



PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)



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ADDIS ABEBA CITY ADMINISTRATION INVESTMENT COMMISSION
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PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

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I. Executive summary

This project profile is prepared to assess the viability of running De-addiction and rehabilitation center, in Addis Abeba city administration. Hence Market, Technical, Organizational and Financial study was made to investigate the viability of the envisaged project.

This project profile on De-addiction and rehabilitation center has been developed to support the decision –making process based on a cost benefit analysis of the actual project viability. This profile includes marketing study, production and financial analysis, which are utilized to assist the decision-makers when determining if the business concept is viable. Ethiopia has a private sector driven De-addiction and rehabilitation center.

The De-addiction and rehabilitation center at full capacity operation can receive 4,000 addicted persons (one thousand per quarter), per year.

The total investment capital including establishing the school is Birr 174,635 million. Out of the total investment capital, the owners will cover Birr 52.39 million (30 %) while the remaining balances amounting to Birr 122.24 million (70 %) will be secured from bank in the form of term loan.

As indicated in the financial study, the cash flow projection of the project shows surplus from the first year on. The net cash flows of the project range from Birr 22 Million in the first year to Birr 34 million at the end of the 10th year of operation. At the end of the 10th year of operation period the cumulative cash balance reaches Birr 338.60 million.

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The Benefit-cost ratio and Net present value (NPV) have been calculated at 17% discount factor (D.F) for 10 years of the project activity. Accordingly, the project has NPV of 184 million Birr at 17%D.F. and the benefit-cost ratio of 1.57 at 17% D.F.

Therefore, from the aforementioned overall market technical and financial analysis we can conclude that the De-addiction and rehabilitation center is a viable and worthwhile.

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1. BACKGROUND INFORMATION

1.1 Introduction

This document was undertaken to show social work service sector on de-addiction and rehabilitation work in Addis Ababa. In compiling the report, information from Addis Ababa investment commission, Ministry of health, Ethiopian custom commission and published sources have been augmented.

Presently, in spite of high demand and its crucial importance, number of de-addiction and rehabilitation centers in the country is very low compared to number of addiction victims. This constrained the achievement of economic, social and health related development goals and also prevented the development of the country from accelerating.

Increase in number of number of de-addiction and rehabilitation center is fundamental importance to Ethiopia's present and future demand. In Ethiopia, the demand for number of de-addiction and rehabilitation centers is expected to increase considerably in the next few decades as a result of increased number of addiction victim citizens, number of population and increasing income levels. Therefore, in a country like Ethiopia, it is important to identify gaps and potential in the development of de-addiction and rehabilitation center.

1.2 Service Description and Application

Drug/Alcohol De-Addiction and Rehabilitation Centre is the place for treatment of the chronic, often relapsing disease and also a place for the restoration of health both physically and psychologically. De-addiction means a state of being free from addiction and rehabilitation means restoration of someone to a normal life. The rehabilitation center will be a therapeutic community for addicts. It is

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the process of active change by which a person who has become addicts acquires the knowledge and skills needed for optimum physical, psychological and social function.

Drug/Alcohol De-addiction and Rehabilitation Centre are envisaged for the people who are suffering from the mental disease, Drug and Alcohol Addiction. Good health is not just about how people live. It is about their quality of life, (physical health, education, family, employment, environment) and how well people are during their extra years, so that they are not robbed of their dignity and independence in later life.

Rehabilitation center is a temporary home away from home, a pathway back to individual stability and societal development. And this short term stay will be a process to healing that brings changes from the inside out. It involves the use of appropriate and available medical treatments, therapies, prosthetics, social and environmental supports. It's likely to require collaboration of health, social service and other public agencies.

It is not limited to the role of the recognized rehabilitation professionals (physiotherapists, occupational therapist and speech and language therapists etc). Instead of medication treatment therefore, they provided the necessary tools to the community of patients in dealing with their own problems, making them part of the process with which they could overcome their traumatic experience.

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1.3 Project Location and Justification

1.3.1 Location of Addis Ababa

Addis Ababa is the seat of the Ethiopian federal government. It is located on the central highlands of Ethiopia in the middle of Oromia Region. The absolute location is around the intersection point of 9°1'48"N latitude and 38°44'24"E longitudes. This is very near to the geographical center of the country. It is, therefore, equidistant to the peripheral areas or is equally accessible to almost all parts of Ethiopia. Addis Ababa is located on a well-watered plateau surrounded by hills and mountains. The city is in the highlands on the edge of the Ethiopian rift valley or the eastern slopes of the Entoto Mountain ranges bordering the Great Rift Valley. The total area of Addis Ababa is about 540 km² of which 18.2 km² are rural. Addis Ababa's built-up urban area spans 474 km². It is also the largest city in the world located in a landlocked country.

1.3.2 Demography of Addis Ababa

According to the CSA (2013) population projection, Ethiopia's total population reaches about 105 million people in 2022. Of the total population 22.9% (24 million people) live in urban areas. Ethiopia's urban population is expected to triple by 2037 (World Bank, 2015). Addis Ababa hosts an estimated 3,859,638 people. Currently, Addis Ababa is experiencing an annual growth rate of 3.8% and is estimated to reach 4,696,629 inhabitants by 2032 (CSA, 2015).

1.3.3 Economic activity of Addis Ababa

The transformation of Addis Ababa has especially been rapid since 1991. According to the data from the city's Bureau of Finance and Economic Development (2006), per capital income of Addis Ababa has grown from USD 788.48 in 2010 to USD 1,359 in 2015. The city also achieved a decline in the

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poverty index from a high of 29.6 in 2012 to 22.0 in 2014. Moreover, the current poverty headcount index for Addis Ababa is estimated at 18.9 while the poverty severity account for 5 and 1.8 index points respectively. Even though, the poverty status of Addis Ababa has an improvement over previous years, there is still much work to be done to curb both the incidence and severity of poverty.

The major contributor to the economic growth of the city is the implementation of publicly financed mega urban projects like condominium housing, the Light Rail Transit, the international airport and industrial zone development (The state of Addis Ababa, 2017). The existence of international large and medium-size enterprises in and around Addis Ababa have also significant role in creating huge opportunity for employment and technology transfer. Furthermore, there are strong demand for goods and services following the existence of many embassies and inter-governmental organizations like the African Union, the United Nations Economic Commission for Africa.

The manufacturing sector's contribution to Addis Ababa's GDP is high. Despite the fact that 86% of the industries in the city are micro and small scale (cottage and handicrafts, and small-scale), the majority of the country's large and medium scale industries are found in the city. Noticeable increases are also registered currently in other aspects of industrial growth.

The service sector is both the largest contributor to the city's economy and the largest employer. It contributes to 76.4% of the city's GDP while industry's share makes up (almost all) the rest. This sector is dominated by three major sub-sectors: Transport and communication; Real estate, Renting and Business services; and Trade, Hotel and Restaurants. According to the state of Ethiopian Cities 2015 report, the service sector has also been responsible for more than 50% of the growth in the estimated annual growth of the city's GDP. Although 75% of employment in the city is also

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generated in the service sector, a large proportion of the employed work in low skill and low paying jobs as shop salespersons, petty and 'gullit' traders, sales workers in small shops, domestic helpers or doorkeepers and restaurant service workers.

Analysis of the economic structure of Addis Ababa reveals that the services sectors (63%) dominates with industry (36%) in second place indicating that these sectors account for almost all of the Addis Ababa's GDP (The State of Addis Ababa, 2017).

Addis Ababa has a great share in the economy of the country due to its attractiveness to businesses, companies, individuals and foreign direct investment. Overall primacy index of the city is 24.8 based on urban employment and unemployment survey (CSA 2015). According to the State of Addis Ababa 2017 report, the simultaneous high rates of economic growth and urbanization in Addis Ababa indicates a likely further rising dominance of the city in Ethiopia's economy as well as growing agglomeration of economic activities in and around the city.

1.4. Why is it beneficial to invest in Addis Ababa?

Addis Ababa is the largest and most economically significant city in the country. Ethiopia's urban population share is only 17 percent (as of 2012, World Bank 2015). The city is the only urban area in Ethiopia capable of delivering scale economies in terms of concentrated demand, specialization, diversity and depth of skills, innovation, and technology transfers. Thus, investors will be benefited in getting capable human power from the market.

The capital is the country's main industrial hub. The city dominates industrial capacity in almost all the braches of light manufacturing that Ethiopia prioritizes. As a result Addis Ababa completely

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dominates production in various subsectors. This can be taken as the political and social stability of the city.

Overall, the city has a beautiful environment, favorable location, and strong industrial base. Its advantage as an economic powerhouse of the country and human resource center are the most attractive features for local and overseas investors.

Moreover, investors will be getting a comprehensive set of incentives for priority sectors. These include:

- Customs duty free privilege on capital goods and construction materials, and on spare parts whose value is not greater than 15% of the imported capital goods' total value.
- Investors have the right to redeem a refund of customs duty paid on inputs (raw materials and components) when buying capital goods or construction materials from local manufacturing industries.
- Income tax exemption of up to 6 years for manufacturing and agro-processing, and up to 9 years for agricultural investment.
- Additional 2-4 years income tax exemption for exporting investors located within industrial parks and 10-15 years exemption for industrial park developers.
- Loss Carry forward for half of the tax holiday period. Several export incentives, including Duty Draw-Back, Voucher, Bonded Factory, and Manufacturing Warehouse, and Export Credit Guarantee schemes.

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1.4.1. The city benefit from the investment

The city will be benefited from investment. These are discussed below.

- **Employment opportunity**

Investment is expected to provide direct and indirect employment. These range from unskilled casual workers, semi-skilled and skilled employees.

- **Improving growth of the economy**

Through the use of locally available materials and exporting products, the investment contributes towards growth of the economy by contributing to the growth of domestic product. These eventually attract taxes including VAT which will be payable to the government hence increasing government revenue while the cost of local materials will be payable directly to the producers. In addition, domestic products save foreign exchange and exports also bring money to the country.

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2. Marketing study

2.1 Market analysis summary

The current drive and emphasis by the government to make addicts free from alcohol and other drugs requires adequate drug/alcohol de-addiction and rehabilitation center. Having undertaken a thorough and comprehensive research of the market we realized that there was a vast opportunity for drug/alcohol de-addiction and rehabilitation center. Aware of the fact that operating in such a market is largely dependent on good networking; the promoter intends to establish networks and strategic relationships with various stakeholders to sustain the market. In so doing the owner intend to ensure that the service they provide are of good quality.

2.2 Number of rehabilitation centers in Ethiopia

Based on the assessment undertaken by the consultant, Ethiopia has limited number of rehabilitation centers. Totally, there are four rehabilitation centers in Ethiopia; three in Addis Ababa and one in Mekele. The total base year (2022) capacity of these centers are 1,300 addicts and this capacity is assumed to increase by 5% annually. Based on the above assumption, the supply for the rehabilitation center for the years 2023 – 2032 was calculated and presented in Table 1.

2.3 Rehabilitation center demand projection

The demand for drug/alcohol de-addiction and rehabilitation center can be influenced by a number of factors. The size and growth rate of the population, increase in economic capacity of the population, and awareness on addiction impacts are few among many variables. However, data on some of these parameters are not readily available in Ethiopia. Consequently, it is difficult if not possible to objectively quantify the actual demand. Nevertheless, for the purpose of this study,

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attempts have been made to forecast the likely future demand for drug/alcohol de-addiction and rehabilitation center on the basis:

- i. Ethiopian population is estimated to be 12, 202,679 as of today (2022)
- ii. Annual growth of population is taken to be 2.5%
- iii. Current (2002) number of addicts was estimated to be 0.5% of the total population

Based on the above stated assumption, demand for drug/alcohol de-addiction and rehabilitation center was projected for the years 2023 -2032 and the unsatisfied demand is shown in Table 1.

Table 1: Projected and unsatisfied demand

Year	Ethiopian population	Total estimated number of addicts (0.5% of the population)	Total number of addicts handled by rehabilitation centers	Unsatisfied Demand
2022	120,202,679	601,013	1,300	599,713
2023	123,207,746	607,024	1,365	605,659
2024	126,287,940	613,094	1,433	611,661
2025	129,445,138	619,225	1,505	617,720
2026	132,681,267	625,417	1,580	623,837
2027	135,998,298	631,671	1,659	630,012
2028	139,398,256	637,988	1,742	636,246
2029	142,883,212	644,368	1,829	642,538
2030	146,455,292	650,811	1,921	648,891
2031	150,116,675	657,319	2,017	655,303
2032	153,869,592	663,893	2,118	661,775

As shown Table 1, the project will have unsatisfied demand for the coming 10 year's period. The projected demand will continue to be positive until 2032. It can be clearly noted that there is a huge

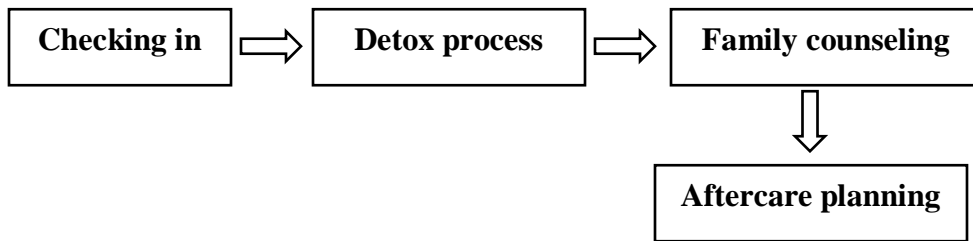
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gap between supply and demand figures, which can really be taken as the apparent demand-supply gap for drug/alcohol de-addiction and rehabilitation center in Ethiopia.

3. Technology and engineering

3.1 Technology

Service process



- **Checking in:** when patient first arrive at a rehab program, staff members will often start by having the patient complete an intake interview to find out more about him/her. This is an important step in the rehab process, because this information will be used to start customizing the treatment plan.
- **Detox process:** After the initial assessment, the patient will go through the detoxification process. Detox is the process of removing drugs or alcohol from body after prolonged use. Though this can be a difficult process for some, it's important to cleanse the patient body of these substances so that he/she is ready both physically and mentally for the work that lies ahead in rehab.

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- **Therapy:** various types of therapies (individual, group and family therapy) will be used throughout the recovery process, depending on the patient needs and the rehab program the patient is attending.
- **Aftercare planning:** Toward the end of the patient time in a rehab center, the patient and his/her counselor will come up with a continuing care (aftercare) plan based on the patient progress up to that point. Aftercare can significantly reduce drug and alcohol relapse rates. The plan will include social and medical support services to help in patient transition. It may include transitional housing (like a sober living home), follow-up therapy and counseling, medical evaluations, alumni support groups, and other suggestions to help patient avoid the situations and triggers that might cause patient to relapse.

3.1.1 Service capacity

In determining the capacity of the center, the future demands of the service and the economics of scale of the available technologies were taken into consideration. According to the data obtained from the market study, number of addicts will reach 655,303 in 2031 respectively. Thus, the envisaged drug/alcohol de-addiction and rehabilitation center is intended to have a capacity to serve 1000 addicts annually.

3.1.2 Service program

The project requires some years to penetrate into the market and capture a significant share. It will start providing service at 70% of its capacity and will grow by 10% each year considering the market penetration traits. The service program of the envisaged tour operator is given in Table 2.

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Table 2: Service program

Year of Production	Capacity utilization	First quarter	Second quarter	Third quarter	Fourth quarter	TOTAL
Year 1	70%	700	700	700	700	2,800
Year 2	80%	800	800	800	800	3,200
Year 3	90%	900	900	900	900	3,600
Year 4	100%	1,000	1,000	1,000	1,000	4,000

3.2 Engineering

3.2.1 Land, buildings and civil works

The required area (m^2) and construction cost for the production facilities essential for the successful operation of the project is shown in Table 3. A total area ready for the project is 4,020 m^2 . In order to estimate the land lease cost of the project profiles it is assumed that all the project will be located in different land level from level 1/1 to level 4/3, their current market lease price is from 39,073.31 birr per M^2 to 2,800.71 birr per M^2 respectively. Therefore, for the profile a land lease rate of birr 3,885 per M^2 have been taken, which is between the ranges.

The cost of construction of building should be appropriate to the size and expected profitability of business, costs of building generally differs by the type of construction materials used, the type of foundation, wall height and location. The current building cost for simple storage and building is from 10,000.00 Birr per m^2 to 25,000.00 Birr per m^2 . The total construction cost of buildings and civil works, at a rate of Birr 20,000 per m^2 is estimated at Birr 136.40 million. Therefore, the total cost of land lease and construction of buildings and civil works is estimated at Birr **152** million.

The proposed plant layout comprises the following buildings and structures.

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Table 3 Building costs

S/No	Descriptions	Total area in M ²	Estimated cost per square meter (in Birr)	Total estimated cost (in Birr)
1	Dormitory G ⁺	2,000	25,000.00	100,000,000.00
2	Laboratory room	500	20,000.00	10,000,000.00
4	Clinic room	500	20,000.00	10,000,000.00
7	Power station room	20	20,000.00	400,000.00
8	Administration office	500	20,000.00	10,000,000.00
11	parking	500	5,000.00	2,500,000.00
12	Fence		Lump sum	3,500,000.00
	Total	4,020		136,400,000.00

Table 4 Land lease period in Addis Abeba

Sector of development activity	Period of lease	Down payment
Education, health, culture and sports	90	10%
Industry (manufacturing)	70	10%
commerce	60	10%
For urban agriculture	15	10%
For others	60	10%

Sources: - city government of Addis Abeba land development and management bureau

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Table 5 Land lease floor price in Addis Abeba

S/No	Land level	Current land lease floor price per M ²	Current lease price per M ² (Market price)
1	1/1	2,213.25	39,073.31
2	1/2	2,165.47	36,825.73
3	1/3	1,900.19	34,578.15
4	¼	1,552.93	31,119.21
5	1/5	1,531.91	29,096.45
6	2/1	1327.39	27,073.71
7	2/2	1,221.18	25,050.96
8	2/3	1,191.17	23,028.21
9	2/4	1,074.39	21,005.46
10	2/5	1,027.84	18,982.71
11	3/1	994.71	16,959.96
12	3/2	960.21	14,937.21
13	3/3	927.84	12,914.46
14	¾	904.77	10,891.71
15	3/5	873.74	8,868.96
16	4/1	814.06	6,846.21
17	4/2	786.45	4,823.46
18	4/3	748.80	2,800.71

Sources: - city government of Addis Abeba land development and management bureau

3.2.2 Machinery and equipment

The list of machinery, equipment and other facilities required for provision of doctoral medicine higher education is estimated to be Birr **12,955,000.00** (Table 6).

Table 6: Lists of required machinery, equipment and other facilities

S/N	Description	Quantity	Unit Cost of Equipment(Birr)	Total Cost of the Equipment(Birr)
1	Laboratory equipment	Lump sum	3,500,000.00	3,500,000.00
2	Medical simulation equipment	Lump sum	3,700,000.00	3,700,000.00
3	Broadband internet line (supply & Network Installation)	1	250,000.00	250,000.00
7	Digital camera	1	30,000.00	30,000.00
8	Video camera	1	35,000.00	35,000.00
13	Satellite TV-set (Supply & Installation)	10	15,000.00	150,000.00
14	Cafeteria facilities	Set (2)	150,000.00	300,000.00
15	Other miscellaneous items	Lump sum		1,000,000.00
Total				8,965,000.00

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4. Organizational structure

The selection of structure of the envisaged project is made based on the existing structure of manufacturing plants operating in the country, the capacity, complexity and technology mix of the plant. Organizational structure principles such as specialization, coordination, and departmentalization are also considered for design of structure that best suits the envisaged project

4.1. Manpower requirement and annual manpower costs

Table 7 Manpower requirement and labour costs

Description	Number	Monthly salary	Annual salary, Birr
Center Manager	1	25,000.00	300,000.00
Secretary	1	10,000.00	120,000.00
Administrative and finance manager	1	20,000.00	240,000.00
Psychiatrist (MD)	2	30,000.00	720,000.00
Psychiatric nurse	2	15,000.00	360,000.00
Social workers	2	12,000.00	288,000.00
Teachers	2	12,000.00	288,000.00
Skill instructors	2	15,000.00	360,000.00
House parents	3	8,000.00	288,000.00
Counselor	2	10,000.00	240,000.00
Security guard	2	6,000.00	144,000.00
Driver	1	10,000.00	120,000.00
Total	21		3,468,000.00

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5. Financial Analysis

5.1 General

The financial analysis evaluation of De-addiction and rehabilitation center project is mainly consisted of capital investment as well as operating and maintenance costs. The capital investment costs include fixed investment costs (initial fixed investment and replacement costs) and working capital, while operating and maintenance costs comprise current expenses related to material inputs, manpower cost, utility, repair and maintenance costs, spare parts, Overheads, Sales and distribution, interest and depreciation expenses.

The financial analysis and evaluation has been conducted taking assumptions:

1. It is assumed that about 70% of the total capital investment costs including the working capital requirement could be covered through development bank loans of short and long-term credits. The remaining balance 30% will be covered by equity capital contribution of the project owner.
2. Even though the project might secure loans under different term and conditions as well as from different financial sources, for the purpose of calculation of debt service scheduling, the current development bank of Ethiopia credit terms and conditions have been used. Consequently. It is assumed that the project will secure loan facility on the basis of 11.5 % annual interest rate.
3. Even though the estimated project production life is more 10 years, the financial analysis has been undertaken for a period interval covering the first 10 years only, during which time

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most of the capital assets are assumed to be depreciated, debts recovered and pay-back period accomplished.

4. It is assumed that the project will be start up production activity at 70 % capacity. During years 2 & year 3 the projects is anticipated to gradually increase capacity utilization to reach 100% in year 4. Therefore, starting from year 4 the project will be operational at full capacity.
5. For the project under reference promotional, sales and distribution expenses have been estimated at 3% of the sales revenue.
6. Maintenance and spare parts costs are 1.5% of the fixed investment costs.
7. Furniture and fixture costs assumed to be 500,000.00

5.2 Initial Fixed investment costs

Table 8 Initial Fixed investment costs

S/No	Fixed investment type	Unit of measurement	Quantity	Unit price	Total Amount	Remarks
1	Land	Square meter	4,020	3,885 birr/M ²	15,617,700.00	The period of land lease will be 70 years and 10% of the total lease amount will be paid in the first year
2	Buildings and civil works	Square meter	4,020	lump sum	136,400,000.00	
	Sub total				152,017,700.00	
3	Machineries	set	2	Lump sum	8,965,000.00	
4	Transformer	set	1	Lump sum	2,000,000.00	
5	Truck and vehicles	Pcs	1	Lump sum	3,000,000.00	
6	Furniture and fixture	Pcs			500,000.00	
	SUB TOTAL				14,465,000.00	
	Fixed capital investment costs				166,482,700.00	
7	pre-operational expenses				2,000,000.00	
	Working capital				6,152,000.00	
	TOTAL INVESTMENT COSTS				174,634,700.00	

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5.3 Working capital

Working capital is the financial means required for smooth operation and maintenance of a project mathematically, it is a difference between current assets and current liabilities. In the particular case of the project under consideration, the current assets comprise receivables, inventories (local and imported material inputs, spare parts, work in progress, and products ready for delivery) and cash in hand, while current liabilities comprise accounts payable to creditors.

5.4 Project Financing

Fixed capital investment costs and working capital requirements are assumed to be financed by equity capital of the owner and through loans of short and long-term credits.

The company obtains loans under different terms and condition as well as from different sources, for the purpose of calculation of debt service scheduling the current development bank of Ethiopia credit terms and conditions have been used. Accordingly, it is assumed that the company will be able to obtain loan 70% of the total investment costs for construction of different buildings for purchase of machineries. The remaining balance that of the total investment costs will be expected to be covered by equity contribution of the project promoter.

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5.5 Production costs

As it is depicted in Annex Table 12 major categories of the total production costs are assembled into the following cost elements.

5.5.1 Material inputs

In the project under study the basic material inputs are food, educational materials, medical disposable materials, cleaning materials etc. Therefore, the current prevailing local and international market prices have been used for estimation of material inputs costs. At full capacity operation the material inputs costs are estimated at Birr 24 million per annum.

5.5.2 Utilities

In estimating costs of utility expenses for operation and maintenance of the project, Costs of fuel, oil and lubricant, electricity and water consumptions have been taken in to consideration, the rates of which have been estimated on the basis of the proposed capacity utilization program of the project and at the current official charging rates. At full capacity operation the project will have the following utility expense per annum which amounts to Birr 3.06 million.

**PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND
REHABILITATION CENTRE)**

Table 9 Utilities of the factory'000''Birr

Utility'000''Birr		Start-up			Full Capacity
		70 %	80 %	90 %	100 %
Project year		1	2	3	4
Item description	Unit of measurement				
Fuel					
Gasoline for service vehicle	50km*365days*47Birr/LIT*8km/Li	107	107	107	107
Change of oil and lubricant	10% of the fuel consumption	11	11	11	11
Sub-Total		118	118	118	118
Electricity	260days*24 hrs.*325kwh* 1.00Birr/kwh	1,420	1,623	1,825	2,028
Sub- Total		1,420	1,623	1,825	2,028
Water	365days*100m ³ /day*15 Birr/m ³	384	438	493	548
Sub -Total		384	438	493	548
Telecommunication					
Telephone	5 lines* 1,500Birr/month/line+18Birr/line/month	31.08	31.08	31.08	31.08
Mobile	5 lines*1,500 Birr/month/line	30.00	30.00	30.00	30.00
Fax	2line*1,000Birr/month + 17 Birr/line/month	12.40	12.40	12.40	12.40
Internet	25,000Birr/month	300.00	300.00	300.00	300.00
Sub-Total		374	374	374	374
TOTAL		2,296	2,553	2,810	3,068

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

5.5.3 Over heads

In the expenses under this title have been included land and building taxes, buildings, vehicles as well as machinery and equipment insurance, vehicles annual inspection; postage, telephone and e. mail, stationery and office supplies; printing and copying; audit fee; cash indemnity etc. The overhead costs and divided in to direct overheads and administration overheads.

Table 10 Overhead costs

Direct Overhead"000"Birr		Year 1	Year 2	Year 3	Year 4
Annual land lease Payment		2,231	2,231	2,231	2,231
Insurance					
Building and Civil works	0.10%	136	136	136	136
Machinery and Equipment	0.20%	18	18	18	18
Motor vehicle and Truck	1%	30	30	30	30
Vehicles annual inspection and registration	25,000 Birr per annum per vehicle	25	25	25	25
Work cloth	Two times per annum per workers at 1,000 Birr	42	42	42	42
Cleaning and sanitation	An estimate of 300 Birr/day	78.00	78.00	78.00	78.00
Sub Total		2,560	2,560	2,560	2,560
Administration Overhead "000' Birr					
Audit fee	40,000 Birr per annum	40.00	40.00	40.00	40.00
Office cleaning and sanitation	2,000 Birr per month	24.00	24.00	24.00	24.00
Stationery and office supplies	2,000 Birr per month	20.00	20.00	20.00	20.00
Printing and Copy	2,000 Birr per month	24.00	24.00	24.00	24.00
Sub Total		108.00	108.00	108.00	108.00
GRAND TOTAL		2,668	2,668	2,668	2,668

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

5.5.4 Financial costs

As it has been outlined earlier under” project Financing” the current Development Bank of Ethiopia credit terms and conditions for newly establishing projects have been used to compute the financial costs, estimated to be incurred in connection with that of the total investment costs assumed to be covered through loan financing. The amount of the loan capital to be obtained and the financial costs to be incurred thereof have been determined depending on the amount of fixed investment cost and pre-production expenses.

5.5.5 Depreciation

Table 11 Depreciation in Birr"000"

Period			Start-up			
			70 %	80 %	90 %	100 %
Capacity utilization			1	2	3	4
Project year						
Item description	Original Value					
Structure and civil works	136,400,000.00	5% of original value	6,820	6,820	6,820	6,820
Machinery and equipment	8,965,000.00	15 % of original value	1,345	1,345	1,345	1,345
Transformer	2,000,000.00	15 % of original value	300	300	300	300
Motor vehicles and trucks	3,000,000.00	15% of original value	450	450	450	450
Office equipment and furniture	500,000.00	20 % of original value	100	100	100	100
Pre-production expenses	2,000,000.00	25% of original value	500	500	500	500
Total			9,515	9,515	9,515	9,515

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

5.6 Break Even point and ROI

5.6.1 Break Even point (BEP)

Three kinds of break-even point

- A. BEP Sales Revenue(BR)
- B. BEP production (Volume)
- C. BEP Percentage (%)

A. Break-even point(BEP) Sales

To determine BEP Annual Sales, multiply annual sales found in income statement by the annual fixed cost, and divided by Annual sales less Annual variable cost.

$$\text{BEP (sales)} = \frac{\text{Annual sales} \times \text{Annual fixed costs}}{\text{Annual sales} - \text{Annual variables costs}}$$

Annual sales = 84,000,000 Birr

$$\text{BEP (sales)} = = \frac{\text{Annual sales} \times \text{Annual fixed costs}}{\text{Annual sales} - \text{Annual variables costs}} = = \frac{84,000,000 \times 29,709,000}{84,000,000 - 21,616,000}$$

BEP (Sales) = 40,003,142 Birr

$$\begin{aligned} \text{B. BEP percentage} &= \frac{\text{Annual fixed costs} \times 100\%}{\text{Annual sales} - \text{Annual variables costs}} \\ &= \frac{29,709,000 \times 100\%}{84,000,000 - 21,616,000} \\ &= 48\% \end{aligned}$$

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

5.6.2 Return on investment

Return on investment = Net profit /Total capital requirement

$$= 116,949,000/174,634,700$$

$$= 67\%$$

The return on owners' investment (ROOI)

= Annual net profit /owners' investment

$$= 116,949,000/52,390,410$$

$$= 223\%$$

5.7 Project benefits

As it has been stated earlier the project is envisaged to reach full capacity operation four years after commencement of production activities which are assumed to begin with 70% of the estimated total capacity.

Thus, according to the computation in Annex Table 14 and Annex Table 16, the net income and cash flow statements analysis revealed that at full capacity operation the project will generate a total income (gross revenue) amounting to 116 million Birr per annum. The Net Income Statement shows a steady growth of gross profit starting from 30 million Birr in year 1 reaching the peak of 72 million Birr in year 10. In its 10 years of manufacturing activities, the project is expected to generate a total net profit of 376 Birr and contribute 202 million Birr to the government treasury in form of 35% income tax.

According to the current investment Law, machinery and equipment are anticipated to be imported duty- free. The liquidity position of the project is very strong. The corresponding Annex Table 16

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

of “Cash Flow Statement” shows the positive cumulative cash balance of Birr 338 million and the project will not face any cash shortage throughout its production life.

The computation of the pay-back period as depicted in Annex table 21 indicates that the project will be able to reimburse itself from its net cash-income within five years after commencement of production activities, the period which is considered to be very good for the project of this nature.

In Annex Table 22 of the Benefit-cost ratio and Net present value (NPV) have been calculated at 17% discount factor (D.F) for 10 years of the project activity. Accordingly, the project has NPV of 184 million Birr at 17%D.F. and the benefit-cost ratio of 1.57 at 17% D.F. These results are most appreciable, especially, when related to the external capital borrowing interest rate which ranges from 8.50% to 18.5 % for newly establishing projects.

Break-even point (BEP) have been undertaken the project under study when implemented will have BEP at about 48 % operation of the estimated full capacity

In addition to this, finally, summary of financial efficiency tests have been conducted in Annex table 20, Accordingly, all efficiency ratios indicated positive trends and consequently, it can be inferred that the project can operate in the frame work of free market mechanism on commercially and financially viable basis and is remunerative.

ANNEXES

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

NNEX II

CALCULATION OF ANNUAL PRODUCTION COSTS

Table 12 Annual total production costs''000''

Period	Start-up			Full capacity						
	70 %	80 %	90 %	100 %	100 %					
Project Year	1	2	3	4	5	6	7	8	9	10
Cost category										
I. Material input	16,800	19,200	21,600	24,000	24,000	24,000	24,000	24,000	24,000	24,000
II. Labor	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468
III. Utility	2,296	2,553	2,810	3,068	3,068	3,068	3,068	3,068	3,068	3,068
IV. Repair and Maintenance and spare parts (1.5 % of fixed costs)	2,497	2,497	2,497	2,497	2,497	2,497	2,497	2,497	2,497	2,497
VI Direct overheads	2,560	2,560	2,560	2,560	2,560	2,560	2,560	2,560	2,560	2,560
A. Direct Production costs	27,621	30,278	32,935	35,593	35,593	35,593	35,593	35,593	35,593	35,593
VII. Administration over head	108	108	108	108	108	108	108	108	108	108
VIII. Marketing and Promotional expense 3 % of sales revenue	2,520	2,880	3,240	3,600	3,600	3,600	3,600	3,600	3,600	3,600
B. Operating costs	30,249	33,266	36,283	39,301	39,301	39,301	39,301	39,301	39,301	39,301
Interest	14,058	13,237	12,322	11,302	10,164	8,896	7,482	5,905	4,146	2,186
Depreciation	9,515	9,515	9,515	9,515	9,015	8,915	8,217	6,820	6,820	6,820
C. Total production costs	53,822	56,018	58,120	60,118	58,480	57,112	55,000	52,026	50,267	48,307

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX IV CALCULATION OF WORKING CAPITAL REQUIREMENTS

- I. Minimum requirement of current assets and liabilities
- A. Accounts receivable: 26 days at total production costs minus depreciation and interest
- B. Inventory
1. Material inputs: 26 days
 2. Spare parts : 90 days
 3. Work under process: two days at direct costs
 4. Product ready for delivery: 8 days at direct costs plus administration overheads
- C. Cash on hand : 360 days
- D. Accounts payable 26 days for material inputs and utilities

ii. Working capital requirement

Table 13 Calculation of working capital

Cost category	Minimum Days of coverage	Coeff-icent of turnover	Project year									
			Start up			Full capacity						
			1	2	3	4	5	6	7	8	9	10
I. Current asset												
A. A/R	26	10	3,025	3,327	3,628	3,930	3,930	3,930	3,930	3,930	3,930	3,930
B. Inventory												
1. Material inputs	26	10	1,680	1,920	2,160	2,400	2,400	2,400	2,400	2,400	2,400	2,400
2. Spare parts	90	4	624	624	624	624	624	624	624	624	624	624
3. Work under process	2	130	-	-	-	-	-	-	-	-	-	-
4. Product ready for delivery	8	32.5	-	-	-	-	-	-	-	-	-	-
C. Cash on hand	90	4	2,732	2,797	2,861	2,925	2,925	2,925	2,925	2,925	2,925	2,925
D. Current assets			8,061	8,667	9,273	9,880	9,880	9,880	9,880	9,880	9,880	9,880
II. Current liabilities												
A. A/p	26	10	1,910	2,175	2,441	2,707	2,707	2,707	2,707	2,707	2,707	2,707
III. Working capital												
A. Net working capital			6,152	6,492	6,832	7,173	7,173	7,173	7,173	7,173	7,173	7,173
B. Increasing in working capital			6,152	340	340	341	0	0	0	0	0	0

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX V

PROJECTED SALES REVENUE

Period					Start up			Full capacity						
					70 %	80 %	90 %	100 %						
Capacity utilization		U/m	Quantity at full capacity	Unit price										
Item description	Product mix													
Project year					1	2	3	4	5	6	7	8	9	10
	Addicts	Pcs	4,000	30,000	84,000	96,000	108,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
GRAND TOTAL					84,000	96,000	108,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX VI

PROJECTED NET INCOME STATEMENT

Table 14 Projected Net income statement "000"

Period	Start up			Full capacity						
	70 %	80 %	90 %	100 %						
Project year	1	2	3	4	5	6	7	8	9	10
Item description										
Product sales revenue	84,000	96,000	108,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
Less total production costs	53,822	56,018	58,120	60,118	58,480	57,112	55,000	52,026	50,267	48,307
Gross profit	30,178	39,982	49,880	59,882	61,520	62,888	65,000	67,974	69,733	71,693
Tax	10,562	13,994	17,458	20,959	21,532	22,011	22,750	23,791	24,407	25,093
Net profit	19,616	25,988	32,422	38,923	39,988	40,877	42,250	44,183	45,326	46,600
Accumulated undistributed profit	19,616	45,604	78,026	116,949	156,937	197,815	240,065	284,248	329,574	376,175

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX VII DEBT SERVICE SCHEDULE AND COMPUTATION PAYMENT OF EQUAL ANNUAL INSTALLMENTS

Table 15 Debt services schedule and Computation

Item description	Project year									
	1	2	3	4	5	6	7	8	9	10
A. Investment and working capital										
1. Investment										
2. Increment working capital										
Total										
B. Loan receipts and balances										
1. Loan receipts										
2. Outstanding balance at end of year	122,244									
a. First year loan	122,244	115,108	107,151	98,279	88,386	77,356	65,059	51,345	36,056	19,008
Total										
A. Debt service										
1. First year Loan										
a. Interest	14,058	13,237	12,322	11,302	10,164	8,896	7,482	5,905	4,146	2,186
b. Repayment of principal	7,136	7,957	8,872	9,892	11,030	12,298	13,713	15,290	17,048	19,008

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX VIII CASH-FLOW STATEMENT FOR FINANCIAL PLANING

Table 16 Projected Cash flow statement

Period	Start up				Full capacity						
	70%	80%	90%	100%							
Capacity utilization											
Project year	1	2	3	4	5	6	7	8	9	10	
Item description											
A. Cash - inflow	260,544	96,606	108,606	120,607	120,000	120,000	120,000	120,000	120,000	120,000	
1. Financial resource (total)	176,544	606	606	607							
2. Sales revenue	84,000	96,000	108,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	
B. Cash – outflow	238,549	69,060	75,541	82,061	82,027	82,506	83,246	84,287	84,902	85,588	
1. Total assets schedule including replacement	176,544	606	606	607							
2. Operating costs	30,249	33,266	36,283	39,301	39,301	39,301	39,301	39,301	39,301	39,301	
3. Debt service (total)											
a. Interest	14,058	13,237	12,322	11,302	10,164	8,896	7,482	5,905	4,146	2,186	
b. Repayment	7,136	7,957	8,872	9,892	11,030	12,298	13,713	15,290	17,048	19,008	
4. Tax	10,562	13,994	17,458	20,959	21,532	22,011	22,750	23,791	24,407	25,093	
C. Surplus (Deficit)	21,995	27,546	33,065	38,546	37,973	37,494	36,754	35,713	35,098	34,412	
D. Cumulative cash balance	21,995	49,541	82,606	121,152	159,125	196,619	233,373	269,086	304,184	338,596	

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX XII TOTAL INVESTMENT COSTS

Table 17 Total investment costs''000''

Period	Start up			Full capacity								
	1	2	3	4	5	6	7	8	9	10		11
Project year												
Investment Category												
1. Fixed investment costs												
a. Initial fixed investment costs	166,483											
b. Replacement												
2. Pre-operational capital expenditure	2,000											
3. Working capital increase	6,152	340	340	340								
Total investment costs	174,635	340	340	340								

ANNEX XIII TOTAL ASSETS

Table 18 Total Assets

Period	Start up			Full capacity									
	1	2	3	4	5	6	7	8	9	10	11		12
Project year													
Investment Category													
1. Fixed investment costs													
c. Initial fixed investment costs	166,483												
❖ Cost of land													
d. Replacement													
2. Pre-operational capital expenditure	2,000												
3. Current assets increase	8,061	606	606	607									
Total assets	176,544	606	606	607									

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX XIV SOURCES OF FINANCE

Table 19 Sources of finance

Period	Start up			Full capacity							
Project year	1	2	3	4	5	6	7	8	9	10	Total
Sources of finance											
1. Equity capital	52,390	340	340	340							
2. Loan capital	122,244										
3. Current liabilities	1,910	265	266	266							
Total finance	176,544	605	606	606							

ANNEX XI SUMMARY OF FINANCIAL EFFECIENCY TESTS

Table 20 Summary of financial efficiency tests

	Project year									
Project year	1	2	3	4	5	6	7	8	9	10
Capacity utilization	70%	80%	90%	100%						
Financial ratio in %										
1. Gross profit : Revenue	36%	42%	46%	50%	51%	52%	54%	57%	58%	60%
2. Net profit : Revenue	23%	27%	30%	32%	33%	34%	35%	37%	38%	39%
3. Net profit : initial investment	11%	15%	18%	22%	23%	23%	24%	25%	26%	27%
4. Net profit : Equity	37%	49%	61%	73%	75%	77%	79%	83%	85%	87%
5. Gross profit : Initial investment	17%	23%	28%	34%	35%	36%	37%	39%	40%	41%
6. Operating costs : Revenue	36%	35%	34%	33%	33%	33%	33%	33%	33%	33%

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX XV CALCULATIONS OF PAYBACK PERIOD

Table 21 Calculation of payback period”000”

Year	Amount Paid Back			Total investment	End of year
	Net Profit	Depreciation	Total		
1	19,616	9,515	29,131	174,635	-145,504
2	25,988	9,515	35,503	340	-110,341
3	32,422	9,515	41,937	340	-68,744
4	38,923	9,515	48,438	341	-20,647
5	39,988	9,015	49,003		+28,356

PROJECT PROFILE ON SOCIAL WORK (DE-ADDICTION AND REHABILITATION CENTRE)

ANNEX XVI CALCULATIONS OF NET PRESENT VALUE AT 17% D.F.

Table 22 Calculation of NPV at 17% D.F.

Project year	Gross Revenue	1/(1+i) ⁿ At 17%	Present value at 17%	Project costs			
				Total investment	Operating costs	Total	Present value at 17%
1	84,000	0.854701	71,795	174,635	30,249	204,884	175,115
2	96,000	0.730514	70,129	340	33,266	33,606	24,550
3	108,000	0.624371	67,432	340	36,283	36,623	22,866
4	120,000	0.53365	64,038	341	39,301	39,642	21,155
5	120,000	0.456111	54,733		39,301	39,301	17,926
6	120,000	0.389839	46,781		39,301	39,301	15,321
7	120,000	0.333195	39,983		39,301	39,301	13,095
8	120,000	0.284782	34,174		39,301	39,301	11,192
9	120,000	0.243404	29,208		39,301	39,301	9,566
10	120,000	0.208037	24,964		39,301	39,301	8,176
Total			503,238				318,961

A. Benefit- cost ratio At 17% D.F. = 1.57

B. NPV At 17% D.F. = 184,277,000 Birr