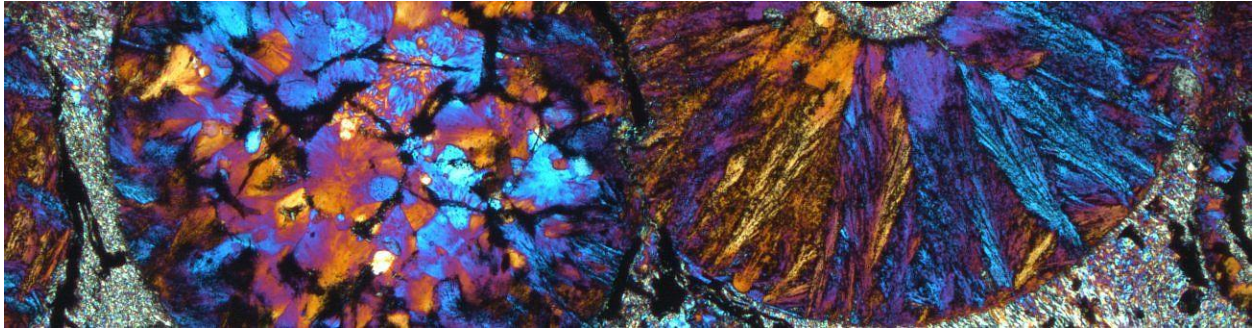


White Paper



Technical White Paper

8th Edition, 18th February 2019



“We are creating the next-generation fully inclusive Digital Economy – the combination of mobile ubiquity and blockchain is unlocking opportunity for prosperity like never before”

Marius van der Leek, Founder & CEO, nuclus.co





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“The global eCommerce market is expected to reach almost US\$2.5 trillion in revenues by 2022.”

Source: Statista Digital Market Outlook 2017

¹ Image courtesy of <https://www.brandsouthafrica.com/resources-downloads/media-library/images/rml-content/arts-and-culture>





Abstract

For the first time in modern history, the global economy is growing but few are benefiting – until now, sellers have had to hold expensive merchant bank accounts and pay high fees making online business expensive and only profitable with high volume sales. The combination of mobile ubiquity and blockchain is unlocking opportunity for prosperity like never before.

The Nuclus Platform will be the #1 marketplace for international order fulfillment from Sub-Saharan Africa serving new buyers and realization of commercial goals and objectives of related development programs. The introduction of a digital token will stimulate trade between participants as it has no residual effects or distortions i.e. inflation and the transaction is totally completed at the point and time of exchange. We introduce a new economic philosophy to ensure sustainability and to advance equitable opportunities for economic participants during economic growth with benefits incurred by every section of society.

Over the next 2 years, we will create a recognizable and distinguished brand, and expand in-country infrastructure to build direct links between the macroeconomic and microeconomic determinants of the economy and economic growth.

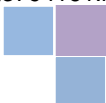
Context²

- The **blockchain economy** (or blockconomy) is a scenario and potential future environment in which the technology replaces current monetary systems, potentially on a global basis. **Blockchain** is a distributed ledger, essentially a type of decentralized database that stores a secure and permanent record of transaction data.
- ³Historically, **currency tokens** issued by a company crossed the boundary of merely being "trade" tokens when they were sanctioned by the local government authority. In effect, the organization behind the tokens became the regional bank.
- The **cowrie shell** is unique and impossible to counterfeit convincingly and has been used all over Africa and Asia. The **cowrie shell currency** broadened the trade possibilities with no residual effects or distortions. The transaction was totally completed at the point and time of exchange.
- **Inclusive growth or economy** is a concept that advances equitable opportunities for **economic** participants during **economic growth** with benefits incurred by every section of society. It implies direct links between the macroeconomic and microeconomic determinants of the **economy** and **economic growth**.
- The proliferation of **mobile phone** networks has transformed communications in sub-Saharan **Africa**. Smartphones (those that can **access** the internet and applications) are owned by significant minorities.
- **Cryptocurrency** is a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank.



² Concept definition mainly from https://en.wikipedia.org/wiki/Main_Page

³ Image courtesy of <https://www.standard.co.uk/fashion/shells-are-the-unexpected-jewellery-trend-of-summer-2018-a3794161.html>





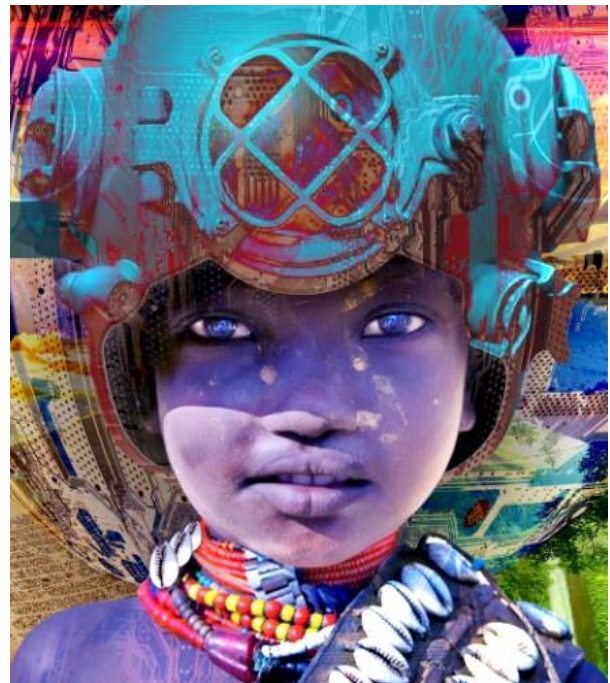
Problem Statement

The Underserved

- In developing economies, vendors do not necessarily have bank accounts and is underserved, therefore are unable to fully participate in eCommerce.
- Commercial bank branches (per 100,000 adults) range from between 2 and 24 throughout the African continent as opposed to 34 across the United States⁴. Such low branch per adults ratios make it difficult to transact and fulfill financial needs.
- Furthermore, micro, small and medium entrepreneurs (MSMEs) in particular are disadvantaged when it comes to access to financial systems.
- There is currently no Sub-Saharan African Digital eCommerce Platform to enhance trade and realize commercial targets of development programs such as BRICS
- In 2015, the BRICS nations, initiated consultations to establish a stable currency and for a payment system that would be an alternative to the SWIFT system⁵.

⁶Economic Inclusion

- To participate in traditional business-to-business marketplace, sellers must have physical stores effectively discarding non-branded lower quality products and services
- Until now, sellers have had to hold expensive merchant bank accounts and pay high fees making online business expensive and only profitable with high volume sales
- In some cases, Mobile network operators (MNOs) have seized the opportunity to create convenient, low-value, inexpensive payment options in the form of mobile money.
- Cash flow problem remains to be the primary cause of small business failure⁷.
- Household income is a major constraint to economic growth and inclusive prosperity



“The new prosperity paradox: For the first time in modern history, the global economy is growing but few are benefiting”

Blockchain Revolution, Solving the prosperity paradox: Economic inclusion and entrepreneurship, D Tapscott and A Tapscott, Portfolio Penguin, 2016

⁴ <https://www.indexmundi.com/facts/indicators/FB.CBK.BRCH.P5>, Commercial bank branches (per 100,000 adults)

⁵ "BRICS starts examining SWIFT alternative". RT News. 17 June 2015. Retrieved 26 March 2016.

⁶ Image courtesy of <https://medium.com/afroera/afrofuturism-21st-century-d472e21ef40d>

⁷ <http://voices.yahoo.com/how-avoid-cash-flow-problems-small-business-5440697.html>



The Solution

We are creating the next-generation fully inclusive Digital Economy – the combination of mobile ubiquity and blockchain is unlocking opportunity for prosperity like never before.

We offer buyers, sellers, organizers and market makers an inclusive opportunity to be part of a thriving ecosystem that is built on the blockchain with retaining and growing the value of its own currency for peer-to-peer exchange⁸.

We are confident that we're entering an exciting new era with a convergence of technologies unlocking potential addressing problems in a way not previously possible.

We will be the #1 marketplace for exports from Sub-Saharan Africa⁹ serving the needs of a growing middleclass and realization of commercial goals and objectives within the BRICS countries amongst others.

¹⁰Market Segments and Size¹¹

- In 2015, the five BRICS countries represent over 3.6 billion people, about 41% of the world population;
- The five nations have a combined nominal GDP of US\$16.6 trillion, equivalent to approximately 22% of the gross world product, combined GDP (PPP) of around US\$37 trillion;
- Overall the BRICS are forecasted to expand 4.6% in 2016, from an estimated growth of 3.9% in 2015. The World Bank expects BRICS growth to pick up to 5.3% in 2017
- In 2017, within BRIC countries almost 40% or 1.5 billion are internet users¹²;



“... blockchain technology could unleash the biggest untapped pool of human capital in history, bringing billions of engaged, prospering entrepreneurs into the global economy.”

Blockchain Revolution, Solving the prosperity paradox: Economic inclusion and entrepreneurship, D Tapscott and A Tapscott, Portfolio Penguin, 2016

⁸ White paper – Bitcoin: A Peer-to-Peer Electronic Cash System, Satoshi Nakamoto, www.bitcoin.org

⁹ 85% of all African countries – The UN Development Program lists 46 of Africa's 54 countries

¹⁰ Image courtesy of <https://za.pinterest.com/CapeCodshibori/africa-textiles-and-more/>

¹¹ <https://en.wikipedia.org/wiki/BRICS>

¹² <https://www.statista.com/statistics/262966/number-of-internet-users-in-selected-countries/>





Technology Disruption creates new opportunities

Our marketplace caters for traditional and previously excluded participants, offering them access to new markets and promoting the manufacturing of goods for export to Brazil, Russia, India and China. This is a fundamental shift in African economy away from the dependency on exporting of natural resources to beneficiation.

In the mining industry or extractive metallurgy, **beneficiation**¹³ is any process that improves (benefits) the **economic** value of the ore by removing the gangue minerals, which results in a higher grade product (concentrate) and a waste stream (tailings). Typically raw iron ore is exported from African countries. We suggest to process ore prior to export and even to promote in country manufacturing of goods for export as a whole.

- Converged technology now offers a solution to provide entrepreneurs that do not have a bank account to access financial systems.
- Blockchain technology offers to significantly reduce the cost of transactions removing costly trusted 3rd parties and intermediaries without loss of security.
- Introducing low cost wearables will further increase penetration and reach to the unbanked or underserved and in-community entrepreneur.
- Crypto currencies is a digital asset designed to work as a medium of exchange³ that uses cryptography to secure its transactions, to control the creation of additional units, and to verify the transfer of assets.
- With these technology evolutions it is now possible to create an inclusive economy that offers the investor opportunity to be part of this unique potential to challenge existing systems of finance and payments.

Our marketplace caters for traditional and previously excluded participants offering access to new markets and promoting the manufacturing of goods for export to Brazil, Russia, India and China. Furthermore, we believe that introducing wearables makes sense as they potentially cheaper, but also because while smartphone sales has stagnated around 1.4 Bn, wearables sales are expected to grow by 13% annually¹⁴. In 2013, B2C e-commerce sales in the Middle East and Africa accounted for only 2.2 percent of global B2C e-commerce sales.¹⁵

“You have to create value in all areas of a company’s activities to win – for you and for your suppliers, your customers, your consumers, your community.”

Design to Grow, How Coca-Cola learned to combine Scale & Agility, D. Butler & L. Tischler, Portfolio Penguin, 2015

¹³ <https://en.wikipedia.org/wiki/Beneficiation>

¹⁴ CAGR: Compound Annual Growth Rate / average growth rate per year Source: Gartner

¹⁵ <https://www.statista.com/statistics/244054/share-of-global-b2c-e-commerce-sales-in-middle-east-and-africa/>
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Elements of the Digital Economy

These five elements essentially constitute the overall inter-related components of our approach and have become recognized each in their own right except for blockchain.

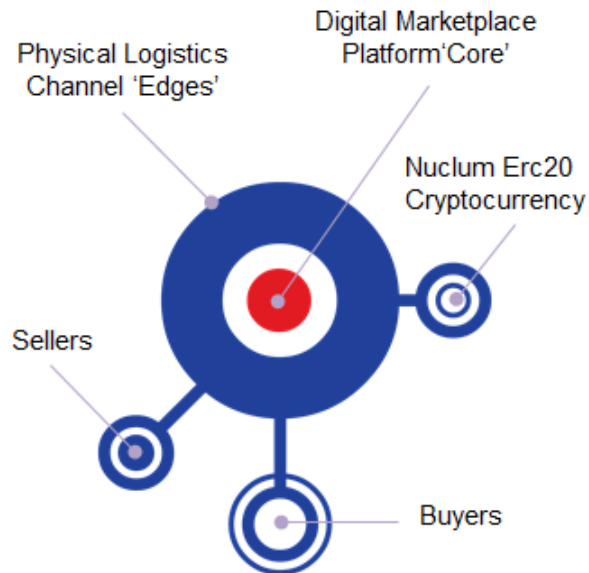


FIGURE 1: 5 ELEMENTS OF THE DIGITAL ECONOMY

Digital Marketplace Platform

Our platform at its core features a fully fledged Order-to-Cash and Debtors Management solution.

Physical Logistics Channels

We believe to have a successful business; we need to establish local in-community distribution and collections channels.

Ehtereum Blockchain

Nuclum Money, or NUCLUM (NLM), is our Ethereum ERC20 of which we minted 1,000,000,000 tokens to 18 decimals.

Sellers

Seller or suppliers are defined as the producer within the eco-system

Buyers

Buyers constitute the consumers within the eco-system.

Buyers and Sellers transact and exchange via the platform and can have a many-to-many relationship. In other words, the platform offers Sellers the ability to find and connect and so grow their online eCommerce businesses, while Buyers have the added advantage of choice, selection and wholesale at bulk prices. Our





distribution and collection network or channels offer a multiple purposes: (1) we fulfill orders, (2) functions as quality assurance, and (3) place of community involvement for training and inclusion in upliftment programs for entrepreneurs.

Metcalfe's law and the Network Effect

Metcalfe's Law is derived from the observation that as the network or eco-system grows in size, the number of connections increases significantly more than the number of nodes. In other words, if the number of nodes is n , the number of potential connections between the nodes equals $(n^2 - n)/2$, which basically means that the number of potential connections increases quadratically with the number of nodes. So doubling the nodes in the eco-system will more than quadruple the number of potential connections between the nodes. Connections are essential and the only mechanism which will allow the basis for transfer, exchange or a transaction. Not all connections will carry the same number of exchanges or transactions. Transactions between connected nodes are defined as sharing and accepting a quote, raising an invoice, and subsequently transferring or exchanging value between them as within a typical Quote-to-cash process. Strong connections can be defined as main routes of transfer and exchange and carry the most traffic. Not all routes within connected nodes will carry the same traffic.

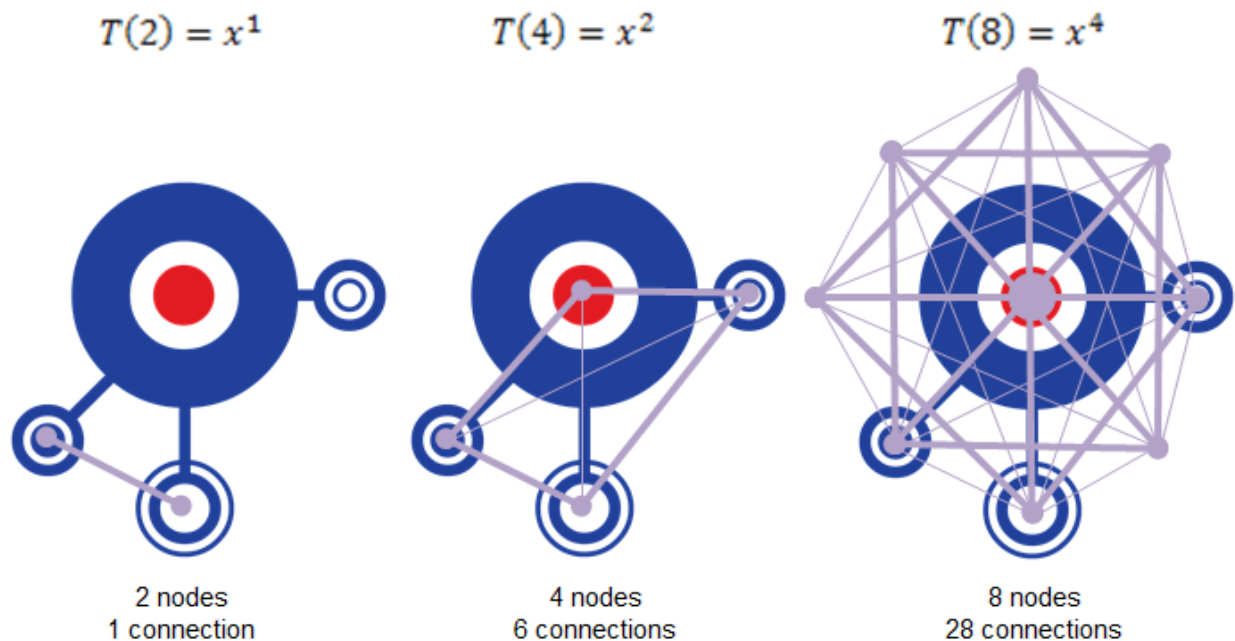


FIGURE 2: GROWING THE ECO-SYSTEM IN ACCORDANCE WITH METCALFE'S LAW

Now we propose extending the concept further and introduce the potential for peer-to-peer transactions between the nodes (n) in a similar manner. The nodes (n) represent an active business or individual users registered on the Nuclus.co business platform. This constitutes that there is a potential of x transactions (T) or opportunity for peer-to-peer exchange between the users:

$$T(2) = x^1 \quad (1)$$

$$T(4) = x^2 \quad (2)$$

$$T(8) = x^4 \quad (3)$$

Then:





$$T(n) = x^{n/2} \quad (4)$$

So if the number of nodes (n) or active users doubles, there would be a proportionate near exponential growth in the number of transactions (T), then $T(n) = x^{n/2}$. This paves the way and provides a sound basis for the introduction of a digital token or cryptocurrency as a utility within the platform.

Furthermore, Metcalfe's Law assumes that each potential connection increases the overall value of the network by an equal amount and implies that increases in number of nodes(n) leads to a quadratic increase in value of the network (VN). We will have to introduce the alternative arguments that the same is implied where the connections in the network decreases. However, we would rather suggest that the focus is on where there are active nodes, in other words where there are a set of stable connections as not all nodes that are active would be of interest and have the same value.

Next, we would like to quantify this Network Value (VN) and illustrate it in terms of the number of increasing transactions (T) proportionate to the increase in number of nodes(n):

We have established that:

$$\text{increase in nodes } (n) \approx \text{increase in transactions } (T) \quad (5)$$

Also that:

$$\text{increase in transactions } (T) \approx \text{increase in value of the network } (VN) \quad (6)$$

Then:

$$\text{increase in nodes } (n) \approx \text{increase in the value of the network } (VN) \quad (7)$$

Furthermore, it is stipulated that if the cost of adding nodes is constant, increases in eco-system size cause a linear increase in cost. The result is inexhaustible returns to scale in which bigger is always better.¹⁶

Economy concept explained

¹⁷At this time we would like to introduce the concept of the digital economy and participants in that economy. A registered and active user represents a node in the network or eco-system and is a participant in the digital economy.

We basically assign the concept of a network to a digital eco-system and will henceforth refer to Nuclus.co as an eco-system with projected numbers based on the concept of a network. Later we extend the concept of an eco-system to a digital economy once we introduce the token or cryptocurrency. This implies that we have some basis to introduce both systemic and economic measures that will be used to gauge and monitor the performance of the eco-system and its nodes.



¹⁶ Metcalfe, *Metcalfe's Law*, *supra* note 7. Bob Metcalfe, *Metcalfe's Law Recurses Down the Long Tail of Social Networking*, VCMIKE'S BLOG (Aug. 18, 2006), <https://vc mike.wordpress.com/2006/08/18/metcalfe-socialnetworks/>. From Moore's Law, Metcalfe's Law, and the theory of optimal interoperability, Christopher S.Yoo Christopher S. Yoo, *Possible Paradigm Shifts in Broadband Policy*, 9 I/S: J.L. & POL'Y INFO. SOC'Y 367 (2014)

¹⁷ Image courtesy of <http://beadsaroundtheworld.com/zulu-s-africa/>





Then finally, we postulate that the bigger the network, the better the economy, and further still, the higher utility of the associated currency based again on the correlation between the relative increase in size or number of nodes, transactions and value of the network, positively benefiting the participants with them owning and exchanging cyptocurrency.

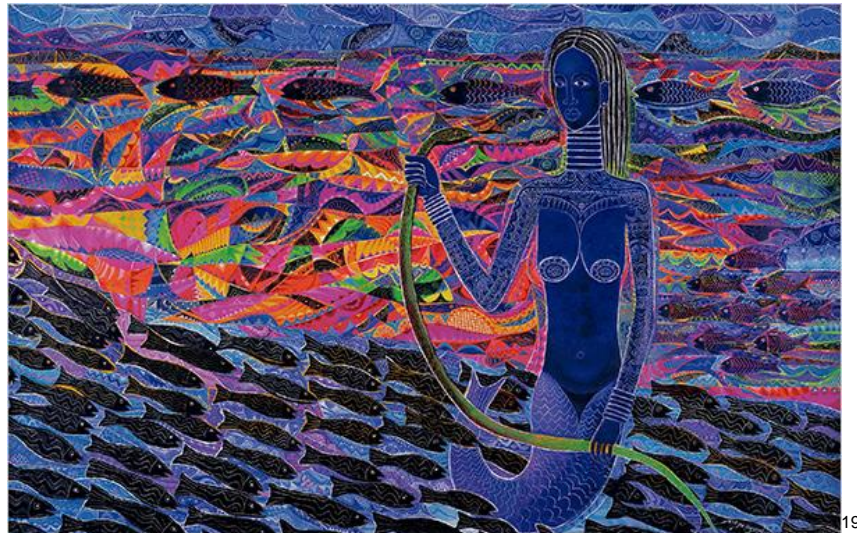
P2P Exchange and token utility

To recap, we have defined exchanges to be similar to transfers which happen across connections between nodes. Users within the eco-system are effectively connected when traffic or transactions occur between them; we also observe that some connections carry more traffic than others. This observation can loosely be equated to where the connected nodes find mutual benefit in transacting, for instance where a supplier node and buyer node agree regularly on the price for goods and subsequent exchange and transfer of value for goods sold.

High volume traffic between connected nodes indicates healthy trade and where traffic is low, the inverse. Trades constitute a transaction between the connected nodes with an increase then in trade where there is a significant increase in nodes as previously suggested. The platform in essence creates connections between nodes which then constitutes the notion of a market. A busy market is made up of connected nodes where there is high volume traffic between them and indicates an established healthy trade relationship. The goal of the platform¹⁸ is to create these highly connected nodes or markets as a basis for trades and transactions.

With an increase in the size of the network there is an increase in number of transactions between nodes as established previously. Traditionally, current bank transactions incur costs and involve trusted intermediaries delaying the eventual transfer between accounts due to the cumbersome clearing processes.

Transaction costs usually include the commission of the intermediaries and merchant fees in the case of ecommerce where online payments are cleared using credits cards. These fees constitute a significant portion of net profits.



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¹⁸ There are no intermediaries between the nodes as it is envisaged they trade or transact directly as a result of the blockchain

¹⁹ Image courtesy of <https://www.nytimes.com/2009/04/03/arts/design/03wata.html>



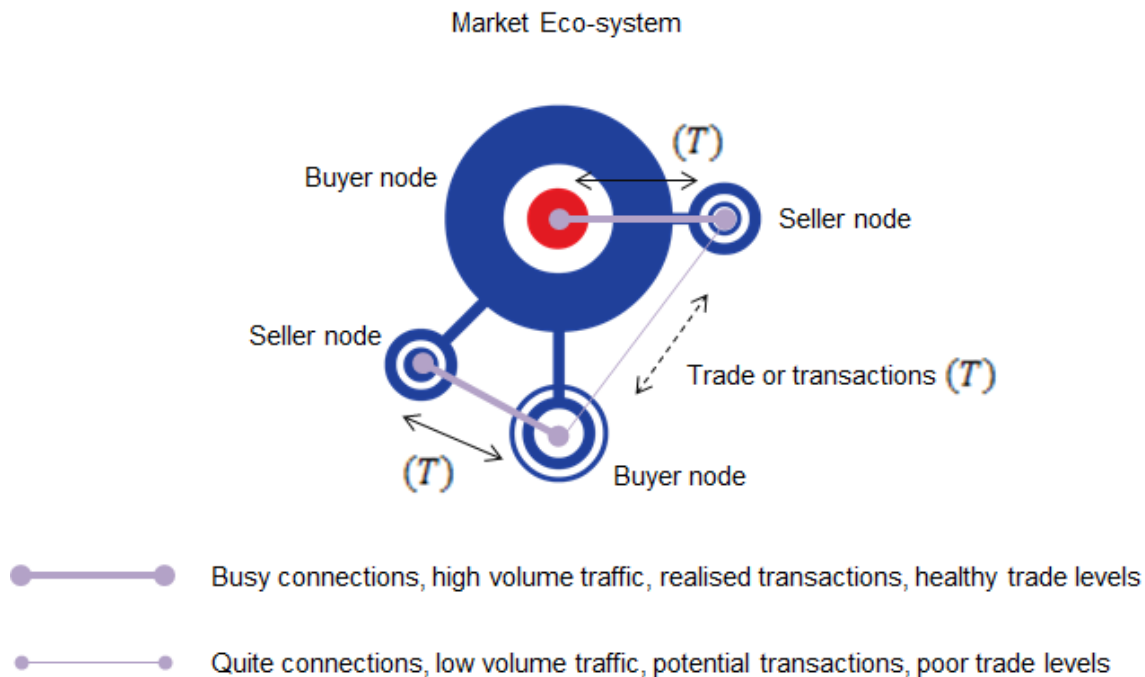


FIGURE 3: TRADE ON CONNECTIONS BETWEEN NODES WITHOUT INTERMEDIARIES

This in itself excludes a huge number of businesses to participate in a digital economy as many are unable to generate large volume of transactions that make small margins a feasible business model.

Furthermore, over and above transaction fees there are the cost of holding a bank account for those who are banked. This traditional offer from financial service providers are essentially the only access the banked or served who are in business have to gain access to financial services and participating in online commerce.

Now, with the advent of the decentralised blockchain and bitcoin becoming a real alternative mechanism to exchange, it manifests the vision of peer-to-peer exchange for a much larger audience and previously underserved access to online commerce.

The introduction of a token is as previously stated not new, and dates back centuries especially in West Africa and China. The introduction of the token stimulated trade between participating nations and worked well even up until the late 1950s as it had no residual effects or distortions i.e. inflation, and the transaction was totally completed at the point of and time of exchange.

Eco-system behavior elements

It is only natural to believe things will go better, however, over time the laws of entropy dictates degradation. To counter this effect system intelligence is designed to attract new users and encourage connections. Furthermore, we are creating a set of performance measures to monitor and track the overall health of the individual business eco-systems as well as the entire network to ensure sustainability and ever-increasing levels of activity.





Node Expansion

From the outset we have been promoting the expansion of the network and established formulas to explain the increase in the value of the network. Practically, we recognize the need to encourage expansion through making it easy for users to find and connect where there is a potential for mutual benefit. We address usability and introduce simplicity to aid users to grow their own network and so establish and expand their business eco-system.

Traffic Volumes

With all things considered, we also recognize that the activity within the established network could grow stale and requires mechanisms to promote sustainability. We introduce attractors in the form of a rewards and loyalty program, and create visibility of demand in order for suppliers or seller to offer competitive pricing that will drive buyer engagement and transaction volumes. The increase of transaction volumes drives traffic and the increase potential for the increase utilization of the Nuclum Money digital currency or NUCLUM (NLM) token.

Designing an Inclusive Economy

The goal is to advance equitable opportunities for economic participants during economic growth with benefits incurred by every section of society.

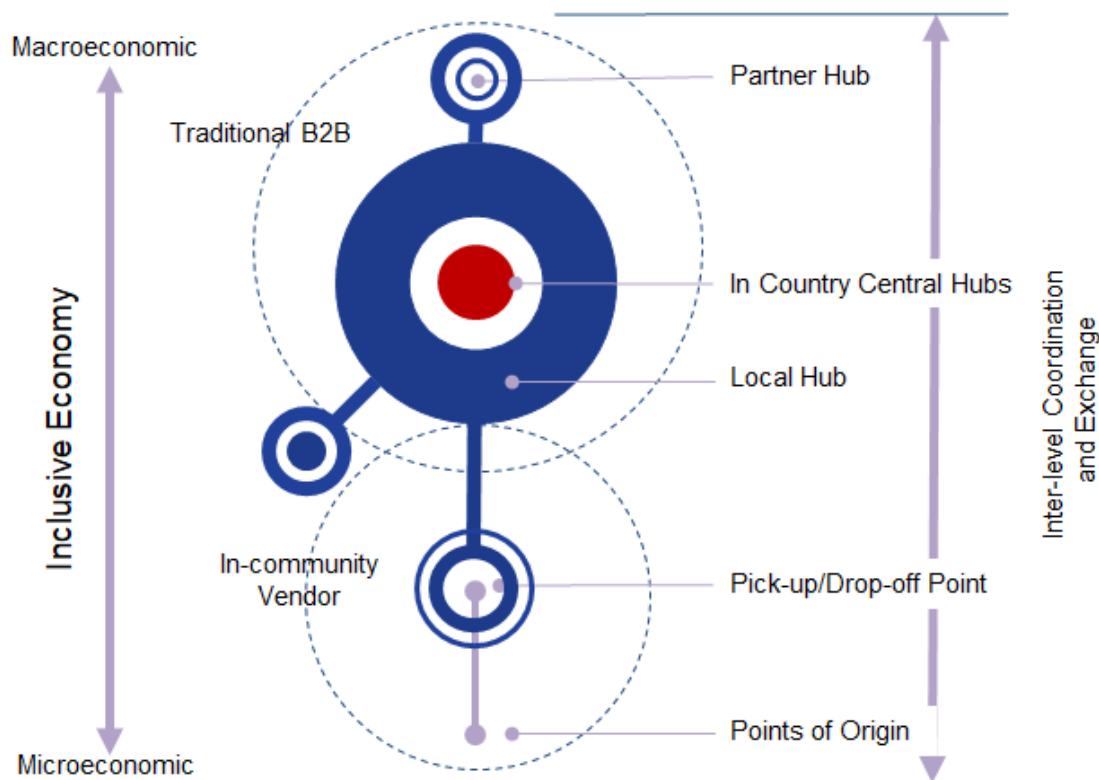


FIGURE 4: A FULLY INCLUSIVE ECONOMY AND THE NEED FOR COORDINATION AND EXCHANGE OF GOODS AND SERVICES FOR THE SELL SIDE





The following roles or societies that forms part of the eco-system includes:-

- Sellers i.e. entrepreneurs and business on macro-, microeconomic to vendor level in-community;
- Buyers on macro-, microeconomic in-community level;
- Exchange Agents to transfers digital to in-country currency on macro-, and microeconomic in-community level;
- Courier Agents to fulfill transactions and realize the distribution and collection coordination of goods between points of origin, pick-up or drop-off points, local and central hubs;
- Shipping Agents to fulfill transactions and coordinate with partner hubs that are integrated with international hubs for door-to-door delivery;
- Community centre agents that educate and inform local business of opportunity and encourages participation;
- Financial Service providers who offers micro-loans in the form of digital currency for easy distribution and access to both macro- and microeconomic determinants;

Sell side scenario – An in-community vendor makes unique and novel artifacts. He exhibits and sells his products at the local market and may take another long trip to reach the local branch where he keeps his savings and occasionally send money to family cross border. He becomes aware of the platform via the programs offered at the local community centre which he visits as part of his weekly or monthly visit to trade. He learns that he can sign up immediately using his mobile phone and will follow a short training program while the community centre creates high resolution images of his products and loads them to his new account. There are no subscription fees, but for transfers he is willing to make micro payments in exchange for the access and reach to a global online community and sell more in accordance with minimum order quantity (MOQ) promotions. He further learns that when he signed up, he received digital currency as a reward that he already can redeem against goods available on the platform marketplace while he waits for his first payment to come through. He can also buy more at the centre to top up his wallet and transfer to his family members cross border without having to travel further to his bank.

The community centre doubles as a store for goods sold online and functions as a distribution hub in transit to the local partner courier services for them to collect en route to the buyer. The centre also facilitates digital to in-country currency exchange and acts as the Exchange Agents. Later other members of the community can fulfill the role after going through a certification process and training on the system, and outbid other agents by offering attractive exchange fees located within the business eco-system using their mobile phone and the Nuclus Platform.

Goods arrive via the vendor themselves or via 'couriers' carrying goods from rural areas and have become part of the distribution channel through regular trips. These 'couriers' are rewarded for collection and safe delivery in digital currency. Goods are tracked and movement coordinated within the system. All participants i.e. buyers, sellers, couriers and shippers are constantly aware of the progress of packages and will facilitate exchange in digital currency at each point of the transaction.

The vendor is now fully included in global trade and learns that he has access to finance to expand his business and to employ in his community to increase manufacturing as demand for his product grows. He could also mechanize parts of the process making use of the loan to buy tools and grow his production. By being part of the Nuclus Platform he not only has access to services to grow his business, but his household income has increased significantly. In accordance with the formula, his disposable income has increased which in itself drives the propensity to consume and creates demand for products and services beyond the basic, in so in itself a catalyst for economic growth.

Buy-side scenario – A trader in rare African artifacts has registered on the Nuclus Platform and is regularly notified of new products within his sphere of interest and registered preferences. As soon as the vendor had registered and his product images added to his marketplace, the buyer is matched to the seller.





The trader can now initiate a request for quote on the product, price and MOQ as presented online. The trader also has a large following in his eco-system on the Nuclus Platform and immediately notifies them to gauge interest. After receiving positive feedback, he is now in a advantages position to place a large order quantity with the vendor. The vendor submits a quote and the trader automatically accepts with shipping costs and estimated time to delivery specified. Because he is a regular system user, he has accrued rewards in the form of Nuclus Money or NULCUM (NLM) and can use it to settle the bill. The trader can also top up his wallet when necessary as the seller does not necessarily have a bank account and only accepts digital currency.

Within minutes, the in-country courier partner part of the eco-system is notified of the availability of stock at the local community centre and dispatches a driver to collect. Within hours of collection the precious cargo is en-route to the trader to his door. Both the seller and buyer are constantly informed of status of the order and upon arrival the buyer accepts the goods in good condition and offers a rating to the seller. The seller immediately receives notice, rates the buyer and receives payment on the form of digital currency, without intermediaries and high transfer costs. He can choose to settle his loan or transfer to family or other participating community members in exchange for goods or services rendered.

In this way a chain of events can follow in which previously not possible but a reality with the ever expanding network connectivity, presence of mobile operators, and now with the advent of the blockchain for secure digital transactions, benefiting the participants within the eco-system on the platform and eventually the local economy.



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“You have to create value in all areas of a company’s activities to win – for you and for your suppliers, your customers, your consumers, your community.”

Design to Grow, How Coca-Cola learned to combine Scale & Agility, D. Butler & L. Tischler, Portfolio Penguin, 2015

²⁰ Image courtesy of <https://pixels.com/artists/bruce+rolff/greeting+cards?page=4>





Select Products and Services

Considering to offering bulk or MOQ at wholesale prices being attractive to sellers and buyers, the model must cater for both macro- and microeconomic determinants. The selection of products and services listed within the Nuclius Platform and Marketplace is driven by two main factors:-

- BRICS policy and trade relations; and
- Household income.

BIRCS Policy and Trade context

²¹Industrial Policy Action Plan II²² introduced the following products and services with a high degree of employment multiplier and backward linkages:-

- Other chemicals & man-made fibers
- Furniture
- Plastic products
- TV, radio and comm equip
- Electrical machinery and apparatus
- Paper and paper products
- Rubber products
- Non-metallic minerals
- Beverages
- Glass & glass products
- Professional & scientific equip
- Metal products excl. machinery
- Machinery & equipment
- Footwear



These products are still relevant and will form the basis of the set of products specifically for mainstream and the macroeconomic determinants within business eco-systems on the Nuclius Platform. It is envisaged that fiat currency will be used to fulfill transactions but as an alternative Nuclius Money or NULCUM (NLM) will be available to settle payments where the digital currency had strengthened significantly and achieves enough momentum as the blockchain and cryptocurrency matures.

We will expand the product listing to attract consumers who are willing to place bulk orders or Minimum Order Quantity (MOQ) at wholesale prices. Buyers would then include individuals over and above the buyers on a business-to-business level.

Household Income and consumer demand²³

Households allocate consumption across a range of goods and services from which they derive the highest amount of utility. Household income is a major constraint to the amount that a household can consume – in order to increase consumption, household income must increase.

²¹ Image courtesy of <https://www.news24.com/Africa/News/ivory-coasts-african-art-museum-gets-new-lease-of-life-20171011>

²² South Africa's Trade Strategy and the BRICS, Dr Brendan Vickers, Head: Research and Policy International Trade and Economic Development (ITED), SA DTI Small Business Summit –Bloemfontein 12 October 2011

²³ The Effective Investor, The definitive guide for all |South Africans, F. Busetti, 2009





To cater for growth at the microeconomic level, we suggest understanding the effect of and interrelation of consumer demand or consumption and disposable household income. The consumption function is represented as follows:

$$C = c_0 + c_1 * Y_d \quad (8)$$

Where

$$C = \text{Total Consumption} \quad (9)$$

$$c_0 = \text{autonomous consumption where } c_0 > 0 \quad (10)$$

$$c_1 = \text{the marginal propensity to consume where } 0 < c_1 < 1 \quad (11)$$

And

$$Y_d = \text{disposable income, i.e. income after taxes and transfer payments to other households.} \quad (12)$$

Household consumption will consist of both autonomous (non-income dependent) consumption such as food, and induced (income dependent) consumption. Induced expenditure is dependent on the income, tastes and preferences and includes products such as cars, furniture and jewelry and clothing and footwear.

As confidence in the future economic and financial outlook improves, however, factors such as rate of inflation, interest rates, political environment and global economic growth all influence a household's potential income and accordingly, their willingness to consume c_1 . So, with the growth in the middleclass in India and China can be described by the consumption function as more household income is allocated to income dependent products and services.

New Opportunity for Entrepreneurs

We believe that the platform can spur economic growth through cause and effect i.e. the increase in world consumption (demand), creates opportunity for entrepreneurs (suppliers) in Africa to expand their household income and boost economic activity at their community on the microeconomic level now that they are part of online global trade.

Digital Platform Features

Our current Quote-to-cash (Q2C) platform have been architected and designed for scale and growth. We are now enhancing these features to function on the blockchain to take advantage of the benefits that this new technology brings – eliminating intermediaries to reduce transaction costs, increase speed of transfers and include entrepreneurs into the global online trade.



FIGURE 5: MAIN Q2C FEATURES





CRM and Product Catalogue – The integrated customer relationship management (CRM) and product catalogue helps you maintain your business data and to keep it up to date.

Quoting & Invoicing – Auto population of data makes it easy and simple when creating quotes, invoices and pay slips, and keeping business mini-sites up to date.

Instant Messaging – The integrated email accelerates the negotiation process and results in more accurate quoting and quicker approvals automatically generating invoices and speeding up the order to cash process.

Order Fulfillment & Order Tracking – The integrated Ticket Manager helps Sellers track to ensure the fulfillment of the orders. Buyers automatically are informed of the progress of their orders.

Debtor Management & Notifications – The integrated Invoice aging and debtor monitoring triggers automated notifications to remind them of outstanding payments.

Payment & Collections – The platform is integrated with secure credit cards payment gateways and is linked to a network of service providers to offer online settlement with fiat currency.

Employee Management & Pay slips – Integrated employee records management offers quick and accurate generation of online Pay slips.

Nuclus Platform Functional Map (PFM) 2.0

A view of our functional landscape allows investors and users insight into features and functions that are already available but will require enhancements, and those that are new additions to enable us to fulfill our vision of a core platform for a fully inclusive economy.

Engagement Layer – The front-end comprises all the channels to reach the users in a digital and physical world. A new addition will be store features and functionality to cater for the coordination and inventory management within and between the points of origin, pick-up / drop-off points, hubs and buyers and sellers. These additions will be created prior to full commercialization as we see the combination of digital and physical capabilities key to success in phase 2 and 3.

Business Layer – The logical layer comprises key features and functions that connect supply and demand, or buyers and sellers. We will introduce new additions specifically to enhance traffic and transactions between nodes to spur growth through campaigns and expand each business eco-system to invite and connect users. These changes will form part of phase 3.

Integration Layer – The introduction of an open architecture enables the platform the ability to grow and engage with partner platforms expanding eco-systems further into a modern digital world. This will be the focus of our final phase of the development of our platform.

Back-end – The back-end requires the most effort as it incorporates incorporating full functionality on the blockchain, features and functions to enable Order Fulfillment, and establish the Marketplace. We foresee enhancements to the mobile and wearable channels to extend and reach the mobile-only worlds of entrepreneurs in emerging and developing economies.

Open Source Platforms – We will introduce integration to the Ethereum Blockchain, incorporate Machine Learning (ML) and Logistical features to enhance the user experience and enable superior levels of service. ML will be used to establish better buyer and seller relationships and streamline sales, financial accounting and administration.



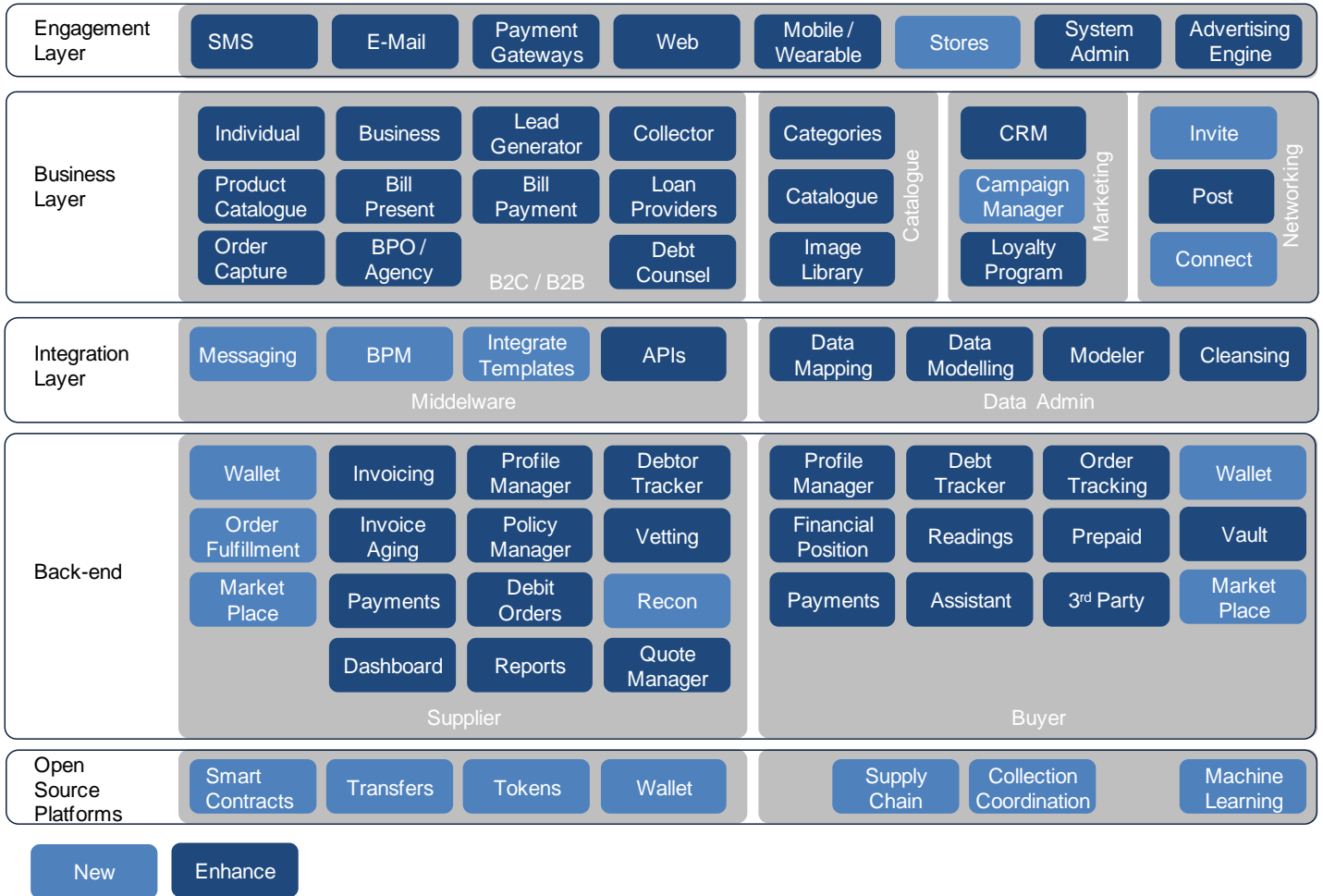


FIGURE 6: NUCLUS PLATFORM FUNCTIONAL MAP 2.0

The Marketplace will cater for a wide range of suppliers. To strengthen ties with and grow transactions within the eco-system, we address minimum required features to include but not limited to the following:-

- Listing of recent or new products and services;
- Listing of popular or most traded products and services;
- Preference matched between buyers and suppliers; and
- Demand curves.

These enhancements will be part of the phases prior to commercialization and to scale and grow the business.

“We will be the #1 marketplace for exports from Sub-Saharan Africa serving the needs and realization of commercial goals and objectives development programs...”

Marius van der Leek, Founder & CEO, nuclis.co



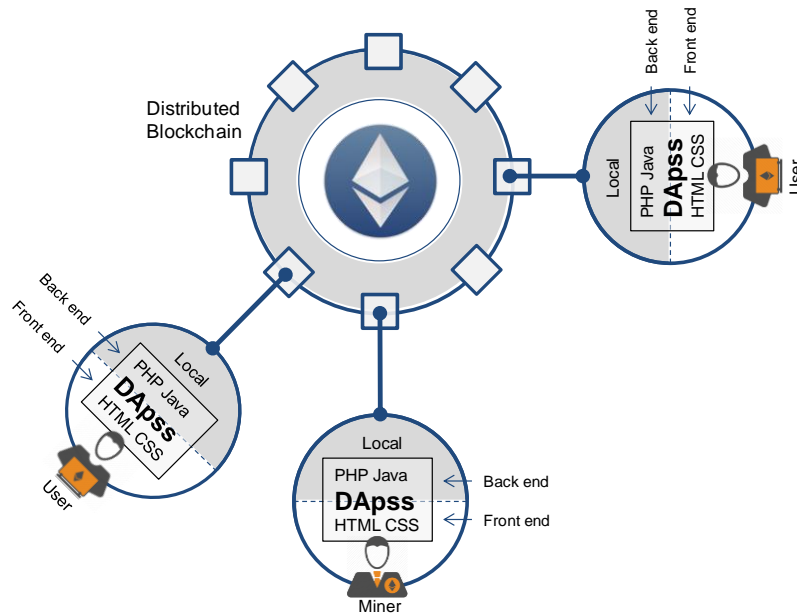


FIGURE 7: WEB / DAPP THAT USES A BLOCKCHAIN WITH SMART CONTRACTS

The most significant change will be to extend and enhancement of our Web Application to include DApps to leverage the benefits of the blockchain to fulfill our vision of creating a next-generation business platform for a fully inclusive digital economy. We'll introduce smart contracts, digital wallet, digital currency or tokens and transfer features from the outset. Through each phase as the technology matures we'll re-introduce efficiency and performance improvements to benefit users and grow the digital economy.

Nuclus Platform Benefits

- Extends reach and reduce barriers to entry for macro and micro, emerging and developing determinants into a fully inclusive digital and global economy;
- Attractive tiered fees fairly distributed amongst the different participants favoring the micro or vendor level business but lower also on the macro levels;
- Intelligently connects sellers and buyers to promote new and stronger relationships for ever-increasing transactions and economic growth;
- Offers sellers or suppliers a business platform to expand their reach and grow their business ecosystem with certainty and improved cash flow;
- Offers buyers access to a range of goods and services ordering bulk or MOQ and conveniently fulfilled door-to-door at wholesale prices and low transaction fees;
- Introducing Nuclus Money or NUCLUM (NLM) cryptocurrency or digital currency to broaden the trade possibilities with no residual effects or distortions with the transaction totally completed at the point of and time of exchange;
- Buyers and Sellers will be rewarded for participating and accrue digital currency that can be redeemed against goods and services or exchanged for fiat currency;
- A first of its kind Sub-Saharan African digital eCommerce platform to enhance international trade and realize commercial targets set by African development programs;
- Focused on promoting tax and trade friendly goods and services as per trade agreements to strengthen and fulfill economic ties between the countries;





- Investors can be assured of the utility of the digital currency within the business platform against all goods and services or exchanged for fiat currency;



²⁴ Image courtesy of <https://www.jungalow.com/2018/08/masks-on-walls.html>





Roadmap

We are super excited to reveal our roadmap for the next few years. As you'll learn, we are coming off a base and have identified including the blockchain technology into our existing product as a natural progression of our aim to make money move faster.

We have wrapped our minds around creating an achievable set of tasks over the next 3 years. We have set timelines that will depend on us reaching the investment community and staying on track with the various releases prior to the next round. We have had to consider continued maturing of the Legal and Regulatory landscape, as well as factoring in Technology evolution to maintain our focus towards establishing a platform for a fully inclusive economy. We also expect to grow the team and allocate funds towards establishing and growing the brand and user base as we carve out our niche in a difficult market.

Traditionally, marketplaces would include small, medium and large business. For the first time, our eco-system will reach the bottom of the pyramid, or the unbanked, as we incorporate mobile first principles for the micro-vendor. Our wearable technology will enhance the reach of the eco-system and will require dedicated focus as we build on existing technology.

In summary, we have selected the Ethereum Open Source Platform as we believe we can achieve both our commercial and technical targets. We are aware of developments of competing blockchains solving existing scale problems and will monitor evolution as and when they occur.

2012 Proof of Concept Online Billing and Collections



Billsource®, our Online Billing and Collections Web Solution POC went live in March 2012. We extended the features and functions to include a central Customer Relationship Management database, Quote Facility, Product Catalog and a very simplistic mobi-site. We managed to register the Billsource trademark and introduced the floating invoice. We were self-funded throughout the idea to market process.

2014 Minimal Viable Product Billsource® v1.0 MVP



In 2014 we went live with our first release of our Minimum Viable Product (MVP). It took time to integrate the different components to work seamlessly as we decided to refactor the previous code set and introduce MVC to enable rapid change. Model-view-controller (MVC) is an architectural pattern commonly used for developing user interfaces that divides an application into three interconnected parts. Furthermore, we introduced new roles to the system e.g. we had business, individual, financial service providers, debt factors, accountants and introduced the debt clerk agency or DCA. Our business eco-system started to take shape and we had spent many hours on testing and fine-tuning the workflow and process steps to help small business manage collections in a more efficient way.

2016 Quote to Cash Billsource® v2.0 Q2C



With the full advent and adoption of cloud computing, we decided to extend capabilities by introducing dashboards that will aid in debtors management and managing aging of bills. We also trashed our mobi-site (still somewhere) and introduced a basic native Mobile App for Android OS. A single download to cater





for both the business and individual roles. After a long relationship with MyGate, we tried PayPal as we wanted to extend our offering to other parts of the world. However, in the end we decided on PayU's EFT and Credit Card Gateway to complete the Order to Cash value chain. To make money move faster we introduced efficiencies between quote and order steps but realized we needed to look for a better way.

2017-'18 Blockchain Disruptive Platforms



Blockchain technology had been labeled as disruptive specifically to the Fintech domain. Due to the distributed and secure nature, we introduce moving money even faster and cheaper than ever before. In January 2018 we minted 1,000,000,000 Erc20 tokens or coins and called it NUCLUM (NLM) which is short for Nuclis Money. The Ethereum platform has become ideal for launching Independent Coin Offerings (ICO) and fitted the eco-system type business platform applications perfectly. We decided to fork Billsources® and create Nuclis. Nuclis.co will host our marketplace offering buyers, seller and market makers the opportunity participates as we build the Next-generation Digital Economy.

Q3 2018 Pre-ICO Nuclis Proof of Concept



We are modifying the platform to streamline and adjust the roles and workflow, offer the additional payment option and to cater for hosting the crowdsale. Funds will be allocated towards the enhancements of the platform to function on the blockchain technology and create the minimal viable product (MVP).

Q4 2018 Blockchain MVP – Phase 1



We'll release Nuclis v1.0 as a fully functional minimal viable product. We'll create the second release of the platform. Funds will be allocated to building the brand, social awareness, towards sales and growing the team. Reserves for contingency are envisaged.

Q3 2019 Commercialization – Phase 2



Releasing Nuclis 2.0 will include Smart Contracts and facilitate Micro-payments. We work towards a fully fledged marketplace for an inclusive economy. The platform will add vendors to the eco-system. The subsequent release will introduce the mobile first mobile only channel as we start to grow and onboard customers. Our Wearable prototype will be developed using Wear 2.0 to further extend the reach of the eco-system.

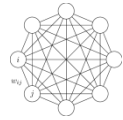
Q2 2020 Scale and Grow – Phase 3





The release of Nuclus 3.0 will coincide with the launch Wearable 1.0 and introduce enhancements towards mobile first to include the unbanked and underserved. It will complete our vision for a fully inclusive economy and work towards improvements to the Ethereum platform as we test its limits and gain insight into potential efficiency improvements. We have started to partner and establish our logistics network for seamless collections, quality management, community upliftment and faster deliveries.

Q4 2020 Blockonomy – Phase 4



Finally we'll see the release of Nuclus 4.0 with a solid customer base and a growing digital economy with a strengthening currency supported by an established support network. There will be an overall focus towards creating an Open Architecture Platform to extend the eco-system into adjacent blockonomies. We'll also introduce updates to our Wearable prior to as we expect rapid growth into developing economies as demand for the product soars. We also expect to see our all-inclusive economy model become the benchmark for developing and emerging economies around the world.

Marketing and Deployment

To reach 85% of Africa is no mean feat. It is envisaged that we will start with South Africa, our home country, and rigorously test the platform and establish a physical infrastructure and presence in main centers around the country. The main centers are Johannesburg and Cape Town where we will deploy the community centers, either through partnering or entirely new. We will rapidly move into the rest of Southern Africa and plan our deployment in accordance with the following criteria:-

- Internet Connectivity²⁵;
- Smartphone Penetration²⁶; and
- Development Programs eligibility²⁷.

Internet Connectivity

In African Countries, Internet penetration has grown a staggering 9942% from 4,514,400 to 453,329,534 over the last 18 years, with a total penetration of 36% average.

Smartphone Penetration

Currently there are 293.8 million smartphone users across the continent. Ovum predicts that there will be 929.9 million smartphones by the year 2021. According to research firm Ovum, the smartphone penetration rate will grow at 52.9% year- on-year.

Furthermore, Opera Software, the makers of Opera browser, mentioned that 2016 was the first year that smartphone imports in Africa outweighed feature phones, signaling the shift.

AGOA eligible

The African Growth and Opportunity Act (AGOA) is a United States Trade Act, enacted on 18 May 2000 as Public Law 106 of the 200th Congress. AGOA has since been renewed to 2025. The legislation significantly enhances market access to the US for qualifying Sub-Saharan African (SSA) countries. Qualification for

²⁵ <https://www.internetworldstats.com/stats1.htm>, Internet Users Statistics for Africa, December 2017

²⁶ <http://www.idgconnect.com/blog-abstract/23175/africa-2017-smartphone-penetration-open-data-online-freedom>

²⁷ <https://agoa.info/>



AGOA preferences is based on a set of conditions contained in the AGOA legislation. In order to qualify and remain eligible for AGOA, each country must be working to improve its rule of law, human rights, and respect for core labor standards.

Countries in order of rank based on internet usage penetration that fulfill most of the criteria include:-

1. ²⁸Nigeria
2. Kenya
3. South Africa
4. Tanzania
5. Uganda
6. Ethiopia
7. Ghana
8. Senegal
9. Zambia
10. Cote d'Ivoire
11. Cameroon
12. Mozambique
13. Benin
14. Rwanda
15. Madagascar
16. Malawi
17. Guinea



This combination offers 288,665,971 (64% of total Sub-Saharan Africa) internet users, with 17 out of the 30 eligible for AGOA and approximately 75-100 million unique smartphone subscribers.

Based on logistics challenges and reach we foresee the following roadmap for infrastructure deployment in the main areas of Africa countries in the following order covering the countries and main centers as listed above:-

1. Southern Africa region;
2. Eastern Africa region;
3. Middle Africa region; and
4. Western Africa region.

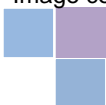
We will create a recognizable and distinguished brand around the marketplace as well as the digital currency Nuclus Money or NUCLUM (NLM) that allows it to be accepted in the same way as in-country currency and mobile payments.

We will expand marketing to traditional and places that have been neglected. Through focused community outreach, physical presence and viral marketing, we will access mainstream business and millions of people who have internet access, smartphones and who previously been excluded from the digital economy.

“...7 of the 10 fastest growing internet populations in the world are in Africa”

GLOBAL DIGITAL OVERVIEW 2017 – FACTS AND FIGURES, Cape Digital Foundation, March 2017

²⁸ Image courtesy of <https://za.pinterest.com/pin/67272588160691566/?lp=true>





Revenue Model

Our model focuses on being a platform for suppliers to sell products in bulk at wholesale prices to small or medium-sized businesses worldwide, who then resell them for a profit in their domestic markets comprises a number of approximated revenue streams in crypto and fiat currencies, that include but may not be limited to the following:-

- Vendors Reseller Program for early adopters i.e. facilitating crypto payments at point of sale and broker sales commissions off the online marketplace
- Shipping fees i.e. facilitating global shipping services with associated administrative charges
- Import/Export Supply Chain Services i.e. trade finance, VAT refunds and logistics services
- Transaction income i.e. fixed transaction fees that are lower than current payment gateway and merchant fees put together
- Monthly subscription income i.e. Attractive tiered monthly subscription fees fairly distributed amongst the different participants favoring the micro or vendor level business but lower also on the macro levels
- Soft Collection income i.e. penalty amounts generated as per automated demand letter issuing
- Advertising income i.e. targeted advertising online as well as marketing space on the generated bill online
- Lead Generator or Originator income i.e. generating qualified leads to ecosystem partners
- Business Loan Origination i.e. sales commissions from underwriting loans

Tokenomics



FIGURE 8: TOKEN DISTRIBUTION AND FUNDS ALLOCATION





Pre-ICO

- We will be launching our pre-ICO crowdsale where white list participants will be offered to purchase Nuclius Money or NUCLUM (NLM) at a discounted price on the MVP Platform.
- 10% of tokens for sale to white listed participants with bonus and bounty
- 100,000,000 tokens available
- 1.0 NLM = USD 0.0056²⁹.
- Soft Cap is 1500 ETH with a Hard Cap on 2500 ETH value tokens sold.
- Minimum by-in is 1 ETH with 300% bonus (Buy 1 and get 4)
- Extended till end March 2019³⁰.

ICO

- 40% of tokens for sale with bonus and bounty
- 400,000,000 tokens available
- 1.0 NLM = USD 0.0224³¹.
- Our aim is to raise ETH 22,000.
- Minimum by-in 1 ETH with
- Three periods scheduled Q2 2019¹⁴ until end September '19 locked in till November '19:
 - Period 1 – 50% bonus from April till end May '19, 100,000,000 NLM tokens
 - Period 2 – 25% bonus from June till end July '19, 200,000,000 NLM tokens
 - Period 3 – 15% bonus from August till end September '19, 100,000,000 NLM tokens

Bonus and Bounty

- 5-10% of tokens for sale with bonus and bounty (Airdrop)
- 50,000,000 tokens

Team

- 10-15% of tokens to Team
- 150,000,000 tokens

Reserve for Platform

- 30% of tokens towards as and when users sign up to the system as rewards and for exchange
- 300,000,000 tokens

Token utilization

Tokens or the digital currency, Nuclius Money or NUCLUM (NLM), based on Ethereum Erc20 interoperable standard, forms an integral part of the platform and business model. From the outset, users will be rewarded for signing up, settling payments, and even for sharing their personal or business information. Goods and services will also be priced in Nuclius Money and fiat currency offering buyers and sellers to trade in the currencies of their choice.

Nuclius Money will form the backbone for peer-to-peer exchange and facilitate transfers between macro and microeconomic determinants. This will introduce additional opportunities for financial services such as micro-loans and exchange services at micro community level where the in-country fiat currency have failed due to poor economic conditions and hyper inflation, especially in Southern African countries.

²⁹ Mid Oct 2018 prices.

³⁰ We will monitor market conditions and adjust the launch dates of the token sale.

³¹ We will monitor the trades. Price adjustments may be eminent. More details on bounty and rewards closer to the token sale.





We will also register with smaller exchanges such as Nebula and Lykke initially up until we've established a track record to gain access to the larger more popular exchanges like Binance. This will enable coin holders to trade NUCLUM as and when they see fit. Furthermore, we propose a trust based peer-to-peer exchange model to transfer digital for in-country currency.

Funds Allocation

We will allocate funds towards several activities³²:-

- 45% of the funds to be allocated towards Platform Enhancements & Development Operations. The enhancements are aligned to proposed phases as per Nuclius Platform Functional Map (PFM) 2.0 (p.20) and Roadmap (p.23) sections.
- 30% of the funds will be allocated towards creating awareness and to start the activities as per Marketing and Deployment section (p.26)
- 15% of the funds will be allocated towards engaging with and ensuring Legal & Regulatory Compliance in an unchartered and non-regulated financial sector.
- 10% of funds towards supporting back-office administration and organizational activities to maintain and sustain stakeholder engagement and success towards achieving milestones

33



“Our collective goal is to bring local and in-community suppliers into trade routes providing them access to established relationships and policies designed to expand their business”

Marius van der Leek, Founder & CEO, nuclius.co

³² The allocation of funds may be adjusted and is apportioned to reach our milestones

³³ Image courtesy of NASA https://www.nasa.gov/multimedia/imagegallery/image_feature_35.html





Our Team

We are forming a strong team to build our brand and establish a leading edge business platform on the blockchain. Our goal is to develop a sustainable and thriving inclusive platform and extend the reach to participants not previously achieved – we are the next-generation digital economy.

Marius van der Leek

B.Sc Comp Science [UP], M.Sc Tech Management[US], Diploma Business Administration [MUM], MBA [MUM]

Founder and CEO

He has spent a number of years in Financial Services and Telecoms in crafting digital strategy, framing complex system architectures, and defining heterogeneous system designs realising business conducive platforms within tough economic times and ever-changing business and technology landscapes. Marius is responsible and accountable for accelerating momentum in the development and execution of the overall business strategy, and to architect and drive the rapid development and commercialisation of the eco-system and platform. To this end leveraging innovative and leading edge technology, establishing a world-class team, and achieving company milestones while managing investor relations.



Kenneth Onah

B.Tech [UNISA], Zend Certified Engineer (PHP), Owner Netcraft DevOps (Pty) Ltd

Lead Back-end Systems Analysis and Development

Kenneth had been focused on applying open source technology and developing commerce platforms for various startups. His role is in the continued development of the existing quote to cash management system for bill presentation, tracking, payment and collection. The platform is a secure, scalable and open architecture business eco-system integrated with third party systems, such as BulkSMS, Payment gateway systems (PayPal, PayU, MyGate et al)



Jandré Venter

National Diploma Creative Design [CPUoT], Owner Freshmedia Digital Agency

Brand Development

Over the last 15 years, Freshmedia consistently assists its clients to achieve tangible results through the effective use of visual communication, dynamic branding, high quality design & production, and proven online marketing solutions. Jandré's contribution includes communications strategy, concept design, digital media campaigns, bespoke web app development or social media management.





Chris Ackermann

B.Com [US], MBA [USB]

CFO and Business Development

For almost 2 decades now Chris has honed his skills and maintained a vigilant focus on financial management at top companies in various roles. His is contributing towards strategy development, Incubation guidance, optimisation supported by modelling, financial structuring, governance and process improvements. He will also be heading up business development to ensure key milestones are achieved.



Stephan Maree

UX Developer

Stephan is passionate and fanatic about creating front-end user experiences which is out of this world. His contribution will be towards web architecture, front-end detailed design, development, implementation, UX realisation, platform maintenance and support. His main focus and task is to guide the team to revamp the design and development of the platform user interface to setting a new world-class standard.



Gustav Harmse

Security Specialist

Specialist knowledge of IT Security Law, Standards, Procedures and Acts to mitigate risks and manage vulnerabilities for large organisations

Gustav have been in IT for over 24 years of which I have spent more than 10 years in Information Security. He has worked for big international companies like BMW South Africa and IBM international.

He will apply his broad knowledge of IT Law, standards, procedures and Acts also hardware, software, and networking technologies to provide a powerful combination of analysis, implementation, and support.



Reenen Malan

Hons B.Comm [US]

Import Export Shipping Advisor

Reenen had built up their Shipping and Freight business over the last 20 years, He has vast experience in and will contribute towards streamlining and incorporating principles of Freight Forwarders, Cargo Agents, Shipping Companies, Air - Sea - Land - River - Railroad Transport, Logistics, Brokers Cargo Services and Customs and Excise.





Dr Anthon Botha

Pr.Sci.Nat, Pr.Phys [US]

Futurist and Advisor

Dr Botha's academic roles included being part-time Extraordinary Professor in the Department of Electrical and Electronic Engineering at the University of Pretoria (UP), as well as guest lecturer in Management of Technology and Innovation to post-graduate students in the Department of Computer Science, UP. He is currently a part-time senior lecturer and researcher at the Graduate School of Technology Management and a guest lecturer in the Senior Management Programme of the Gordon Institute for Business of (GIBS). He is a Professional Physicist registered at the South African Institute of Physics (SAIP) and a registered natural scientist at the South African Council for Natural Scientific Professions (SACNASP).

He has conducted numerous strategic planning projects and market and feasibility studies for research, innovation, restructuring, and re-positioning in the fields of information and communication technologies, small business start-up support, business and financial services and high technology enterprises.



Daryl Naidoo

Strategic Social Media and Blockchain Advisor

Daryl is part of the new internet generation. Over the last decade and more, he has been focusing on understanding client's needs ranging IT infrastructure, Connectivity, Software and Network solutions, Blockchain advisory and more. Daryl will bring his expertise in Strategic Marketing, Crypto Consultant and Client Acquisition to the team as we grow and reach out to new types of investors.



Jimmie Mwangi

BCom (Hons) Infomatics [UNISA], MCom IS [UJ]

Digitalisation Advisor

Jimmie is an experienced Senior Business Systems Analyst, IT specialist, Corporate Change practitioner, experienced Project Manager with cross-industry experience and a student of the application of innovative technology and digitalisation of companies in Africa.





Riaan Mastenbroek

BSc Civil Eng [UT]

Technical Advisor

Riaan runs his own IT company and is a qualified MCP (Microsoft Certified Professional) and Structural Civil Engineer that has more than 15 years in-depth experience in software development using the full stack of Microsoft windows and web technologies that include experience in various database technologies and scripting libraries.



Dinah Mabuse

MBA [TUT], International MBA [MUM]

Social Responsibility

Dinah is an advocate, driven and passionate about opening and establishing inclusive access to services and education. She has a sound background in Technology Strategy and Integration and is a Specialist in Broadband Implementation. She has extensive coal-face experience with large telecoms companies in Southern Africa providing her leading-edge insights into connectivity and technology adoption bringing valuable real life case studies to our planning and services roll-out.



“Financial inclusion is a prerequisite for economic inclusion”

Blockchain Revolution, Solving the prosperity paradox: Economic inclusion and entrepreneurship, D Tapscott and A Tapscott, Portfolio Penguin, 2016





Disclaimer and Risks

Risks associated with the use of new technology

Nuclius Money or NUCLUM (NLM) tokens are a new and relatively untested technology. In addition to the risks mentioned in this document, there are also additional unforeseen risks associated with this product. These risks may manifest themselves in various forms of risk in addition to those specified herein.

More so, regarding the platform, written code is an expression of an intent aligned to a set of objectives and is rarely without errors. We do not guarantee the outcome and objectives stated are achievable without risk and potential loss. We however endeavor to mitigate and minimize risks through a governed process of constant and rigorous testing as per best practice for software engineering and systems development life cycle management standards and operating procedures.

Overall, including the business, we can also not foresee the extent of the adoption and take-up of use of the technology and infrastructure barring all care given and taken to minimize and eliminate potential and actual risks and improve and increase overall acceptance of the technology. Furthermore, timelines for commercialization and for scale and growth are based on estimates as there are many factors that could interfere with the best of intentions. No part of this document can be construed to be completely accurate and therefore cannot be used as a basis in part or whole or for argumentative purposes for recourse in resulting unfortunate and unfavorable circumstances.

The author(s), any of the team members and associated parties cannot be held liable for any loss directly or indirectly occurring as a result of participating in the activities as stipulated previously. Participation is fully and wholly on own discretion and parties do so at their own risk.

Risks associated with the Ethereum Blockchain

Nuclius Money or NUCLUM (NLM) will be issued on the Ethereum blockchain. Therefore, any failure or malfunctioning of the Ethereum protocol may lead to the trading network of fragmented Nuclius Money or NUCLUM (NLM) tokens.

Nuclius Money OR NUCLUM (NLM) are not securities nor an investment

User acknowledges, understands, and agrees that Nuclius Money or NUCLUM (NLM) are not securities and are not registered with any government entity as a security, and shall not be considered as such. User acknowledges, understands, and agrees that ownership of Nuclius Money or NUCLUM (NLM) does not grant the user the right to receive profits, income, or other payments or returns produced from the acquisition, holding, management or disposal of, the exercise of, the redemption of, or the expiry of, any right, interest, title or benefit in the Nuclius ICO or Nuclius Platform or any other Nuclius property, whole or in part. Nuclius Money or NUCLUM (NLM) do not represent an ownership interest in the Nuclius platform, Nuclius.co or AnyABEX (Pty) Ltd or any other entity.

Nuclius Money or NUCLUM (NLM) tokens are not legally binding investments. In the case of unforeseen circumstances, the objectives stated in this document may be changed. Despite the fact that we intend to reach all goals described in this document, all persons and parties involved in the purchase of Nuclius Money or NUCLUM (NLM) tokens do so at their own risk.

There are no Guarantees of Value

There is no guarantee that Nuclius Money or NUCLUM (NLM) will be tradeable on any exchange. There is no guarantee of the value of Nuclius Money or NUCLUM (NLM) tokens or whether that value will change over time. Unforeseen events, events in which the developers have no control, or force majeure circumstances may cause the value of Nuclius Money or NUCLUM (NLM) to be extremely volatile.





Users who purchase or earn Nuclius Money or NUCLUM (NLM) hereby acknowledge and represent that they are not acquiring such Nuclius Money or NUCLUM (NLM) with an expectation of profit or income. Users who purchase or earn Nuclius Money or NUCLUM (NLM) further acknowledge and represent that there may be no exchange or merchant that will accept Nuclius Money or NUCLUM (NLM) in exchange for goods, services, cash, or other cryptocurrencies.

As future values and acquisitions of cryptocurrencies and alternative coins cannot be guaranteed, it is recommended that each participant consider all risks as described in these papers and those associated with participation in the ICO or utilizing the Nuclius Digital Platform.

Regulatory Uncertainty and Legal Governance and Compliance

Blockchain technologies are subject to supervision and control by various regulatory bodies. Nuclius.co may fall under one or more request or action on their part, including but not limited to restrictions imposed on the use or possession of digital tokens such as Nuclius Money or NUCLUM (NLM), possibly limiting the functionality or repurchase of Nuclius Money or NUCLUM (NLM) tokens in the future.

We shall continue to invest in proper legal and compliance expertise to ensure the Nuclius Digital Platform meet current regulatory rules and regulations of an Initial Coin Offering at the pre-ICO and ICO-stages.

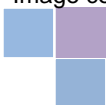
This document is for information purposes only, and is not an offer or a call to sell stocks or securities on the Nuclius platform, or that of any other related or associated companies.

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³⁴ Image courtesy of <https://auction.catawiki.com/kavels/4986193-african-mask-tikar-tribe>
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White Paper

