

DETAIL PROJECT REPORT OF CHARITABLE PATHOLOGY & RADIOLOGY LAB OF 70 BED
CHARITABLE HOSPITAL IN BAGHI BALA KABUL AFGHANSITAN

13 STOREY HOSPITAL BUILDING IS READY CONSTRUCTED

WEBSITE www.greenecoglobal.com

Report Prepared by Dr. Dipti Tawde, M.D. MBA Medical Practitioner.

Report Checked by Viren Sharma

Engineer, M.B.A, LEED AP, NFNLP.

Principal Consultant, Managing Director.

Georgia development Mission Not for profit NGO

**Registered in Georgia, Developing & Managing 77 bedded hospital
project in Kabul Afghanistan**

Green Eco Global LLC

12 A Bedia Street, Nutsubidze Plato, Micro District 1, Tbilisi, Georgia.

**Email: viren@greenecoglobal.org ; virenuae@gmail.com Website
www.greenecoglobal.org**

Mobile: + 995 558 000 674 / +995 558 000 675 / +91 989 3610 800



Executive Summary

Georgia development mission is Not for Profit NGO registered with Government of Georgia, Developing and managing 77 bedded hospital in Kabul Afghanistan.

► **Mission**

To serve and enrich the quality of life and the development of internally Displaced Persons, Refugees and Community through the different deployment of technology and human expertise in the field of Healthcare.

► **Vision**

We will strive with excellence to fulfil the needs and development of internally displaced person, refugees and community.

► **Values**

We provide services with courage confidence, passion and love in a manner that is laudable, transparent and ethical.

► **Goal**

To bring Stability and harmony in their life of internally displaced persons by their economic and healthcare development.

Objectives

1. The main objective of **Georgia development mission a Not for Profit NGO** is to utilize its **20%** of profit to give affordable healthcare services to about **28%** of widow women in Afghanistan, internally displaced people, and economically weaker section.
2. Provide Diagnostic service by tapping the expertise of the private sector
3. Speedier diagnosis, reduced incidence of complications due to delays in diagnosis
4. Increased access of people to improved quality of diagnostic services at affordable costs
5. Reduction in upstream treatment costs of complicated conditions resulting in financial savings
6. Mobilize private capital to speed up the delivery of infrastructure and services
7. Enable efficient use of Diagnostic service by improving the identification of long-term risks and their allocation, while maintaining affordable tariffs
8. Provide higher quality of services and access best practices
9. Enable regular maintenance and upgrades.

Charitable Pathology & Radiology Laboratory

- ▶ Medical diagnosis has evolved from visual and aural observation, tasting of body fluids, primitive testing with basic chemicals and heat to advanced atomic level measurements at present. Medical diagnosis presents a truer picture of the nature of disease, status of penetration of the disease, degree of cure and the health of the cellular components of the body. Medical treatment procedures have become highly dependent on diagnostic service to provide measured, accurate and effective treatment, 80% of the medical treatment is dependent on proper diagnostic service.
- ▶ The branches of medical diagnosis is widely divided into two, anatomical pathology and clinical pathology. Anatomical pathology includes histopathology, cytopathology, electron microscopy etc and Clinical pathology includes, microbiology, bio chemistry, haematology, genetics, reproductive biology etc, each of these sub sections have further specialized fields of study which offer an in-depth view of the disease and the body. While the advantages medical diagnosis is well documented and proved in medical treatment efficacy, it is also equally costly to provide for high-end diagnostics. Diagnostic centres originally associated as a part of hospitals have branched out as a separate business, to economise the service and provide a wide spectrum of service. A laboratory diagnostic service has to be mandatorily approved by a qualified pathologist
- ▶ The convergence of an aging population, new technology, and an increasing number of clinical applications and reimbursements has created a favourable environment for ambulatory imaging centres. From a patient's perspective, features such as easy access, parking, appointment availability, and a setting that caters to outpatients are attractive compared with the hospital environment. Before embarking on a venture, the execution of a careful, thorough planning process, from the inception of the idea to the opening, is vital to success
- ▶ Medical Imaging Services (Diagnostic centre) are the clinical establishment that conduct investigation/ therapy /procedures (which does not require overnight admission) of patients that provide information for diagnosis, prevention and treatment of disease or assessment of health.

Healthcare Scenario of Afghanistan

An estimated 6 million people have no access, or insufficient access to health care.

There are many barriers to creating an accessible, effective, and sustainable health care system in Afghanistan. The main challenges of rebuilding Afghanistan's health care system include lack of security, lack of infrastructure, economic hardship, poor coordination among government and health care providers, difficult access to health care facilities, unsuitable hospital conditions, and few trained health care workers, especially women.

Factors that influence the inadequate availability of Pathology and Radiology services

- ▶ 1. Non-availability of modern automatic and semi-automatic equipment's which increase efficiency of the output
- ▶ 2. High capital cost of high-end equipment's required for advanced tests
- ▶ 3. Shortage of skilled manpower for operating the diagnostic centre
- ▶ 4. Insufficient supply chain and logistics of consumables and other chemicals required for the service
- ▶ 5. Inadequate resources to meet the diagnostic load of the hospital
- ▶ 6. Lack of standard operating procedures for sample collection, management, testing, reporting, patient management and infection control
- ▶ 7. Inadequate bio medical waste management practices.

Lacunae in the system adversely effects the efficiency and operation of the hospital

- ▶ 1. Delaying the treatment procedure
- ▶ 2. Restricting the treatment capacity of the medical practitioners
- ▶ 3. Absence of proper diagnostics may lead to judgmental errors on the condition of the patients
- ▶ 4. Everyone is immune or counter reactive to certain drugs and chemicals, lack of diagnostic service may adversely affect the treatment out comes.
- ▶ 5. Inhibits the continuity of medical treatment
- ▶ 6. De-motivates the medical practitioners are they are not able to extend to their fullest capacity

Scope of services Charitable Pathology & Radiology Laboratory

Blood investigation

- ▶ CBC
- ▶ Viral Markers
- ▶ Hemogram
- ▶ LFT
- ▶ RFT
- ▶ Malarial parasite
- ▶ Dengue etc
- ▶ Histopathology

Medical scanning devices:

- ▶ X-ray machine
- ▶ Dental X- Ray
- ▶ Ultra sound unit
- ▶ CT scan imaging machine (Computerised Tomography)
- ▶ MRI imaging machine (Magnetic Resonance Imaging)
- ▶ Mammography
- ▶ 2D Echo
- ▶ EEG (Electro Encephalogram)
- ▶ PFT (Pulmonary Function Test)

Pathology Laboratory Accreditation

CAP Accreditation (College of American Pathologist)

- ▶ The CAP Laboratory Accreditation Program is an internationally recognized laboratory inspection program, the only one of its kind utilizing multidisciplinary teams of practicing laboratory professionals as inspectors. Because they deal with laboratory issues daily, these inspectors are uniquely qualified to provide you with a thorough inspection that is specific for each section of the laboratory. A laboratory inspection occurs every two years. In the years when an on-site inspection does not occur, the laboratory must perform a self-inspection using materials provided by the CAP. The accreditation program is voluntary and helps laboratories achieve the highest standards of excellence in patient care.
- ▶ What Is CAP Laboratory Accreditation?

Accreditation is a continuous process by which the CAP reviews and monitors the laboratory's performance.

All testing performed at a single location under the leadership of one laboratory director must be reported during the application process.

Radiology Laboratory Accreditation

ACR (American College of Radiology) Accreditation

- ▶ The ACR awards accreditation to facilities for the achievement of high practice standards after a peer-review evaluation of its practice. Image quality and procedure evaluations are conducted by board-certified radiologists and medical physicists who are experts in the field.
- ▶ The program also evaluates personnel qualifications, adequacy of facility equipment, quality control procedures and quality assurance programs. All findings are reported to the practice via a comprehensive report that includes recommendations for improvement.

- ▶ The ACR accredits facilities in the following modalities:
 1. Breast ultrasound
 2. Computed tomography (CT)
 3. Magnetic resonance imaging (MRI)
 4. Mammography
 5. Positron emission tomography (PET)
 6. Ultrasound

Projected Financial

General Assumptions

Calculations are made on the following assumptions:

1. The Hospital will be commissioned as fast as possible subject to the available of fund.
2. 300 working days has been considered for revenue calculations.

Year	Capacity Consumption
Year 1	50%
Year2	60%
Year 3	70%
Year 4	80%
Year 5	90%
Year 6 onwards	90% and more

3. Price increment year on year has been considered at 5%
4. For calculating revenue share to the promoter, revenue from implants have been considered at 10% of the gross revenues for calculating net revenues.
5. Specialist doctors and Resident doctors will be on salary/contract basis and the income generated through professional charges will be debited to the hospital account.
6. Depreciation has been calculated on a straight-line basis

Proposed Operational Model for Charitable Pathology and Radiology Laboratory

Profit & Loss owned by **GEORGIA DEVELOPMENT MISSION A NOT FOR PROFIT NGO**

- ❑ In this model, the P&L responsibility would be owned by the Georgia Development Mission a Not for Profit Ngo would operate the Charitable Pathology Laboratory and own responsibility for the profit and loss account of the operations.
- ❑ 20% of Profit earned will be used for Operational purposes of Charitable Pathology and Radiology laboratory.
- ❑ The promoter would invest on the capital expenditure incurred on the building, associated utilities and services, architectural finishes and the medical equipment's. Any expansion of the infrastructure would also, be invested by the promoter.
- ❑ All expenditure incurred on the day to day operations and the maintenance would be taken care by Georgia Development Mission a Not for Profit Ngo.
- ❑ All future expenditure for replacement/repair of medical equipment for the existing facility would be the responsibility of Georgia Development Mission a Not for Profit Ngo.
- ❑ The term of the agreement would be for a minimum of 15 years with a provision to extend further based on the agreement of both parties.
- ❑ In return for the promoter's investment in the project, Georgia Development Mission a Not for Profit Ngo proposes a revenue share to the promoter such that there is a return of approximately 8% IRR on the total investment in the 15 years of contract.
- ❑ The revenue share would be paid from the 2nd year on wards with the 1st year being a moratorium towards stabilizing the operations of the new unit.

Human Resource Management for Charitable Pathology Laboratory

Department			Salary per month/person	Salary per year/Person	Total salary a year
Pathology					
	Chief Pathologist	1	\$4,615	\$55,380	\$55,380
	Pathologist	3	\$2,308	\$27,696	\$83,088
	lab technician	2*3=6	\$385	\$4,620	\$27,720
	Reception	1*2	\$277	\$3,324	\$6,648
	Billing	1*2	\$187	\$2,244	\$4,488
	Ward Boy	1*3	\$154	\$1,848	\$5,544
	Housekeeping	1*3	\$132	\$1,584	\$4,752
	Biomedical Engineer	1	\$385	\$4,620	\$4,620
	Manager	1	\$769	\$9,228	\$9,228
	Total Salaries		\$9,212	\$1,10,544	\$2,01,468

Human Resource Management for Charitable Radiology Laboratory

Department			Salary per month/person	Salary per year/Person	Total salary a year
Radiology					
	Chief Radiologist	1	\$4,615	\$55,380	\$55,380
	Radiologist	3	\$2,308	\$27,696	\$83,088
	X ray technician	1*3	\$385	\$4,620	\$13,860
	MRI & CT scan technician	1*3	\$385	\$4,620	\$13,860
	Reception	1*2	\$277	\$3,324	\$6,648
	Billing	1*2	\$230	\$2,760	\$5,520
	Ward Boy	1*3	\$154	\$1,848	\$5,544
	Housekeeping	1*3	\$132	\$1,584	\$4,752
	Biomedical engineer	1	\$385	\$4,620	\$4,620
	Manager	1	\$769	\$9,228	\$9,228
	Total Salaries		\$9,640	\$1,15,680	\$2,02,500

Revenue Assumptions

► Charitable Pathology Laboratory

Particulars	No. of Tests per day	No. of Days	Total No. of Tests in a year	Charges per Test	Total Revenue
Pathology	441	365	\$1,60,965	\$8	\$12,87,720
10%	<i>Growth Rate in charges and number of patients</i>				
Particulars↓ / FYE →	March-18	Mar-19	Mar-20	Mar-21	Mar-21
Revenue					
Charges		\$9	\$10	\$11	\$12
No of tests	\$8 \$ 1,60,965	\$1,77,062	\$1,94,768	\$2,14,244	\$2,35,669
Revenue	\$ 12,87,720	\$ 15,58,141	\$18,85,351	\$22,81,275	\$27,60,342

► Charitable Radiology Laboratory

X-ray	50% occupancy	60% occupancy	70% occupancy	80% occupancy	90% occupancy
bed occupancy	35	42	49	56	63
IPD Conversion (30% of bed occupancy)	11	13	15	17	19
OPD conversion (30% conversion)	96	106	116	128	141
Referral Marketing	30	33	36	40	44
Total	137	151	167	185	203
Total Revenue from X ray	\$955.5	\$1058.4	\$1170.12	\$1291.542	\$1423.6362
Total revenue from other radiology test					\$29,32,604
	\$20,03,008	\$22,03,308	\$24,23,639	\$26,66,003	
Total Radiology revenue	\$2003963.192	\$2204366.862	\$2424809.428	\$2667294.78	\$2934027.199

Particulars	Daily Basis	No. of Days	Total No. of test	Charges per Test	Total coverage - 12hrs , from 8 AM to 8PM	Total Revenue
X-Ray	30	365	10,950	\$7		\$79177
Sonography	12	365	4,380	\$33	1 per hour	\$144877
C.T. Scan	12	365	4,380	\$82	1 per hour	\$360508
MRI	12	365	4,380	\$115	1 per hour	\$502015
ECG	24	365	8,760	\$5	2 tests per hour	\$40431
Stress Test	12	365	4,380	\$25	1 per hour	\$107815
2 D echo	12	365	4,380	\$37	1 per hour	\$161723
Pulmonary Function Test	12	365	4,380	\$14	1 per hour	\$60646
Executive Health Check up	12	365	4,380	\$77	1 per hour	\$336923
EEG	12	365	4,380	\$21	1 per hour	\$90969
EMG/NCV	6	365	2,190	\$54	1 case every 2 hours	\$117923
Total	156		56,940	\$43(Average)		\$20,03,008

NOTE

- ▶ The main objective of **Georgia development mission a Not for Profit NGO** is to utilize its **20%** of profit to give affordable healthcare services to about **28%** of widow women in Afghanistan, internally displaced people, and economically weaker section.
- ▶ But in the first year of operation of Charitable Radiology laboratory there is no profit so 20% of revenue is kept reserved for charity purpose.
i.e. \$400601 of \$2003008 is kept reserved for charity.

Profit & Loss statement for the Charitable Pathology Laboratory

All Values are in US\$ format

Revenue					
Sales	12,87,720	15,58,141	18,85,351	22,81,275	27,60,342
Cost of goods sold	128772	155814	188535	228128	276034
Gross margin	90%	90%	90%	90%	90%
Operating Income	11,58,948	14,02,327	16,96,816	20,53,148	24,84,308
Expenses					
Salary of staff	2,01,468	2,01,468	2,21,615	2,21,615	2,43,776
Laboratory Management System	15,000	5,000	3,000	3,000	3,000
Rent of Space	1,44,000	1,44,000	1,44,000	1,44,000	1,44,000
Marketing cost	1147	1147	1147	1147	1147
Running cost	115895	140233	169682	205315	248431
Electricity	5000	5000	5000	5000	5000
UPS	1000	500	500	500	500
Generator	7000	2000	2000	2000	2000
Equipment purchase	175700	0	0	0	0
material purchase(reagents & slides)	148000	148000	148000	148000	148000
Depreciation	17570	35140	52710	70280	87850
Operating expense	8,31,780	6,82,488	7,47,653	8,00,857	8,83,704
Profit/Loss	3,27,168	7,19,839	9,49,163	12,52,291	16,00,604
Charity	65434	143968	189833	250458	320121

Profit & Loss statement for the Charitable Radiology Laboratory

All Values are in US\$ format

Revenue					
Sales	2003963	2204367	2424809.4	2667294.8	2934027
Cost of goods sold	200396	220437	242481	266729	293403
Gross margin	90%	90%	90%	90%	90%
Operating Income	18,03,567	19,83,930	21,82,328	24,00,565	26,40,624
Expenses					
Legal Requirement	3000	1000	1000	1000	1000
Salary of staff	2,02,500	2,02,500	2,22,647	2,22,647	2,44,911
PACS	15,000	5,000	3,000	3,000	3,000
Rent of Space	2,88,000	2,88,000	2,88,000	2,88,000	2,88,000
Marketing cost	1147	1147	1147	1147	1147
Running cost	180357	198393	218233	240057	264062
Electricity	10000	10000	10000	10000	10000
UPS	1000	500	500	500	500
Generator	10000	3000	3000	3000	3000
Equipment purchase	\$44,78,519	0	0	0	0
Depreciation	223926	447852	671778	895704	1119630
Operating expense	54,10,449	11,56,392	14,18,304	16,64,054	19,34,251
Profit/Loss	-36,06,882	8,27,538	7,64,024	7,36,511	7,06,374
Charity		165508	152805	147302	141275

Some key points to be noted

- ▶ EBITDA break even period - Year 2
- ▶ Cumulative cash break even period - Year 4

All cash flows to Georgia development mission a Not for Profit NGO exclude the annuity payment of 2% towards its corporate overheads including branding, Information Technology license charges, central marketing support and procurement support.

- ▶ Scheme for Below Poverty line people
- ▶ Category Annual Income
- ▶ Indigent \$770/-
- ▶ Weaker Section \$1,540/-

The Charitable hospitals shall verify the economic status of the patients from their Medical Social Worker based on scrutiny of any one of the following documents produced by the patients.

- ▶ • Certificate from Local Afghan Council Member
- ▶ • Afghan National ID Card or Tashkira
- ▶ • Below Poverty Line Card
- ▶ Benefits to patients
- ▶ Free OPD
- ▶ Diagnostic and Pathology test will be at 50 % charges