Islamic Republic of Afghanistan
Ministry of Finance
Directorate General Public Private Partnership

Diagnostic Imaging Center at Ibne Sina Complex, Kabul

Public document

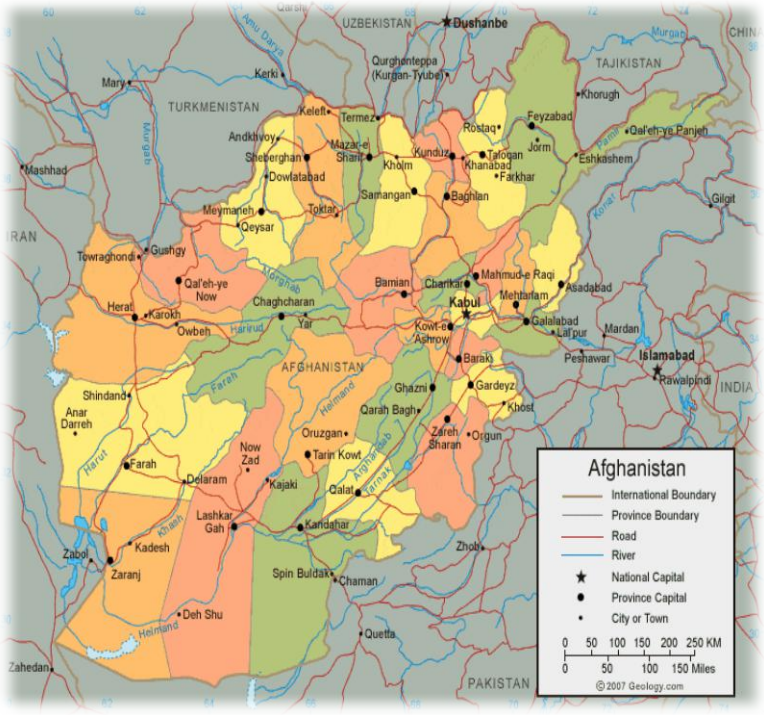
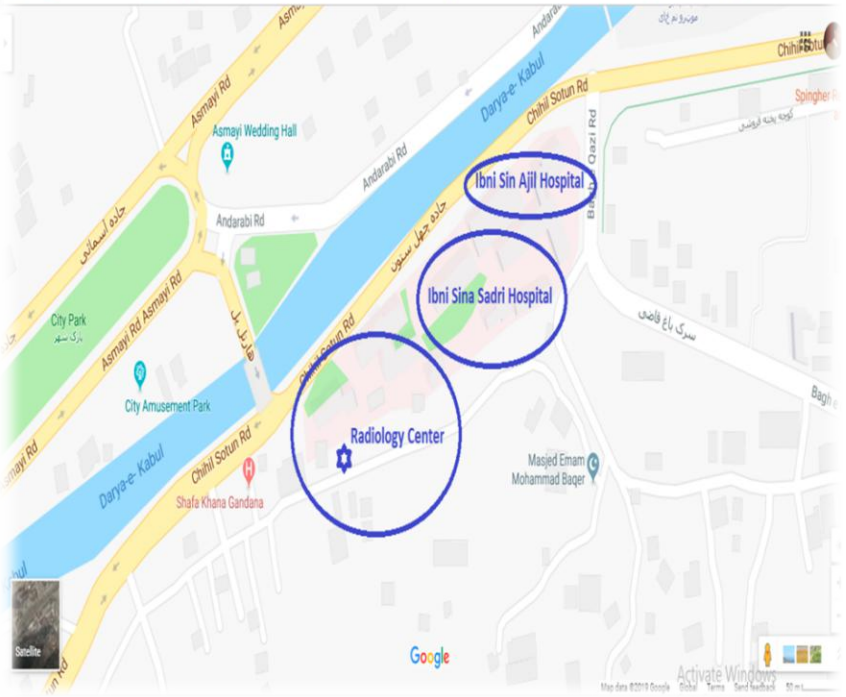


Figure 1 Project Location



Disclaimer:

The data presented here is a summary from the information in the process of the project documentation and those data that we deemed we are at liberty to share. We take this issue at hand that we will be able to share, and any unauthorized use is strictly forbidden.

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Abbreviations

BPHS	Basic Package of Health Services
EPHS	Extended Package of Hospital Services
HEC	High Economic Council
PPP	Public Private Partnership
MRI	Magnetic Resonance Imaging
MoF	Ministry of Finance
MoPH	Ministry of Public Health
CT	Computerized Tomography
ECG	Electrocardiography
ETT	Exercise Tolerance Test
GDPP	General Directorate of Policy and Planning
GoIRA	Government of Islamic Republic of Afghanistan
GDCM	General Directorate of Curative Medicine
SEHAT	Systems Enhancing for Health Actions in Transition
AMSU	Afghan Medical Services Union
WHO	World Health Organization
USAID	United States Agency for International Development
IFC	International Finance Corporation
APHA	Afghan Private Hospitals Association
DIA	Diagnostic Imaging Association

Introduction

Radiological diagnostic service is required for providing an effective diagnosis of various medical conditions.Even though health system in Afghanistan has improved since 2002 with the creation and implementation of the basic package of health services (BPHS) and later the essential package of hospital services (EPHS), still many health indicators remain poor.

Therefore, the Government holds strongly to its commitment to improving the health and well-being of the people. Based on above background, Ministry of Public Health (MoPH) of Afghanistan has initiated to strengthen the health and medical care services in the state. The purpose of these initiatives is to improve the health status of the population of Kabul as well as Afghanistan. One such initiative is establishment of small-scale Diagnostic Imaging center in Ibn-e-Sina Hospital at Kabul under Public-Private Partnership (PPP).

The goal of this project is to establish a cost-effective, affordable, and efficient center for diagnostic facilities based on the assessment of the local communities' needs and available resources. Accordingly, High Economic Council (HEC) of government approved for establishing Diagnostic Facilities under PPP in Kabul as a pilot basis.

As part of the feasibility study, primary research was carried out to understand the current operations of the selected hospitals/diagnostic centers of the state and identify their needs. Also to assess the availability of diagnostic services for the district population with the public and private facilities, assess the business environment in terms of market dynamics, pricing competition, regulations and detailed sensitivity analysis on the base case projections with respect to the key drivers affecting revenue, streams of business and capital cost.

Secondary research was carried out supplementing the primary survey focused on similar successful PPP models and operating models across neighbor countries. A rapid assessment of the nine Public Hospitals plus one Military Hospital in Kabul city was carried out to assess the readiness of the hospitals for the PPPs and gather information on the current status of provision of the imaging/diagnostic services. This included, demand for the services, physical status of the hospitals, and the willingness of the hospitals' management to engage with the PPP process. A number of criteria were considered for that analysis including, space availability, provision of diagnostic imaging services, diagnostic imaging staff, current fees, accessibility, supply of electricity, etc.

After analyzing both primary and secondary data, several imaging services has been proposed such as, MRI, CT-Scan, X-ray, Ultra-sonogram, Angiogram, ECG, Endoscopy, ETT and Echocardiogram. Floor area also has been estimated as 2260 square feet.

It is also recommended that in order to attract potential private sector bidders that the initial procurement and implementation period should be multi-year (10 years at a minimum); but continued implementation would be dependent on satisfactory performance on the private sector contractor. Further, if performance is deemed satisfactory with the pilot hospital, the MoPH can then consider whether to further scale-up this PPP initiative to additional hospitals. The proposed project will be offered on Design, Built, Finance, Operate and Transfer mode (DBFOT) to the successful bidder, the bid variable being the fractional cost for diagnostic services that the bidder charges the government for providing the service.

The service provider will be responsible for investing in the requisite equipment and manpower as per the terms of reference, operating the center, providing the service and adhering to the laws and regulations that govern the process. This project shall be verified for its success and ability to meet the specified objectives at the end of every year. Upon successful achievement of the objectives, the project may be replicated across the country following the same model or modifying it as per the requirement.

Diagnostic Imaging Center at Ibne Sina Complex

The health system in Afghanistan has improved dramatically since 2002 (1381) with the creation and implementation of the basic package of health services (BPHS) and later the essential package of hospital services (EPHS). Introduction of the BPHS and the EPHS led to a greater cohesion of services offered in the public health system, which is under the stewardship of the Ministry of Public Health (MoPH).

However, many health indicators for Afghanistan remain quite poor. For example, life expectancy remains less than 65 years, a recent measure of infant mortality showed it to be at 77/1,000 live births, and maternal mortality at 327/100,000 live births. Rates for many of the top ten causes of death (for example, ischemic heart disease at 8.1% of total deaths, stroke at 6.4%, pre-term birth complications at 5.2%, and road injuries at 2.6%) would most likely be lower if better diagnostic imaging services were more readily available within the public sector.

The establishment of small-scale Diagnostic Imaging center in Ibni Sina Hospital at Kabul under Public Private Partnership (PPP). The objective of this initiative is also to ensure greater access of the people to quality diagnostic services at affordable cost. Accordingly, High Economic Council (HEC) of government of Afghanistan already approved for establishing Diagnostic Facilities under PPP in Kabul as a pilot basis. Replication of this PPP model will lot more depend on initial success of the scheme.

GOAL, PRINCIPLES AND EXPECTED RESULTS

Goal

To establish a cost-effective, affordable, and efficient center for diagnostic facilities at Ibn Sina Hospital, Kabul based on the assessment of the local communities' needs and available resources. A successful prototype project will open the window to follow the project in same manner in the different part of the country.

Principles

Cost-Effectiveness: For sustainable partnership, the diagnostic center must be viable and at the same time affordable.

Comprehensive Coverage: Services must cover all the basic categories of standard diagnostic tests like X-ray, ultrasonogram, echocardiogram, CT scan and MRI.

Acceptable Quality: The operating procedures prescribed by the Government, must be followed for good quality testing accompanied with compliance monitoring and timely reporting.

- **Upward and Downward Linkage:** Non-standard and special tests to be made available through seamless linkages with designated referral laboratory. Similarly, samples for testing would also be collected from primary level care via the collection center.

Expected Results

The following results are expected -

- Speedy diagnosis, reduced incidence of complications due to delays in diagnosis.
- Improved ability of the public health system to respond to health needs of the people.
- Increased confidence of the community in public health services and improved utilization of Hospital services.
- Increased access of people to improved quality of diagnostic services at affordable costs.

RESULTS OF THE MARKET ASSESSMENT

Table 4: General description of the nearby hospitals:

Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Established on 1961, located in a crowded area within the center of Kabul city and there are around seven – eight public and private hospital in the neighborhood.	Established on 1962, has total capacity of 60 beds with the specialties of Chest surgery (Cardiology) and Internal medicine. The hospital located in a crowded area within the center of Kabul city and there are around seven – eight public and private hospital in the neighborhood.	Established on 1961, has total capacity of 200 beds with the specialties of Internal Medicine, General Surgery, Ear, Nose and throat (ENT), Dermatology, and Vascular Surgery. The hospital located in a crowded area within the center of Kabul city and there are around seven – eight public and private hospital in the neighborhood.

Table 5: Manpower distribution of the nearby hospitals:

	Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Designation	**Current number**	**Current number**	**Current number**
Specialist doctor	0	0	166
Medical officer	17	37	123
Nurse	0	36	45
Admin & supporting staffs	44	93	25
ICU staffs	0	0	49
Technicians	39	0	0
Others	0	0	0
Total	**100**	**166**	**408**

Table 6: Diagnostic facilities offered by the nearby hospitals:

	Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Equipment name	**Number of instrument in operation**	**Number of instrument in operation**	**Number of instrument in operation**
Ultrasonogram	2	2	1
Echocardiogram	1	2	0
X-ray	5	2	1
Bronchoscopy	1	1	0
ETT	1	1	0
ECG	4	4	0

Table 7: Pricing comparison of imaging services provided by the nearby hospitals:

	Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Investigation Name	Cost/investigation (AFN)	Cost/investigation (AFN)	Cost/investigation (AFN)
MRI	x	8,000	8,000
CT Scan	x	3,000	3,000
Ultrasonogram	30	200	200
Echocardiogram	50	1,000	1,000
X-ray	100	500	500
CT Angiogram	x	18,000-24,000	18,000 – 24,000
ECG	x	100	100
ETT	x	1,500	1,500
Endoscopy	x	1,300	1,300

Table 8: Number of imaging service provided by the nearby hospitals per day:

	Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Investigation Name	Number/day	Number/day	Number/day
MRI	X	1-2	0
CT Scan	X	1-2	1-2
Ultrasonogram	150	25	80
Echocardiogram	4	20	8
X-ray	200	80	80
CT Angiogram	X	2-3	X
ECG	X	150	200

ETT	X	1-2	X

Table 9: Number of patients referred to private hospital for diagnostic imaging per day:

	Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Investigation Name	**Number/day**	**Number/day**	**Number/day**
MRI	X	1-2	0
CT Scan	X	1-2	1-2
Ultrasonogram	X	0	5
Echocardiogram	X	0	4
X-ray	X	0	0
CT Angiogram	X	2-3	1
ECG	X	0	0
ETT	X	1-2	0

Table 10: Salary comparison of nearby hospitals:

	Radiology Centre	Ibni Sina Sadri Hospital	Ibni Sin Ajil Hospital
Designation	**Salary/month (AFN)**	**Salary/month (AFN)**	**Salary/month (AFN)**
Medical director	24,000	29,000	24,000
Medical Officer	26,000	27,000	18,000
Nurse	24,000	12,000	12,000
Medical Technologist	24,000	16,000	16,000

Table 11: Services to be provided by the proposed diagnostic Imaging Center:

Diagnostic services
MRI
CT Scan
Ultrasonogram
Echocardiogram
X-ray
ECG
CT-angiogram
ETT
Endoscopy

Initial estimate of required spaces

Ideally the ground floor should contain all the radiological diagnostic imaging devices. The following devices/ facilities must be placed on the ground floor.

- CT- Scanner
- MRI
- X-ray machin
- Reception area
- Waiting room
- Toilet and washroom

Rest of the services such as ECG, Echocardiogram, Endoscopy, Angiogram, and Ultrasonogram with reasonable free space and toilet facility can be established in 1st floor.

Initial estimate of cumulative space required for all diagnostic imaging devices

Room purpose/ Device name	Minimum space needed (length x width)	Total area (Square feet)
Radiography room	12'x10'	120
Radiography control room	8'x8'	64
CT- Scanner	20'x'18	360
MRI, ECG, ETT, Endoscope, Echocardiogram, Ultrasonogram.	14'x12' for each service	168x6=1008
Reception	12'x12'	144
Washroom	8'8'	64
Free area/passage	500 sqf	500
	Total	**2260**

Current site situation of the Project

The proposed land is inside the Ibni Sina Hospital-Complex area, which is owned by the Ministry of Public Health. The site area is approximately 1,010 square feet surrounded by the boundary. In the front-age of the site ministry has allocated approximately 450 square feet to construct the hospital waiting area, which will be shared with the diagnostic center.

A separate space will be allocated other than the site area inside the waiting space for the private partner to set up its billing, administrative office and report delivery space. Private partner will be allowed to build a two-storied building to cover the diagnostic equipment setup area. There is a 150KV Generator next to the site; operator can use the connectivity of this generator for electricity back up paying a user fee.

Roles & Responsibilities

Ministry of Public Health (Authority / Implementation Agency)

- Lay a broad concept and vision for the project
- Handover land free of encumbrances to the private partner
- Remain as ultimate land and asset owner
- Provide enabling infrastructure to supply necessary services (power, water, etc.) for the diagnostic center with connections and metering facilities
- Develop framework for ensuring referrals are made to the Diagnostic Centre
- Contract monitoring to ensuring the service is provided to the expected quality and quantity specified in the contract
- Enforce the parameters within which the private partner operates

Private Partner (Developer)

- Design and configure the project, based the concept laid out by the MoPH;
- Apply for and receive all approvals related to implementation of the project;
- Achieve financial close;
- Pay security deposit;
- Undertake construction and development of project facilities;
- Obtain and maintain insurance for the project facilities;
- Responsible for the entire operation and management of the facilities with their own resources including deployment of medical, technical and other personnel;
- Ensure that the services are operational during the operating period of the contract;
- Pay for infrastructure services facilitated / provided by the government party;
- Charge user fees from users of the centre based on the provisions of the PPP contract;
- Comply with all provisions of the PPP contract;
- Comply with the relevant laws, regulations and applicable norms;
- Handover the project back to the MOPH after expiry of contract period.

Project Configuration

- Land – ~1,500 Sq.ft (approximately);
- Floor Area Ratio (FAR) – Unrestricted (subject to local bye-laws);

- Ground Coverage – maximum 85% ;
- Height Restriction – as per civil aviation and other local norms;
- Other bye-laws as per Kabul Building Construction Act;
- Mandatory Development Obligations (i.e. the development which will be compulsory required to be undertaken by the private partner).

a. Diagnostic Centre – the following imaging equipment's need to set up by the private partner – MRI, CT Scan, Ultra sonogram, Echocardiogram, X-ray, ECG, CT-angiogram, ETT and Endoscopy;
b. Private partner may construct a coffee and snacks corner outside the built-up area.

Bid / Selection Process

The selection process shall have two stages:

- Stage 1 – Qualification based on legal, financial and technical requirements
- Stage 2 – Quality and cost-based evaluation from the Technical and Financial Proposal

Nature of Bidders

The bidders may be single entities or a consortium. In the case of a Consortium, it shall have a maximum of 5 members.

Bid Security

At bid stage, the bidders shall be required to deposit the following to the Authority a bid security based on the following:

- Amount – 0.5 - 1% of Estimated Project Cost
- Format – Either a Demand Draft or Bank Guarantee
- Validity – For unsuccessful bidders, bid security is returned upon signing of contract with successful bidder. For successful bidder, bid security is returned upon receipt of performance security.

Performance Security

After selection, the selected Private partner shall be required to deposit the following:

Performance Security (PS): provided as Bank Guarantees in separate forms as follows:

- PS 1 – Valid from Contract Execution Date till COD (Amount: 5-10% of Estimated Project Cost)
- PS 2 – Valid from COD till expiry of Contract Period: Payment obligations of the private partner during operations phase are considerably low and doesn't justify holding a very high-performance security throughout the tenure of contract period.

Ownership and Exit

1. Lead Member of Consortium should hold at least 26% of equity till COD and minimum 15% of equity till COD+5 years. May exit after COD+5 years.
2. Non-Lead members, whose credentials have been used for technical / financial capability assessment – To hold minimum 10% equity till COD+5 years.

All original shareholders to together hold minimum 51% of equity till COD+5 years