

COMPUTER HARDWARE SERVICE CENTRE

1. INTRODUCTION

Computers are most essential for all type of business. Small retailers, traders, doctors, hospitals, call centres, even nowadays vegetable shops like wholesale, reliance-fresh need computers to maintain inventory, credit/debit card payments, billing, maintaining customer database, appointments, and customer's history/cases. Some of institutions have large number of computers operating under various departments like accounts, inventory, billing, marketing etc. Schools and colleges have separate labs having hundreds of computers operating at same time.

2. SERVICE AND ITS APPLICATION

Computer hardware service centre is one such centre which provides services to above mentioned institutions that have computers for their business. Some of them need repair and maintenance for large number of computers at the same time. They also need upgrades on time to time basis. This centre will provide services to such customers for assembly of upgraded hardware, repair of faulty parts, upgrade of processors and software and also provide external components like mouse, speakers, key-boards.

3. DESIRED QUALIFICATION FOR PROMOTER

An entrepreneur with computer engineer background is required which will helpful in procurement of right materials and components as per customer's specifications and also can understand customer's requirement in upgrade and assembly of computers.

4. INDUSTRY LOOK OUT AND TREND

The technology industry is always in flux. Frequent new products and category innovation define and redefine the sector's constantly shifting landscape. But lately we have seen even greater volatility than usual, and it has begun to affect the makeup of hardware and

software companies themselves. Increasingly, technology firms are re-examining the structure of their businesses and taking bold steps to squeeze out better financial performance.

This volatility is manifested in a flurry of attempted and consummated mergers, acquisitions, and divestitures. In the early fall of 2017, for example, multiple major business publications reported that Hewlett-Packard was in talks to purchase storage equipment maker EMC, primarily to improve scale and cut costs. Both sides refused to comment on any possible deal, and none occurred. Then, in November, HP announced that it was splitting in two, separating its computer and printer hardware business (HP Inc.) from its enterprise hardware, software, and services units (Hewlett-Packard Enterprise). HP's goal for the split is to allow both units, which will each generate more than US\$50 billion in revenue and be Fortune 50 companies, to become more nimble and focused on their respective markets and competitors. With this breakup, the two companies will have to find ways to improve the performance of slow-growth businesses struggling to maintain decent profit margins.

5. MARKET POTENTIAL AND MARKETING ISSUES. IF ANY

The market for computer is expanding day by day due to rapid computerization of offices for accounts, inventory, sales, correspondence and communications in all walks of life. The demand for computer continues to grow. Even though there are big competition in computer assembling the servicing of computers and providing quality networking services are in very poor shape even in metros. The small manufacturers have to compensate this tough competition with their better quality services. Government as well as private offices need dedicated team of expert to service as well network their whole functioning on service contract basis in most reliable fashion. This project serves this grey area of activity.

As of 2010 there were over 550,000 people employed in the maintenance and repair sector in the United States, and employment was expected to grow through 2018. More than 70% of those people work in small businesses of less than 5 people; another 20% work for companies with less than 20 people. While previously the industry had been primarily focused on fixing and upgrading business computers, most of the companies now do more than just maintenance and repair. Over the course of the 1990s, repair services were able to cope with more reliable and cheaper computers hurting business by replacing components instead of repairing them, using new diagnostic tools, and offering other services such as disaster recovery and virus protection.

6. RAW MATERIAL REQUIREMENT

Sr. No	Description of the item	Quantity	Cost/Unit	Total Amount
1	Processor, motherboard, monitor, keyboard, Hard Disk, DVD writer, SMPS, RAM, Speakers and UPS.	2 sets – for assembling 2 computers	35,000 INR	70,000 INR
2	Accessories for networking and other spare hardware frequently used.	1 set of equipment	15,000 INR	15,000 INR

7. SERVICES PROCESS OUTLINE

The maintenance of computer involves various skills like assembly of electronics and electrochemical sub-assemblies, peripherals and integrating them into a computer unit. In present market scenario it will be difficult to face competition from big names. Mostly the project model involves earning through servicing; however few computers will be assembled too to supply to the trusted customers. As per design the motherboard, and display device will procured as per demand. The other sub-assemblies like hard disk, CD drive, cabinets, SMPS will be readily available. For assembly of PC the motherboard along with other sub-assemblies are mounted in cabinet and interconnected before testing for various performances with help of dedicated software.

There are basic 2 services will be provided by service centre.

1. New computer assembly according to the customer's requirement
2. Old computer repairing/ replacement of particular devices.

8. MAN POWER REQUIREMENT

SR. No	Designation	Salary/Month	Number of Employees according to year				
			1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
1	Supervisor	₹ 13,000.00	1	1	1	2	2
2	Technical Skilled Worker	₹ 10,000.00	3	5	5	7	7
3	Semi-Skilled Worker	₹ 8,000.00	2	2	2	3	4
	Total		6	8	8	12	13

9. IMPLEMENTATION SCHEDULE

The project can be implemented in a period of 3 to 5 months by performing the various activities in a systematic manner and simultaneous application of various common activities as mentioned below:

SR. No	Task Description	Duration
1.	Preparation of project reports	15 Days (1 st Month)
2	Essential registration	15 Days (1 st Month)
3	Site Selection	5-10 Days (1 st Month)
4	Arrangement of Finance/ loan	30 Days (2 nd Month)
5	Arrangement of rented accommodation	30 Days (2 nd Month)
6	Machinery and Equipment purchase	10 Days (3 rd Month)
7	Recruitment of staff and labour	10 Days (3 rd Month)
8	Installation of Machinery	10 Days (3 rd Month)
9	Trial Operation	4 th Month
10	Commercial Operation	5 th Month

10. COST OF PROJECT

Sr. No.	Particulars	Amount in Rs
1	Fixed investment amount	₹ 1,18,650.00
2	Working Capital Margin (3 Months)	₹ 3,94,050.00
	Total Cost of Project	₹ 5,12,700.00

(a) Fixed Investment Calculation

Sr. No.	Description	QTY	Amount
1	Computer Testing System (HDD, Motherboard, Processor, Printer, Keyboard, Mouse etc.)	2	₹ 70,000.00
2	Tools for making internet connections and other essential tools for assembly and service activities	LS	₹ 15,000.00
3	Software	LS	₹ 12,000.00
4	Office Furniture	LS	₹ 16,000.00
5	Electrification and other charges for installation 5 % of plant & machine charges	--	₹ 5,650.00
	Total		₹ 1,18,650.00

(b) Working Investment Calculation

Sr. No.	Description	Total
1	Salary	₹ 59,000.00
1a	Supervisor	₹ 13,000.00
1b	Technical Skilled Worker - 3 @ Rs 10,000 per Month	₹ 30,000.00
Sr. No.	Description	Total
1c	Semi-Skilled Worker – 2 @ Rs 8,000 per Month	₹ 16,000.00
2	Raw Material	₹ 58,000.00
2a	Computer assembly equipment kit	₹ 38,000.00
2b	Accessories for networking and other spare hardware frequently used.	₹ 20,000.00
3	Utilities	₹ 1,150.00
3a	Power	₹ 1,000.00
3b	Water	₹ 150.00
4	Other Expenses	₹ 5,200.00
4a	Advertising/Marketing/Social Media	₹ 800.00
4b	Stationery	₹ 500.00
4c	Telephone	₹ 700.00
4d	Transportation	₹ 1,200.00
4e	Insurance	₹ 500.00
4f	Consumable Stores	₹ 1,000.00
4g	Misc.	₹ 500.00
5	Rent	₹ 8,000.00
	Total	₹ 1,31,350.00

11. MEANS OF FINANCE

Sr. No.	Description	Percentage	Amount (Rs)
1	Promoter's Contribution	25%	₹ 1,28,175.00
2	Term Loan/Bank Finance	75%	₹ 3,84,525.00
	Total		₹ 5,12,700.00

(a) Cost of Operation

Sr. No.	Particulars	Amount in Rs
	<u>Variable Cost</u>	
1	Raw Material and Other direct inputs	₹ 63,200.00
2	Salary (60%)	₹ 35,400.00
3	Power (70%)	₹ 805.00
	Variable Cost 1 Month	₹ 99,405.00
	<i>Total Annual Variable Cost</i>	₹ 11,92,860.00
	<u>Fixed Cost</u>	
1	Overheads	₹ 8,000.00
2	Salary (40%)	₹ 23,600.00
3	Power (30%)	₹ 345.00
	<i>Sub Total</i>	₹ 31,945.00
	<i>Total for 12 Months</i>	₹ 3,83,340.00
4	Interest	₹ 46,143.00
5	Depreciation on Equipment @ 10%	₹ 6,865.00
6	Depreciation on Furniture @ 20 %	₹ 9,000.00
	<i>Total Fixed Cost</i>	₹ 4,45,348.00
	Total Cost of Production	₹ 16,38,208.00

(b) Turnover

Sr. No.	Description	Unit Price	Unit per Day	Revenue per Day	Monthly Amount (25 Working Days)
1	Service Charge for Hardware Repair and Upgrade	500	12	6000	₹ 1,50,000.00
2	Profit Margin on selling assembled of Computers	5000	6	30000	₹ 30,000.00
	Total Revenue per Month				₹ 1,80,000.00
	Total Revenue per Annum				₹ 21,60,000.00

12. WORKING CAPITAL REQUIREMENTS

Working capital is based on the expenses this centre does per month to work and provide the services. We have given following list for working capital requirements.

- Raw material : Computer assembly equipment kit and networking devices
- Manpower: this centre required one supervisor, 3 skilled workers and 2 semi-skilled workers on initial stage.
- Utilities: basic utilities – water and electricity (Power) are required must.
- Basic other expenses are also included in working capital like telephone, transport, rent, stationery, insurance and more according to the business requirement.

13. LIST OF MACHINERY REQUIRED

Start-up with computer hardware centre, following machinery required on fixed investment basis as well as on monthly basis.

- Computer Assembly kit
- Motherboards
- Mouse
- Keyboards
- LCD Screens/Monitors
- CPUs
- Wire-less routers
- Other small computer repairing components
- Connection and network devices like cables, USB, hard disk and other specific device according to the requirement.

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

1. Impressive Computers
Hasan Ali House No. 4/41-A,
Noor Baug, Umerkhadi,
Mumbai - 400009,
Maharashtra, India
2. Computer Planet
Shop No. 1, Shaniwar Peth-53,
Opposite Amruteshwar Mandir,
Amruteshwar Co Operative Housing Society,
Near Shaniwar Wada,
Pune – 411030,
Maharashtra, India
3. Visicube Technologies Private limited
Door No. 1-8-315,
Begumpet, Opposite US Consulate,
Hyderabad - 500016,
Telangana, India
4. Micon Automation Systems Private Limited
A-814, Siddhi Vinayak Towers,
Behind DCP Office, Makarba,
Ahmedabad - 380051,
Gujarat, India
5. Adaptek Automation Technology
No. 13, F- 3, 2nd Floor,
Main Road, AdyarNehru Nagar,
Near H.D.F.C. Bank A.T.M.,
Chennai - 600020,
Tamil Nadu, India

14. PROFITABILITY CALCULATIONS

Description	Amount
Net Profit (Turnover - Cost of Operation)	₹ 5,21,792.00
Net Profit Ratio (Net profit * 100/Turnover)	24.16%
Rate of Return (Net Profit * 100 / Total Cost of Project)	101.77%

(a) Profitability Projection

Sr. No.	Particulars	UOM	Year Wise estimates					At Full
			Year 1	Year 2	Year 3	Year 4	Year 5	Capacity
1	Capacity Utilization	%	30	40	50	60	70	100
2	Sales	Rs Lakhs	₹ 6.48	₹ 8.64	₹ 10.80	₹ 12.96	₹ 15.12	₹ 21.60
3	Raw Materials & Other Direct Inputs	Rs Lakhs	₹ 3.58	₹ 4.77	₹ 5.96	₹ 7.16	₹ 8.35	₹ 11.93
4	Gross Margin	Rs Lakhs	₹ 2.90	₹ 3.87	₹ 4.84	₹ 5.80	₹ 6.77	₹ 9.67
5	Overheads Except Interest	Rs Lakhs	₹ 3.83	₹ 3.83	₹ 3.83	₹ 3.83	₹ 3.83	₹ 3.83
6	Interest	Rs Lakhs	₹ 0.46	₹ 0.46	₹ 0.46	₹ 0.46	₹ 0.46	₹ 0.46
7	Depreciation	Rs Lakhs	₹ 0.16	₹ 0.16	₹ 0.16	₹ 0.16	₹ 0.16	₹ 0.16
8	Net Profit Before Tax	Rs Lakhs	-₹ 1.55	-₹ 0.58	₹ 0.38	₹ 1.35	₹ 2.32	₹ 5.22
9	Profit %		-23.95%	-6.77%	3.54%	10.41%	15.32%	24.16%

The basis of profitability calculation:

This unit will have capacity to repair 4320 hardware (12 units/day) and sell assemble computers 2160 (6 units/day) per year. Warranty terms will be decided according to hardware condition and primary diagnosis of the system by the technical skilled worker.

The cost of selling product (assembled computer) will be defined by the manufacturing company, but the approx margin of profit/unit will be around 5000 INR/unit. With the repairing services the range of the service will be 500 INR to 900 INR depends on the requirement. (This includes the basic repairing; some spare-part replacement would be charged extra).

Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per litre. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 14 -15 % depending on type of industry.

15. BREAKEVEN ANALYSIS

Sr. No.	Particulars	UOM	Value
1	Sales at Full Capacity	Rs Lakhs	21.60
2	Variable Costs	Rs Lakhs	11.93
3	Fixed Cost incl. Interest	Rs Lakhs	4.45
4	Break Even Capacity $BEP = FC / (Sales - Variable Cost) * 100$	% of Installed Capacity	46.05

16. STATUTORY / GOVERNMENT APPROVALS

Bureau of Indian Standards (BIS) is operating Compulsory Registration Scheme (CRS) for Electronics & IT Goods as per the provision of Chapter IVA of THE BUREAU OF INDIAN STANDARDS RULES, 1987 for the product categories notified by MeitY. Visit official government website (Bureau of Indian Standards) for notice about products on: <http://crsbis.in/BIS/> Entrepreneur may contact State Pollution Control Board where ever it is applicable.

17. BACKWARD AND FORWARD INTEGRATIONS

It is assumed that the unit will be viable at 75% efficiency on single shift basis considering 5 working days or as per demand of area per week.

The rate of interest in the scheme is taken at 11.5 % for both fixed and working capital. Due to liberalization and competition among banks, lower rate of interest is possible in future.

The prices of machinery and equipment are approximate which are ruling locally at the time of preparation of the project. When a tailor-cut project is prepared the necessary changes are to be made at the local level.

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18. TRAINING CENTERS AND COURSES

There is no specific course in repairing and assembling services, but the most authorized centre is government authorized "ITI" available in all the cities across the country.

India Training institute of computer technology conducts various technical courses in different cities to enable students to make a bright career. Most of our vocational programs are job-oriented with which students can start earning the day they finish their training or can learn them as a hobby. Students can join for any of these in vacations as all these are short-term certificate courses.

Udyamimitra portal (link :www.udyamimitra.in) can also be accessed for hand-holding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.