EPISODE 326

[INTRODUCTION]

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[INTERVIEW]

[0:01:52.6] Q: Thank you so much for your time, George. I appreciate it a lot. First of all, I would like us to kind of discuss history, I guess, in Kenya of how 10 to 15 years ago, the population was unbanked. Now, they're quite big with banking with their mobile phones and paying for

things on the mobiles. Can you just talk me through the evolution of payments in Kenya over the last decade or so?

[0:02:17.6] G: Just like many African countries, one of the biggest things that's happened over the last couple of decades we've had the entry of mobile phones and the internet at the same time. What that has done to not only the ecosystem, but also the consumer, is that the consumer has learned to adopt and also use different elements of technology in a very rapid sense.

When you associate the internet in the First World, it's something that you do on your computer. It's certain services that are customized for the computer. Then, you have this other world where the entry of the internet and the entry of the mobile phone have kind of coincided. So what our everyday consumer considers are normal internet transaction is actually the mobile version of the more advanced system that we're used to on the internet.

What has happened also is that a lot of the developers and a lot of the new users and a lot of the new use cases are coming from environments that are very unique to here because of just the way we have adopted and understood both technology and the internet.

[0:03:42.6] Q: When we talk about somebody being unbanked, what does that actually mean?

[0:03:48.1] G: Just because of how our geographical locations are placed and banking is still fairly new — you'll find a lot of countries on the side have only been independent 40, 50 years. So banking is a very new thing. Before 50 years from now, they had their barter trade and they had all these round table tanking and things like those.

The commercial banking in the region is only maybe 20, 30 years old, and so a lot of the new people still consider it a foreign concept. If you look at a user or a person who keeps surplus income somewhere in their house, or with a group of people, the opportunity to then be able to keep and access money on your phone, to access money on wallets, to get sent money from abroad, and I think that could be a place where that began.

Even how we ended up creating things like M-Pesa is because you have all these people who leave Africa and are going to the States, or to Europe, and they're sending money back home. The model around that is that you get a text message or an e-mail that says, "Hey, you've been sent $100 by your brother, John." Then, you head over to a place and they give you the $100 off of this message.

We took that idea and evolved it into a whole monster. Where, now, everybody, even within the country, is able to then send money the same format of like — The closest I'd imagine is like a Western Union, or something like that. To be able to send that in real time and then have enough points of access where you can go and pull them out.

Where, if I signed up to a bank, I do have to go to my specific bank, or to a specific branch to withdraw. With something like mobile money, I'm able to go to millions of little agents who are in kiosks, so I can go to ATMs, or I can go to different vending points, or I could just send it virtually to somebody else without having to step into a bank. That's just changed the way we transact with money on this side.

[0:06:07.8] Q: Okay. In my research, when I was looking at payments across Africa, Kenya came up again and again as a leading player, especially with your M-Pesa system. How was that developed, and how has it helped Kenya become a leading player globally, in fact, with payments on mobile?

[0:06:27.8] G: M-Pesa is tied to one mobile network, and that's possibly the most unique thing about Kenya and why Kenya would popup quite a bit. It's the only market in the region where you have one, almost monopoly player in the telco space. Out of 47 million population, probably 35, or 30 million of those people are on one mobile network. This mobile network then developing a system where you're able to transact money within the network using just your sim card, so this application is already installed onto your sim card and anybody else on the network you're able to transfer money between your sim and their sim.

If you can consider 30 million people, there are very few banks that are holding 30 million active accounts that are moving money daily between each other. That is one of the reasons. This has grown steadily over 10 years. It started — The reason why I think it became to get started as

just a service that was being offered to, then, banks. When it was introduced, as supposed to banking, which is looking for who's the guy with the most money, or who's the guy doing transactions, this system was based around everybody has a lot money that they need to send to so and so, to somebody else.

How can we make sure that person, as supposed to having to go deposit in a bank, can be able to make transactions as quickly and as easily as possible? Then, that just became adopted across the board. Everybody from the people in the villages, to your CEOs, to new people experts who come in here, you'll walk into shops, or you'll go to some of the game parks, and you can't even pay with cash anymore. They've replaced cash completely with this virtual mode of payment.

[0:08:22.4] Q: Okay. Clearly, it's become part in parcel of everyday life in Kenya.

[0:08:29.1] G: I always tell it to people when — If there's somebody who hasn't experienced it before and they're trying to compare it to a mobile wallet somewhere. I always say the closest thing you can compare it to is cash, because it's the only thing that's trusted. It's not like a wallet which people are adopting anymore. This is now more valuable than cash. There are people you meet and they'll be like, "Just send it to my phone. It's safer for me to have on my phone than to carry cash around."

[0:08:55.3] Q: Oh, really?

[0:08:56.2] G: Yes.

[0:08:56.6] Q: That is interesting. I wonder, Safaricom, I believe, is the network that is behind M-Pesa. Am I correct?

[0:09:03.8] G: Yes. Correct.

[0:09:04.6] Q: They are 40% owned, I think, by Vodafone U.K.

[0:09:08.2] G: Correct.

[0:09:09.3] Q: I understand that, initially, M-Pesa became, or was started as a way to send out micro-loans to people, but then instead of people using it for that purpose, they began sending money to family, to friends, to relatives. How much outside influence has there been on M-Pesa in Kenya from out of the country?

[0:09:33.3] G: Very little actually. A lot of it has grown and evolved based on the local consumer. You'll also see that. Because of the Vodacom influence, the product has moved into several markets. They've tried it in the south. They have it in several of the East African countries. You find that the core of it was built for Kenya based on a Kenyan consumer. The challenge, even when you look at M-Pesa, is when you move into some other markets, it doesn't operate as efficiently when you don't have that 90% market share. That is the advantage on one side.

The second you have to go cross-network, or interbank, or something, that it complicates the model a little bit. A lot of it was built and evolved around the Kenyan consumer and it has been tried in other markets, some successful and some unsuccessfully, but a lot of it was built based on Kenya, and Kenya is still its most successful market.

[0:10:36.2] Q: Yes. That actually brings me to my next question. Across Africa, you've got different systems of paying by mobile. For example, in my home country of Zimbabwe, we have EcoCash, for instance. In Nigeria, it think you've got Paga. In Ghana, you've got Zeepay. This diversity, is it good, or is it a hindrance in your opinion?

[0:10:58.9] G: When we were getting into online, and online is where you start to see that play. Within the local countries, what is happening is each of these markets has developed its own little payment system that if you go to the different countries, there's an M-Pesa equivalent that has that kind of market share that's doing those kind of numbers.

What separates us and what makes the things not as big is that we have within Africa, within the billion people, we probably have 20 of those systems in operation and each of them is separated by geography, by currency, by governing. Everything is different in each individual market.

The challenge with that is that no matter how big M-Pesa was on mobile here Nairobi, I still am not able to M-Pesa somebody next door in Tanzania, or I wasn't able to send an M-Pesa to Uganda, because, then, they're on a different version of the mobile money. They're using a different currency and all those.

When you look at internet, and online transactions, and ecommerce, the internet has broken some of those barriers already. When I post up an image of a product I'm trying to sell, the people who like it in Zimbabwe will see it and they'll probably want to click and buy. The guys in Tanzania, for example, and the guys in Kenya, and for us, the challenge has been how do we make sure that the consumer in each of those markets is able to transact or complete the transaction easily, whether in their local currency, or using credit cards, and we are able to settle to the merchant in whichever country there is.

Each individual market has cracked mobile money, and that's step one, but the step two in that evolution of payments is how do we move that same mobile money efficiency online?

[0:12:56.1] Q: That actually brings me on to Mookh. Obviously, you cofounded Mookh with your partners to kind of help merchants in the country sell their goods. Now, before you came along with Mookh, what was the state of ecommerce platforms in Kenya in general?

[0:13:13.9] GG: I'll give you two scenarios of what ecommerce was, and this was five years ago when we started Mookh, 2012, when we began to develop the idea. The scenario was two, you have the bigger players who had read the trends and they saw that ecommerce and online trade is the big thing of the future. They've gone and paid web developers a ton of money to build them an ecommerce store, they coveted ecommerce stores. They have a website and it's been plugged into PayPal, or Stripe, or something, that then the challenge with those becomes that none of those had local integrations.

When you then looked at the online stores that was set up, those online stores were set up using — When you look specially at the payment, which is the core of that entire ecosystem, that payment was happening outside of the local — Outside of whatever the local currency was. Then, for those smaller businesses that did have the infrastructure, the finances to go and build an ecommerce store, they moved to Facebook and other social channels, like those which offer

you free, almost free access to your audience, and they would then post up products and run what we call an informal juwakali kind of sector of ecommerce where you'd post up a picture and you'd tell all the people who follow you, "Hey, if you want to buy this, send us a WhatsApp, or an Inbox, and then we'll get back to you," and you'd find 200 comments of, "Do you have it in this color? Do you have it in this size? How many pieces?"

Our version of ecommerce was more like a social conversation. For us, when we looked at that, we were like, "Okay. There's a gap between the merchant who's able to go and set up this whole ecommerce store and plugin and international payment channel." Then, there's also a need for us to develop a solution for this little merchant who's spending all day on their Facebook comments, responding back and forth about products and trying to close one or two deals every single day. Is there a way to automate that process and allow their customers to pay using local currency?

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[0:15:45.3] JM: When I'm using the tools for my side projects, the first thing that I look for is ease of use. That's why I love MongoDB, it is the most popular non-relational database, and it is super easy to use. At the beginning of a project, I often don't know the shape of my objects, and Mongo makes it easy to evolve the database schema as I like overtime.

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[INTERVIEW]

[0:17:44.2] Q: I'm guessing, as you're looking at this, I'm thinking of ideas, M-Pesa really was the thing that made it possible, because you had an audience; the merchants and the consumers, used already to paying for items and good with their phones.

[0:18:00.0] GG: exactly.

[0:18:00.4] Q: I'm guess that's where you came along and you kind of targeted that area.

[0:18:03.9] GG: Exactly. At that point, we were trying to sell a physical product to ourselves. We were the merchant. We weren't even trying to be —

[0:18:13.3] Q: Okay. What was your products?

[0:18:15.2] GG: We were trying to sell a heat patch, it was a heat patch for women. It helps to reduce period pains and it was our most brilliant idea life at that point, and we've brought in the product, we've done the packaging in some very good marketing material. We'd managed to get it into, I think, 20-something chemists and all the major supermarkets. Then, we realized that the biggest hassle in that was one going around all these different outlets where we've put our products to just figure out how the stock is moving. Two, we were marketing on Facebook, like the other merchants that we had seen. We were on Facebook telling guys, "Hey, this is the hottest product in town. You can go and buy it at supermarket-X."

At that point, we have no means of measuring whether or not we complete the sale, whether the consumer goes. We almost lost them for a bit, until the next time they needed us, and then they'd come and ask, "Hey, where can we find you?" We'd redirect them somewhere. We started to think of a way that we could complete that transaction during that conversation. If there's a way that online I could tell them, "How many pieces do you want to order? Pay to this number." I'll get one of our riders to come and deliver the thing to your house, or to your office."

As we were thinking of that, we started to think of what would be the best way to automate it completely so that without me, then, having to only do that when a customer has reached out, can we provide the avenue for them to always be able to get on to the platform? Select their items, shop, pay, have the item delivered to them, and just make it quick and easy for us as the business to manage our numbers, but even for the customers to just access to the product, whether it's on Facebook, whether it's on a website, whether it's a WhatsApp link.

We started to just build this whole engine. Mookh, the name, actually means money in local slang. It's Sheng slash, there's a word called "mkwanja", which means money. We were just trying to figure out a way to collect money online. That was our core — Our core challenge at that time.

[0:20:32.8] Q: Okay. If I'm correct, you operate on Facebook, on Twitter, and also Instagram. If I'm correct.

[0:20:39.9] GG: Yes. What we do is once you set up as a merchant on our page, we create for you a unique URL, or a unique store, that you're able to syndicate across your social platforms or your website. Basically, the same store that you have on Mookh, you're able to have that on your Facebook page, you're able to have that as a direct bio link on your Instagram.

The advantage of this over an aggregator, which is very big on this side. You have a lot of stores in Africa that are also just — We have 1,000 merchants who we brought online and everybody comes and buys from us. For us, everything is centered on the merchant and the merchant's audience. You don't share your audience with other people who are running competing businesses. When people see your link, they click it and it brings them directly to your store. They've literally walked into your storefront at that point.

[0:21:37.6] Q: Okay. Lots of your clients and consumers are, I guess, in the stores, on mobile. In an interview you did prior to — I think it was with [inaudible 0:21:48.1], you spoke about how it took you nine months to make an API, to make the whole process seamless. How did you go about doing that?

[0:22:00.6] GG: One of the challenges you find especially in a young ecosystem like what we have in Nairobi is that these existing things — You'll see an existing product like M-Pesa and you assume, "Wow! This is excellent. Let's go and find ways to plug into it." A lot of it is built from scratch. There're no other use cases that we can go back to and research and then benchmark on. You literally have to look, learn, and adapt.

We initially thought that we would just go plugin in M-Pesa pay bill or plugin one or two card options and we'd be running in no time. You realize that especially for online. We were basing our assumptions on the fact that mobile money and mobile transactions are so big. Moving that to online would be seamless, but that's what the part that took us nine months, because, then, you realize, "Oh, okay. None of these is built for automatic callbacks. None of it is built —" There's the little things that you don't think about when you're doing mobile, because it's straightforward.

If, then, I don't want to have to get an SMS, which is the response method from the mobile payment, I needed to go into my API and automatically complete a transaction. Those are things that we had to build into our system ourselves.

[0:23:24.1] Q: In doing so, what kind of challenges in terms of technical things did you encounter with your development team?

[0:23:31.6] GG: The fact that, one, we have a fully local development team. The entire system from the shop site, or the payments, is all locally built. One of the things you realize is that a lot of the things that we're able to research or benchmark against are not localized. We can look at other online shops. We can look at other online payment systems. We can look at best practices, but none of it includes a mobile payment like M-Pesa, which is a primary — Out of all of our transactions, probably 90% or 85% are run off of mobile payments, Visa Vie cards.

Even when you're thinking of things like those, it's how we build for our consumer, even our UX, our UI, all needs to be based on a consumer who's used to seeing things on a phone that could might be a feature phone even. We've had to build based on variables that are very unique to this environment.

Also, as a challenge, it's bit — That for this thing to work and to be as impactful as we've imagined it to be, it needs to be able to function in several markets. We need to be able to scale out. When you think about that, especially in the scenario we're in, it means the developer has to think in six different markets, because nothing is easily replicated. It means that the same challenge we had with payments here, we have to go and overcome the same every single market we go to.

[0:25:08.7] Q: I'm wondering, as a non-technical founder of a startup, how are you able to assemble a team able to create such a system?

[0:25:18.9] GG: First, it's God, it'd say, because it's just — We have a good vision and we have gone through our fair share of developers over the years just who are able to see what we're envisioning as non-tech background founders and be able to replicate that into the product.

Also, then, we've been able to secure some good partnerships along the way who are able to help us on the places where we don't have our strength. For example, we work with Microsoft, and they have a Microsoft for Africa program, where they are able to give us technical support, and they fly in competent Microsoft employees from the states, from Canada, from Egypt, who work on building actual Microsoft products to come and work with our development team to cleanup some of the stuff we do to make sure that it's global standard. Being able to get expertise that covers up for the things that we don't see, or the languages that we don't speak, has been a valuable thing for our company so far.

[0:26:27.7] Q: Yes. That's something that's actually I was going to touch upon in the next kind of few minutes, but now that you have talked about it, how were you able to hook up with them; Facebook and also Microsoft, to get their help to boot up your technical team and as well as boot up features for your platform?

[0:26:44.7] GG: One, we're in a market that has some good attention. A lot of people have their eye on Africa right now, and Africa is no longer the next frontier, it's the frontier of today. It's the frontier of now. A lot of these big organizations, as much as they're growing and expanding, are starting to see their elasticity in the American and European market and are looking to their next billion consumers coming from Africa.

While they do that, they're obviously looking for people who have started to set their foot, who they can learn from on some of the elements that are key to them. This is how we've been able to interact. It's all happened in a very short time, I'm telling you. This has all been the last one year. Yeah, we've had, maybe, a couple of meetings with a Facebook team and been able to work with them to figure out certain elements, things like payments are crucial right now in their global strategy. That, being a core of what we do now, how can we help them understand certain elements of the payment system on this side based on what they're doing?

The same thing with Microsoft, they have some very good products. We're in a world now where we can't be relying on physical storage, or servers based on electricity and other little factors. To be able to have partners who are able to give us best practice on storage, on clouds, on how we set up our systems in the backend, backups, and things like those, is valuable, especially when you think of the scale that we're trying to go to here.

[0:28:28.1] Q: Okay. Going back to the whole kind of system and how Mookh works. If I'm a consumer and come into a store, and it's one on Mookh, and I did buy a product, if I'm correct, your system is able to interact directly with my sim card.

[0:28:46.0] GG: Correct. One of the things when we were building — And I think this is the advantage of a non-tech element to how we designed the product. For us, we were coming with some of the frustrations that, if you use M-Pesa, for example, on the mobile phone, the process of sending money from one user to the other one is a nine-step process.

It becomes really tiring, because by the time you've gone to your menu, your menu has 10 options, you choose the service you want to start with, send money. It takes you to a page to select the number. Put in the number. Put in the amount. Put in your pin. Confirm. Confirm

again, and then get to a message. For us, that was too tedious when you're online. I'm not going to be online and then take nine steps to make a payment.

Number two; I don't want to go online and have to login, which is a big cart abandonment problem. All the websites that you see for ecommerce, once you get to the point where you need to pay, they tell you, "Hey, signup to our platform and create your account." That was a big element of cart abandonment that we thought to take out.

As a customer, you come to this page, you've seen the link, it could be an event that's selling tickets, it could be a merchant selling physical products. The only details that we ask you to provide are your name, your email, and your phone number. For each transaction, we collect those details as the unique identifiers of the transaction. Map it to that unique transaction, so each transaction gets its own I.D. Once you've selected the number of items you want, and if it's a physical product, you put in your delivery location and it will calculate for you the fee based on where you are from the merchant.

If you select mobile payment, what we do is, as supposed to making you have to go and do the nine-step process, and then come back and give us your confirmation, we have automated the system so that as soon as you initiate it on your mobile phone, or your computer from our platform, it will automatically communicate into your sim application and give you a popup that just asks you to confirm that you're trying to make a transaction. For example, $10 to Mookh for transaction I.D. X and you put in your pin, and your transaction is over. We've cut down a nine-step process into a two-step process. That alone has changed our business dramatically.

[0:31:23.9] Q: Okay. Also, for that process, you're using short codes as supposed to using the customer's number, and that system was made by developers outside of Safaricom, the makers of M-Pesa, how does it work?

[0:31:38.6] GG: Correct. M-pesa, as it was built, this is system is made for users to send money from one sim card to the other one. It's customer to customer. Over the years, developers have built on to the M-Pesa system and one of the things that has grown it drastically over the years is the ability for the customers to be able to pay businesses. A C to B version of the model where the business as supposed to using a number like what use which is the 07 blah-blah-blah

number, the businesses will get a short code that the customer is able to input in their M-Pesa menu and send money directly to that short code.

The similar system of the short code is what we use online as well, but our is built by a separate developer and purely as a business solution from M-Pesa. It's a spinoff of M-Pesa, but it's so widely used and so normal now that nobody imagines it is a spinoff.

[0:32:42.5] Q: With Safaricom, obviously, kind of running and owning M-Pesa, how easy it is for a developer to maybe think of an I.D., like short codes, for example, and then create something which is put on top of M-Pesa and then maybe either benefit from it financially or any other way?

[0:33:01.2] GG: Technically, it's easy, because the platform is an open platform. It's used across devices. The core of M-Pesa was not developed as a fully interactive payment system. It was built simply as a customer-to-customer payment system. There's still a lot of opportunities for developers to build ways for this payment system to work in apps for this payment system to work. Now, what we've done is plug it online and have an automatic online plugin.

There are lots of opportunities for those spinoffs to still be built. However, again, with every ecosystem, there's, then, the politics around it. The better product you build, then the more Safaricom will need to or want to be involved just for the scale out of that to be viable.

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[INTERVIEW]

[0:35:22.3] Q: Yeah. Going back to Mook a bit more, when you first answered, you're allowing merchants to sell products on the platform. Now, you've kind of evolved to selling tickets, content, and also allowing people to take donations. How were you able to scale up in such a way to kind of broaden your offering for your clients?

[0:35:44.3] GG: Interestingly — Actually, we built it for people who are selling physical products, is who we built this system for. As we were building it and we were testing and figuring out the logistics of it, one of the first people who are approached us to be able to try and use our online system was an event, a festival, actually. That was during a two-day festival and they wanted to sell tickets purely online and they were looking for a new solution.

What we did, we hadn't even launched the products at that point. We decided, because for a ticket, it's a lot easier to fulfill the delivery than a physical product. All we need to do is get their name, email, phone number, and we'll email them back a ticket and figure out a way to scan the ticket at the door to verify it from our system.

We created some tweaks in about a week, and put out our first event, and we ran about 1,500, or 1,600 transactions and maybe 700 of those were successful. That was the first real run we had at running the system live. From there, we've had about 300 different events set up on the platform since then.

Eventing just became one of our biggest channels, because that's where we started. When we were building it, we had looked, and our research online was based on what other things that the consumers and businesses or merchants are interacting with the most online. If there're

conversations online about purchase, what are they based on? A lot of them were based on tickets to events. A lot of it was based on music, especially in this part of the world, where you have some artists who — You have a crop of maybe under 50 artists who are big across all of Africa and people are always trying to buy their music.

Then, there are all these smaller businesses that are popping up. Especially, if you look at the age bracket of 17 to 30, or 17 to 27, everybody has a hustle where they're making a bag, or they're making some t-shirts, or they're making jewelry, and they're trying to sell them within their network. That's the primary person that we're targeting as our customer as Mookh. It's all the people who are getting into this new business and they're trying to capitalize on the audience they already have, but they want a credible, efficient system for both them and their customers.

[0:38:19.0] Q: With regards to Kenya's development and its economy and technology, where does Mookh fit into that story? What part are you playing in that story?

[0:38:31.5] GG: The interesting thing — I don't know if this just a Kenya situation, but it's everywhere. You never get as much love in your own home turf as you do when you step out. we get a lot of attention and a lot of great support from external partners; the Microsofts, the Facebook, and a few other people we work with.

Then, locally, what happens is the merchants — This, for us, is a blessing. The merchants love us. The merchants see Mookh as a solution that will carry them and their businesses into this next online frontier. In terms of does the rest of the play work towards it? We are having to build that system. We are the ones having to sit now with banks, and with other telcos and be like, "Okay. Let's evolve your model, or let's evolve you product offering to be able to fit into what this business is and these customers are looking for.

We do have a very ripe online ecosystem here. We do have a huge number of people now on the internet and the country, and they are interested in commerce. Our spending power is growing, especially among the younger people. For us, it's to focus on who are the audience of the next five years, and if they're going to have spending power in five years, how do we grow them now from buying small event tickets for $10, or music for a dollar, into buying all the

products that they need to buy online in the next 5, 10 years, spending their months shopping through Mookh is the target.

[0:40:08.1] Q: With that in mind, what does the process of starting a tech startup in Kenya look like? What is an advantage of being based there? Also, what are the disadvantages of being based there as well?

[0:40:22.6] GG: If I will start with advantages, one, we live in a country where it's very easy to start new businesses. The ease of opening up a new business, especially in the tech space, is very easy here. Especially now, even just outside of the tech, if you look at some of the merchants that we service, if you're looking at businesses that are trying to start and are not looking to get into the brick and mortar system, they're not trying to go and pay goodwill for a store in the central business district, they want to be able to start a business with the little money they have and be able to run transactions that will then help them grow.

If you look at that, we're in a perfect ecosystem, because the merchants have audiences, the audiences have M-Pesa, and they have all these other avenues available to them. If this merchant can just get his products into a system like Mookh, he could easily be selling and collecting money without having to undergo strict or mad government taxes on goodwill and those things.

However, if I'd say, the disadvantage, it's not really a Kenyan disadvantage, but FinTech is still new, and the traditional businesses, if I call the traditional businesses, banks, the traditional businesses being money lenders and those people. It's not in their benefit to see online businesses thrive and grow, because, then, we take out of their walk-in. Because businesses now have seen what the internet and technology has done to industrial businesses, especially if you look at the states. Over the last couple of years, that fear means that conventional businesses are locking out the opportunities for what the new online businesses could bring.

[0:42:14.5] Q: Now, looking a bit into the future more and as to what's next. Earlier, you said that many Kenyans consider having a wallet on your phone, a standard feature of what phone they're using.

[0:42:27.7] GG: Correct.

[0:42:28.3] Q: How does that mentality affect the way developers and founders create software and build companies?

[0:42:35.7] GG: There was an interesting article today in the newspaper where the Central Bank was intervening on a new product that is being developed for technology, and it's being done as a collaboration of banks. What's happening is that the Central Bank told this conglomerate of banks that if you guys want to get into the space where you do online transactions, of mobile transactions, you need to be able to compete on things like efficiency.

What's happening is we become so aware that even as we build the things we are looking at, is how do we reduce the steps. How do we make the process more efficient? How do we make sure that transactions can happen in under 10 seconds, for example?

Developers have been forced to think and code around — Not even have been forced, but are now able to think around things that are monetizable, because it's very easy for the consumer to pay for something. Because everyone now has a phone and we're now moving into the phase where, because everybody has a basic phone, a lot of the market is now moving up into smartphone and to better phones. Even developing apps and different little things that can be used on these different phones that are completely localized is a huge opportunity for the developers.

[0:44:02.7] Q: What do you think other parts of the world can learn from this approach to creating new technology and innovation?

[0:44:11.1] GG: I think one of the biggest things is that adoption can happen very rapidly. If you look at things like Bitcoin, for example, or even credit cards, which have been around for a while. Their understanding in the financial services world is that it takes a while to get all those consumers to adopt. Everybody is going to be fraudulent. We're going to fall into problems. There will be money laundering. Yet, if you look on the flipside, these consumers are more awake. These consumers, their demand is a lot higher.

I think there's a lot that we still have to learn and we're just at the budding stage. As much as it's been a decade, we're still at the budding stage of this product. There's still a lot that we're going to see and learn from just how the users are interacting with these platforms.

[0:45:05.0] Q: You briefly mentioned Bitcoin in your answer just now. What role is it playing in Africa in the mobile payment space in the moment?

[0:45:13.7] GG: None, because everybody considers it so foreign, and that's the same thing they thought would happen to things like mobile wallets, that it feels like such as a foreign concept or something so new and so out there that the adoption of it becomes slow.

When you look at the format of where this wallet, our part of the same card, for example, it's not a new thing you need to go and signup to. It already exists in your everyday life. The fact that 30 million people are using it, gives it the cloud that a Bitcoin won't have. The fact that I can walk to the local grocery lady across the street and I could pay her with this mobile virtual currency, but if I walked up to her and I told her I want to give her some Bitcoin, she'll probably think I'm crazy.

The fact that we've been able to adopt it on customer to customer, customer to business, business to business as a payment model, it's very rare for that in what we could call new currencies. You're having a new currency that's coming and overtaking all the things that are looking to be the new global currencies.

[0:46:26.5] Q: Put it — It's like BitPesa, which is the Kenyan Bitcoin exchange. Are they failing in the moment? Are they successful? What is their current state?

[0:46:36.6] GG: I'd say, if you look anywhere, there's always going to be products or people that develop around existing things in the hope of them blowing up and capitalizing. I think BitPesa and them are made for. If Bitcoin blows up, we need a way to be able to capitalize it convert it quickly into what we already know. If was to take Bitcoin and any other spinoff that we do off them and compare it to the mobile wallet that we have for Africa, the mobile wallets are going to win.

[0:47:13.8] Q: With M-Pesa, if I'm correct, currently, there's a limit at how much money you can hold at any one time on your wallet.

[0:47:21.5] GG: Correct. It's about a thousand dollars.

[0:47:24.1] Q: Okay. Does this, in any way, hinder the levels at which consumers and merchants can trade?

[0:47:32.2] GG: Yes and no, and no would be the stronger answer there, because if you look at online, especially in a young economy — We're also not in a place where somebody's going to go online and buy Jimmy Choos for $6,000. We're in an economy where a lot of the transactions that are happening in the range of under $500. If you're looking at products, tickets, and in any one single transaction on M-Pesa or on this mobile wallet, you're able to do up to $700.

If all I'm buying is a ticket that's $15, $20, or I'm buying a product that's even $50, or $200, I'm able to run these transactions off of my mobile phone without a hassle. The bigger things which would require me to spend more than a thousand dollars, we still haven't got into the point yet where the consumer and the seller trust each other online to do such transactions over our platform.

You'll find globally — Globally, I think the limit as to what people are transacting online, especially from a cost of business to a customer, works within the under 700 range which we play with on the mobile money.

[0:48:47.5] Q: Do you see this limit increasing at all in the future?

[0:48:50.2] GG: Yes. The thing I was just talking about, the bank wallet that they've just created with a 23 conglomerate, they let you move up to a million, which is about $10,000.

[0:49:02.3] Q: That's interesting you say that, because I saw a video online this week about that topic, and I think it was the Kenyan Bankers Association that were coming together to basically try and break the stronghold that M-Pesa has in the market.

[0:49:17.9] GG: Exactly. This is not something new, because when you look at — For example, in the south, what has happened over the last couple of years is that economies have learned the advantages and disadvantages of allowing a player, a telco player for example, like Safaricom, to get into the mobile money space and dominate it.

Today, Safaricom is one of the highest earning businesses in our country, and three-quarters of that revenue comes from M-Pesa transactions. What has happened is you go into countries like Namibia, or you go into other countries in the southern parts of Africa and the banks have worked with the CBK and regulators there, the central banks and the regulators, to be able to block out the telcos from running financial platforms. Those systems, what is the mobile wallet, are ran by banks as supposed to telcos.

Now, here, the banks are coming on as a re-battle, but they're the last player coming in, because we've had maybe four, five, other phone networks that have been active over the last couple of years. None of them has been able to steal even 20% market share from M-Pesa.

[0:50:35.4] Q: Really?

[0:50:36.0] GG: Yeah. The banks have taken it upon themselves now.

[0:50:41.4] Q: Yeah, that's interesting, actually. Just one other thing, when I was looking online, I'm just reading stuff on Mookh. One of your cofounder, was it Eric Thimba?

[0:50:49.6] GG: Correct. He's our CEO.

[0:50:51.4] Q: Yes. He quoted in an article saying that, "Companies in Africa need to start thinking about making solutions which are not only local, but can be continental-wide as well as worldwide." How is Mookh set up to achieve this goal?

[0:51:08.9] GG: Okay. I'll paint a picture for you. Right now, if you're a merchant who is based in Kenya and you make a product that — For example, it's a t-shirt, an Africa t-shirt, Africa Is Now, and you have an audience in Uganda, you have an audience in Tanzania, you have your

audience in Kenya, you have an audience in, for example, Zambia, there are two problems that come with being able to fulfill that audience. The first one is a currency, or a payment problem, and that's one of the first things Mookh is fixing.

For you as a merchant, how do I ensure that you can set up your product on the platform and you set it up in a currency, for example, your base currency will be dollars, for us as a platform, it's to ensure that the customer in whichever country they are in can pay you the equivalent of your $10 in whichever currency they are in, whether it's Kenya Shillings, South African Rand, Tanzanian Shillings, and you will get your money settled to you in your dollars. You will always get your $10 per transaction no matter what currency we've paid in, because that's your first huddle as a business.

If you try and figure out, "How do I get customer-X to send me Rand and customer-Y to send me Kenya Shillings and make sure they all balance, the region doesn't allow for that. Number two is the logistics. It's how do we move products across borders. That's one of the challenges that we're getting into as we build the 2.0 version of Mookh. It's how do we figure out if we can help all these businesses with their logistical nightmares of moving products across borders.

It's fixing payments, and then fixing the logistics. In terms of audience and reach, the internet has already done an excellent job, and the social media has done excellent job of connecting

[0:53:14.3] Q: How many countries are you currently in then in Africa?

[0:53:17.4] GG: We built and tested in Kenya, so we are fully operational here with all four platforms. We've tested the ticketing system in both Nigeria and Namibia last year. Each of them had unique and interesting opportunities and challenges. Nigeria is one of the biggest markets in Africa. For us, setting our foot in there and testing the water and seeing what kind of response we get was very important, because it tells us if it's a market we'll able to scale into.

Then, Namibia, for us, was key, because it is a very small market, two million population, about half a million in the capital city. Then, average is 19 years old. It's marked on the kind of audience we'd be looking at globally. However, they also operate in an environment which is

completely different from Kenya. Where we have a dominant mobile player up here, they have two equal bank players that are competing on the same field.

Being able to integrate into those banks, integrate into systems that are more offline, because in Nairobi, again, our mobile phone penetration has been heavy. Every single person; young, old, in the village, in the urban cities, has a mobile phone, or two. Because everybody is already connected, everybody uses their mobile phone to get access to all these services.

If you go into a place like Namibia, where some people still are not using their mobile phones or they have features phones, and so they will only access certain services from a physical vending location. How do we make sure our system can work in those environments as well? For us, it's been a heavy learning curvy and a lot of our system and our features are based from use cases. Being able to test it in as many use cases is key for us.

[0:55:13.3] Q: For developers who are listening to this podcast and who might be based in the west, where maybe paying on mobile isn't as big a thing as it is Africa and Kenya, what can they do to reach that audience with their services and their products? How easy it for me, for example, to build an app and take payments from M-Pesa?

[0:55:35.0] GG: Those are some of the things we're trying to solve. How can we create easy gateways for developers to plug in? Another thing we realized is — When we realized this as we were building our payment platform, some of these payment — The aggregators make it a nightmare for developers. It's almost like they give you the documentation and you want to lose your mind at how difficult it is to plug into them.

One of our cause has always to be build as if you're building for the developer and to make his work super easy. If we needed to do the most complicated integration of a Mookh interface into a thing, it wouldn't take more than an hour. We have been working to just make sure that we make it super easy.

For developers, I'd say, "The audience is here. You have a billion people who are stuck on the internet, who are very alert, who have learned a lot by observation, and so they are in line with

you, they like the exact same trends you like, and they are curious enough to adopt at a rate that you will not find anywhere else.

If nothing else, build it, look to us to help you figure out the M-Pesa and how it works, I'm happy to answer any questions and what. It's definitely an avenue to look at. Once we're able to break this new borderless currency, which is what we want to make Mookh. We want to make it just anywhere in Africa where you go, if you say Mookh, people will be able to acknowledge that as a payment system. Then, we can open that up to the world.

[0:57:14.2] Q: Okay. I guess, just to kind of close off the interview, besides Mookh, what are cool startups in Kenya should the world watch out for over the next few years?

[0:57:26.2] GG: Whoa! That's a big one.

[0:57:28.1] Q: Because, I know, for example, Mark Zuckerberg from Facebook, came to Kenya. Was it last year? He met up with Mookh and other companies that are working in different spaces.

[0:57:38.7] GG: Correct. We have done a lot of things, and technology has played an interesting role. We are now in a city where agri-business, for example, is being driven by technology. One of the businesses that met Mark along with us is called Twiga, and they do food deliveries, and they figured out a way to map the product from the farm to the market so that you're able to see the best price to the farmer and you're able to root your product from the market place directly to the farmer, so that then we're able to know that this person was growing it sustainability, that we're supporting a guy who lives in place X.

There's all these little apps that are being built, and a lot are being built for businesses. Where I'd say the gap is and the things to look out for is, now, there's a lot of apps being built, Uber is here now, and I hear the term a lot, the Uber of tailoring, or the Uber of motorbike rides. There are all these people who are building what is the quickest way to order and get and access, whether it's information or services.

As much as some of them are just spinoffs or replicas of existing systems, that it's bound to be a lot of very clever ones. I'll probably need to write you a — I'll send my article, a mini article and just list some people to watch out. I'll definitely need to put that down for you.

[0:59:10.4] Q: That's fine. Thanks a lot for that. People, if they want to get a hold of you, how can they reach you?

[0:59:15.4] GG: You can check up our website, we've tried to put as much information over there. The website is mymookh.com. We have an email account over there that you can reach us at, that's hello@mymookh. If you want to reach me directly, my email address is porgie@mymookh, and I'm always happy to chat payments. Africa is the next frontier, and we all need to get into it.

[0:59:42.8] Q: Okay. Fantastic. Thanks a lot for that, George. All the best with Mookh in the future.

[0:59:47.8] GG: Thank you [inaudible]. Much appreciated. Thank you for the time, and I'm looking forward to share more with the developers anytime you all are ready.

[0:59:55.7] Q: Great.

[END OF INTERVIEW]

[0:59:59.2] JM: Thanks to Symphono for sponsoring Software Engineering Daily. Symphono is a custom engineering shop where senior engineers tackle big tech challenges while learning from each other. Check it out at symphono.com/sedaily. Thanks again Symphono.

[END]