

SAFEMOTOS: SCALING UP INNOVATIONS IN AFRICAN RIDE HAILING

R. Chandrasekhar wrote this case under the supervision of Professor Darren Meister solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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In mid-April 2018, Barrett Nash and Peter Kariuki—co-founders of SafeMotos, a motorcycle taxi service in Kigali, the capital of Rwanda in Central Africa—were reviewing the expansion plan they had just finalized. Having become established in its inaugural market, the three-year-old start-up was on the verge of expanding into the much larger market of Kinshasa, the capital of the neighbouring Democratic Republic of Congo.

Kigali was known as a test market for entrepreneurs in Africa, where they could pilot new business models, try new management techniques, and experiment with new product features before scaling the best of their innovations into markets beyond Kigali. The larger goal of the SafeMotos co-founders was not only to replicate SafeMotos's growth in other cities in the African continent but also to move quickly into the underserved city transportation markets of Asia and the Far East. Extending the channel of transportation from motorcycle taxis to taxicabs was also part of their grand design.

The duo had developed a five-year growth plan (see Exhibit 1), which identified specific outcomes. For example, net revenues would go up from about US\$11,000¹ in 2018 to \$4.9 million in 2023. Net income would go from a loss in 2018 to \$2.3 million in 2023. The number of drivers on the company's rolls would go up from 116 to nearly 8,000, and the number of rides they would provide to customers would go up from 45,000 to 5.1 million in five years.

As they reviewed the five-year plan, they were confident that their tried and tested growth model was replicable with some tweaking—both minor and major—across markets. They also knew they could leverage learnings from the three-year experience of working in Kigali. However, there was one key issue: What should be the road map for scaling up?

RIDE HAILING INDUSTRY

The global taxi market was estimated to be worth \$108 billion in 2017, and the ride hailing segment, which involved the use of digital technologies, was valued at \$36 billion. Ride hailing companies were taking an average commission of 23 per cent on gross market revenues. Their earnings in 2017 were approximately \$8.3 billion. Ride hailing was forecast to grow eightfold to \$285 billion by 2030, netting \$65 billion to these companies. The segment was expected to outsize the analogue taxi market by 5.3 times by then.²

¹ All currency amounts are in US\$ unless otherwise specified.

² Goldman Sachs Group Inc., *Rethinking Mobility*, Goldman Sachs Global Investment Research, May 23, 2017.

In a major competitive trend that would affect the segment, automotive original equipment manufacturers were getting into ride hailing. For example, BMW Group was offering a free-floating car-sharing platform known as DriveNow in European cities and ReachNow in US cities. Daimler owned MyTaxi, a taxi-booking service based in Germany. The Ford Motor Company had set up a subsidiary, Ford Smart Mobility, which had acquired Chariot, an on-demand shuttle offering what was known as Transportation as a Service. General Motors Corporation had made strategic investments in Lyft, a ride hailer. Toyota Motor Corporation had collaborations with Uber and Getaround, while Volkswagen had partnered with Gett and DiDi Chuxing as its entry points into the ride hailing market.³

Road fatalities were a major source of concern to both policy planners and various industry stakeholders. Low-income and middle-income countries had 48 per cent of the world's registered vehicles but accounted for a disproportionate 91 per cent of the world's fatalities on the roads.⁴ African countries ranked the highest, at 26.1 road fatalities per 100,000 population (see Exhibit 2) compared with 17.4 fatalities per 100,000 globally.

Getting from Point A to Point B in many African cities was stressful due not only to a lack of travel options but also to the risks associated with the prevailing options. Motos, as motorcycle taxis were known, were the most common transportation channel. There were more than 1 million motos in Africa, performing 15 million trips every single day across cities as varied as Ouagadougou, the capital of Burkina Faso; Bamako, the capital of Mali; Kampala, the capital of Uganda; Douala, the commercial capital of Cameroon; and Kigali. From an entrepreneur's perspective, motos were a capital-light way to start a business. For customers, they were a low-cost way of getting around in a city. For example, in Kigali, one could ride from one end of the metropolis to the other for less than \$1.

Motos were generally unregulated in Africa. Moto drivers could zip between gaps in a lane of traffic. They moved about, speeding around blind corners, braking sharply at the last moment, and taking off so quickly as to unseat any passenger who was not on guard. The speed of passenger turnaround was all that mattered to moto drivers. They maximized their earnings by taking as many rides as they could. They also negotiated their own rates. Customer experience was secondary to them, and they made no effort to be nice to passengers because they rarely expected repeat customers.

There were a total of 56 ride hailing services on the African continent. Dominant among these was Uber, which was launched in 2013 and had since grown its footprint to include eight countries: South Africa, Kenya, Nigeria, Tanzania, Uganda, Ghana, Egypt, and Morocco. A majority of ride hailing services were concentrated in East Africa and West Africa; there were very few companies in Central Africa. The services were also city-centric. SafeBoda, for example, provided moto services in the city of Nairobi and was also launching in Kampala. Bolt, a global operator based in Estonia, was running a close second to Uber in several cities.

RWANDAN CONTEXT

Rwanda was a landlocked nation in Central Africa, bordering the four nations of Burundi, Congo, Uganda, and Tanzania (see Exhibit 3). The country was a picture of contrasts. It was endowed with natural energy resources including hydroelectricity, solar power, and methane gas, but its national electrification rate was

³ Ibid.

⁴ "Chapter 3: The State of Road Safety around the World," in World Health Organization, *Global Status Report on Road Safety 2018*, accessed January 10, 2019, www.who.int/violence_injury_prevention/road_safety_status/report/state_of_road_safety_en.pdf?ua=1.

only 30 per cent.⁵ More people had easy access to high-speed mobile Internet service than to a public utility service like electricity. Intra-city travel was good, but inner-city travel was difficult. An 80 per cent majority of the population was employed in agriculture, and, while relying on smart phones to negotiate market prices, they continued to hold on to traditional methods of farming. Eight out of 10 Rwandans had a smart phone.⁶ One could buy an Android 5.0 smart phone for \$50 in Rwanda, and data was cheap at \$1 per gigabyte. Public bus systems were non-existent in cities due to the hilly nature and unorganized structure of city roads. Groups of motos waiting for hires were common sights at every corner of the country's cities.

Two decades after the genocide that had decimated the nation in 1994, Rwanda was making rapid strides toward becoming a technology powerhouse. Its gross domestic product had moved up from \$753.6 million in 1994 to \$9.1 billion in 2017. It also had an ecosystem that was tailor-made for start-ups: it was marked by an absence of corruption, a clear tax policy, and a pro-business government. In its 2017 report on doing business, the World Bank Group had ranked Rwanda number two in Africa.⁷ In May 2016, Kigali had hosted the 26th World Economic Forum on the theme of "digital transformation."⁸ The city was increasingly known as a test kitchen, where African start-ups could launch, iterate, and use their learnings to quickly scale into larger markets.⁹

SAFEMOTOS COMPANY OVERVIEW

The idea of a business enterprise focused on delivering road safety as a value-added product surfaced in the minds of Nash and Kariuki in the summer of 2014 in Kigali, where they had met and become friends. Nash was a Canadian who had come to Rwanda in 2010 to work for One Laptop per Child, a US-based non-profit initiative that provided low-cost, low-power laptops to school children. Kariuki was a software developer from a town in Kenya working for Innovys Ltd., a Rwandan firm that was developing electronic ticketing for long-distance buses. Conversations between the two men often turned toward a common topic among city residents: the hazards of riding on local motos.

There were about 15,000 motos in the city of Kigali making an average of 200,000 journeys a day. A customer could usually sense within seconds of commencing a ride on a moto whether their driver was safe, but it would be too late by then to decline the ride. The solution to safe driving, as Nash and Kariuki saw it, was to fix the problem early on and scale the sensory awareness up front with the help of technology. If someone could have a direct line of sight into driving behaviour and monitor the risk propensity in real time, it would also be possible to tilt the driver's behaviour toward a desired outcome like safe driving in a short time.

Nash thought it would be possible to track individual driving patterns through sensors, which could be introduced into headgear such as a helmet. Kariuki suggested that a smart phone would be a better medium, since it already had built-in sensors. The sensors could easily measure metrics related to driving, such as speeding, swerving, and braking. Putting a user interface into play would connect the smart phones with

⁵ "Rwanda: Power Africa Fact Sheet," United States Agency for International Development, accessed January 21, 2019, www.usaid.gov/powerafrica/rwanda.

⁶ "Rwanda's Mobile Phone Penetration Rised over Past Five Years," National Institute of Statistics of Rwanda, accessed January 16, 2019, <http://statistics.gov.rw/publications/article/rwanda%E2%80%99s-mobile-phone-penetration-rised-over-past-five-years>.

⁷ The World Bank, *Doing Business 2017: Equal Opportunity for All*, October 25, 2016, accessed January 12, 2019, www.doingbusiness.org/en/reports/global-reports/doing-business-2017.

⁸ "Media Accreditation Opens for 26 World Economic Forum on Africa in Kigali, Rwanda," World Economic Forum, New Release, February 9, 2016, accessed January 21, 2019, www.weforum.org/press/2016/02/media-accreditation-opens-for-26th-world-economic-forum-on-africa-in-kigali-rwanda/.

⁹ Matt Davis, "Is Rwanda in Line to Become One of Africa's Major Tech Hubs?," Big Think, October 18, 2019, accessed January 21, 2019, bigthink.com/technology-innovation/rwanda-tech-hub?rebellitem=1#rebellitem1.

the customers, opening new possibilities. The duo soon moved toward telematics, the branch of information technology that dealt with the long-distance transmission of computerized information. They started building a mobile application (app) that could be incorporated into a smart phone.

Both had the overarching model of Uber in mind, but they had to add a local twist to the global prototype. The transportation problems in Africa were unique, and solving them would require a deep understanding of local conditions. In Rwanda, for example, most drivers could not read maps, and therefore, following pins on a map would simply not work. By extension, the Western model of notifying drivers where to find their fares would also not work because moto drivers in Kigali, for example, navigated through the city's landmarks. The local model would map thousands of landmarks in and around Kigali and link them to global positioning system (GPS) coordinates. As a result, when customers requested pick-ups, SafeMotos could translate their GPS locations into landmarks in the city for the drivers to relate to.

Nash and Kariuki also developed a tentative business plan as part of a pitch to a company called SOSV, a global venture capital firm that provided multi-stage investment to “scale big ideas for positive change.”¹⁰ SOSV was at the time launching an accelerator for global innovations in transportation technology. The plan fit with four of the 17 sustainable development goals (SDGs) adopted in 2015 by all members of the United Nations as a universal call to action to end poverty.¹¹ For example, SDG 11 pertained to building a safer taxi experience; SDG 9 pertained to developing a local technology ecosystem, SDG 8 to increasing taxi driver economic productivity, and SDG 5 to enabling women to become taxi drivers.

The social impact of their plan—and its potential for global scale—fascinated both men. It was becoming evident that, if they could nail down the moto problem in Kigali, the duo could scale up the solution to address the moto problem in the wider African context. They could also move on to other vehicle types, such as taxi cabs, before taking the model beyond the African continent for replication in global city markets.

Nash and Kariuki found that, after pulling the data from a driver's smart phone into a server, they could run it through a risk model that was already being used by the US automobile insurance industry to rank its driver-customers. The relevant application programming interface (API) was available to prospective developers in an open form known as public API. Several automobile insurance companies had provided a dashboard device to their customers that could monitor, in real time, how safely they were driving. They used the data to penalize unsafe driving by increasing insurance premiums and to incentivize safe driving by reducing insurance premiums.

Access to OpenStreetMap, an open source street map built by a community of mappers contributing and maintaining data about roads all over the world,¹² also enabled Nash and Kariuki to know exactly what each street in Kigali looked like, including its length and its various crossings. They had access to the speed limits set by the local government for each lane, and they built an algorithm to ascertain how long each driver took to browse individual streets and to determine operational variables like how fast the driver went and how hard the driver braked. They could observe every instance of unsafe driving by the driver in real time. The partners were keen to deliver safe drivers to passengers in Kigali by pairing them only with those drivers who were above a certain safety threshold.

Their business plan envisaged that prospective drivers would have at least three years of experience before being employed by SafeMotos. A driver would also have to possess a valid driving license, a quality helmet,

¹⁰ “About: Who We Are, What We Do, Why We Do It,” SOSV, accessed February 5, 2019, <https://sosv.com/about>.

¹¹ “Sustainable Development Goals,” United Nations Development Programme, accessed February 5, 2019, www.undp.org/content/undp/en/home/sustainable-development-goals.html.

¹² “OpenStreetMap Provides Map Data for Thousands of Web Sites, Mobile Apps, and Hardware Devices,” OpenStreetMap, accessed September 10, 2020, www.openstreetmap.org/about.

and a reflective jacket. The app would forensically evaluate drivers against safety measures to ensure that reckless drivers were quickly dropped. After being screened, each driver would sign a contract, which the company could terminate at any time. Each driver would be given a smart phone, on which SafeMotos would install an app; and the data from the app would be fed to servers, which would come up with an overall safety score for each driver. A rating of 90 or more out of 100 was mandatory for a driver to continue to stay on the roster. The company would maintain driver profiles that showed travel times, tracing each trip and updating them with charts and maps. SafeMotos would offer courses on road caution, blind spots, and customer service. The drivers would also be given weekly English classes so that they could attract the increasing number of foreign tourists visiting Rwanda. The bikes would be checked every week as part of an ongoing maintenance support program.

The majority of customers would be Rwandans. Expatriates in the city would likely comprise 15 per cent of the user base. Any individual customer could join the scheme by downloading the app, which would be user friendly. The customer could open it, select a preferred pick-up location on an interface styled after Google Maps, and write a one-line text clarifying the location. The app would guarantee that a SafeMotos driver would come to pick up the customer. Customers would pay for each trip from their SafeMotos wallets, which would be connected to mobile money, cash, or credit card. The fare would be charged based on driving distance and would not be negotiated by the drivers. There would be an option for the customer to rank the driver at the end of a trip. Every positive review would carry a micro-incentive for the driver, and the incentive would be built into the app.

The business plan forecasted a commission on each ride as the main source of income for SafeMotos, as in the model used by Uber. Since the value proposition was based on safety, Nash and Kariuki thought they could charge a premium of RF5¹³ over the prevailing market rate of RF100 per kilometre. The driver would be paid RF85, and SafeMotos would earn RF20.

By January 2015, the company had received the first tranche of an investment from SOSV, which amounted to \$25,000. The co-founders were planning to finance the launch through a seed round of fundraising from friends and family and also from SOSV, which would together amount to \$125,000 by June 2015 (see Exhibit 4).

They were still fine-tuning the app when, in the weeks leading up to the summer of 2015, they themselves became parts of the official statistics on road injuries in Kigali. The two men were riding on two separate motos on a rainy evening when the motos, in quick succession, hit a truck that was pulling up on the road. The customer pain points they had set out to address had become personal, providing an incentive to hasten the launch.

They launched SafeMotos in June 2015, in Kigali, as a “safer Uber for African motorcycle taxis.” Almost immediately, they realized—somewhat late in the process—that safety was secondary to convenience and price for Rwandans. The solution SafeMotos provided was turning out to be more like a vitamin than a painkiller. The biggest challenge they faced was the complacency of the average moto rider in Kigali. Many Rwandans believed that dying from a moto accident was just bad luck and therefore an integral part of day-to-day living. The co-founders had to change their focus midway to incorporate value additions other than safety.

This challenge led them to segment the market into categories in a bid to identify niches with specific pain points that they could then address. Four categories surfaced: (1) direct pick-up, for customers wanting convenience; (2) night-time trips, for customers wanting safe drivers during dark and dangerous hours; (3) employee transport, for employees of businesses using moto rides for work-related activities; and (4) female drivers, for female customers who would not want to be driven by men.

¹³ RF = FRw = Rwandan franc; US\$1 = RF852.9 on April 15, 2018.

The partners quickly saw a far greater business opportunity in providing additional, complementary services to the local market before scaling up into other markets. They saw that this mid-course correction carried four advantages: (1) it would make the SafeMotos app an essential part of local digital life, thus locking in customers; (2) it would monetize multiple aspects of the tech ecosystem, which was fragmented in more developed economies; (3) it would build a network effect of adoption between products; and (4) it would be an entry barrier to imminent players that did not have the same suite of services that SafeMotos could provide.

SafeMotos planned new products along these lines. For example, it planned driver financial services, which would help its drivers handle their finances more effectively; product delivery, which would leverage the SafeMotos logistics network to deliver goods directly to customers; and business-subsidized trips, which would ferry customers to business establishments (like hotels and restaurants) that would pay SafeMotos for delivering customers through its platform.

SafeMotos had six employees in addition to the chief executive officer and chief operating officer: a country manager (Rwanda), a future opportunity director (Rwanda), an operations manager, an operations coordinator, a chief financial officer, and a lawyer. The company was in the middle of forming an advisory board, which would include a representative from SOSV.

BUILDING ON KIGALI TO MOVE INTO KINSHASA

Kinshasa had a population of 12.6 million.¹⁴ *Kinois* (as residents of Kinshasa were known) had limited transportation options. While high-income earners had personal or corporate cars with drivers, middle-income people used shared taxis, which operated as micro buses called *ketch*. It was common for low-income *Kinois* to be trapped at home or at other locations, especially in the evenings.

SafeMotos's entry strategy in Kinshasa was meant to avoid the missteps the company had taken in Kigali. For example, it would not launch motos in Kinshasa but would launch taxis. It would also not launch using SafeMotos as its banner in Kinshasa, not only because it would not be using motos but also because the word *safe* also meant slow and expensive in this city. Instead, it would be using a new name. It would work toward unfolding a narrative about a "home grown hero" from within the African continent rather than "an invader from the West," such as Uber. SafeMotos would step in to fill an existing void in the private taxi market. It would have a price point that would enable it to break even in little time. In the larger context, it would be pioneering the best practices of building a start-up in Africa.

A major tweak that the co-founders provided to the software model in Kinshasa was what they called the "guaranteed engine." Riders in Kigali had been given the option to book rides outside the SafeMotos grid during the lean hours between 1:00 p.m. and 4:00 p.m. so that drivers could augment their earnings. As it happened, some drivers had become fair-weather operators, seeking rides only when they wanted and resting whenever they wanted, irrespective of the demand cycle. The usage of rides outside the SafeMotos grid was often as high as 50 per cent. In Kinshasa, the driver would not be allowed to take non-SafeMotos trips but would be guaranteed a certain amount of revenue per day, irrespective of the number of trips taken. This was meant to incentivize drivers to comply with SafeMotos protocols. It was also designed to safeguard the brand.

SafeMotos was planning to roll out its services to the well-heeled residents of Gombe, who would be able to pay a premium for services like on-demand pick-up. Gombe was the affluent city centre—the downtown core—with a population of half a million and covering an area around half the size of Manhattan in New

¹⁴ PopulationStat, accessed October 27, 2020, <https://populationstat.com/democratic-republic-of-the-congo/kinshasa>.

York City.¹⁵ As the system became more efficient, the company would lower prices to attract more users across the city and would provide additional services like motos, on-demand delivery, and carpooling. The long-term plan was to address Kinshasa as a mass market, in contrast to Kigali, which was a niche market.

The company had already built a physical network of 15 drivers to power its launch in Kinshasa. Its core app for the taxi had the back-end sophistication of the Uber app but was built on the assumption that the users were not map-literate. The company also built a new feature for Kinshasa that enabled customers to indicate how they wanted the driver to drive (e.g., very slowly, slowly, or at normal speed). The app was linked to credit card carriers with mobile money functionality. The company had also built a third-party corporate dashboard, similar to what it already had in Kigali, to help corporations track their employees' use of SafeMotos to move around for work-related activities.

SCALING UP FURTHER

Nash and Kariuki projected they would reach a break-even point in Kinshasa, at 35,000 monthly trips, by spring 2020. With the rapid urbanization of African cities and increases in their population, the number of market opportunities Africa-wide seemed considerable. Rapid scaling seemed an obvious choice. To execute this, they anticipated that they would need to manage four different elements: partnerships, product design, government relations, and funding. There were unresolved issues in the future with each of these elements.

Managing Partnerships

Nash and Kariuki were considering potential partnerships with banks, telecommunication companies, technology companies, and global development agencies.

As SafeMotos had already been collecting fares digitally from its customers, partnering with commercial banks, which were already driving digital forms of payments, seemed a natural choice. The partnership would be synergistic because banks were constantly expanding their loan portfolios and SafeMotos drivers, whose earnings history was already digitized, would be a captive customer pool for the banks' products and services. SafeMotos could use a partnership with banks both as a driver-retention tool and as a behavioural tool. However, striking a deal with banks was a challenge because no banks were headquartered locally and the local offices didn't have the autonomy they needed to agree to partnerships on their own. It was a non-starter. The co-founders wondered how to break the deadlock.

The same synergies prevailed with telecommunication companies, which would be looking for new customers for their data plans not only among the company's drivers but also among its riders. SafeMotos could benefit in terms of turbocharging its growth in African markets where the telecommunication companies were already operating. Such a partnership could also act as an entry barrier to competition. However, the same problem prevailed: none of the telecommunication firms was headquartered locally, and the local managers had no authority to strike independent partnerships locally.

Partnering with technology companies that were keen to roll out services such as telematic tracking and integrated Internet of Things platforms in Africa seemed like a good way to scale up. SafeMotos could gain access to these new technologies, bypassing the need to build them in-house while helping its partners navigate untested business environments. The same logic prevailed in terms of partnering with global

¹⁵ Barrett Nash and Peter Kariuki, "Building on Lessons Learned in Kigali to Dominate On-Demand-Services in Kinshasa and Beyond," SafeMotos Business Plan document, July 2018.

development agencies, which had huge budgets and mandates to improve the lives of people in the developing world. While it benefited from these agencies' low-cost financing, SafeMotos could provide a better and faster return on their investments than other social initiatives such as building roads.

Managing Product Design

Nash and Kariuki had been motivated by the success of Uber in North America, but there was no way they could replicate a Western model, which had worked well in a mature market, in a developing market and assume that it would work equally well.

In the West, technology users had had access to operating systems like Windows and Mac OS long before smart phones had made their simultaneous debut worldwide. In contrast, customers in several African countries were unused to seemingly straightforward actions on their smart phones—like clicking an X to close a window—because they were not familiar with the legacy systems. SafeMotos had to build technology that worked organically for new users. This often meant a departure from practices established in the West.

The Kigali launch, in many ways, had been a lesson in product design. For example, it was not until two years after their launch that the co-founders had discovered that there was almost no literacy about city maps among lower-middle-class Africans. School kids were familiar with continental maps, and they understood country maps as part of their geography lessons, but there was no awareness, even among teachers, of city maps and their legends. There was also little numeracy, even while many services were being offloaded to locals based on assumptions to the contrary.

When they discovered this, Nash and Kariuki had quickly proceeded to make three major innovations in the SafeMotos app: two on the customer smart phone and one on the driver smart phone. Customers no longer had to key in their locations, thereby pre-empting the very real possibility that they might key in incorrect locations; instead, the GPS would locate the customer. The design language on the customer app was also reconfigured to make sure that it would not depend on icons, which were a source of confusion. The driver app was reconfigured to pair it with the savings program of a local bank.

A major innovation in Kinshasa was that customers who did not have smart phones could still access SafeMotos through a network of agents, who helped with the ordering process. As an extension, the company was also planning a call centre in Kinshasa.

Another takeaway from Kigali was that putting users front and centre would help resolve any ongoing problems. Users in Africa were new to technology: many of them relied only on preinstalled apps like WhatsApp and Facebook, rather than installing new apps of their own. As a result, navigating through even basic design metaphors was difficult for many of them. The co-founders had made it a practice to track users' experiences not only with the rides but also with the app.

Managing Government Relations

Although potential entrepreneurs saw Kigali as a test market, doing business in Rwanda—as indeed in many African nations—was by no means easy. Media optics and some designated events portrayed some African countries as dream destinations, but dealing with ground-level realities could be a nightmare. For example, it was very easy to set up a company in Rwanda. The metrics related to this were measurable, and they always looked good. However, it was very difficult to see through even a seemingly routine task like changing directorships on a company board. Another major challenge was a weak adherence to the rule of

law. Many laws were enforced arbitrarily or selectively. People could visit a tax body for guidance and come out with as many interpretations of tax law as the number of people they had spoken to. Ambiguity was an issue that businesses had to contend with.¹⁶ Nash and Kariuki wondered how to position their story within the official corridors so that the government and its officials would perceive the success of SafeMotos as a success of their own.

Raising Capital

A new enterprise normally had two main sources of funding: seed capital and series A financing. Seed capital was mobilized from personal savings, family, and friends. This went toward building the product or service and gaining traction through pilot customers. Series A financing was raised after the business was launched and came from professional investors such as angel investors and venture capitalists (VCs). These funds were put toward strategic activities like scaling up operations. A VC would be asking Nash and Kariuki three questions: How much money did they want to raise? How would they deploy the funds? How would they pay back their investors?

Having raised nearly \$1 million so far, the co-founders were examining ways in which they could leverage their competitive positioning to attract VCs. First-mover advantage seemed to be a big plus with the VC community, and SafeMotos could easily claim the top spot as a pioneer in public transportation in Central Africa. The company was well placed to take the lion's share of the total addressable market in many cities in the region. But was their first-mover position defensible in the long run? That was the question to which the VCs would be seeking answers.

Nash and Kariuki wondered what their investment pitch should be.

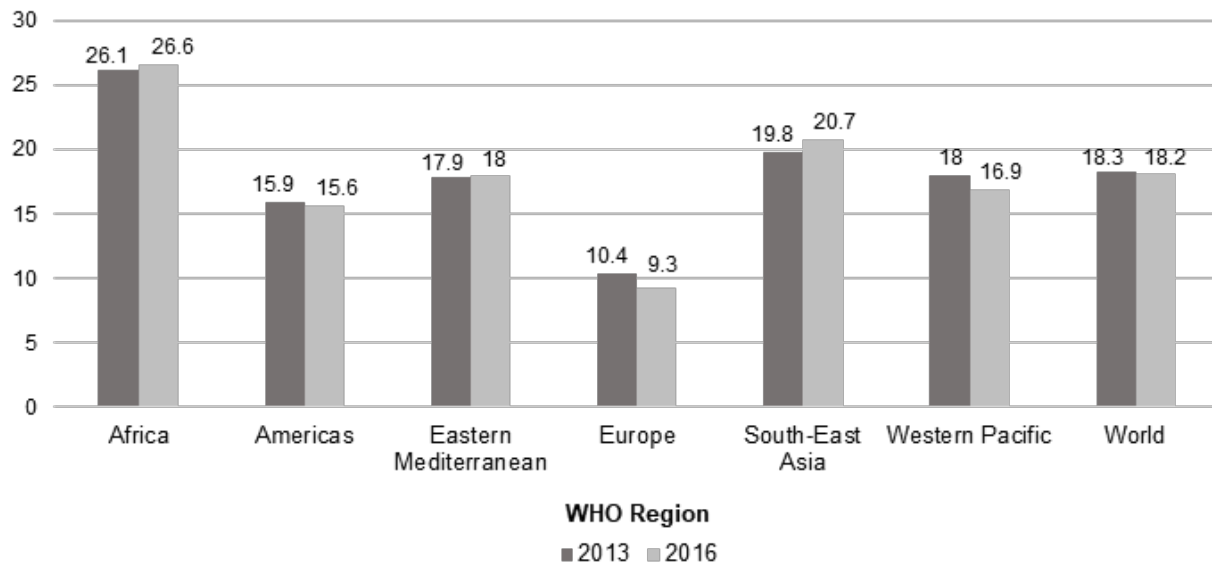
¹⁶ Ibid.

EXHIBIT 1: SAFEMOTOS—TRACTION TO DATE AND PLANNED GROWTH

Growth Index	Unit	Forecast					
		2018	2019	2020	2021	2022	2023
Drivers	Number	116	191	432	1,273	4,385	7,874
Rides	Number	45,436	128,618	256,091	677,158	2,204,089	5,129,568
Gross Revenues	US\$	43,714	174,810	605,076	2,201,370	8,262,677	19,774,671
Net Revenues	US\$	10,929	43,703	151,269	550,343	2,065,669	4,943,668
Cost of Goods Sold	US\$	11,359	32,154	64,023	169,289	551,022	1,282,392
Gross Profit	US\$	(431)	11,548	87,246	381,053	1,514,647	3,661,276
SG&A Expenses	US\$	300,000	789,600	1,166,790	1,651,320	2,035,598	2,604,827
Marketing	US\$	45,406	63,991	139,919	231,379	370,627	665,592
EBIDTA	US\$	(57,631)	(56,293)	(48,735)	150,347	1,265,665	3,343,672
Income Tax	US\$	0	0	0	0	379,700	1,003,102
Net Income	US\$	(57,631)	(56,293)	(48,735)	150,347	885,966	2,340,570

Note: SG&A = selling, general, and administrative; EBIDTA = earnings before interest, tax, depreciation, and amortization
Source: Company files.

**EXHIBIT 2: ROAD TRAFFIC FATALITY RATES
(PER 100,000 POPULATION, BY WHO REGION AND INCOME GROUP)**



Note: WHO = World Health Organization

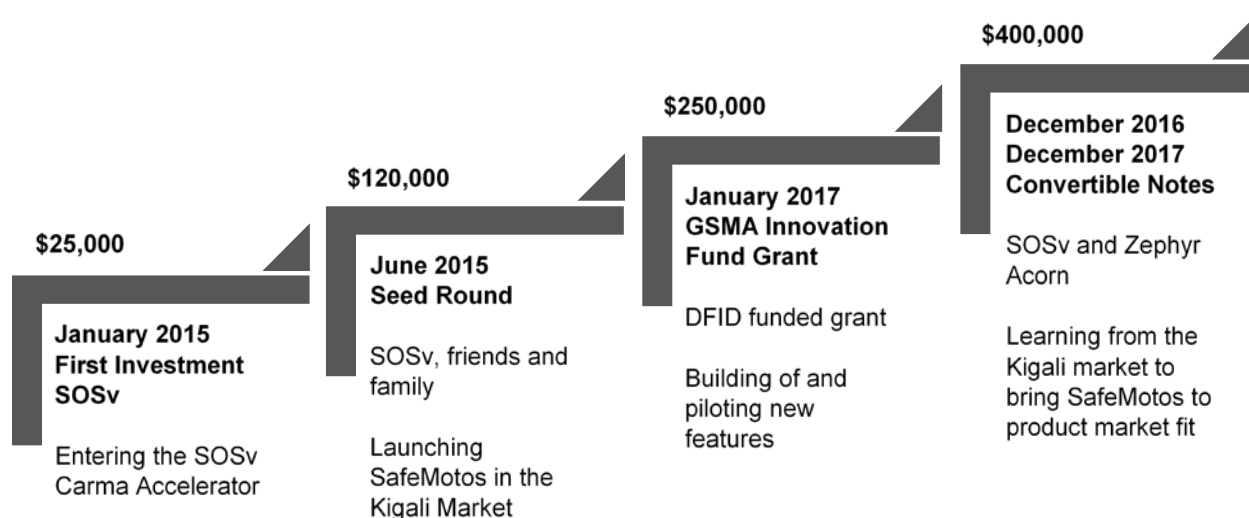
Source: Created by the case authors using data from World Health Organization, *Global Status Report on Road Safety 2018*, 5, accessed January 16, 2018, www.who.int/violence_injury_prevention/road_safety_status/2018/GSRRS2018_Summary_EN.pdf.

EXHIBIT 3: RWANDA



Source: "The World Factbook: Rwanda," Central Intelligence Agency, accessed January 17, 2019, www.cia.gov/library/publications/resources/the-world-factbook/geos/rw.html.

EXHIBIT 4: SAFEMOTOS—PROGRESSIVE FUNDING



Note: GSMA = Global System for Mobile Communications; DFID = Department for International Development

Source: Company files.