



# How Project Finance Can Revolutionise Healthcare

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## INTRODUCTION

The IFC, in its Business of Health in Africa report, describes how healthcare in Africa is overwhelmingly the worst in the world!

The countries with the highest rates of maternal death, **death under 5 years old**, deaths from trauma & injury, and deaths from infectious diseases are nearly all in Africa.

### So why is healthcare in Africa so poor?

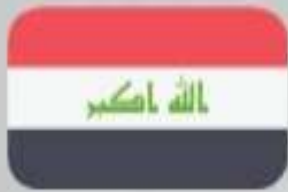
Ultimately, it comes down to resources. Especially as the price of healthcare globally continues to increase. Jon Guber, a Professor of Economics at MIT describes how in 1950, the American government spent 5% of GDP on healthcare. In 2012, it spent almost 20% of GDP on healthcare. By 2075, it's projected to be 40%. That means 40 cents out of every \$1 generated in America will go to healthcare!

**Africa makes up 16% of the world population and carries 23% of the global disease burden**, yet it accounted for just 1% of total global health expenditures in 2015.

Africa has a population of 1.3bn people and an economy smaller than California's (population 40m), this level of poverty magnifies the need for healthcare whilst simultaneously decreasing the capacity to pay for it.

This article explores how project finance can help change this.

## For selected Countries



25 **IRAQ**



52 **AFGANISTAN**



14 **SYRIA**



65 **NIGERIA**

My experience in project finance, both as an investment banker and as a Professor of finance, has firmly convinced me of its usefulness in enabling emerging economies to unlock the value of their natural resources and build the infrastructure they need to move forward.

*-John Finnerty, Author, Project Finance*

## What is project finance?

Project finance is a type of loan that is repaid primarily through the project's cash flow, with the assets, rights, and interests of the project serving as secondary collateral.

Project financing is not based on the firm's existing credit like conventional direct financing, rather it is based on cash flows from a particular project. This financing approach has been used to develop transformative projects across Africa such as railways, airports, and power stations but has been underutilized in healthcare because of what I believe to be the three main reasons.

### 01

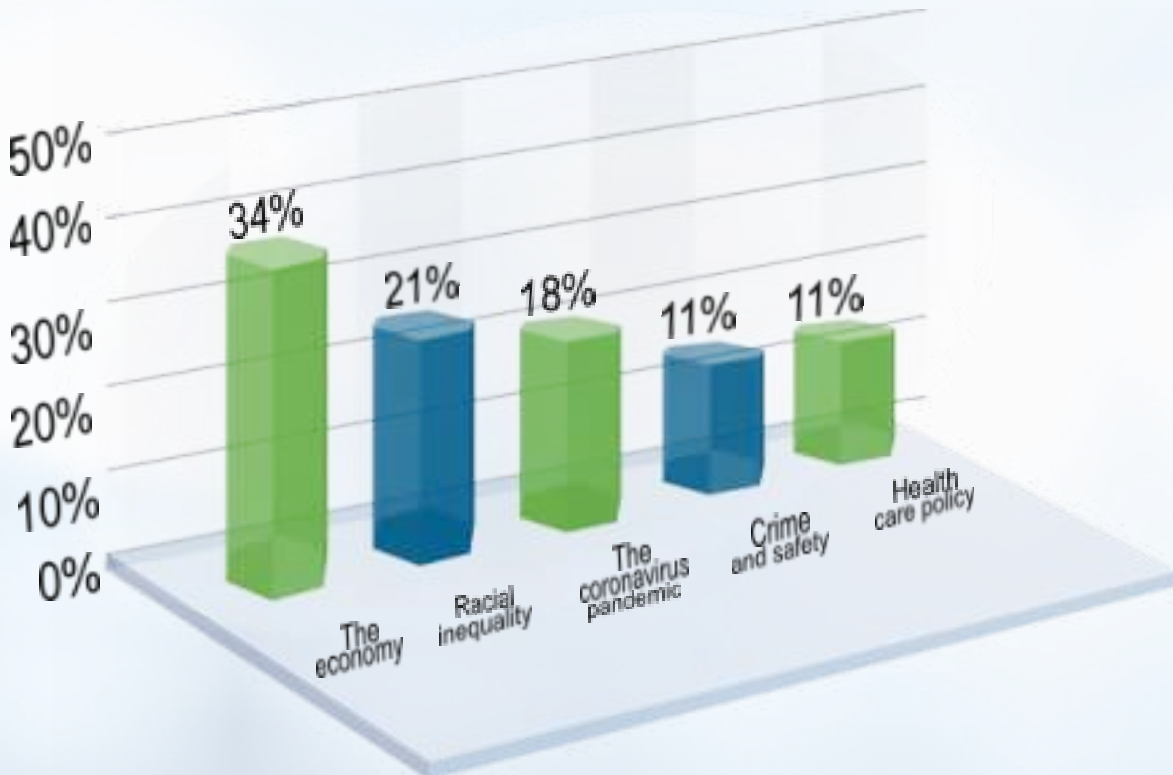
Firstly, healthcare is not seen as a priority for most African politicians. Africans, unlike Americans, do not vote based on healthcare. This study from the Atlantic council shows that the top three issues for Nigerian voters were corruption, security, and the economy.

This contrasts with places like Britain and America where healthcare is much higher up on a politician's agenda. The politics around the funding of the UK NHS and Obamacare vs alternative US healthcare plans are front and center during political campaigns. Healthcare is a make-or-break election issue in these countries. Finland's entire government once had to resign over a failed healthcare policy.



## National exit poll: Issues

Which one of these five issues mattered most in deciding how you voted for president?



Two out of the top five issues that mattered most to US voters in the 2020 election were around healthcare as shown in the diagram above. Politicians like to do the things that will win the next election. There is less political will to undertake projects that are not prioritized by the electorate.

### 02

Secondly, healthcare investment requires specialist knowledge. Much of this knowledge is held by doctors who do not particularly understand or care to understand finance. Whilst bankers who have the finance, do not really care to understand the complexities of healthcare investment. Many countries have recognized how nuanced healthcare investment is and have developed the specialist knowledge to develop and invest in healthcare projects.

At Columbia University, for example, you can spend an entire MBA term learning about just healthcare investment. A deep understanding of healthcare, finance, and increasingly technology is required to effectively develop healthcare projects. If there is no one to bridge the gap as in Africa, deals simply do not get done.

The Flying Doctors Healthcare  
Investment Company

# bridging the gap between healthcare and finance

HEALTHCARE

FINANCE



Thirdly, in the fiscal space, many African governments have high levels of debt and therefore feel the need to prioritize spending on the type of projects that can increase economic growth such as power plants, railways, airports, and bridges. Historically, African governments have provided offtake/guarantees for airports, railways, power stations, and even factories. Subsidies have been offered for fertilizer, diesel, and electricity.

But many African governments still expect millions of the world's poorest people to be able to pay out of pocket for healthcare. Even in far wealthier countries like America and the UK, most people would be unable to afford quality healthcare if they paid out of pocket. The strong link between healthcare and economic growth is often overlooked. An article by Dr Ola Brown written for Stears Business, explains how improvements in healthcare can lead directly to economic growth.

### Why project finance is an ideal tool for the development of healthcare infrastructure

It doesn't depend on the balance sheet of an existing company, therefore can be used to develop projects quickly

The children's hospital in Dublin costs nearly \$3bn in CAPEX alone. That level of healthcare infrastructure spending in Africa would be unthinkable. But it is possible to deliver quality healthcare infrastructure at a fraction of that cost. However, even that level of CAPEX cost would be difficult to achieve for many African governments. Spreading payments over time helps countries to manage their fiscal space making it possible to do more with less.

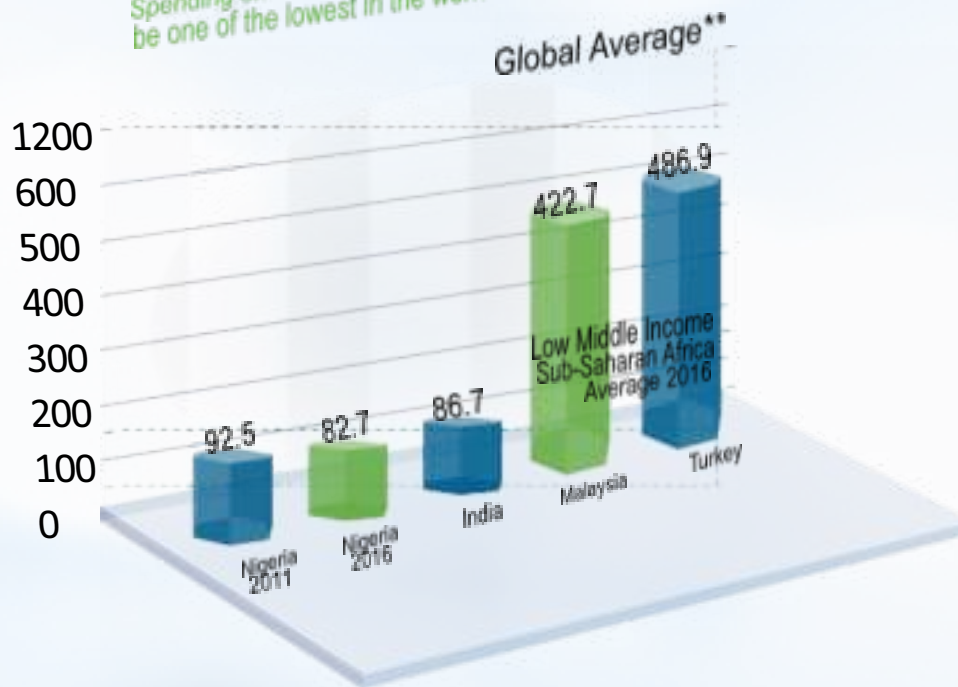
Increases healthcare budget: Healthcare spending in Africa is extremely low. The type of offtake agreements, such as minimum patient number guarantees, that make these types of infrastructure projects bankable also increase the amount of money available for healthcare to citizens whilst protecting the government off-takers against healthcare inflation.

Economies of scale: Large-scale healthcare projects provide economies of scale by reducing fragmentation. This provides more efficiency and cheaper costs per patient. It also increases quality, bulk purchases of equipment and drugs can be made by these large-scale healthcare projects, further reducing care costs. I explain this further in my article on the world's cheapest hospital.



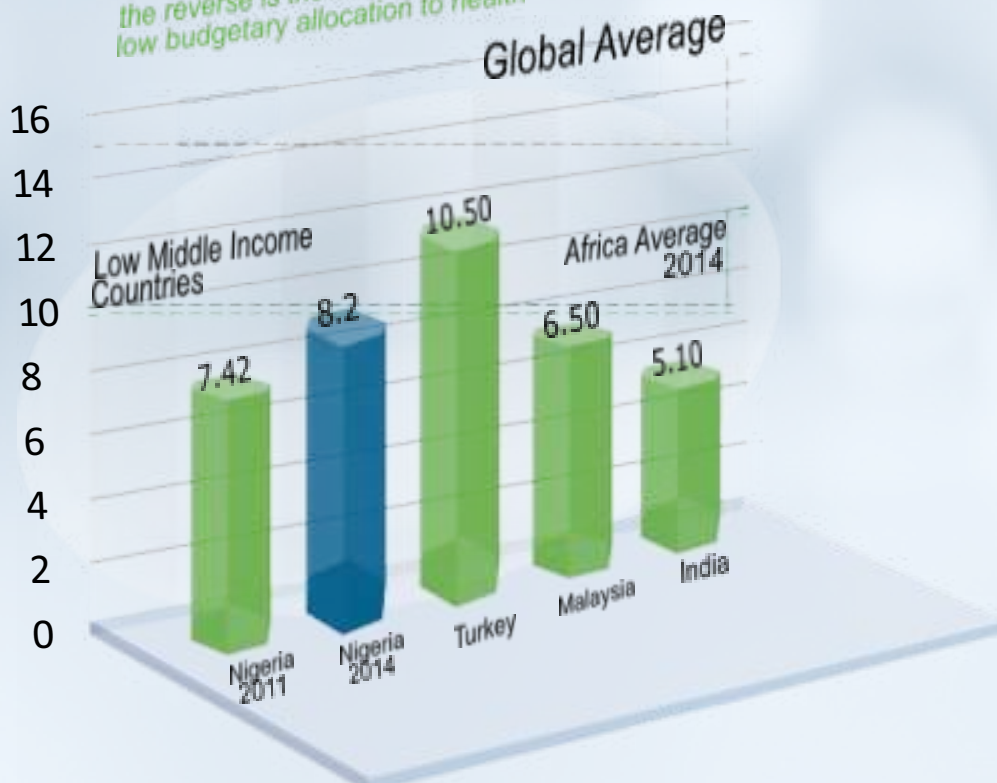
## Health Spending per Capita \$US

Spending on health in Nigeria estimated to be one of the lowest in the world



## Health Spending to Total Government Spending (%)

Globally, government spends nearly 50% more on healthcare than the private sectors, the reverse is the case in Nigeria with very low budgetary allocation to health



Large scale centralized hospitals in India allows operations to be done at 1- 10% of the prices of American hospitals, but because of the large volumes, the procedures are profitable and clinical outcomes (quality) are the same, sometimes better

### WHAT NIGERIA CAN

**Central, High Volume, Specialist CENTRES**

**IN BANGALORE, INDIA,**

Heart surgeons perform daily state-of-art heart surgery on adults and children at an **AVERAGE COST OF \$1,800**

**FOR THE RECORD,**

That's about 2% OF the \$90,000 that the **Average heart surgery costs in THE UNITED STATES**

**And when it comes to the quality of the heart surgery, the patient outcomes are among the best in the world**

---

**SURGEONS IN THIS INDIAN HOSPITAL**

Performed 37 Heart Surgeries on **Adults and Children**

Including one **Heart transplant** in a single day

This translates into about 900 procedures a month, or about what most U.S. university hospitals do a year.

**Dr Ola Brown,**

Follow me @naijaflyingdr

## LEARN FROM INDIA'S LEADING HOSPITAL

### OPERATION CUT COSTS

India's Narayana Hrudayalaya Hospital uses high volumen to lower health-care costs.

Average price charged for coronary artery bypass graft surgery\*

Narayana Hrudayalaya	
\$ 2,000	
Indian Private hospitals	
\$ 5,000	
U.S. Medicare	
\$ 20,000 to 42,000	

Coronary artery bypass graft surgeries performed in 2008

Narayana Hrudayalaya	3174
3174	
Cleveland Clinic	1367
1367	
Massachusetts General Hospital	536
536	

Pediatric cardiac surgeries performed in 2008

Narayana Hrudayalaya	2,777
2,777	
Cleveland Clinic	1,026
1,026	

\* Price for overall packages including hospital stay and Surgery

Source : Narayana Hrudayalaya Hospital; Cleveland Clinic; Massachusetts General Hospital; Children's Hospital Boston; Centers for Medicare & Medicaid; Bangalore Enterprises

There are other benefits to governments: economic growth and increased productivity. Africa's health financing gap is at least \$66 billion, and business opportunities in the healthcare and wellness sector in Africa are estimated to be worth \$259 billion by 2030.

**This holds the potential to create sixteen million jobs!**

**FD** Flying Doctors  
HEALTHCARE INVESTMENT COMPANY

## IMPACT OF INVESTMENT IN AFRICA HEALTHCARE

**\$66+**  
billion healthcare financing gap in Africa

**\$259+**  
billion business opportunities by 2030

**16M** jobs that could be created

Source: [www.devex.com](http://www.devex.com)

Learn about Flying Doctors Healthcare Investment Company Specialist approach to Investment in these sectors → [www.fdinvestmentcompany.com](http://www.fdinvestmentcompany.com)



According to IBISworld, the biggest sources of employment in almost every American state are in healthcare or education. In fact, three of the top ten American companies by revenue are healthcare companies. The UK NHS is the second largest employer in the entire world.

In Africa, job creation has a knock-on effect on increasing security, reducing illegal migration, and helping to fight terrorism. Learn more about the massive multiplier effect that healthcare has on the economy by watching our webinar with the Nigerian Ministry for trade and Investment.

## Categories Of Project Finance

Project finance can be categorised as follows:

- **Greenfield:**  
This involves constructing new (“green”) facilities from the ground up.
- **Takeover, Privatization or Rehabilitation of existing assets:**  
This involves the sale of already existing public sector facilities to the private sector in the case of privatization, and the restoration and upgrade of a building that is in existence in the case of rehabilitation.
- **An extension of an existing capital asset.**

### Public Private Partnership

This is the cooperation and collaboration between public and private sectors to ensure funding, construction, renovation, management, maintenance and capital-intensive projects. Typically, this has a long-term nature and a key feature of a PPP is government ownership of the assets (facilities and equipment) at the end of the contract.

### Why Are PPP’s Ideal for Healthcare?

On average, over 50% of Africans pay for healthcare out of pocket (with countries like Nigeria as high as 75%). This is significantly high compared to the wealthier developed countries. It is therefore impossible to achieve universal healthcare without state support, as the poor would be unable to afford quality healthcare if they have to pay out of pocket. The use of PPP in healthcare is the most sustainable means to ensure healthcare is made available to the bottom of the pyramid.

### PPP’s in Healthcare

The use of project finance and PPP’s has been widely used in various sectors. Globally, the majority of PPP projects worldwide have been implemented in non-health sectors such as transportation, electricity, telecommunication.

Despite all the potential benefits of PPP’s, the Project Finance and Infrastructure Journal (IJGlobal) estimates that Sub-Saharan Africa and the Middle East, and North Africa together constitute less than 5% of projects globally.



## Benefits of PPP in Healthcare

### Increased funding for healthcare infrastructure projects:

Traditionally, infrastructure is funded by governments through public budgets. However, many governments of Emerging and Developing economies do not have sufficient public budgets to fund all of their infrastructure needs. Governments simply lack the fiscal space to finance healthcare infrastructure. Hence, the use of private capital remains the only sustainable means for financing infrastructure projects. PPP's, therefore, is helping reduce the burden of paying for these infrastructural projects upfront as payment can be spread out over very long tenors (typically 15+ years, usually at least longer than five).

### Increased efficiency:

Experience has shown that the private sector can bring in needed financing, technology, expertise, and efficiencies for the construction and operation of infrastructure projects, creating value for money and improving service delivery. This is detailed in a report by Global Infrastructure Facility.

### Risk sharing:

An advantage of PPP is that both the public and private sector partners have “skin in the game”. This means that the risk is shared amongst both parties. While risk allocation in PPP projects varies on a case-by-case basis, optimal risk allocation is one of the key Value for Money (VFM) drivers in a PPP delivery model. However, the rule of thumb as highlighted in a report by the International Institute for Sustainable Development (IISD) is that risk should be allocated to the party best able to manage them at the lowest cost.

## PPP Models in Healthcare

A report by UCSF Global Health Group and PwC noted that there are six major functions governments typically engage the private sector to carry out. These are:

- Finance – Financing or co-financing of the project.
- Design – Design of the project, including design of the infrastructure and care delivery model.
- Build – Construction or renovation of facilities in the project.
- Maintain – Maintenance of hard infrastructure (this includes facilities and equipment where applicable).
- Operate – Supply of equipment, IT, and delivery/management of non-clinical services.
- Deliver – Delivery and management of specified clinical and clinical support services.

Furthermore, they highlighted three major PPP models for Healthcare.

### Infrastructure-based Model

This involves the construction and operation of facilities, often including a range of nonclinical or clinical support services. The model first became predominant in healthcare in the 1990s when the UK implemented a large-scale scheme to upgrade aging facilities and expand capacity of the National Health Service (NHS). At least 100 new NHS hospitals were built through this “Private Finance Initiative” within 12 years (thus why the model is commonly referred to as the “PFI” model).

### Discrete Clinical Service Model

Also known as the asset-light approach. This focuses on the provision of standalone clinical services. It is popularly used for rendering diagnosis services and has been employed in India, Romania, and even Nigeria.

### Integrated PPP Model

This involves offering a suite of clinical services in addition to building a new, or refurbishing an existing infrastructure. The private sector is also responsible for maintaining the infrastructure throughout the life of the contract. This model was employed in Valencia which is perhaps one of the most widely cited clinical services PPPs in the literature. This project is known as “the Alzira model.”

A report by PwC notes that when PPP projects include clinical services - partners must confront workforce costs, which can be between 50% and 75% of health spending. Healthcare is a labor-intensive industry, and in many countries, it is heavily unionized with rigid compensation structures.

In terms of impact, the Integrated PPP Model is most impactful as the private sector can handle the end-to-end delivery of both clinical and non-clinical services. It is however the most complex of the three models.

## CASE STUDY:

### Lessons from the First Healthcare PPP in Africa: Lesotho Project

Lesotho is a landlocked kingdom encircled by South Africa. The 2 million residents of Lesotho faced numerous health challenges and as such sought to replace their main 100-year old public hospital, Queen Elizabeth II. In addition, they faced a shortage of nurses and physicians. The private operator for the project was Netcare, which manages hospitals and clinics in the UK and South Africa. The project was a fully integrated model and the 18-year contract with the Lesotho government covered the design and construction of a 425-bed referral hospital, feeder clinics, and the provision of all clinical services. It was the first of its kind in Africa.

### What went wrong:

- Projection error, and as such the project was 21% above budget, 3 years into project commencement.
- The skills gap in the public sector and over-reliance on the private partner.

### Lessons learnt:

- Government should have done a backward horizontal intervention - Strengthening Primary Healthcare is the most inclusive, effective, efficient, and sustainable approach to improve a nation’s healthcare.
- There was a need to build PPP knowledge capacity ( technical, legal, etc.) especially for the public sector.

### Risk in PPP’s

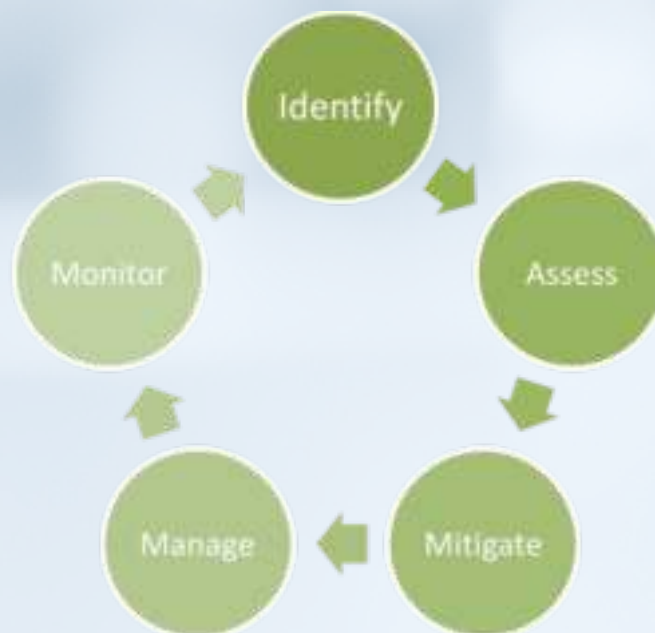
UCSF Global Health Group and PwC identified three major categories of risk within PPP projects:

1. General and financial risk: Financial risk could include bankruptcy. Some general risks include force majeure risk, changes in legislation, country and political risk.
2. Planning/design and construction risk: Planning risk includes changes in design risk, approvals, and land acquisition. Some construction risk includes cost overruns and completion risk.
3. Operating risk: This includes demand risk, operating and maintenance cost risk, equipment downtime risk, and risk in clinical performance.

### Risk Management in PPP’s

Although risk cannot be eliminated during a project, the goal is to minimize it as much as possible. Because of the long-term nature of such projects, risk management in PPP’s is a dynamic and ongoing process.

To properly manage risk throughout the project lifecycle, it is recommended that the standard five steps risk management process is followed as shown below.



Furthermore, we highlighted below some of the risks that materialize during a project and their respective mitigants.

Risk Category	Sub-category	Typical Mitigants
<b>General Risk</b>	Force Majeure	<ul style="list-style-type: none"> <li>● Insurance</li> </ul>
	Political Risk	<ul style="list-style-type: none"> <li>● Political risk insurance</li> </ul>
<b>Financial Risk</b>	Financing	<ul style="list-style-type: none"> <li>● Standby credit facility</li> <li>● Completion guarantees by sponsors and contractors</li> </ul>
<b>Planning/Design Risk</b>	Design risk	<ul style="list-style-type: none"> <li>● Delay damages</li> </ul>
<b>Construction Risk</b>	Cost overruns	<ul style="list-style-type: none"> <li>● Fixed-price contracts</li> <li>● Turnkey Agreements</li> </ul>
	Completion risk	<ul style="list-style-type: none"> <li>● Delay damages</li> <li>● Performance Bonds</li> </ul>
<b>Operating Risk</b>	Operating and maintenance cost risk	<ul style="list-style-type: none"> <li>● Maintenance and Inspection Obligations</li> <li>● Maintenance Reserve Account (MRA)</li> </ul>
	Equipment downtime risk	<ul style="list-style-type: none"> <li>● Maintenance and Inspection Obligations with OEMs</li> </ul>
	Demand Risk	<ul style="list-style-type: none"> <li>● Offtake Agreements</li> </ul>
	Supply Risk	<ul style="list-style-type: none"> <li>● Supply Agreements</li> </ul>

### Critical success factors for PPP's

#### Flexibility

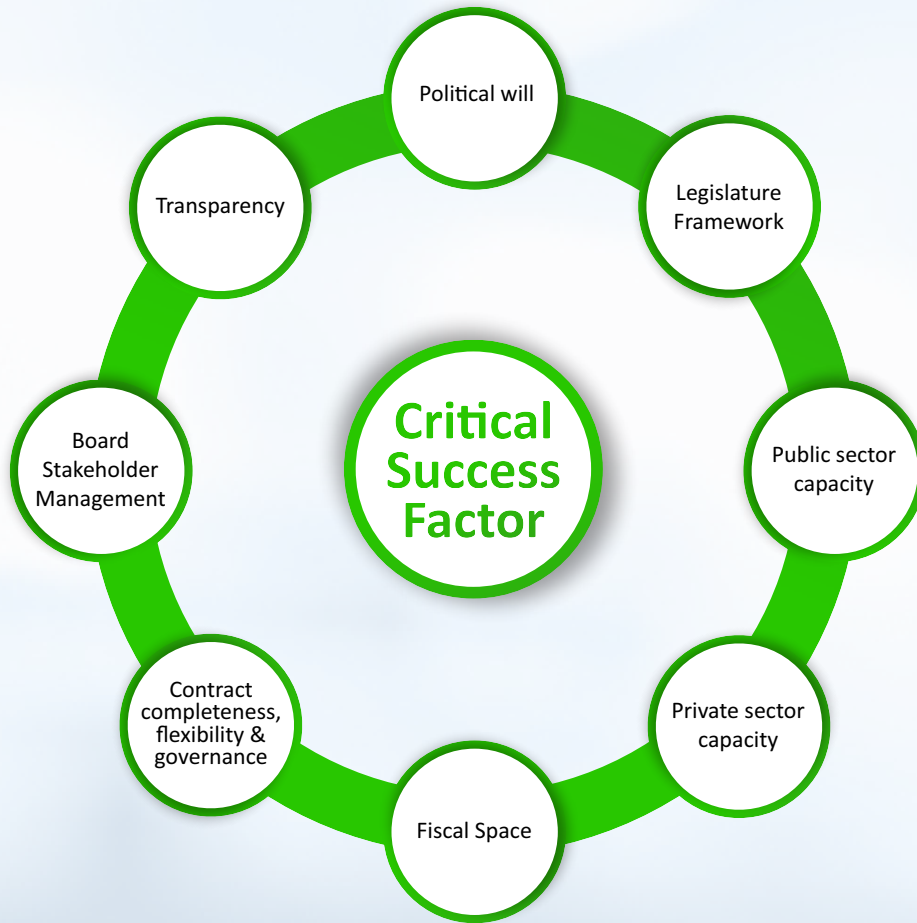
Given the long-term nature of PPP projects (they typically range from 7- 15 years), it is impossible to address all risks involved as some risk may manifest mid-way into the projects. Therefore, parties within the project must be constantly monitoring the business environment and should be nimble enough to make changes when necessary.

#### Labour Cost

Healthcare is a labor-intensive industry. As highlighted above, the cost of labor must be assessed for a project to be successful. In addition, to achieve high service quality, there is a need to attract the best physicians. In most African countries where we operate, there is also an issue of supply. The ratio of doctors to the 10,000 population in Africa remains significantly below the WHO recommended global average of 15. Therefore, there is the need for capacity development and task shifting, thereby further reducing the human capital cost of healthcare incorporated into projects.



Some additional critical success factors for PPP's highlighted by UCSF Global Health Group and PwC are shown below:



### How FDHIC is bridging the gap

FDHIC is a pan-African tech-enabled PPP project company. We create a working ecosystem involving large PPP projects and healthcare-focused technology companies. Our innovative financing solutions can profitably improve the availability of healthcare across Africa.

- Our large-scale PPP facilities enjoy economies of scale thereby increasing efficiency and competitiveness.
- We further increase efficiency and reduce the cost of patient's treatment through the use of technology, thereby making medical care available, accessible and affordable.
- Our model also taps into the higher-income segments to cross-subsidize services to the lower-income segments, thereby making expensive procedures/surgery affordable to the majority of Africans.
- Our team consists of experts in healthcare and finance, allowing us to bridge the knowledge gap between both worlds.
- We leverage on partnerships we have built across Africa over the past decade.

## Conclusion

In the light of the COVID19 epidemic, we have all learned the hard way that poor healthcare infrastructure anywhere, can very rapidly become a problem everywhere.

Improved African healthcare systems make the world safer.

COVID19 also taught us that most drugs, medical devices, and medical consumables come from China. Whilst this is not a bad thing in itself, many countries are looking for ways to diversify their manufacturing supply chains to improve health security. Investment in the African value chain will create new industries enhancing supply chains for the manufacturing of medicines and medical equipment.

Although our investment in healthcare commenced within the health technology space, we have realized that innovation in financing is just as important, if not more important than the next piece of cool tech (see 'Fixing Healthcare in Nigeria; A guide of African healthcare policy makers', by Dr. Ola Brown).

Project financing can be a useful part of the funding mix to develop healthcare infrastructure projects in Africa. Utilising this approach more frequently for healthcare would save lives, create jobs, improve global health security and grow the local economy. A better investment would be hard to find.



**Flying  
Doctors**

HEALTHCARE INVESTMENT COMPANY