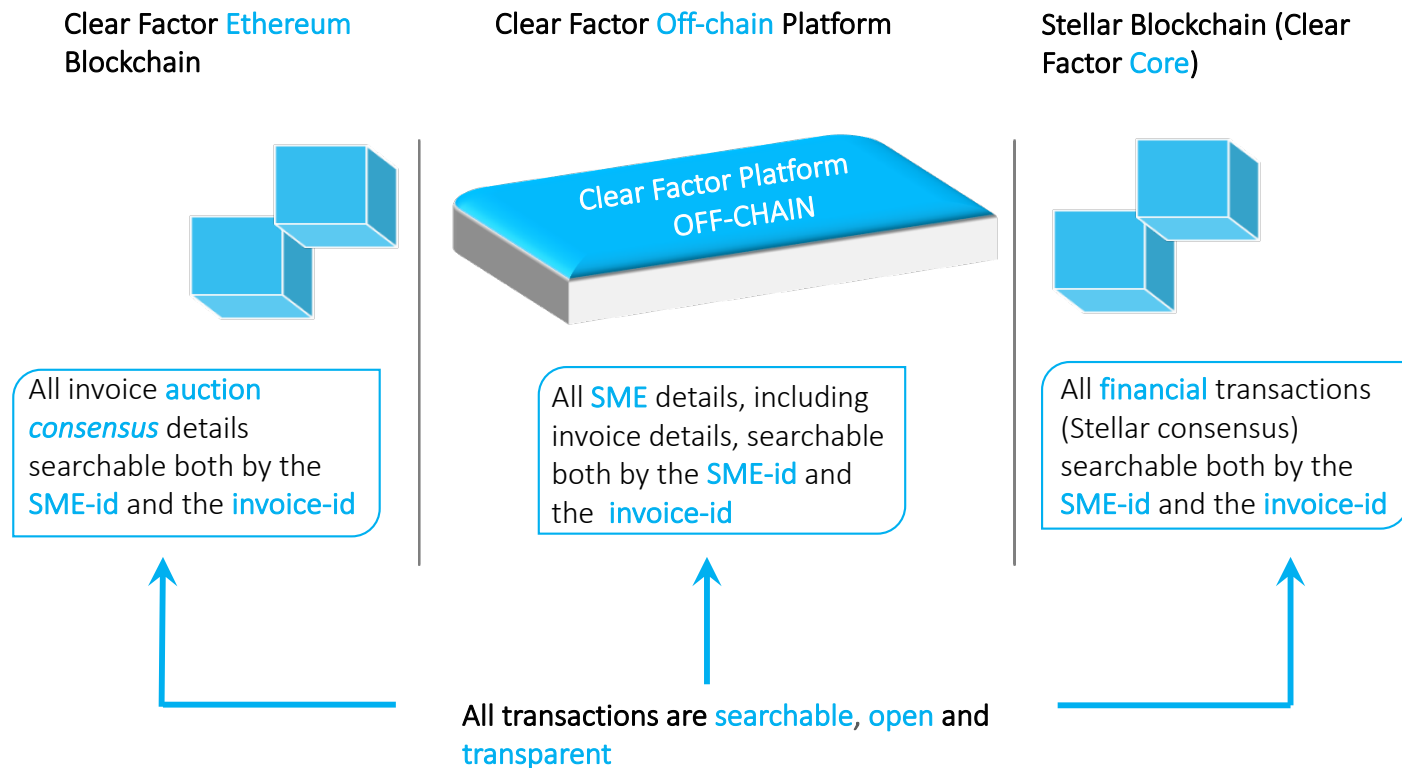
10. Blockchain, Smart Contracts & Technology Stack

10.4 Business Flow – A Simpler View

Let's use the same scenario – UK Investor investing in a Bangladesh invoice in USD, i.e. section 7.8, Cross border invoice finance scenario 4.



All transactions are linked across the different technology platforms of the Clear Factor ecosystem by the SME-id and the Invoice-id. The integrity of all the transactions is maintained over the life cycle of the invoice sales-to-repayment process and easily searchable. This also helps build up the SMEs' credit profiles over a period of time.



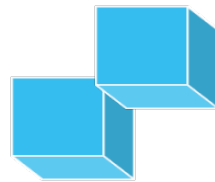
10. Blockchain, Smart Contracts & Technology Stack

10.6 Technology Implementation – Blockchain, Web & Mobility

SPIDER® DevOps

framework is the world's most comprehensive metrics-driven framework for setting up or transitioning into a DevOps culture created in 2015 by Clear Factor co-founder & CTO. It's twin purposes are to make business outcomes directly measureable in terms of returns for investment made in IT and make cost leakages as close to 0 as possible. It is an extension of the SPIDER® algorithm and SPIDER® framework built in 2006 by Clear Factor co-founder & CTO for large FTSE 100 organisations in the UK.

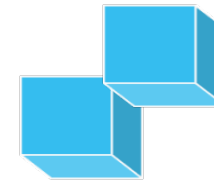
Clear Factor **Ethereum** Blockchain



Clear Factor **Off-chain** Platform



Stellar Blockchain (Clear Factor **Core**)



- ✓ Web and Mobile friendly
- ✓ Apps with full functionality for both iOS and Android
- ✓ App for Apple Smart Watch – Alerts, Search and Reporting only
- ✓ AI (artificial intelligence) & ML (machine learning) for Big Data analysis
- ✓ AI chatbots on Web, Messenger, WhatsApp, Telegram, Facebook, WeChat, Viber

Underpinned by SPIDER® DevOps Framework to ensure delivery as per Road Map in Section 6, Page 17 of this White Paper.

10. Blockchain, Smart Contracts & Technology Stack

10.7 The future of Clear Factor Ecosystem Technologies

Clear Factor ecosystem uses Ethereum for liquidity and Stellar for money transfers.

Here we provide some thoughts on why Ethereum is best suited for the Clear Factor ecosystem.

At Clear Factor, we believe that **Ethereum** will be a part of our ecosystem for the foreseeable future. It is the world's first truly **complete** blockchain development platform with the capability to construct **complex** and infinitely **customisable** smart contracts. Due to its popularity and mass adoption, it is also the world's most **tried** and **tested** network. While there might be issues, most are **known** and it is easier to deal with known issues than stumbling across surprises.

We are aiming to create a truly decentralised **community** driven ecosystem and Ethereum is at the moment most suited for creating such an ecosystem. Scalability or transactions throughput is currently a **trade-off** for decentralisation but equally this trade-off is likely to be a feature of **any** truly decentralised

ecosystem. As Vitalik Buterin describes in his Scalability Trilemma thoughts, a blockchain network can **only** have **2** of these **3** properties – decentralisation, scalability and security.

The mathematics of solving this trilemma is pretty complicated and has eluded top mathematicians thus far. Not one of the alternative blockchain networks possessing or claiming to possess significantly faster transaction throughput than Ethereum has been able to **conclusively** demonstrate that it has **solved** the problem of scalability without sacrificing decentralisation and security i.e. solving the trilemma.

It cannot be denied, however, the infrastructure for blockchain networks is still in its infancy and that there are efforts **underway** to improve scalability for the Ethereum network. These

initiatives are commonly referred to as scalability solutions. To **safeguard** the architecture of the Clear Factor ecosystem for the next few **years**, we have looked into the **impact** of some of these scaling solutions on our current **protocol** and **design** choices.

Any public network implementing the blockchain protocol, like Ethereum, is limited by the processing capability of its smallest node, i.e. a consumer device for example. This is what limits the transaction throughput of Ethereum. To allow **only** powerful computers to be nodes in the Ethereum network in an effort to increase throughput would **defeat** the purpose of decentralisation i.e. mining would be centralised to nodes with powerful processing capabilities. The block gas **limit** has been defined
(continued on next page)

by Ethereum for this very reason, to be more inclusive and decentralised. Any scaling solution would need to work within the **constraints** of this limit.

One such solution is called **Sharding** which strives to increase Ethereum's transactions throughput by **dividing** the network into multiple consensus groups, processing **mutually exclusive** sets of transactions, instead of every transaction being processed by **every** single **node** in the Ethereum network.

Sharding divides opinions and is far from being put into practice. We are **not** taking any sides in that **debate** but we need to understand the **impact** on our current protocol choices **in case** Ethereum sharding becomes a reality in the near future. When sharding comes into play, it would necessitate a

hard fork in Ethereum because it is implemented at the base-level protocol of Ethereum and we have to be prepared for that eventuality.

As with the Byzantium hard fork (part of Metropolis) of Ethereum or the looming Constantinople (the remaining part of Metropolis), sharding is likely to be introduced as an **agreed** and **planned** hard fork (it is unlikely to be implemented without the support of the Ethereum community) and **as with** all planned hard forks, miners, nodes and DApp-chains move over to the upgraded version of the Ethereum network. Clear Factor DApp chain would do exactly the same.

While sharding is (or will be) an on-chain scalability solution, there are **off-chain** scalability solutions too and

from those, of particular interest to us is the **State Channel** and we are still reviewing the cost-benefit aspect of it and also its fit for purpose for our use cases.

State Channels are useful when there are **numerous** state updates between a **defined** set of participants over a long period of time and only the opening and closing transactions are recorded on chain. Everything else happens off-chain. Although the off-chain transactions do not incur the gas cost and happen quicker than would be possible on-chain, there is an initial cost in deploying the **Judge** smart contract.

At this point in time, we feel that neither the **Auction** process nor the **Mint & Burn** process requires a state channel implementation.

11. Business Model Canvas

11.1 Users and Value Proposition

VALUE PROPOSITION <ul style="list-style-type: none">○ For SMEs – cheap and transparent way to sell invoices globally & being rewarded for good repayment behaviour○ For Debtors – payment for verifying invoice○ For Individual Investors – a new profitable investment instrument & the option to earn more via collaterals○ For Trade Investors – new revenue source via ‘Portfolio Replicate’○ For Underwriters – new freelance revenue source○ For Brokers – reward for introducing SMEs into the ecosystem○ For Advertisers – targeted audience	USERS <ul style="list-style-type: none">○ SMEs (Invoice Sellers)○ Debtor (SMEs’ Customers)○ Trade Investors○ Individual Investors○ Underwriters○ Brokers (any one of the above 5 groups of users can also act as a broker in addition to traditional brokers)○ Advertisers
USER RELATIONSHIP <ul style="list-style-type: none">○ Community – Create the community of users○ Co-creation – Empower the community (Fact holders hold more influence proportional to their Fact holdings) to govern the Clear Factor ecosystem and determine future direction○ Network Effect – Bind the community together in a cycle of business processes where everyone benefits thus creating a network effect○ Audit – Create user confidence on Stat behaving like a Stable coin by conducting independent quarterly audits	CHANNELS <ul style="list-style-type: none">○ Off-chain platform (Web & Mobile)○ Mobile App for iOS & Android○ App for Apple Smart Watch○ AI Chat Bots for all mainstream social media platforms

11. Business Model Canvas

11.2 Infrastructure and Finance

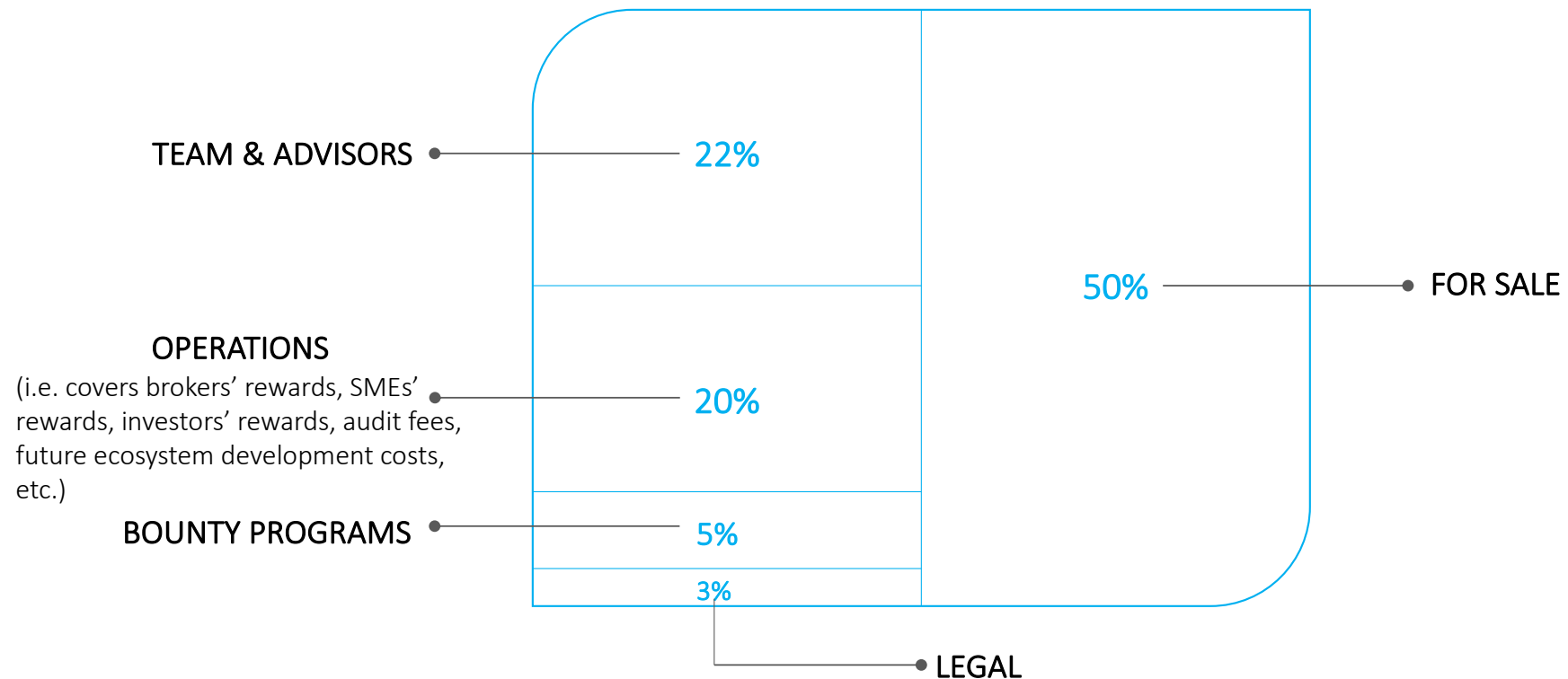
KEY ACTIVITIES <ul style="list-style-type: none"> Marketing Build partnerships Build/hire physical and IT infrastructure Hire personnel Get Fact listed on major crypto-currency exchanges Develop & maintain the ecosystem Engage with the user community 	KEY PARTNERSHIPS <ul style="list-style-type: none"> Stellar Ethereum Enterprise Alliance Auditor Brokers Underwriters Trade Investors Debtors SMEs Advertisers Infrastructure Providers Associated Business Forums Associated Technology Forums 	REVENUE STREAMS <ul style="list-style-type: none"> Transaction fees .of the ecosystem Advertising on the ecosystem Stat-to-Fiat & vice-versa forward exchange rates for Cross Border invoice finance scenarios
KEY RESOURCES <ul style="list-style-type: none"> Users Fact holders Marketing staff Technical staff Administrative staff Technology (inc. infrastructure) suppliers 	COST STRUCTURE <ul style="list-style-type: none"> Marketing Exchange Listing Infrastructure Development Maintenance Administration Contingency 20% of Clear Factor's revenues each 	COST STRUCTURE (continued) <p>month will be used to buy back Facts from the open market and burn them</p> <ul style="list-style-type: none"> Payment* to Underwriters, Debtor Ethereum gas price costs Stellar transaction costs <p><i>*All other rewards (to the Broker, to the SME for good behaviour, to the Investor who puts up the collateral for cross border invoice finance solutions,, to the Auditor) comes from the Ops Fund (section 12.1.1), while Trade Investor commission comes from the individual investors.</i></p>

12. ICO Details

12.1 Token allocation & use of funds

12.1.1 Token (Fact) Allocation

The accepted currency during the ICO is Ether, BTC, Litecoin and Credit Card.

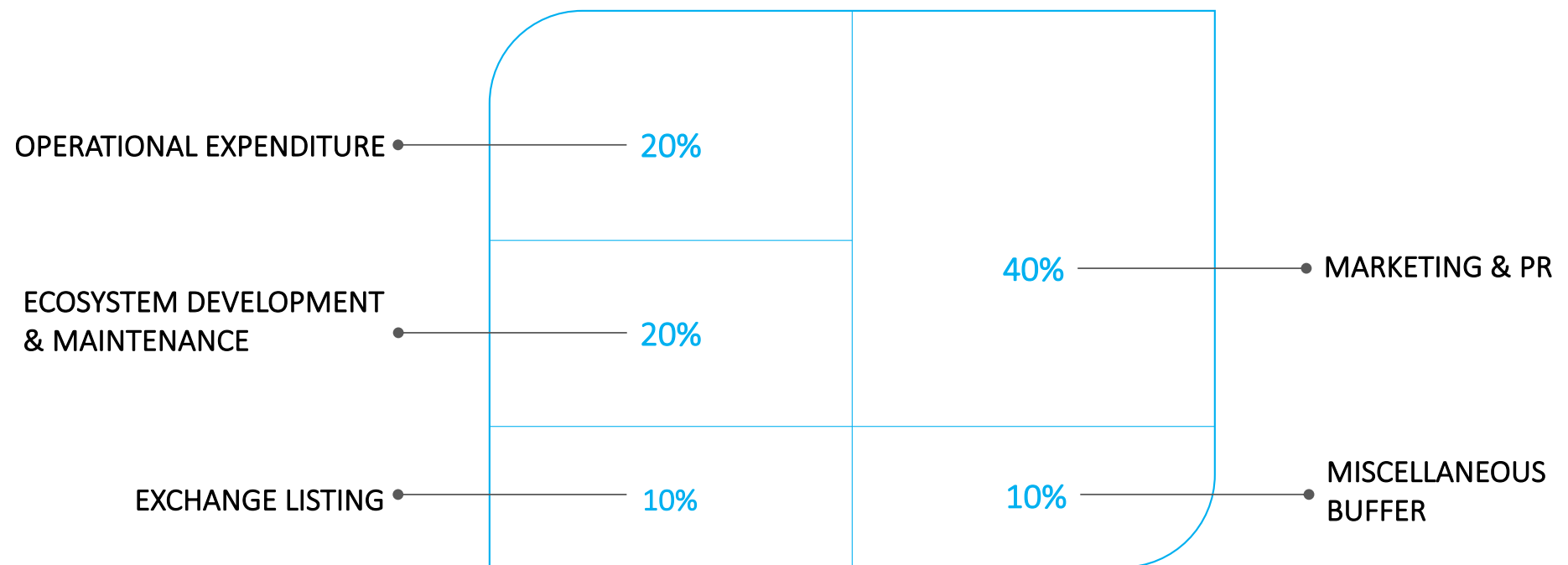


12. ICO Details

12.1 Token allocation & use of funds

12.1.2 Use of Funds

The accepted currency during the **ICO** is Ether, BTC, Litecoin and Credit Card.



12. ICO Details

12.1 Token allocation & use of funds

12.1.3 Fact Creation

The accepted currency during the **ICO** is Ether, BTC, Litecoin and Credit Card.

- ✓ 150 million ERC20 compliant Clear Factor staking-cum-utility tokens, Facts, will be minted
- ✓ 75 million Facts will be offered for sale during the ICO
- ✓ After ICO, all unsold Facts will be burned
- ✓ Clear Factor will use 20% of each month's revenues, from the 2nd year onwards for a period of 5 years, to buy back and burn Facts from the market
- ✓ Team Facts locked for 6 months and thereafter trickled down to the team over a period of 20 months

150 million Facts (ERC20 compliant, 18 decimal places) will be minted once and never again. **75 million** of these Facts will be offered for sale during the ICO.

After the ICO is over, all the Facts offered for sale that went unsold will be **burned**.

From the **2nd** year onwards, **20%** of Clear Factor's revenues each month will be used to **buy** back Facts from

the open market and **burn** them subject to a yearly maximum of **10%** of total Facts in circulation. This policy will be executed for a period of **5** years before it is reassessed. For example, in the 2nd year following the ICO, if the Clear Factor ecosystem revenues are £100,000 per month then each month Clear Factor will **buy** back £20,000 worth of Stats from the open market and **burn** them.

This **decreases** the total number of Facts available in the market and as a consequence the value of each individual Fact may **increase**. Team and Advisors' Facts will be locked for a period of **6** months following the **ICO**. The advisors' Facts will be available to them immediately after that while the team Facts shall be made available at the rate of **5%** of each team member's allocation every month.

12. ICO Details

12.2 ICO Timeline

ICO Timeline

Fact Value

1 ETH = 1600 Facts

On ICO Sale

75 million

Soft Cap

6250 ETH

Hard Cap

37,500 ETH

Dates	Bonus	Duration
24 th Aug – 6 th Sep	33%	14 days
7 th Sep – 21 st Sep	30%	14 days
22 nd Sep – 5 th Oct	25%	14 days
6 th Oct – 20 th Oct	20%	14 days
21 st Oct – 3 rd Nov	12%	14 days
4 th Nov – 18 th Nov	7%	14 days
19 th Nov – 3 rd Dec	0%	14 days

The accepted currencies during the **Initial Coin Offering (ICO)** are:

- ✓ Ether
- ✓ BTC
- ✓ Litecoin
- ✓ Credit Card

All dates based on GMT, i.e. 8th Aug ends at UK midnight and 9th Aug starts
All dates may be subject to change

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