
Investment Opportunities Map

Jordan Investment Board

Medical PDA for Emergency Units Project

IT Sector

If interested in more information, kindly contact:

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The Project at a Glance	
Project Name	Medical PDA for Emergency Units
Project Service Capacity	1500 participants/Year
Manpower	12
Total Investment Cost	US\$ 304,000
Initial Working Capital	US\$ 37,000
Internal Rate of Return (IRR)	24.5 %
Breakeven Point	60 % of Service Capacity

Medical PDA for Emergency Units Project

1. Introduction

1.1 Project Description

Due to the high number of cases in emergency units in hospitals, medical staff face problems most of the time, errors occur very often, and medical treatment face difficulties.

The medical Personal Digital Assistant (PDA) application will allow the medical staff at Emergency Units (EU) to do the work with minimal effort and high efficiency.

The project will provide the following services:

- Allow medical staff at emergency units to register and admit patients with minimal effort.
- Allow medical staff to close patients' emergency transaction (case) or refer patients to other units.
- Medical staff can place direct orders to other units or departments like radiology, blood bank, laboratories.etc.
- Creation of a log for patients' cases.
- Reports can be extracted easily to help doctors understand the patient's case.

1.2 Potential Clients

- All Hospitals in Jordan
- Hospitals in Arab countries
- Clinics in Jordan & Arab countries.

2. Market Aspects

2.1 Local Demand

In 2003, the total number of hospitals in Jordan was 97, and the total number of medical centers and clinics was 1254. Tables (1) & (2) illustrate the estimated numbers of Medical Staff (MS) in emergency units.

Table (1)
Hospitals & Their EU Staff Distribution According
to Health Care Sectors
2003

Sector	Hospitals	MS in EUs
Ministry of Health	29	290
Royal Medical Services	10	100
Jordan University Hospital	1	15
King Abdulla Hospital	1	10
Private Hospitals	56	448
Total	97	863

Source: Ministry of Health

Table (2)
Medical Centers & Clinics
2003

Sector	Number	MS at EU
Comprehensive HC	52	260
Primary HC	340	1020
Peripheral HC	259	518
Maternity & child care	353	706
Dental clinics	250	250
Total	1,254	2754

Source: Ministry of Health

From the above tables, the total estimated number of medical staff that could benefit from the project is about 3617.

2.2 Competition

There are different medical PDA software applications in the market, but all of them are in the English language. The medical PDA application of the proposed project will be in the Arabic language to facilitate easier understanding by the medical staff who are mostly weak in English.

2.3 Project Forecasted Demand

The following considerations are taken into account:

- PDA is newly introduced to medical staff, especially doctors.
- Emergency units at hospitals have critical and quick treatment needs.
- Medical staff at emergency units are overloaded most of the time.
- Efficiency should be the aim of emergency units in any hospital.

Therefore, it is projected that the project will provide its services to 1500 participants in the third year of operations. The number of participants will progress annually as follows:

Table (3)
Participants Annual Number Development

Year	1	2	3 +
Participants	750	1125	1500

2.4 Projected Sales Revenues

Software projects have the following special features which the investor should take into account:

- Software products have a universal market and can be implemented in different countries.
- Software products are subject to changes and modifications to cope with the information technology changes and updates.
- Software applications maintenance fees after the warranty period are estimated at about 15 % of the sales price.
- Manpower are not limited to the development of one certain product, they can work on other systems concurrently, so additional income can be generated.

The project will provide its services to participants at a projected annual fee of JD 200/participant.

Table (4)
Estimated Project Revenues

Year	1	2	3 +
US\$	150,000	225,000	300,000

3. Technical Aspects

3.1 Project Location

The location of the project is proposed to be in the middle or northern provinces where most hospitals and doctors are located.

3.2 Manpower

Table (5)
Manpower Requirements

Job	Required No.
General Manager	1
Administrative Clerk	1
Engineer	1
Software expert	2
Technician	3
Laborer	4
Total	12

The total annual salaries and wages of the employees (including fringe benefits), in addition to overhead and administrative expenses are estimated at US\$ 120 thousand.

3.3 Building

The building area required for the project is about 200 m² of office type to be rented against an annual rent estimated at US\$ 15,000.

3.4 Inputs & Consumables

Stationary and IT equipment consumables.

3.5 Technology

The project will need hardware, software and networking items, most of which could be obtained from the local market.

4. Financial Aspects

Basic Assumptions

The financial analysis and indicators are based on the following assumptions:

1. Project operational life is 10 years.
2. Internal Rate of Return (IRR) is calculated at 100% equity ratio.
3. Income tax is calculated at 25% on net taxable income.
4. Net Present Value (NPV) is calculated at 12% discounted annual rate.
5. Initial working capital is based on the operating expenses needed for two months.
6. Operating expenses comprise raw materials, labor cost and overheads, utilities and other expenses.
7. Pre -operating expenses consist of studies fees, capital issue, licensing, training, trial operations and other similar expenses.

4.1 Project Investment Cost

Table (6)
Total Investment Cost

Item	US\$
Equipment & Software Development	200,000
Transport means	20,000
Sub- Total (Fixed Assets)	220,000
Contingency, 10%	22,000
Pre – Operating Expenses	25,000
Initial Working Capital	37,000
Total Investment Cost	304,000

4.2 Financial Indicators

- ROI = 23.4 %
- IRR = 24.5 %
- NPV = 200 Thousand US\$
- BEP = 60 % of Service Capacity
- Payback Period = 5 Years.