

Pre-Feasibility Study

PHOTO DEVELOPING AND PRINTING LAB (Digital Technology)



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

www.smeda.org.pk

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1 INTRODUCTION TO SMEDA

Small and Medium Enterprise Development Authority (SMEDA) was established with the objective to provide fresh impetus to the economy through the launch of an aggressive SME support program.

Since its inception in October 1998, SMEDA had adopted a sectoral SME development approach. A few priority sectors were selected on the criterion of SME presence. In depth research was conducted and comprehensive development plans were formulated after identification of impediments and retardants. The all-encompassing sectoral development strategy involved recommending changes in regulatory environment by taking into consideration other important aspects including finance, marketing, technology and human resource development.

SMEDA has so far successfully formulated strategies for sectors including fruits and vegetables, marble and granite, gems and jewelry, marine fisheries, leather and footwear, textiles, surgical instruments, transport and dairy. Whereas the task of SME development at a broader scale still requires more coverage and enhanced reach in terms of SMEDA's areas of operation.

2 PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding business of photo developing and printing, which comes under service sector. The objective of the pre-feasibility is primarily to provide potential entrepreneurs information on various aspects of the project including industry analysis, technical requirements, marketing, labor requirements and financial analysis.

3 CRUCIAL FACTORS & STEPS IN DECISION MAKING FOR INVESTMENT

A SWOT Analysis is a strategic planning tool used to evaluate the *Strengths*, *Weaknesses*, *Opportunities*, and *Threats* involved in a project or business venture. Strengths and weaknesses are internal where as opportunities and threats originate from the external environment. Following are major strengths, weaknesses, opportunities and threats of photo developing and printing business in Pakistan.

3.1 Strengths

- Digital technology has Information-intensive applications.
- It provides quick turnaround.
- Easy availability of resources (technological, skilled human resource, raw material, infrastructure etc.)
- Availability of low cost and user friendly cameras.
- Affordable development and printing of photographs.
- Fast developing and printing.

3.2 Weakness

- With increase in use of digital cameras, consumers can now view their photos on PC by directly attaching their digital cameras with a computer.
- Machinery cost of a digital lab is much higher as compared to conventional labs.
- It is difficult to implement.
- Due to world recession, raw material prices has increased.

3.3 Opportunity

- New applications keep on coming due to innovation in technology.
- In future, digital cameras and their accessories can be placed in shop for selling purpose.
- Great potential, since there are not many (very few) digital photo development labs operating in Pakistan.
- Growing trend of photography in Pakistan.

3.4 Threat

- Cost inhibits growth, so huge amount of money required for adaptation of new technology.
- Potential users may be unconvinced by advantages.

4 PROJECT PROFILE

"Photography" is derived from the Greek words photos ("light") and graphein ("to draw") The word was first used by the scientist Sir John F.W. Herschel in 1839. It is a method of recording images by the action of light, or related radiation, on a sensitive material.

After introduction of user-friendly and affordable digital cameras, digital photography has become a popular phenomenon, world-wide. This pre-feasibility will facilitate to understand the newly emerging business of digital photo developing labs. In addition to the conventional services of developing and printing of negative rolls, this technology is enabling us to process photos from slides and digital media.

4.1 Opportunity Rationale

Photography has emerged itself as a basic need of the day. Camera is being used more or less in every house in Pakistan and world over. It is the cheapest medium to save the moments of life. It is also the need/requirement of many big industries, like film, newspapers, advertising and fashion. Many experts see digital photo printing as the next wave in printing technology. The same consumer, who probably one or two years ago did not feel any need for digital printing is now far more interested. As a result there has been a tremendous increase in photo developing labs with digital technology in last few years.

4.2 Project Brief

The photo printing and developing business comes under service sector and it provides variety of services like developing, printing, enlarging, framing, mounting of photographs and sale of cameras & photo accessories (i.e. flashes, film rolls, albums, camera batteries, camera bags etc.). Moreover a studio will also be established along with the shop and lab, where clients can have their snaps exposed.

4.3 Market Entry Timing

Demand for the digital labs is increasing at a rapid pace and there are very few currently operating in Pakistan. Therefore, it is advisable to enter this business at earliest. Moreover, photo labs can be established at any time of the year, all seasons are suitable for market entry but for more fast business earning it would be advisable to start business in wedding season.

4.4 Proposed Business Legal Status

An enterprise can be a proprietorship or a partnership and even it can be registered under company law with Security and Exchange Commission of Pakistan. Selection totally depends upon the choice of the entrepreneur. Legal status recommended for this business type is sole proprietorship/partnership, as registering sole ownership requires less legal requirement. Similarly a lower income tax rate is applicable to sole proprietorship than that of any other form of companies.

4.5 Project Capacity and Rationale

The proposed digital lab has capacity to print 1180 prints (4"x 6") in one hour. Although shop will operate for eleven hours daily but the lab will only operate for eight hours (single shift) a day.

4.6 Project Investment

Follow is the breakup of investment required for the project:

Table 4-1: Investment breakup

Sr.#	Description	Rupees
1.	Capital cost	9,917,500
2.	Working Capital	1,260,124
	Total	11,177,624

Table 4-2: Recommended Project Parameters

Capacity	Human Resource	Technology/Machinery	Location
1180 prints (4"x 6")/hour	9	Imported Machinery	Metropolitan
Financial Summary			
Project Cost	IRR	NPV	Payback Period
11.17M	40.38%	10.6M	2.80 Years

4.7 Proposed Location

Location of unit is primary concern in this business. It should ideally be located near residential blocks of metropolitans, where majority population belongs to middle and/or higher income bracket. Other suitable location can be concentrated markets for photo labs and related arcades (e.g. Nisbat Road and Chamberlain Road in Lahore).

4.8 Key Success Factors/Practical Tips for Success

- Customer care, well in time service and maintaining good quality can ensure success of any business. Photo developing and printing is service based business where combination of good quality of product and exclusive service can play distinctive role in ultimate success of the business. Entrepreneur can be innovative in many ways to facilitate clients. Giving customer best value for his money is primary success factor for photo developing business.
- Photo-image processing is the most critical step in photography. The final images, or prints, that determine whether consumers continue to spend their discretionary income on photography are a direct result of the quality of photo/image processing. Regardless of the camera, film processing equipment, processing chemicals and photographic paper used." Photo-image processing will be the most critical step in keeping clients coming back.

4.9 Strategic Recommendations

4.9.1 Marketing

Regular and sustained marketing is required for a successful business of photo developing and printing. Few useful marketing and promotional tips are as under:

- Referral marketing is most suitable medium for promoting service sector businesses including photo developing and printing. Take care of your customers and they will promote your business through word of mouth.
- Know your customers' needs and design your product and services in accordance with their requirements.
- Provide "in time" service to customers. Timely delivery is a major consideration for the clients.
- Use promotional sales to increase traffic flow. This technique is useful to gain competitive edge over others.
- Local marketing channels like cable network advertisements and leaflets distribution can be used to increase traffic flow.

4.9.2 Pricing

Following are the currently market prices charged for services being offered by photo printing and developing labs:

Table 4-3: Developing

Sr. #	Media Type	Service charges per roll
1	Film roll	Rs. 20

Table 4-4: Scanning and Image Recording

Sr. #	Media Type	Service charges per roll
1	CD writing from negative	Rs. 150

Table 4-5: Printing

Sr. #	Print	Service charges per print (Rs.)
1	Prints 4R (4"X6")	8
2	Prints 5R (5"X7")	10
3	Prints 6R (6"X8")	40
4	Prints 8R (8"X10")	80
5	Prints (8"X12")	90
6	Prints 10R (10"X12")	100
7	Prints (10"X15")	120
6	Prints (12"X16")	200
7	Prints (12"X18")	225
8	Prints (12"X36")	400

4.9.3 Product Packaging

Traditionally, negatives are placed in a plastic sheet (specifically made for the purpose) and presented to the client along with an album and the photographs in a printed envelop. Album, negative wallet and envelope are complimentary and client is not charged for them. Following are the current market prices at which lab will purchase above mentioned packing material:

Table 4-6: Market Prices of Packing Material

Sr. #	Item	Purchase price per unit (Rs.)
1	Album	4.80
2	Negative wallet	1.0
3	Envelope	1.5
	Total	7.3

5 SECTOR & INDUSTRY ANALYSIS

5.1 Global Prospective

In this new era where the time is running fast, the Global market is also showing fast developing trends. People have turned from conventional methods to digital technology for better and faster results.

Market demand has lead to stronger digital intentions as the conventional methods are inflexible and produce static prints. Digital equipment increases the opportunity to expand services for all sizes of photo-finishing laboratories because it can process and print film and scan the images onto computer CDs or for use online. This trend increases the importance of connectivity between the imaging industry and the information technology industry.

Based on *InfoTrends report*¹, it is revealed that;

- Worldwide revenue from low end (sub-\$1,000) digital camera sales is forecast to reach \$11.8 billion in 2007.
- Worldwide unit shipments of low end digital cameras will reach 24 million units in 2002, capturing 28% of total worldwide camera sales (not including one-time use cameras).
- Unit volume is forecast to grow at a compound annual growth rate of 16% to reach 51 million units in 2007.
- Digital camera sales are expected to experience a compounded annual growth rate of 15 percent over the next four years, reaching 82 million units by 2008.

Based on *IDC report*², it is revealed that;

- Between 2005 and 2009, digital prints are expected to grow 26% annually, from 60 billion to 152 billion. And by 2009, digital print revenue could grow to \$107 billion (it's about \$38 billion currently). Best of all, atleast from the industry's point of view, more than 55% of those prints will be created at a retail location.³
- Positive growth is expected in the consumer photofinishing market. Even though film usage will decline, the bright future of digital camera shipments will increase the number of images captured, shared and received.
- Digital camera images captured, shared and received worldwide will grow an average of 35% for 2003-2008.
- Digital cameras will continue to be the largest generator of digital images despite the greater forecasted proliferation of camera phones.
- Prints from digital images will surpass film prints in 2006 and will account for 71% of total worldwide prints by 2008.

¹ [www.infotrends.com/Revenue from Worldwide Digital Camera Sales to Reach \\$11_8 Billion in 2007.htm](http://www.infotrends.com/Revenue%20from%20Worldwide%20Digital%20Camera%20Sales%20to%20Reach%20$11_8%20Billion%20in%202007.htm)

² [www.IDC.com/Bright Future of Digital Cameras to Boost Consumer Photofinishing Market, IDC Expects](http://www.IDC.com/Bright%20Future%20of%20Digital%20Cameras%20to%20Boost%20Consumer%20Photofinishing%20Market,%20IDC%20Expects)

³ Photo Industry Sees Future In Printing/technology analysis firm IDC Research,2005-2009

5.2 Imports of photographic goods in Pakistan⁴:

Following are the major imports of photographic goods done in Pakistan. The data will give a fair idea of the prospects of this industry in Pakistan:

YEARS	COMMODITY CODE	COMMODITY	TRADE (USD)	WEIGHT (KG)	QUANTITY NAME	QUANTITY
2003	370231	Colour photo film,rolls width < 105mm	1,610,099	45,999	Number of items	1,460,301
	370310	Unexposed photographic paper, textile roll > 610mm wid	2,040,885	329,391	weight in kilograms	329,391
	370320	Unexposed colour photographic paper, board or textile	5,964,209	791,595	weight in kilograms	791,595
	370790	Chemicals preparation for photographic uses,nes	4,579,290	1,165,699	weight in kilograms	1,165,699
2004	370231	Colour photo film,rolls width < 105mm	793,125	0	Number of items	65,604
	370310	Unexposed photographic paper, textile roll > 610mm wid	1,540,592	0	Number of items	97,308
	370320	Unexposed colour photographic paper, board or textile	4,550,002	0	Number of items	289,778
	370790	Chemicals preparation for photographic uses,nes	4,486,634	1,032,682	weight in kilograms	1,032,682
2005	370231	Colour photo film,rolls width < 105mm	402,739	15,203	Number of items	376,356
	370310	Unexposed photographic paper, textile roll > 610mm wid	823,041	170,579	Weight in kilograms	170,579
	370320	Unexposed colour photographic paper, board or textile	3,609,595	494,872	Weight in kilograms	494,872
	370790	Chemicals preparation for photographic uses,nes	4,040,238	2,187,328	weight in kilograms	2,187,328
2006	370231	Colour photo film,rolls width < 105mm	1,136,367	25,531	Number of items	1,059,552
	370310	Unexposed photographic paper, textile roll > 610mm wid	1,051,770	163,127	Weight in kilograms	163,127
	370320	Unexposed colour photographic paper, board or textile	3,085,328	403,427	Weight in kilograms	403,427
	370790	Chemicals preparation for photographic uses,nes	4,267,113	1,237,723	weight in kilograms	1,237,723
2007	370231	Colour photo film,rolls width < 105mm	1,599,831	44,667	Number of items	1,367,364
	370310	Unexposed photographic paper, textile roll > 610mm wid	579,245	109,347	Weight in kilograms	109,347
	370320	Unexposed colour photographic paper, board or textile	2,470,168	344,327	Weight in kilograms	344,327
	370790	Chemicals preparation for photographic uses,nes	3,653,187	1,030,519	Weight in kilograms	1,030,519

⁴ www.comtrade.un.org

5.3 Local Prospective

Photo printing business is emerging as one of the good business ventures in Pakistan. Pakistan is one of those countries where use of camera is gaining popularity, as it is the cheapest medium to save the moments of life.

Unfortunately neither is there any data available about the exact number of minilabs operating in Pakistan nor about their contribution to GDP. There are total 350⁵ minilabs working in Pakistan (140 Fuji, 160 Konica, 30 Kodak, 20others). Number of small photo studios exists mostly in unorganized sector which do not have minilab facility. There is an association of this industry operating under name of Pakistan Photofinishers Association. The head office is in Peshawar and Lahore zone office is located at 86 Chamberlain Road, Lahore. The cluster of this business in Lahore is at Chamberlain Road and Nisbat Road. According to an estimate there are around 150 minilabs in Lahore. Major players are:

- Konica (source LED)
- Fuji (source Laser)

5.3.1 Major Industry Players of Lahore & surrounding areas

Following is the list of major players in the market of Lahore:

Table 5-1: Major Industry Players

Sr #	Name	Location
1	Imperial Digital Color Lab	Chamberlain Road ,Lahore
2	Ikram Digital Color Lab	Chamberlain Road, Lahore
3	Konica Express	Liberty Gulberg, Lahore
4	Amfahas	Liberty, Lahore
5	AB Digital	Chamberlain Road, Lahore
6	Insta Digital Color Lab	Garhishahu, Lahore
7	Crown Digital Color Lab	Shiekhupura
8	Master Rana Color Lab	Kasur

⁵ Fuji, Head Office, Karachi

5.4 Legal Issues Regarding Industry

Photo printing business like any other business activity must be registered with income tax department and sales tax department. Prevailing rate of income tax for sole proprietorship is in various slabs max 25%. Rates are as follows:

Table 5-2: Income Tax Brackets

S/No	Taxable income	Rate of tax
1	Where taxable income does not exceed Rs. 100,000	0%
2	Where taxable income exceeds Rs. 100,000 but does not exceed Rs. 110,000	0.50%
3	Where taxable income exceeds Rs. 110,000 but does not exceed Rs. 125,000	1.00%
4	Where taxable income exceeds Rs. 125,000 but does not exceed Rs. 150,000	2.00%
5	Where taxable income exceeds Rs. 150,000 but does not exceed Rs. 175,000	3.00%
6	Where taxable income exceeds Rs. 175,000 but does not exceed Rs. 200,000	4.00%
7	Where taxable income exceeds Rs. 200,000 but does not exceed Rs. 300,000	5.00%
8	Where taxable income exceeds Rs. 300,000 but does not exceed Rs. 400,000	7.50%
9	Where taxable income exceeds Rs. 400,000 but does not exceed Rs. 500,000	10.00%
10	Where taxable income exceeds Rs. 500,000 but does not exceed Rs. 600,000	12.50%
11	Where taxable income exceeds Rs. 600,000 but does not exceed Rs. 800,000	15.00%
12	Where taxable income exceeds Rs. 800,000 but does not exceed Rs. 10,00,000	17.50%
13	Where taxable income exceeds Rs. 10,00,000 but does not exceed Rs. 13,00,000	21.00%
14	Where taxable income exceeds Rs. 13,00,000	25.00%

Note: No tax shall be charged if the income of a woman taxpayer does not exceed Rs. 125,000

Where the taxable income, in a tax year, of a taxpayer aged 60 years or more on the first day of that tax year does not exceed 500,000 rupees, his tax liability on such income shall be reduced by 50%.

6 MARKET INFORMATION

6.1 Market Potential

The market for photo developing and printing industry in Pakistan has been developing steadily over the years and a mushroom growth of minilabs has been observed in all the cities. Still a good potential is available for new labs, as population of big cities and use of digital camera are increasing day by day. Moreover there are very few digital photo processing labs operating in Pakistan, while their demand is rapidly raising

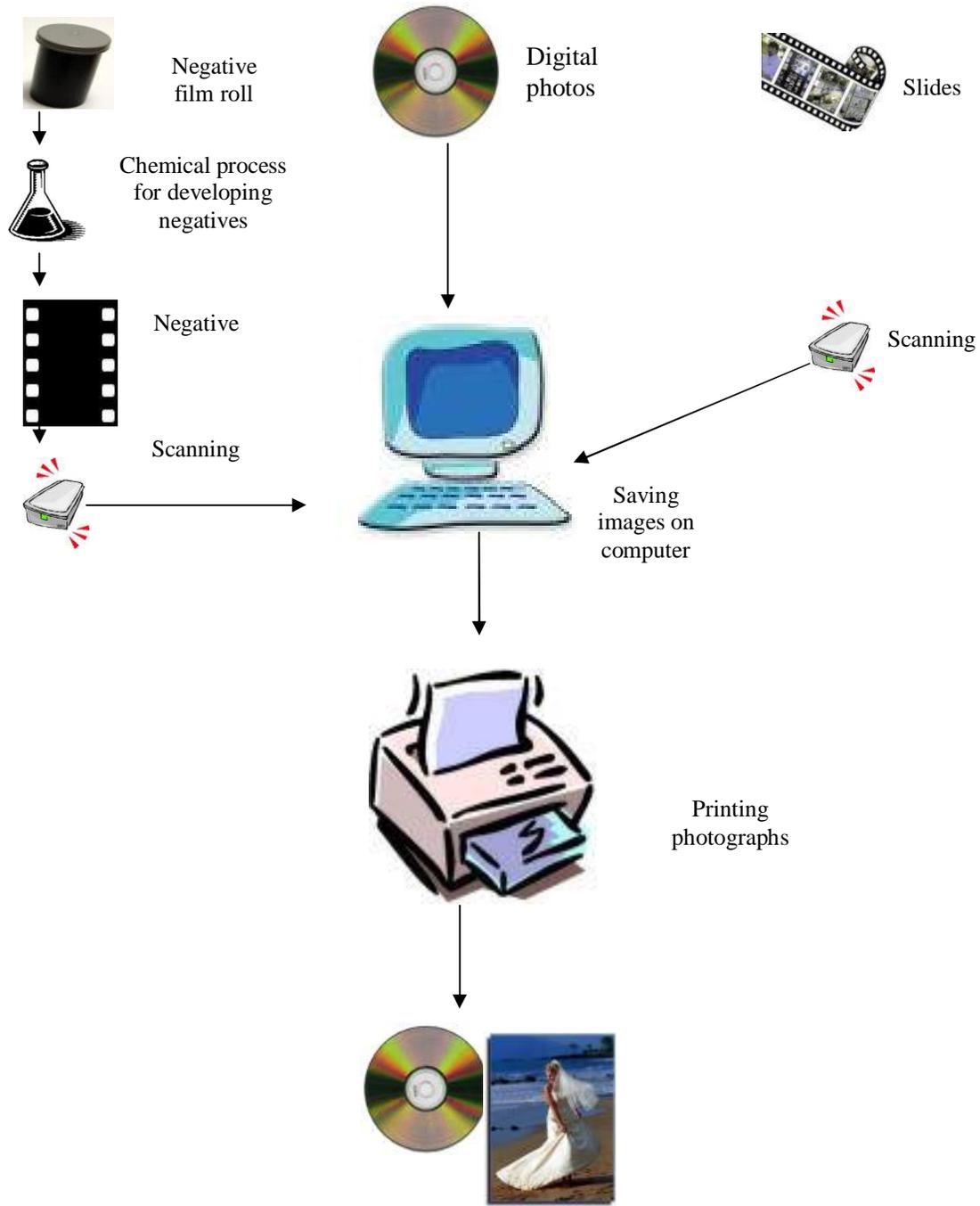
6.2 Target Customers

The customer of this industry can be categorized as follows:

- Retail customers
- Small photo studio owners not having minilabs
- News papers
- Professional photographers
- Surveyors etc

7 PRODUCTION PROCESS

7.1 Production Process Flow



Photographs are saved on CDs and presented to clients along with prints

7.1.1 Input photo film

- a. Film is accepted from customer
- b. Film passes through processor containing chemical baths.
- c. The negative is produced.
- d. Negative image is transferred to photographic paper
- e. Photographic paper passes through a series of chemical baths.
- f. Photographic prints are produced.
- g. Prints and negatives are assembled into final package
- h. Prints may be stored on any digital medium like CD, ZIP, FLOPPY etc
- i. Finished product is delivered to customer.

7.1.2 Input digital image

- a. Digital media like digital camera, CD etc is accepted from customer
- b. Digital image saved and forwarded to equipment.
- c. Digital image is transferred to photographic paper
- d. Photographic paper passes through a series of chemical baths.
- e. Photographic prints are produced.
- f. Prints are assembled into final package
- g. Finished product is delivered to customer.

7.1.3 Input Slides

- a. Slide positive is accepted from customer
- b. Scanning of image from slide
- c. Digital image saved and forwarded to equipment.
- d. Digital image is transferred to photographic paper
- e. Photographic paper travels through a series of chemical baths.
- f. Photographic prints are produced.
- g. Prints are assembled into final package
- h. Digital image can also be stored on digital device like CD, ZIP or Floppy on clients request.
- i. Finished product is delivered to customer.

7.2 Product Mix Offered

The Photo developing and printing unit will offer following broad categories of products and services to its customers:

- Photo developing and printing (digital input and film input)
- Photo enlargement (maximum 30"X 40")
- Sale of film rolls, albums, cameras, batteries and allied accessories
- Exposing Photos
- Framing and mounting
- High resolution scanning service
- CD writing of photos
- Digital processing and customizing photographs

7.3 Raw Material Requirement

The raw materials required for minilabs are:

7.3.1.1 Photographic paper

Photographic paper rolls are available in various sizes (length and width), most commonly used is of 610 feet x 6 inches and costs approximately Rs.4,600/-. This paper is sufficient to print 1830 prints or 51 rolls of 4"x6" size. Rates of various sizes of photographic papers are as follows:

Table 7-1: Prices of Photographic Paper

Sr. #	Paper roll	For print sizes	Cost per roll
1	610 ft (6")	4"X6"	Rs. 4,600
2	610 ft (5")	5"X7"	Rs. 4,100
3	575 ft (6")	6"X8"	Rs. 4,600
4	275 ft (8")	8"X10", 8"X12"	Rs. 3,700
5	275 ft (10")	10"X12", 10"X15"	Rs. 4,600

7.3.1.2 Chemicals

There are two main types of chemicals used in the process, developing chemicals and printing chemicals. Chemicals required at developing stage are film developer, film bleach, film fixer, and film stabilizer and at printing stage are paper developer, paper bleach, and paper stabilizer.

Table 7-2: Prices of Chemicals available at FUJI

Sr. #	Type	Quantity	Cost per container
1	Developer Kit CP-47L, CP-43	2.5 liters	Rs. 733
2	CP 49E, PCx2	-	Rs.3,375
3	Bleach P-2R	4 liters	Rs. 1,561

It is difficult to calculate the consumption of these chemicals in quantitative terms. According to experts, average cost of chemicals consumed for printing and developing of a film roll of 36 snaps is as follow:

Table 7-3: Cost of Chemicals (Approximate)

Sr. #	Type	Cost per roll
1	Chemicals at developing	Rs. 25
2	Chemicals at printing	Rs. 10
	Total	Rs. 35

The chemical process generates silver as waste. This wastage is sold at the rate of Rs. 25 to 35 per liter, depending upon the silver proportion in it. For the purpose of this feasibility wastage sale has been ignored in financials.

These raw materials are easily available in all the cities of Pakistan. Following are the major suppliers of machinery and raw material in Lahore and Karachi:

Table 7-4: Suppliers of Machinery and Raw Material

Sr. #	Company Name	Contacts
1	FUJI FILM PAKISTAN	37D PECHS Karachi Tel: 021-4535502. West Pakistan Investment Ltd Building Patiala Ground Lahore Tel: 042-7237704-6
3	EM-AEY ENTERPRISES (DNP)	Patiala Ground, Lahore
4	KODAK	Bahria Complex M.T Khan Road, Karachi Tel: 021-5610150 Empress Road, Lahore
5	PPM CHEMICALS (PVT) LTD	1/1 Mission Road, Lahore Tel: 042-7223693
6	UNICOLOR	42-Chamberlain Road, Lahore Tel: 042-7226361

7.4 Technology and Processes

7.4.1 Technology/Process Options

Two main types of technologies are available these days:

- Conventional minilabs
- Digital minilabs

7.4.2 Merits & demerits of these technologies

Conventional minilabs only take photo prints from film rolls, while *digital minilabs* allows photos to be produced on photo paper using digital technologies. Pictures can be manipulated in many ways before it is printed. Digital lab can print images from CDs, digital cameras, slide film and negative films. Besides printing, an image can also be copied to CDs and Floppy disks on customer's demand.

Digital minilabs are costly as compared to conventional minilabs. Digital technology was introduced in 1998. In Pakistan this technology arrived in year 2001. Digital minilabs with good market repute are Fuji 355, Konica R-1 Super, Kodak Noritsu 2901, Kodak Noritsu 3001, Fuji LP 7100 and Fuji LP 7500. These machines cost in range of Rs. 4.00 million to Rs. 9.00 million and have production capacity between 1,000 and 1,200 prints per hour.

Traditionally, the rates charged for digital prints are higher than that of conventional prints. Labs with digital technology are charging Rs. 8 for 4"x6" print as compared to Rs. 6 of conventional labs. Clients are willing to pay this extra premium for better quality prints of digital labs.

7.5 Machinery Requirement

Machine and equipment required for a digital photo developing and printing lab are listed as follow:

Table 7-5: Machine and Equipment

Sr. #	Description	No. of Units	Cost per unit	Total cost	Availability
1.	Minilab Fuji Frontier LP7500	1	7,500,000	7,500,000	Local
2.	Film processor FP 560 B	1	1,000,000	1,000,000	Local
3.	Exposing studio equipment (Professional Camera, lights, backgrounds, stands etc)	1	90,000	90,000	Local
4.	Split AC	2	35,000	70,000	Local
5.	Furniture/fixtures/glass work		265,000	265,000	Local
6.	Computer	1	35,000	35,000	Local
7.	Scanner	1	7,500	7,500	Local
8.	Printer	1	15,000	15,000	Local
9.	Generator	1	780,000	780,000	Local
	Total			9,762,500	

Major supplier of machinery used in processing and developing of photographs are listed under the caption “suppliers of machinery and raw material”

7.6 Machine Maintenance

Generally these machines require less but regular maintenance and cleanliness. Spare parts and after sale service is easily available in all the big cities. For this pre feasibility, the machine maintenance cost is assumed at 1% of machine cost.

8 LAND & BUILDING REQUIREMENT

8.1 Land Requirement

The proposed photo developing and printing unit requires an area of approximately 640 sq ft. It is recommended to start this business at rented premises rather at owned premises.

8.2 Covered Area Requirement

Following table gives detail of covered area requirements for the lab:

Table 8-1: Lab area requirements

Sr. #	Description	Sq ft.	Units	Area Sq ft
1	Lab	126	1	126
2	Studio	300	1	300
3	Sales/customer area	120	1	120
4	Owner room	94	1	94
	Total			640

8.3 Construction Cost

It is assumed that the renovation cost would be approximately Rs. 400 per sq ft. Total renovation cost of 640-sqft area will be Rs. 265,000/-

8.4 Rent Cost

Building will be acquired on rent, will cost around Rs. 35,000 per month in recommended areas of Lahore. For the purpose of this feasibility it is assumed that a premise is rented on same.

8.5 Utilities Requirement

The necessary utilities are electricity and telephone. A three-phase commercial electricity connection is required. Current rate of electricity for these connections is Rs 11.00 per kilowatt-hour.

9 HUMAN RESOURCE REQUIREMENT

Skilled machine men are easily available at competitive salaries. Number of workers required for each department along with their salaries are given below:

Table 9-1: Human Resource Description

Sr. #	Positions	No. of employees	Salary/month (Rs.)	Annual salary
1	Manager	1	25000	300,000
2	Machine men	1	15,000	180,000
3	Assistant operator	1	10,000	120,000
4	Cashier/Accountant	1	8,000	96,000
5	Helper	1	6,000	72,000
6	Graphic designer	1	10,000	120,000
7	Computer operator	1	8,000	96,000
8	Security guard	2	8,000	192000
	Total	9	98,000	1,176,000

10 FINANCIAL ANALYSIS

10.1 Projected Income Statement

	Rupees (000)									
	Year - I	Year - II	Year - III	Year - IV	Year - V	Year - VI	Year - VII	Year - VIII	Year - IX	Year - X
Revenue*	14,925	23,507	24,683	25,917	27,213	28,573	30,002	31,502	33,077	34,731
Direct cost*	7,398	11,906	12,520	13,168	13,850	14,569	15,326	16,124	16,965	17,852
Gross Profit	7,527	11,602	12,162	12,749	13,363	14,005	14,676	15,378	16,112	16,879
Operating Expenses:	4,243	4,516	4,753	5,030	5,349	5,691	6,101	6,562	7,077	7,650
Operating Profit	3,284	7,086	7,409	7,719	8,013	8,313	8,575	8,816	9,035	9,228
Financial Charges	956	754	553	352	151	-	-	-	-	-
Profit before Taxation	2,329	6,332	6,856	7,367	7,863	8,313	8,575	8,816	9,035	9,228
Taxation	582	1,583	1,714	1,842	1,966	2,078	2,144	2,204	2,259	2,307
Profit after Taxation	1,747	4,749	5,142	5,525	5,897	6,235	6,431	6,612	6,776	6,921
Acc. Profit b/f	-	1,747	6,495	11,637	17,162	23,059	29,294	35,725	42,337	49,113
Un-appropriated Profit c/l	1,747	6,495	11,637	17,162	23,059	29,294	35,725	42,337	49,113	56,034

* NOTE The figure of revenue and cost are exclusive of sales tax

10.2 Revenues

Revenue	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue from printing and developing	9,691,733	15,264,480	16,027,704	16,829,089	17,670,544	18,554,071	19,481,774	20,455,863	21,478,656	22,552,589
Revenue from enlargements	2,422,933	3,816,120	4,006,926	4,207,272	4,417,636	4,638,518	4,870,444	5,113,966	5,369,664	5,638,147
Revenue from film roll, cameras, batteries and other accessories	969,173	1,526,448	1,602,770	1,682,909	1,767,054	1,855,407	1,948,177	2,045,586	2,147,866	2,255,259
Revenue from Studio/exposing	969,173	1,526,448	1,602,770	1,682,909	1,767,054	1,855,407	1,948,177	2,045,586	2,147,866	2,255,259
Revenue from Albums/framing	484,587	763,224	801,385	841,454	883,527	927,704	974,089	1,022,793	1,073,933	1,127,629
Revenue from scanning, CD writing	387,669	610,579	641,108	673,164	706,822	742,163	779,271	818,235	859,146	902,104
total revenue	14,925,269	23,507,299	24,682,664	25,916,797	27,212,637	28,573,269	30,001,933	31,502,029	33,077,131	34,730,987

10.3 Direct Cost

Direct cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Printing and developing	3,939,545	6,204,718	6,514,954	6,840,701	7,182,749	7,541,887	7,918,902	8,314,979	8,730,642	9,167,207
Packing cost	236,003	371,700	409,799	451,804	498,114	549,171	605,455	667,525	735,939	811,376
Enlargements	1,453,760	2,404,156	2,524,363	2,650,582	2,783,111	2,922,266	3,068,379	3,221,798	3,382,888	3,552,033
Film roll, cameras, batteries and other accessories	726,880	1,202,078	1,262,182	1,325,291	1,391,555	1,461,133	1,534,190	1,610,899	1,691,444	1,776,016
Studio/exposing	484,587	801,385	841,454	883,527	927,704	974,089	1,022,793	1,073,933	1,127,629	1,184,011
Albums/framing	363,440	601,039	631,091	662,645	695,778	730,567	767,095	805,450	845,722	888,008
Scanning, CD writing	193,835	320,554	336,582	353,411	371,081	389,635	409,117	429,573	451,052	473,604
Total direct cost	7,398,049	11,905,629	12,520,425	13,167,961	13,850,092	14,568,748	15,325,932	16,124,157	16,965,317	17,852,256

10.4 Operating Expenses

	Year - I	Year - II	Year - III	Year - IV	Year - V	Year - VI	Year - VII	Year - VIII	Year - IX	Year - X
Administrative Salaries	1,176,000	1,293,600	1,422,960	1,565,256	1,721,782	1,893,960	2,083,356	2,291,691	2,520,860	2,772,946
Rent	600,000	660,000	726,000	798,600	878,460	966,306	1,062,937	1,169,230	1,286,153	1,414,769
legal & Audit Fee	25,000	27,500	30,250	33,275	36,603	40,263	44,289	48,718	53,590	58,949
Entertainment	74,626	117,536	123,413	129,584	136,063	142,866	150,010	157,510	165,386	173,655
Telephone, Fax and Postage	74,626	117,536	123,413	129,584	136,063	142,866	150,010	157,510	165,386	173,655
Electricity	744,360	818,796	900,676	990,743	1,089,817	1,198,799	1,318,679	1,450,547	1,595,602	1,755,162
Advertisement and promotional	298,505	235,073	246,827	259,168	272,126	285,733	300,019	315,020	330,771	347,310
Repair and maintenance	98,125	107,938	118,731	130,604	143,665	158,031	173,834	191,218	210,340	231,374
Traveling conveyance	74,626	116,017	121,622	127,488	133,625	140,045	146,760	153,779	161,118	168,787
Printing and stationery	74,626	117,536	123,413	129,584	136,063	142,866	150,010	157,510	165,386	173,655
Depreciation	981,250	883,125	794,813	715,331	643,798	579,418	521,476	469,329	422,396	380,156
Amortization	21,000	21,000	21,000	21,000	21,000	-	-	-	-	-
	4,242,746	4,515,658	4,753,118	5,030,218	5,349,066	5,691,154	6,101,380	6,562,063	7,076,987	7,650,418



10.5 Projected Balance Sheet

Rupees
(ooo)

	Year - 0	Year - I	Year - II	Year - III	Year - IV	Year - V	Year - VI	Year - VII	Year - VIII	Year - IX	Year - X
Tangible Fixed Assets	9,813	8,831	7,948	7,153	6,438	5,794	5,215	4,693	4,224	3,802	3,421
Preoperational expenses	105	84	63	42	21	-	-	-	-	-	-
Current Assets:											
Security deposit	300	300	300	300	300	300	300	300	300	300	300
Advance rent	300	-	-	-	-	-	-	-	-	-	-
Cash in Hand / Bank	660	3,331	8,317	13,218	18,426	23,939	30,825	37,853	45,014	52,297	59,687
	1,260	3,631	8,617	13,518	18,726	24,239	31,125	38,153	45,314	52,597	59,987
	11,178	12,546	16,628	20,713	25,185	30,033	36,340	42,846	49,538	56,398	63,408
Owners Equity:											
Capital	5,589	5,589	5,589	5,589	5,589	5,589	5,589	5,589	5,589	5,589	5,589
Accumulated Profit	-	1,747	6,495	11,637	17,162	23,059	29,294	35,725	42,337	49,113	56,034
Long Term Loan	5,589	3,353	2,236	1,118	-	-	-	-	-	-	-
Current Liabilities:											
Current Portion of Long Term Loan	-	1,118	1,118	1,118	1,118	-	-	-	-	-	-
Accounts Payable	-	740	1,191	1,252	1,317	1,385	1,457	1,533	1,612	1,697	1,785
	-	1,858	2,308	2,370	2,435	1,385	1,457	1,533	1,612	1,697	1,785
	11,178	12,546	16,628	20,713	25,185	30,033	36,340	42,846	49,538	56,398	63,408

10.6 Projected Cash Flow Statement

Rupees
(ooo)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Profit before Financial Charges & Taxation	-	3,284	7,086	7,409	7,719	8,013	8,313	8,575	8,816	9,035	9,228
Amortization	-	21	21	21	21	21	-	-	-	-	-
Depreciation	-	981	883	795	715	644	579	521	469	422	380
	-	4,287	7,990	8,225	8,455	8,678	8,893	9,096	9,285	9,457	9,608
Working Capital Change	-	1,040	451	61	65	68	72	76	80	84	89
	-	5,327	8,441	8,286	8,520	8,746	8,965	9,172	9,365	9,541	9,697
Cash form other Sources											
Owners	5,589	-	-	-	-	-	-	-	-	-	-
Bank Finance	5,589	-	-	-	-	-	-	-	-	-	-
	11,178	-	-	-	-	-	-	-	-	-	-
Total Sources	11,178	5,327	8,441	8,286	8,520	8,746	8,965	9,172	9,365	9,541	9,697
Applications:											
Fixed Assets	9,813	-	-	-	-	-	-	-	-	-	-
Preoperational Expenses	105	-	-	-	-	-	-	-	-	-	-
Working Capital	1,260	-	-	-	-	-	-	-	-	-	-
Re -Payment of Loan	-	2,073	1,872	1,671	1,470	1,269	-	-	-	-	-
Tax	-	582	1,583	1,714	1,842	1,966	2,078	2,144	2,204	2,259	2,307
	11,178	2,656	3,455	3,385	3,311	3,234	2,078	2,144	2,204	2,259	2,307
Cash Increase/(Decrease)	-	2,671	4,986	4,901	5,208	5,512	6,886	7,028	7,161	7,283	7,390
Opening Balance	660	660	3,331	8,317	13,218	18,426	23,939	30,825	37,853	45,014	52,297
Closing Balance	660	3,331	8,317	13,218	18,426	23,939	30,825	37,853	45,014	52,297	59,687

10.7 Project Ratio Analysis

	Rupees (ooo)									
	Year - I	Year - II	Year - III	Year - IV	Year - V	Year - VI	Year - VII	Year - VIII	Year - IX	Year - X
Income:										
Net sales/revenue	14,925	23,507	24,683	25,917	27,213	28,573	30,002	31,502	33,077	34,731
Profit before tax	2,329	6,332	6,856	7,367	7,863	8,313	8,575	8,816	9,035	9,228
Profit after tax	1,747	4,749	5,142	5,525	5,897	6,235	6,431	6,612	6,776	6,921
Retained earnings in business	1,747	6,495	11,637	17,162	23,059	29,294	35,725	42,337	49,113	56,034
Financial Position:										
Current assets	3,631	8,617	13,518	18,726	24,239	31,125	38,153	45,314	52,597	59,987
Less current liabilities	(1,858)	(2,308)	(2,370)	(2,435)	(1,385)	(1,457)	(1,533)	(1,612)	(1,697)	(1,785)
Net working capital	1,773	6,308	11,148	16,292	22,854	29,668	36,620	43,702	50,900	58,202
Tangible Fixed assets net	8,831	7,948	7,153	6,438	5,794	5,215	4,693	4,224	3,802	3,421
Less long term debts other liabilities	(3,353)	(2,236)	(1,118)	-	-	-	-	-	-	-
Represented by:										
Equity	7,335	12,084	17,226	22,751	28,648	34,883	41,314	47,926	54,702	61,623
Ratios:										
Current assets to liabilities	1.95	3.73	5.70	7.69	17.50	21.36	24.89	28.10	31.00	33.60
Profit before tax to sale/revenue (%)	15.6%	26.9%	27.8%	28.4%	28.9%	29.1%	28.6%	28.0%	27.3%	26.6%
Return on fixed assets (%)	19.8%	59.7%	71.9%	85.8%	101.8%	119.6%	137.0%	156.5%	178.2%	202.3%
Return on equity (%)	23.8%	39.3%	29.8%	24.3%	20.6%	17.9%	15.6%	13.8%	12.4%	11.2%
Debt to equity:										
Debt	31.4	15.6	6.1	-	-	-	-	-	-	-
Equity	68.6	84.4	93.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

11 KEY ASSUMPTIONS

11.1 Machinery Assumptions

Capacity of minilab machine (Prints/Hour)	1,180
Capacity per day -(impressions) approximately	8,000
Repair and maintenance cost (% of equipment cost having growth 10%)	1%
Number of prints per roll	36

11.2 Operating Assumptions

Hours operational per day	8 hours
Days operational per month	25 days
Days operational per year	300 days
No of shifts per day	Single
Annual capacity utilization for year 1	40%
Annual capacity utilization for year 2	60%
Annual growth in capacity utilization (year 3 onwards)	5% p.a.

11.3 Economy Related Assumptions

Electricity cost growth rate	10%
Salary growth rate	10%
Rent growth rate	10%
Markup rate on long-term loan	16%
Raw material price growth rate	5%
Revenue price growth rate	5%

11.4 Cash Flow Assumptions

Accounts payable average	30 days
Advance rent (period)	6 months

11.5 Financials Assumptions

Project life (Years)	10
Debt	50%
Equity	50%
Interest rate on long-term debt	18%
Debt tenure (Years)	5
Debt payments per year	2
Discount rate (weighted Avg. cost of capital for NPV)	20%

11.6 Operating Cost Assumptions

Telephone Expenses (percentage of annual revenue)	0.5%
Entertainment (percentage of annual revenue)	0.5%
Amortization of deferred cost	20%
Advertisement first year (percentage of annual revenue)	2%
Advertisement year two and onwards (percentage of annual revenue)	1%
Traveling and conveyance (percentage of annual revenue)	0.5%
Printing and stationery (percentage of annual revenue)	0.5%

11.7 Direct Cost Assumptions

Chemical used in negative development	Rs.25/roll
Chemical used in printing	Rs.10/roll
Printing paper	Rs.90/roll
Packing charges	Rs.7.5/roll
Enlargements (percentage of enlargement revenue)	60%
Film roll, cameras, batteries and other accessories (percentage of accessories revenue)	75%
Studio/exposing (percentage of studio/exposing revenue)	50%
Albums/framing (percentage of album/framing revenue)	75%
Scanning, CD writing (percentage of scanning and CD writing revenue)	50%

11.8 Revenue Assumptions

Printing (4" x 6")	Rs.245/roll
Film roll (negative) developing	Rs.20/roll
Revenue from enlargements (percentage of printing/developing revenue)	25%
Revenue from film roll, cameras, etc. (percentage of printing/developing revenue)	10%
Revenue from Studio/exposing (percentage of printing/developing revenue)	10%
Revenue from Albums/framing (percentage of printing/developing revenue)	5%
Revenue from scanning, CD writing (percentage of printing/developing revenue)	4%