



The FinHub

INTRODUCING THE ALGORAND-UCT FINANCIAL INNOVATION HUB

The Algorand Foundation established a pilot project for the [Algorand Centres of Excellence \(ACE\) Program](#) which was officially launched in October 2021 with a total budget of 100m Algo tokens for the next 10 years. This funding allowed the establishment of the Algorand-UCT Financial Innovation Hub centered around three pillars:

- Rigorous Academic Research on Blockchain
- Innovation
- Thought Leadership

The Hub now boasts six full-time employees, five startups, and a number of interesting events and projects in the pipeline. Given all of this activity, we are happy to announce the first issue of the FinHub newsletter.

We established the FinHub to update our stakeholders and followers on the strides being made within the hub. The FinHub will be centered around our three pillars.

This issue will provide a general overview of the hub and some of our work to date, such as our inaugural CBDC in Africa Symposium hosted in April.

Newsletter Highlights

ESTABLISHMENT OF
THE HUB

OUR THREE PILLARS

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ON THE ESTABLISHMENT OF THE HUB

BY ASSOCIATE PROFESSOR CO-PIERRE GEORG



The sustained success of our Master's in Financial Technology means that we are producing some of the country's most sought-after graduates. But the main goal of our program is to enable students to start their own companies and we already had several startups successfully launching their journey from our program.

With the grant from the Algorand Foundation, we can take this to the next level and create a truly transformative environment that empowers students to launch their entrepreneurial journey.

The hub will also be the home of an extensive research program on central bank digital currencies (CBDCs) in Africa. Over eighty central banks globally are currently investigating new forms of digital money, including the South African Reserve Bank and the Central Bank of Nigeria.

The Algorand-UCT Financial Innovation Hub will accelerate our ongoing research in this area and advise government and private sector participants on how to best manage the digital transformation of our existing payments infrastructure.

CBDCs are among the most exciting applications of blockchain technology and provide a huge opportunity for the continent.



RIGOROUS ACADEMIC RESEARCH



Our first pillar, rigorous academic research, works on five key research areas of blockchain applications, central bank digital currencies, privacy, cybersecurity and digital inclusion. We aim to make meaningful contributions at the forefront of current knowledge. This pillar is the cornerstone of the hub and it covers a myriad of disciplines such as economics, computer science, information systems, and finance.

This pillar will result in 22 scholarly papers in the disciplines mentioned above leading to 5 Ph.D. theses and 25 Masters theses. This research lays solid groundwork for later innovation.

INNOVATION HUB

Our second pillar serves as an Innovation Hub for student-led startups with a uniquely African focus. The hub serves as the bridge to help translate the latest academic research derived from the first pillar into non-commercial open-source projects and commercially viable startups that contribute to the overall Algorand ecosystem. So far we have five startups and we hope to grow this number as we build the hub.



THOUGHT LEADERSHIP

As blockchain adoption grows across the continent, there is a growing need for collaboration and discussions between academics, entrepreneurs, senior policymakers, and leading industry experts. Hence the third pillar of the hub is thought leadership. The hub will act as a forum to facilitate important discussions between all stakeholders. This will be achieved through hosting several conferences and webinars in collaboration with other partners.





OUR TEAM



Co-Pierre Georg

DIRECTOR

"The Algorand-UCT Financial Innovation Hub will accelerate our ongoing research in CBDCs and advise government and private sector participants on how to best manage the digital transformation of our existing payments infrastructure."



Anda Ngcaba

CHIEF OF OPERATIONS

"At the Hub, I hope to make a profound impact on addressing financial inclusion on the continent through innovation and research to unlock the full potential of Africa's three-quarters of a billion youth population projected for the year 2030."



Danaé Bouwer

HEAD SOFTWARE ENGINEER
AND INNOVATOR

"Through our work in data ownership, I hope to reshape the way in which knowledge is shared, and through those who perceive the impact of our efforts, I hope to encourage the preservation and continuation thereof."



Takunda Chirema

HEAD SOFTWARE ENGINEER
AND INNOVATOR

"It will be an achievement to make a contribution to a borderless and decentralised remittance platform. This would assist numerous African and economically unstable countries to receive aid from the diaspora faster and at a low cost."



Alex Stewart

HEAD SOFTWARE ENGINEER
AND INNOVATOR

"During my time at the hub, I hope to build impactful applications where the implementation of blockchain and privacy-preserving technologies are used to maintain data privacy without forgoing functionality."



Gary Lu

HEAD SOFTWARE ENGINEER
AND INNOVATOR

"I hope to provide individuals more control over their financial identity through the use of blockchain-based solutions."



Lindiwe Kers

GENERAL HUB MANAGER

"I hope to make a contribution that enables an inclusive financial services industry across the continent"



STARTUP SPOTLIGHT: FOODPRINT



FoodPrint is a low-tech digital food supply chain platform for smallholder farmers in sub-Saharan Africa to digitally participate in food value chains, and directly connect with buyers and other participants.

Q&A with Julian Kanjere

How did the idea of FoodPrint come about?

The origins of FoodPrint can be traced back to mid-2019 when I was enrolled in the MPhil in Financial Technology (FinTech) degree at the University of Cape Town (UCT). During one of the FinTech classes, we had an ideation session where we came up with use cases for blockchain technology in Africa.



One such idea was the use of blockchain to provide farm-to-fork traceability of fresh produce for smallholder farmers, especially seeing as they belong to an underserved segment of society. This idea especially resonated with me as I am personally driven by a desire to use technology to improve society and create economic opportunity for all.

How did you end up in the blockchain space?

I started my career as a software developer at Allan Gray, which is Africa's largest privately-owned investment management company. This was my initial foray into the world of financial services – risk, regulation, reporting, asset classes, etc – which I found really intriguing. Following Allan Gray, I joined a software development and services company as I wanted to gain experience in a professional services environment. However, I still had the fintech itch at the back of my mind and I increasingly found myself in conversations about blockchain technology, and the ability to send value across the globe in seconds with no intermediaries. Fortuitously, around about 2017, I heard about UCT launching a new FinTech masters program with a strong focus on entrepreneurship/innovation, machine learning, and blockchain technology. I submitted an application, which was successful and my admission into the MPhil in FinTech marked my initial foray into the blockchain space!



Congratulations on winning the inaugural Inqola FEED innovation prize. Did winning this prize help increase FoodPrint's awareness globally?

Thanks. The Inqola FEED Innovation prize was created to highlight ideas and solutions that have the potential to create meaningful impact in the food system in South Africa – more specifically, internet-based solutions that have the ability to scale rapidly. We won this prize in 2021 for our submission based on our FoodPrint platform, in particular the FoodPrint WhatsApp Chatbot – a low resource innovation that we are designing for farmers to easily and quickly digitise their operations from the palm of their hands. The award helped increase FoodPrint awareness in South Africa and regionally.

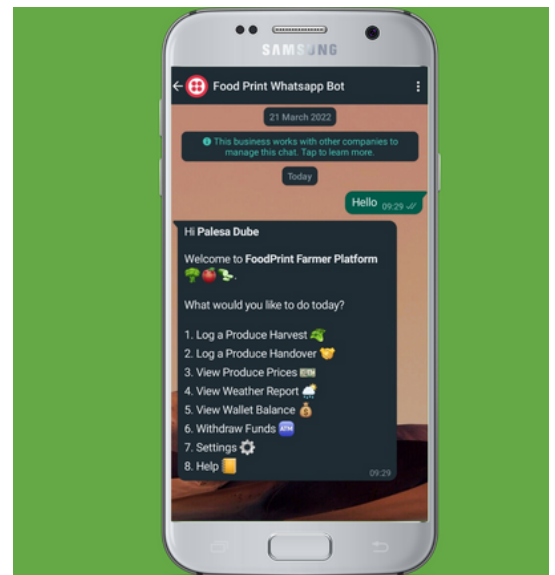
How has the adoption of FoodPrint been since inception? Are you seeing some positive uptake?

We have been iteratively working on product development and getting feedback from the market, this has been going well. We started out with a web-based platform that only provided farm-to-fork traceability, this was piloted at OZCF with farmers and consumers. This pilot informed our decision to build a WhatsApp chatbot as there was a clear need for a low-tech and more accessible solution for smallholder farmers.

More recently, we have been working with PEDI agrihub who support approximately 100 farmers in Philippi (Western Cape), with a view to pilot our WhatsApp chatbot with them. In short, we are working on partnerships with agrihubs, and value chain intermediaries to build both our solution and mutual trust, which will ease onboarding of farmers.

How much funding have you raised to date and from where?

We have not yet gone out to officially fundraise. In the meantime, we have received grant funding, R100 000 from the Inqola FEED Innovation prize, and R1.5M from the Algorand foundation (our platform is being built on the Algorand blockchain).



What's next for FoodPrint?

We have been working on our WhatsApp chatbot and currently waiting for verification from Facebook before we are allocated an official WhatsApp number. Once this happens, we will be ready to pilot the chatbot. In addition, we have recently started a weekly fresh produce subscription box in partnership with the PEDI agrihub. This subscription box is our attempt to better understand the market, strengthen relationships with farming communities and ultimately one of the avenues we can use to provide them with access to markets.



EVENT RECAP

CBDC Symposium 19 April 2022 UCT GSB Conference Centre

The world is changing at a rapid pace, and this is having consequences for Central Banks across the world. Globally, central banks are starting to see the advantages of Central Bank Digital Currencies (CBDCs). 90% of central banks in the world are exploring issuing a digital currency, with a growing number of them being on the African continent. The Central Bank of Nigeria (CBN) and the South African Reserve Bank (SARB) have been the most advanced on the continent in terms of CBDC development.

In 2021 Nigeria successfully launched the eNaira, becoming the first African country to introduce a digital currency. South Africa recently completed a prototype system called Project Dunbar in collaboration with the Bank for International Settlements (BIS) Innovation Hub. This followed earlier developments in Project Khokha.

Given all this activity around CBDCs on the continent, the Algorand-UCT Financial Innovation Hub hosted its inaugural CBDCs in Africa Symposium at the UCT GSB Academic Conference Centre. We brought together representatives from various African Central Banks, leading academics, and representatives from industry to discuss the impact of CBDCs and ongoing payment innovations. The symposium consisted of two panel sessions that explored African Central Banks and their Digital Currencies, CBDCs, and ongoing payments innovation. Both panels were moderated by Carlos Mureithi, former Quartz journalist who recently joined OCCRP.



In our first panel we had Rakiya Mohammed from CBN who was instrumental in the recently launched e-Naira, Gerhard Van Deventer from SARB who participated in Project Dunbar, Hub Director and UCT Associate Professor Co-Pierre Georg and Peter Munnings from Adhara - a leading financial software company that has developed a leading CBDC suite aimed at Central Banks. Co-Pierre and Peter kicked off the discussion about the evolution from wholesale CBDCs to retail CBDCs and now mCBDCs and whether we really need both forms. Gerhard from SARB was able to offer insights into mCBDCs given his involvement in Project Dunbar.

“The decision that central banks make around infrastructure matters. Before acting, we must think about implications and be deliberate and that policymaking and designing must be agile and adaptive.” - Gerhard Van Deventer. Project Dunbar is an mCBDC. Gerhard discussed the reasons for this experiment - one key question he said SARB was left with was how governance would work when it came to mCBDCs in terms of AML when it comes to onboarding different banks.

Rakiya Mohammed gave her insights on crypto regulation in Nigeria and its impacts on their newly launched CBDC. As the first African country to launch a CBDC, Nigeria experienced some challenges. One key finding was that the eNaira has the potential to improve financial inclusion and grow the economy. She explained how Nigeria began by strengthening their crypto regulation first before launching their CBDC given how CBDCs find their roots in cryptocurrencies. “There were plenty of learnings and it has been a continuous process of learnings,” Rakiya Mohammad.



The second panel consisted of Pietro Grassano from Algorand, Jan Pilbauer from BankservAfrica, Andries Brink from the 42Markets Group, Pierre Durandt from Sumbion SF and James Wallis from Ripple. This panel discussed modern-day payment systems, a world with a wholesale CBDC and whether this would lead to big changes in the interbank market. This panel also discussed how blockchain can facilitate interbank payments on par with current payment systems.



This panel then turned their attention to Project Khokha and other projects that found that blockchain can facilitate interbank payments on par with current payment systems. While the vote was split on whether our current payment systems are broken and need a complete overhaul, our speakers were able to agree that a new payment system is not a magic wand that will make the financially excluded included. This is for a multitude of reasons – one being the closed loops which make it difficult and cost-ineffective which is why majority of South Africans still transact in cash.

The panel then turned its attention to retail CBDCs, particularly in Africa followed by a debate on whether retail CBDCs should become legal tender. This debate offered the audience interesting perspectives. One of these came from Pierre, “it’s important when developing a payment instrument that it has characteristics of (i) ease of use (ii) accessibility (iii) ubiquity and (iv) utility. As this is what will make adoption easier for consumers thus increasing prospects of financial inclusion and not necessarily the status of whether it is a legal tender or not.”

A recurring theme from both panels was how do CBDCs solve financial inclusion (if at all) and what is the purpose of CBDCs. This is particularly important on a continent where 57% of the population remain unbanked (limiting their access to financial services) and where a digital identity is not as prominent. James agrees that while digital identity is an issue and cannot be ignored, CBDCs bring the potential for financial technology companies to enter the space and provide low-cost products for the financially excluded.

Interestingly a comment from the audience that “without an ID there is no financial inclusion,” paved the way for future conversations around the impact CBDC adoption has on financial inclusion in Africa. As more African central banks explore the feasibility and advantages of CBDCs through trials and research there is a clear need for Pan African collaboration.



We hope to continue this conversation as we plan future engagements at the Algorand-UCT Financial Innovation Hub.



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