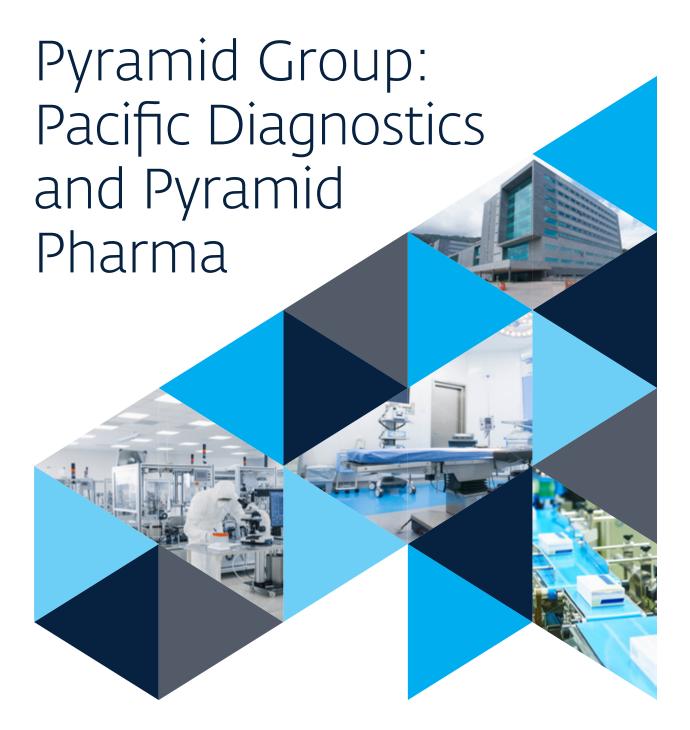
CASE STUDY





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Introduction

Founded in Dar es Salaam, Tanzania, Pyramid Group has demonstrated how a company can succeed financially in emerging economies while still promoting a socially conscious agenda. In this case, the company's leaders—Abraham Okore, CEO of Pyramid Group and founder of Pyramid Pharma, and Prashant Gokarn, founder of the medical equipment subsidiary Pacific Diagnostics—began with a recognition of the gaps in the existing healthcare system in Africa.

There were two basic problems: an inefficient supply chain for healthcare supplies and pharmaceuticals, and an ineffective approach for maintaining and supporting complex medical equipment.

In this oral history-based case study, four executives at Pyramid Group and one of their hospital-based customers discuss how the company developed its business and what underlies its successes. There is a great deal to learn from their experience. They have designed a streamlined supply chain for healthcare products. Moreover, they have created a strategic regimen for sales, installation, and support for complex medical equipment such as CT-scan and MRI machines, X-ray devices, and critical care equipment.

Perhaps the most significant element of this story is about relationships and trust. To break through established patterns and practices that have held back the effective distribution of medical supplies in the past, Pyramid Group's leaders have built up an outstanding reputation for excellence. In offering their solutions, they can commit to a very high-quality service level agreement with their customers, driving competitive advantage in the market. They have convinced hospitals to invest up front in new technology, and their own staff to make a commitment to quality. They have influenced suppliers to provide the kind of training and certification that is equivalent to that of developed countries, with uptime guarantees of up to 98 percent. They have lived up to their own standards by explicitly setting an example—for instance, by mentoring others inside and outside their company—and by making "leap of faith" investments in elements like expensive training and certification, where the payoff is not always obvious to outsiders.

In the following story, you'll see why they chose this path and what they expect to accomplish going forward.



"The impact of well-maintained medical equipment isn't always obvious in the abstract. It saves lives."

-Christene Muchene



We Interviewed Four of Pyramid Group's Leaders for this Article



Abraham Okore is the founder and Chief Executive Officer of Pyramid Group, and CEO of its subsidiary Pyramid Pharma. Based in Dar es Salaam, he has led the company since its beginning. He is a member of the Tanzania working group of The Africa List, an invitation-only group of business leaders recognized for their commitment to regional prosperity. Previously, he was the COO for GM Pharmacy Tanzania, a family business.



Prashant Gokarn is the chief technical officer at Pyramid Pharma. He is also the founding director of Pacific Diagnostics, the medical devices firm acquired by Pyramid Group in 2015. Previously, he was a technical manager and engineer for Siemens in India and Vanguard in Tanzania.



Christine Muchene is the chief financial officer at Pyramid Group, overseeing the finances, accounting, and human resource functions of Pacific Diagnostics and Pyramid Pharma. Previously, she was a consultant at Deloitte & Touche, East Africa, and worked in financial controls at Philips in Nairobi.



Huzefa Adamali is a service and installation manager at Pacific Diagnostics, and a key leader in its approach to customer relationships.



Lessons from Pyramid Group's Story



Provide full solutions for complex technology: Complex devices are often sold or donated without planning for the long-term support, maintenance, and training that they require. Technology needs to be seen as a whole system, not a series of one-off purchases. This is particularly important for health facilities, to improve their quality of care.



Invest in your company's capabilities: Successful businesses in emerging economies must make long-term investments in their people and skills, even if that seems risky.



Expand geographically with an eye toward differentiation:

Practices that succeed in one emerging market can make a company seem unique, enough to be invited elsewhere.



Live by values: An enterprise is stronger and more influential when it operates with a dedicated, ethical, responsive culture.





Pyramid Group at a Glance

Years in business 20 (Pyramid Group) and 15 (Pacific Diagnostics); they merged in 2014.

Websites Pyramid Pharma (https://www.pyramidpharma.com/) and

Pacific Diagnostics (https://www.pacificafrica.com/)

Corporate Governance Pyramid Group is a privately held limited company incorporated in Mauritius.

It has two subsidiaries, Pyramid Pharma (for the medical supplies and

pharmaceuticals business) and Pacific Diagnostics (for the medical devices and

imaging systems business). Both are based in Dar es Salaam, Tanzania.

In this case study, we refer to the two businesses as "Pyramid Pharma" and "Pacific Diagnostics" respectively, and to the overarching enterprise as

"Pyramid Group."

Investment history In 2018, IFC and Leapfrog Investments, a private equity fund specializing in

> healthcare, co-invested in Pyramid Group (IFC invested \$7.5 million). In 2017, IFC and Leapfrog Investments, a private equity fund specializing in healthcare, each invested US\$7.5 million in Pyramid Group. The goal was to support the expansion of both businesses—for example, to enable Pacific Diagnostics to train more installation and sales people.

Abraham Okore and Prashant Gokarn, both interviewed for this case study,

are the two most senior executives of Pyramid Group and the largest

shareholders.

Geographic Footprint Africa and Middle East.

Business Model Distribution of healthcare supplies and consumables with a single supply

> chain, reducing costs and focusing on quality and reliability of service; direct distribution and installation of medical equipment, providing full solution installation, training for hospital staff and after-sales services, helping

hospitals save on long-term capital expenditures.

Culture Visionary yet pragmatic approach to solving problems; emphasis on

mentoring others, including customers and suppliers.

Lesson 1: Provide Full Solutions for Complex Technology

Underinvestment in the maintenance and upkeep of high-end medical equipment is a pervasive problem in developing countries, affecting the level and quality of care. Hospitals buy and install complex imaging, X-ray, ultrasound, and anesthesia devices, all needed to diagnose and treat serious illness and save lives. But they do not allocate enough capital for the long-term support, maintenance, and training of staff needed to keep the equipment functioning.

As a result, when the machines break down, they can be difficult or expensive to repair. This represents a sunk cost that drains away working capital—and thus makes it even harder to keep up with technological changes. This lack of protection for medical equipment investment is prevalent in Sub-Saharan Africa, where projects or equipment are abandoned for lack of ongoing service.

Investment in medical equipment thus needs to be seen as a whole system, not a series of one-off purchases, if it is to be financially viable and meet the goal of helping patients. Similarly, when medical equipment is donated, attention must be paid to training staff, setting up a plan for maintenance, and allocating the necessary resources.

The leaders of Pyramid Group realized from the beginning that the prevailing cycle of technological decay represented a trap for their customers. The company could provide a much-needed service by implementing sales and installation in a more sophisticated way. It would also provide training for the staff members who would use the equipment, and after-sales service to ensure better long-term performance. This would demonstrate to their customers that although there were larger upfront costs, the service would be more timely, and it would reduce the overall cost of ownership

in the long run. It would provide much-needed protection for the investments in equipment, which are usually supposed to cover 8 to 10 years of a device's life cycle.

Huzefa Adamali, a service and installation manager at the Pyramid Group subsidiary Pacific Diagnostics, describes the impact on the customer:



Adamali: The greater part of the success that we achieved was the delivery of after-sales service. We formed a supply chain solution. It was also very unique for Africa and for our region at that time. I think we just looked at whatever blanks were there, and we decided to go and fill them as best as we could. But there was no [perceived] value for after-sales service. It was only when we proved to people that their total cost of ownership would come down and their services would be delivered very promptly, that we really started making the business.

I think we installed our first new CT scan in 2011 in Zanzibar. It was difficult because there were no people there who could service them.

Customers would think, "if this device goes bad, I'll throw it away and get another used one.

That would be cheaper." We showed them an alternative

In one main referral hospital they could only scan up to 20 patients per day. Now they can scan an average of 95. The patient's waiting period went from almost three months to one or two days.

CEO Okore says they immediately saw the need for this new service:



Okore: The hospitals were the first to tell us. They had broken MRI and CT-scan equipment that they couldn't afford to have repaired. They had a lot of capital items that were just lying idle. We promised to deliver the same quality of repair and service that a manufacturer would deliver in a market like the U.S. or Europe. And we could do this, up to a point, because Prashant (Gokarn) had been trained in the technology. Other distributors would have to bring in someone from Europe, and the infrastructure was very poor; it could take one or two weeks to get service. It was a no-brainer to have a local distributor and repair person in country.

For a [medical equipment] company to sell their product and have it work, it needs the right things to be done—first is to make sure that the system is the right fit for the intended purpose, [providing] training of personnel, right installation and after-sales service—to deliver that promise. We helped our principal suppliers deliver their promises to our customers. And I think many of them saw that we were trying to do this. Maybe we didn't do it to perfection, but we did much better than other people in the market.

When Pyramid Group and Pacific Diagnostics joined forces, it was clear that they had a similar vision of how customer service and innovation could make a difference. Prashant Gokarn, chief technical officer, explains:



Gokarn: When I founded Pacific Diagnostics in 2009, we discovered that there was a great need for credible service organizations in this field. Most companies sold equipment; there was very little emphasis on after-sales support. We recognized this need very early, which set us apart from our competitors. Our installed base was very small at first; today, we hold an almost 80 percent market share for all sophisticated radiology imaging products.

When a hospital makes a capital investment in a CT-scan, and then can't afford to repair it regularly, it may be down 50 percent of the time or more.

The return on investment is not there. And for doctors to do a good job, they need good equipment, in part so they can learn better practices. Many hospitals in Africa have struggled with this.

To make this change take place, the company had to engage with hospitals in a different way. Pacific Diagnostics began to explore providing full solutions. Instead of only selling a machine, the company got involved in helping health facilities set up more complex medical services, such as cardiac catheterization and radiotherapy. For example, in partnership with one of its hospital clients, Pacific Diagnostics supported creation of the first center for cardiac procedures in Tanzania. This required a multi-faceted approach that included planning of the facility in terms of work flow, training of hospital staff to use the equipment, constant system monitoring through a Siemens remote service solution system, parts replacement and eventually the supply of consumables: supplies fully used within a short period of time, including treatments for cancer or diabetes and vaccines. Remote monitoring of the system has helped the company provide a more advanced level of preventive maintenance. At the same time, the company trained local engineers at suppliers' factories. The local engineers are able to visit sites and make major and minor adjustments to keep equipment running, without the time and expense of having an engineer fly in from elsewhere. This has helped the company to provide its clients with an uptime guarantee of 97 percent or upward. The full-solution approach also enables a higher level of client engagement based on a more in-depth understanding of their customers' needs.

This point is illustrated by Gokarn, and by one of the company's major customers, Dr. Sarah Urasa, director of hospital services, Kilimanjaro Christian Medical Centre, which treats almost 130,000 patients per year:





Gokarn: Hospitals are often ill-advised when they buy equipment. The price of a CT-scan machine ranges from \$100,000 to \$4 million. They need an honest, candid discussion with the distributor. We could tell them things like: "Based on the number of patients you have, it's not worthwhile to invest in this equipment." Or, "Buy this smaller one and when your volume grows, you can trade it in."

We proved to our customers that their total cost of ownership comes down when repairs and supplies are delivered promptly. They have to invest a bit more up front, but they know that they're paying for a reliable kind of service. They no longer perceive the devices as too expensive.



Urasa: The installation of these two Siemens systems [by Pacific Diagnostics] has been the highlight of my year. In my directorate, I tend to deal with both patients and the staff here at Kilimanjaro Christian Medical Centre. It's very fulfilling seeing patients coming here and receiving what they came here for, and us not having to ask them to go elsewhere for the management [of their illness].

Lesson 2: Invest in Your Company's Capabilities

Successful businesses in emerging economies must make long-term investments in their people and skills, even if that seems risky. The Pacific Diagnostics leaders realized that they could only take on their expected role with technological installation and upkeep if they brought more of the necessary expertise in-house. They couldn't continue to rely on experts from Europe or the United States flying to Africa to fix their machines.

Okore, the CEO, recounts how Siemens proposed a solution:



Okore: At first, we only had two technicians trained on these [MRI and CT-scan] machines. Then Siemens, as one of our primary suppliers and the only source of training on their equipment, asked us if we wanted to expand our range by sending our technicians to their inhouse sessions. This involved a leap of faith. We would have to make this training investment before we had sold the equipment. That took a lot of confidence in the market, and in our ability to deliver.

The leap of faith, as Okore puts it, was not just a major financial commitment. It also meant changing many established practices, for themselves, their customers, and their suppliers not just Siemens, but others, such as Medtronic and Johnson & Johnson. In equipment procurement, people tend to focus on the devices themselves, and specifications for their features. Pacific Diagnostics focused instead on the people who would manage and maintain them. They made audacious investments in staff training, sending technicians to Europe and the United States for certification by major technology suppliers. The company's comprehensive business model, oriented toward the long term, helped it establish lasting relationships and strong track records for contract retention with Siemens. Medtronic, Johnson & Johnson, and other suppliers.

Huzefa Adamali, who was one of the first technicians to be trained, looks back on the experience and on the difference it made to have more trained people on staff: **Adamali:** Currently, my value in terms of the cost that Pacific Diagnostics has invested in me would be around \$100,000. Trainings are very expensive. My initial product training alone was \$21,000, including the transportation, and apartment rental costs in Germany. We also have had training sessions in Las Vegas.

Then multiply that cost by 30. That's how many fully trained engineers in our company are working in Ghana, Malawi, Nigeria, and Tanzania. I am now certified as an installer and a startup engineer, including equipment servicing. We have other colleagues who are trained on MRI machines.

Apart from this, we have very specialized equipment for radiation testing, for image quality testing, and so on, which actually cost a fortune. Our installed base is growing, so we have to have technicians in each country we serve.

Trust grew slowly. African hospitals began to spend more up front, trusting they would have lower costs later. Siemens and other manufacturers such as Medtronic enlisted us to help install their equipment in most of Africa and in parts of the Middle East.

We have really worked hard, especially in service. We have had to learn to train hospital staff in complex maintenance procedures. This often surprises them. For example, when we installed an expensive CT-scan device in [one hospital] in Dar es Salaam, we said the first preventive maintenance session would require at least six hours. They wrote back, saying that they had never seen a service call take anywhere near that long. My reply was: "We have to follow the manufacturer's protocol exactly."

Most of our customers have old second-hand used equipment that had been donated or bought from America or Germany. We designed our business so that, after we had earned our reputation from delivering service, we could also justify new equipment sales.

Pacific Diagnostics is now a recognized source of expertise, providing service, maintenance and guidance for complex equipment, even for its competitors in the region. Old habits are fading away; for example, it is no longer as common for people who need CT-scans to travel to India to do the procedure.

In healthcare systems in an emerging economy, sustainable practices are a key to stability. They make it easier to invest wisely in advanced equipment, especially when resources are limited. Even if the machines grow obsolete and are replaced, the trained people tend to remain, and can build on the skills they already have.



"We proved to our customers that their total cost of ownership comes down when repairs and supplies are delivered promptly. They no longer perceive the devices as too expensive."

—Prashant Gokarn

Muchene, the chief financial officer of Pyramid Group, offers this perspective:



Muchene: The impact of a well-maintained machine isn't always obvious in the abstract. It saves lives. In Tanzania, as part of normal preventative maintenance, an engineer found a small code error that they fixed. Someone with

less training might not have spotted it. And if the helium had started to leak from the machine as a result, it would fail completely. Then the machine wouldn't be available, and that would mean a new investment from the hospital, and a much worse relationship. Our customers now trust us to give them this kind of service.

Lesson 3: Expand Geographically with an Eye Toward Differentiation

Practices that succeed in one emerging market can make a company seem distinctive enough to be invited elsewhere. That happened with the Pacific Diagnostics approach to service and installation. Other companies in the field, referred by Siemens or other major suppliers of devices, began to request the company's help.

Pyramid Group and its subsidiaries are looking to expand, balancing the demands of growth with the investments needed to maintain quality. When they consider extra assignments, they explicitly look not just at the parameters of the assignment, but on its alignment with their values.

Three leaders of the company recount some of their perspective about the opportunities and challenges of geographic expansion.



Okore: Our customers in Tanzania started recommending our services to other hospitals. Then, starting around 2011, our diagnostics equipment suppliers suggested we move into other countries where they did business. We jumped at every opportunity.

We had to learn to mimic the way Siemens delivered their products in Europe and North America so that we could try and do the same in Africa. It was a simple execution of the concept: think globally, act locally.



Gokarn: In late 2011, we were given the opportunity to handle a crisis for one of our principals at Siemens, for Nigeria. So, they dispatched us [to a hospital on the outskirts of Abuja]. We assessed the situation, we took the installation into our hands, and we turned it around. [It was a new MRI machine, which might have been damaged by problems with the electric power.]

This was probably our turning point for our expansion into the other countries in Africa. That's when Siemens also took notice, and they said, "Guys, if you are able to do this work, why are you not thinking of, let's say, expanding into other regions in Africa?"

So, Nigeria was one of the first that we went to. We then started moving out in the region. We had the Kenyan market, the Ugandan market, Mozambique, and then of course for the American devices market, we moved into West Africa. 2011 opened our eyes for our expansion.

Previously the other distributors saw little value in after-sale service. Now they are increasingly asking us to subcontract that side of it.



Adamali: We have come to a point where Siemens has started trusting us to do all of their installations in Africa with the exception of South Africa and Egypt.

Lesson 4: Live by Values and Lead by Example

Building trust has been a core aspect of Pyramid Group's success as a business. An enterprise is stronger and more influential when it operates with a dedicated, ethical, and responsive culture. As entrepreneurial enterprises, Pacific Diagnostics and Pyramid Pharma have had to demonstrate that new approaches will serve customers better than the old practices they replaced.

This has involved a combination of compassion and competence: being able to demonstrate an understanding of the pressures on healthcare providers in African countries, and the ability to provide a solution. In this section, the leaders of the company explain their own thinking and reactions, and how that enabled them to set an example that others would follow—including their European and U.S. suppliers.

CFO Muchene explains how this affects the enterprise as a whole:



Muchene: [Abraham] is an entrepreneur and he's very, very passionate about healthcare. He will call you in the middle of the night [to say] that: "I know this customer is blocked because they haven't paid us, but there's a patient and they need our help."

And I'm like, "They know they're a hospital. They know that they work in emergency services and they need these things to support their business. So, they shouldn't [sound] like they should not be paying us."

We always have that conflict. And I love that we are different people; we have different personalities and I complement [his vision] and he complements the back of the business. Our job is to help him and guide his vision so that we don't hold him back, and support him in sustainable ways.

For example, we have set up custom payment plans for hospitals with cash flow problems, allowing them to continue keeping up with the machines.

There's no science to this type of judgment about how much credit and help we give our customers. It's a balancing act. It helps when you know the history of their hospitals and their vision of their business. There can be a collaborative effort to come up with proposals that work for both of us.

One critical aspect of any company's values is the diversity of opportunity for its staff. This doesn't just involve recruiting and promotion, but the mentoring, coaching, and communications that make a diverse staff viable. At Pacific Diagnostics and Pyramid Pharma, there has been a commitment to placing women in leadership positions.

Muchene discusses this commitment in more detail:



Muchene: Currently, Pyramid Group is 52 percent women. I would say that the decision-making authority is divided about 50-50 in the group, and perhaps 70 percent male in our subsidiaries. We have an informal approach where women coach other women individually. And we do more general mentoring as well. One of my team members recently approached me to request my mentorship. I was very humbled, but also excited, because I could see their potential. We've been having sessions to talk about how they can grow personally and professionally. We do the same with some of our customers and local partners.

The values of the enterprise are always linked to its ultimate healthcare goals. The Pyramid Pharma website, for instance, does not emphasize equipment or supply chain logistics. It highlights the quality of healthcare, taking a special interest

in prevention and treatments for diabetes, cancer, and cardiovascular ailments. In a video put out by Siemens, CEO Okore stressed that the company's approach in Dar es Salaam, for example, is not only improving that one city, but the whole country. "(W)e are part of building the community, the healthcare infrastructure," he said in the video. Ensuring health facilities have what they need to provide quality healthcare is the reason for the business's existence, explains Okore.

Okore: : [In all locations,] our team is committed to delivering very high-quality solutions. Our discussions are mostly held around questions like this one: "If it were me who received this service, would I find it acceptable?"

We are trying to instill this way of thinking for everybody joining the company. We hope they will ask: "If the service was for my family, would I be interested? Would I accept this?" That's more or less the theory behind how we engage with each other, and with our customers as well.

African medical facilities have low expectations; they do not believe that their suppliers have good products. That's partly because the customers are not trained to use the product, or because it was badly installed or was oversold. And it's very difficult to run a hospital when the machines are not working. When there are downtimes, this kills the return on the hospitals' investment, and then they do not have the capital to invest in more advanced equipment.

So, we have tried to lead by example, not just for our customers, but for our suppliers. We want to ensure that when companies like Siemens or Medtronic have a global mission, our customers will be part of that. Because we can sell, deliver, and install products well—perhaps not to perfection, but much better than other people in the market—we raise the level of reliability and quality all around.



"We hope [our employees] will ask:

'If the service was for my family, would I
be interested? Would I accept this?"

-Abraham Okore



Conclusion

Healthcare is one of the fastest-growing sectors in Africa, because of population growth, an emerging middle class, and increased foreign investment. But the industry has not yet caught up with the recognized need for higher-quality, less expensive healthcare supplies, technology and practices.

Pyramid Group's case provides a noteworthy example for other entrepreneurs in this field. It is the leading medical devices supplier in the territories where it operates, with a very large market share in some of its product lines, such as sophisticated radiology imaging, laboratory equipment, surgical and cardiac implants products in the territories that we manage. It is also a favored supplier for non-government and government-owned medical facilities in the countries where it does business. Its story demonstrates how a company's innovative business model and operational skill can lead to simultaneous financial and societal benefits.

When IFC and Leapfrog co-invested in Pyramid Group, the goal was in part to enable an entrepreneurial company with a successful business model to continue to expand. But there was also a broader societal purpose. The investors saw an enterprise, which was seeking to deliver on promises that, if fulfilled, would lead to

further beneficial developments in the countries where they operated.

IFC's decision makers had already seen what happens in healthcare when supply chains are inefficient, or when machines are not working. They saw in Pyramid Group a possibility for partnership to foster kinds of changes they hoped to see throughout the sector. Suppliers like Siemens and Medtronic saw the same potential.

But no one would have seen it if the leaders of Pyramid Group had not seen it themselves first. They recognized the logic of social ventures—where a for-profit enterprise becomes a catalyst for beneficial social change, because of the nature of its business model. In their quiet, persistent, matter-of-fact way, Pyramid Group's leadership put that business model into play and became a company to emulate.

The trajectory for the company is continued growth, and potentially further expansion into the Middle East. Enterprises like Pyramid Group appear to have hit on an essential formula for health-related industries. They treat suppliers, customers and staff with candor. They look for opportunities to solve entrenched problems. And they combine operational focus with a human touch.

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