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Business Plan

KAG Engineering Solutions

Entrepreneurship
Master of Science in Computational Mechanics

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Business idea

Owing to different background of group mates, the business ideas discussed were very different. Arzu had a plan for a small restaurant or cafeteria based in Barcelona. Gabriel had the idea to work in projects related to previous research done in his field before. Krupesh wanted to use his masters as base for his future business. As we all three are in the same masters it was quite reasonable to accept the idea of having a technical service company on the field of our master of science. Since, all three are learning common technical expertise it is agreed to plan for an Engineering Design and Analysis company, since we now have a common framework, and we could use this work as experience in case we decide to start a similar business someday.

Based on our educational background and skill; we decided to share the responsibilities of the business. As an experienced Mechanical Engineer and creator of the idea to work, Krupesh will be leading the technical team. As a mathematician Arzu took the responsibility of financial department. As a Civil Engineer with background studies in Marketing, Gabriel agreed to lead marketing team.

Individual responsible were focused more during the course. The relevant information provided in class was really helpful. The market research analysis, financial planning and operational necessities which were discussed in class are successfully applied in the business plan.

Finally, geography is decided on scope and opportunities for the start-up. India is a developing country with promising future due to the grow of their economy and the grow on the educated population, which has led to an exponential creation of new companies dedicated to the manufacturing processes, similar to what China has been doing to this day. The fact that Krupesh is from India also worked as an advantage to this project since he has experience in the market, knowing how the country works and what are the prices that we will be dealing with in the future. Since he also has experience working on consultancies before, it was decided fairly quick that India was a good market to target with our company.

1. Company and Service

KAG Solutions is a Technical Service company, offering Engineering Design and Analysis solutions.

Since product development is important stage of product life cycle, we focus on that specific part. Nowadays, mechanical product development is mainly carried out by Computer Aided Design (CAD) and Computer Aided Engineering (CAE or analysis tools). The growing industries like automotive and aerospace are completely dependent this for Research and Development purposes. The product life cycle is illustrated in the figure 1.1. It starts with Design, where our company intends to serve other industries in this area.



Figure 1.1: product lifecycle

Keeping in point that it's a service company defining specific goals is really important. Our principal goals are:

- Endeavour to achieve consistency and innovative design.
- Ensure high level of quality, integrity and ethics.
- Ensure performance through design, engineering and analysis.

Because of our line of work, our services are highly technical, cutting edge technologies. The two types of services are that we offer are

- Computer Aided Design.
- Computer Aided Engineering or Analysis.

Both are basically mechanical software jobs. Due to the nature of the work, it's easy to have distant customers as well.

Computer Aided Design

The design is carried out using the CAD softwares AutoCAD and CATIA. The main services in this category are:

- Concept Design.
- Design for Assembly (DFA) / Design for Manufacturing (DFM).
- Detailed Engineering Design.
- Re-Engineering.

Figure 1.2 shows a sample of AutoCAD drawing of Detailed Engineering Design. Similarly, Figure 1.3 shows a sample of CATIA drawing of Design for Assembly.

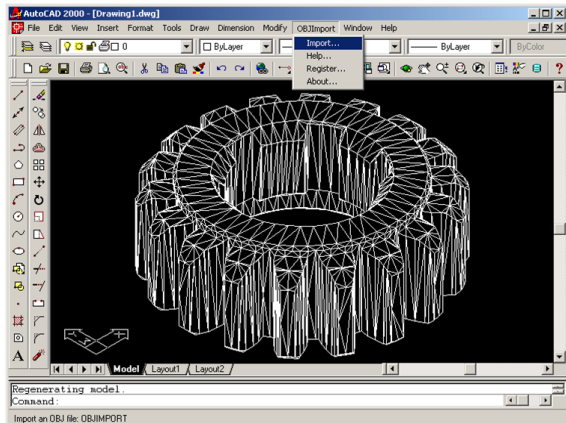


Figure 1.2: CATIA drawing of assembly

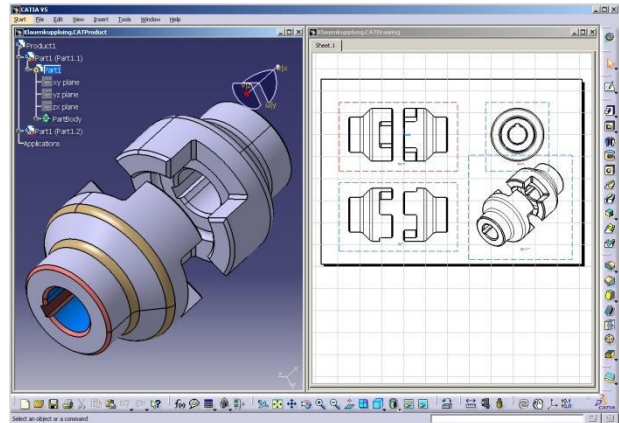


Figure 1.3: AutoCAD drawing of spur gear

Computer Aided engineering

Engineering analysis is carried out using the softwares Hypermesh and ANSYS.

- Finite Element Method (FEM) and Computational Fluid Dynamics (CFD) modelling.
- Crash / Impact / Safety analysis.
- Durability analysis.
- Noise Vibration Harshness (NVH) analysis.
- Thermal and flow simulation.

Figure 1.4 illustrates a sample mesh using Hypermesh. Similarly, figure 1.5 shows the sample simulation using ANSYS.

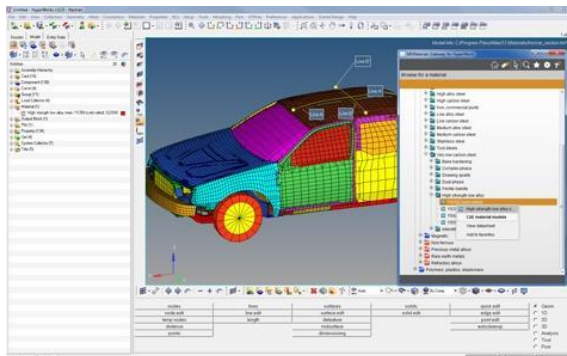


Figure 1.4: mesh of car in Hypermesh

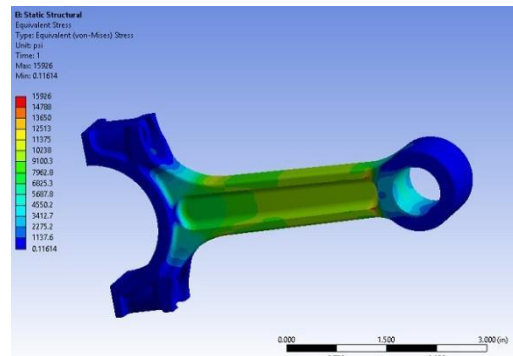


Figure 1.5: analysis of connecting rod in ANSYS

Service lifecycle

The marketing team comes up with project proposals. Initially the marketing team advertises about the company and try to follow tenders of most of the companies. With sufficient penetration in the market, it's expected to have proposals from the customer's side. During project proposals the project completion time and project cost are clearly discussed; on mutual approval the project is confirmed. Figure 1.6 shows the service life cycle.

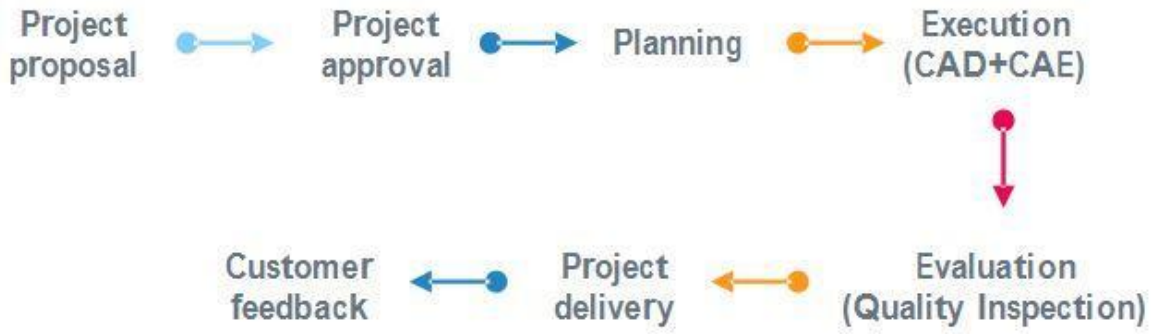


Figure 1.6: service lifecycle

Once the project is approved, the technical team plans the work. It's expected to work in two shifts to have maximum utilization of manpower and equipment (systems). The work is executed by one of the technical group and quality inspection is carried out. Quality is evaluated again by the technical head. On confirming the quality, the project is delivered to the client. As a service industry maintain long-term relationship with the customer is necessary, hence, customer feedback is seriously considered.

2. Market Research and analysis

Our market research and analysis is based on personal experience and expert's advice. Developing countries like India have a lot of scope for cutting edge technical services and investment in industries is tremendously increasing.

Manpower is another surplus. Owing to very large population, high unemployment, and large number of qualified Engineering graduates, it's easy to engage skillful graduates in start-ups. There is certainly good opportunity for technical service start-ups.

Customers

Our main customers are Automotive, Aerospace, Energy, Electrical & Electronics and FMCG sectors. In India, most of the companies are not investing on Research and Development, which it's an added advantage for our start up. There are also many strong reasons which confirms their dependence on our services:

- Lack of R&D facilities: in developing countries like India most industries don't have Research and Development facilities so they are dependent on consultancies.
- Innovative solutions: to compete in market the manufacturer need upgrade their product.
- Improving productivity.
- High Quality solutions: through the use of advanced engineering tools.
- Original Equipment Manufacturers most of the time outsource part of their work to cope up with project deadlines.
- Medium and small scale industries completely dependent on consultancies for product development.

Market size

It's estimated that the expected market share among the customers as follows,

- 35% Automotive and Automotive parts
- 35% Aerospace
- 10% Energy
- 10% Electrical and Electronics
- 10 % FMCG and others

Competitors

Identifying and tackling competitors is important. Our competitors are:

- Similar service providers and consultancies: there are few established companies working in this domain.
- OEMs, on failing to find cost effective and time bound solutions, they may not outsource the work, instead they try to recruit and train more employees.

Sales Forecast

Revenue is forecasted on quarterly basis. The data is collected from consulting the experienced professional in this field. The service is charged on hourly basis and it varies as nature of work and softwares used. The customers are charged less in the initial two years and over years the prices are normalized. The following graph shows the revenue forecast over duration of five years.

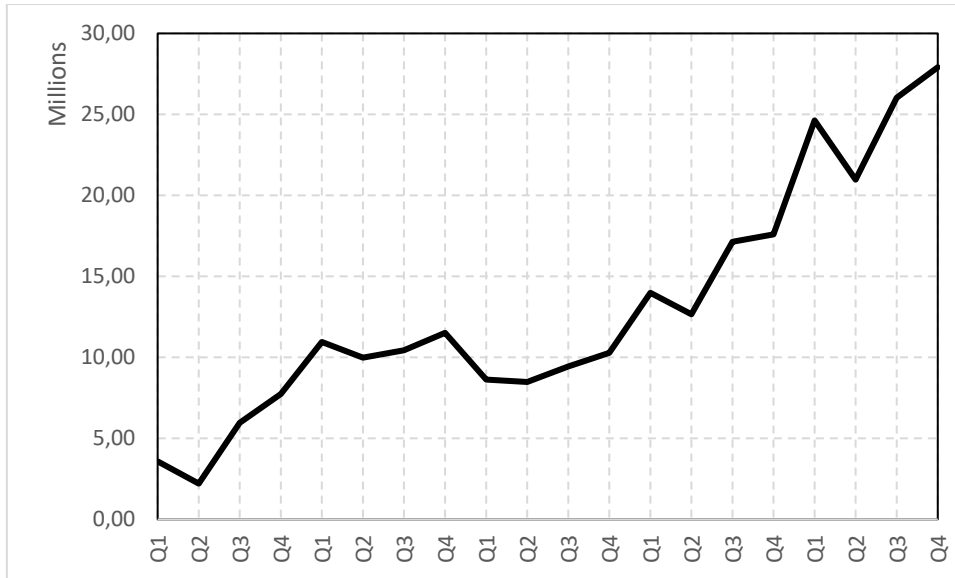


Figure 2.1: revenue forecast

Marketing team monitors the Market. It focuses on maintaining long term relation with the customers. Importance is given to marketing strategies. Price negotiations and promotional offers are periodically boosted to strengthen market size.

Table 2.0.1: sales projections

OPERATING BUDGET													
ESTIMATE OF SALES AND GROSS PROFIT													
		Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.
Cash sales													
AutoCAD		60,00	40,00	100,00	150,00	165,00	130,00	150,00	170,00	135,00	130,00	155,00	180,00
CATIA		120,00	21,00	80,00	140,00	155,00	120,00	135,00	160,00	110,00	100,00	140,00	160,00
Hypermesh		80,00	60,00	120,00	200,00	220,00	150,00	180,00	200,00	180,00	150,00	160,00	180,00
Ansys		75,00	50,00	150,00	150,00	165,00	200,00	190,00	180,00	135,00	130,00	140,00	140,00
CAD+CAE		15,00	40,00	100,00	120,00	130,00	120,00	120,00	150,00	100,00	120,00	120,00	130,00
Total sales	Rs.	3580000,00	2210000,00	5960000,00	7740000,00	10950000,00	9980000,00	10440000,00	11520000,00	8630000,00	8480000,00	9440000,00	10280000,00
Cost of goods sold													
Lost hours		214800,00	132600,00	357600,00	464400,00	657000,00	399200,00	417600,00	460800,00	345200,00	339200,00	188800,00	205600,00
Unexpected costs		71600,00	44200,00	119200,00	154800,00	219000,00	149700,00	156600,00	172800,00	129450,00	127200,00	94400,00	102800,00
Cost of goods sold		286400,00	176800,00	476800,00	619200,00	876000,00	548900,00	574200,00	633600,00	474650,00	466400,00	283200,00	308400,00
Gross profit		3293600,00	2033200,00	5483200,00	7120800,00	10074000,00	9431100,00	9865800,00	10886400,00	8155350,00	8013600,00	9156800,00	9971600,00
Gross profit %		0,92	0,92	0,92	0,92	0,92	0,95	0,95	0,95	0,95	0,95	0,97	0,97

Year 4				Year 5			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.
190,00	180,00	200,00	200,00	230,00	210,00	250,00	270,00
165,00	160,00	210,00	215,00	240,00	180,00	230,00	250,00
180,00	150,00	200,00	210,00	250,00	200,00	260,00	280,00
150,00	140,00	220,00	200,00	240,00	210,00	250,00	260,00
150,00	130,00	175,00	200,00	220,00	200,00	250,00	270,00
13990000,00	12660000,00	17135000,00	17590000,00	24630000,00	20970000,00	26030000,00	27910000,00
279800,00	253200,00	342700,00	351800,00	246300,00	209700,00	260300,00	279100,00
139900,00	126600,00	171350,00	175900,00	246300,00	209700,00	260300,00	279100,00
419700,00	379800,00	514050,00	527700,00	492600,00	419400,00	520600,00	558200,00
13570300,00	12280200,00	16620950,00	17062300,00	24137400,00	20550600,00	25509400,00	27351800,00
0,97	0,97	0,97	0,97	0,98	0,98	0,98	0,98

3. Marketing Plan

The general strategy for the product is based in the common marketing mix analysis adapted for services, more known as the 7 P's:

- **People:** we focus both on our clients and our professionals when promoting our company. We target start-ups and small to medium companies in developing countries, supporting the needs that arise and can't be fulfilled in their current environment. On our company side, we focus on the professionalism of our employees, targeting at high-quality engineers that are deeply invested in every project assigned to them.
- **Place:** to attend better the needs of our clients, we locate our office in the Ambattur Industrial Estate in Chennai, India. This area is known as an industrial and development hub in Southeast Asia, so we set our center of operations here to be close to our clients, since we have an easy access and a priority spot to globalize after some years.
- **Product:** our service main focus is the quality of the work done. For this we work with realistic estimations of our completion times and very strict on-time delivery, so our clients know what to expect and what they are charged for. This requires a deep understanding of our clients' expectations, which is to what we aim for.
- **Process:** our work process is oriented to the logistics of fast processing and organized solving sequence, in order to have a better response time to the needs of our preferred clients, as well as the new ones.
- **Physical Evidence:** we provide a professional environment which can be seen through our engineers and installations.
- **Price:** our pricing strategy aim mainly to competitive and affordable prices, in order to attract all type of companies.
- **Promotion:** a percentage of our total sales is dedicated to finance our promotions strategies. We have a dedicated sales team for the purpose of contacting prospective customers, mainly by phone and participating in technological congresses and start-ups events. We also invest in Google Ads for selected search topics. We also have promotional schemes to attract new customers as first time discounts. We also offer fidelity plans to maintain our oldest ones, with some advantages as project priority and discounts for our most recurrent clients.

The sales are organized by the type of service offered by our company, and based on that it's also organized our pricing strategy. We offer differentiated prices depending of the stage of development of the product of our clients, and the needs that they have. In the table below we show the expected costs at the first year:

Table 3.1: price scheme, 1st year

Packages	Software	Price (Rs/hr.)	Specification
CAD	AutoCAD	6000	Concept Design
	CATIA	10000	DFA Detailed Engineering Design
CAE	Hypermesh	8000	CAE CFD Modelling
	Ansys	16000	Safety Analysis Durability Analysis NVH Analysis Thermal and flow Simulations
CAD+CAE	AutoCAD/CATIA	12000	Design + Analysis
	Hypermesh/Ansys		

During following years, when we manage to establish a more stable base of clients, we expect to raise the prices to cover for the expansion of our engineering team, as well of the increasing costs of a growing company. The prices expected at the five year margin are shown in the next table:

Table 3.2: price scheme, 5th year

Packages	Software	Price (Rs/hr.)
CAD	AutoCAD	15000
	CATIA	20000
CAE	Hypermesh	18000
	Ansys	22000
CAD+CAE	AutoCAD/CATIA	30000
	Hypermesh/Ansys	

Our pricing strategy also depends on the amount of workload. If our client need our service through their whole process of design and engineering we offer a combined price for the CAD and CAE, which can push our clients to choose our company to help in a more complete and concise way.

4. Design and development plans

Present situation and pending tasks

The company is still in development stage. The idea is set and the directions are clear, but we still have some development to do in order to set up the company in an effective way to appeal to the customers:

- Development of communication channels: our main focus here is to start a website to make us visible to the internet, as well as participation in social network to increase awareness and closeness to the clients.
- Design of application: develop a Smartphone/web based app that helps maintaining a closer relation with clients, as well as real time tracking of the process of engineering of their product.
- Setting of an office and accommodations: we have planned a 2000 square meter office with all the accommodations to host creative and technical meetings, as well as a comfortable working space to boost productivity.
- Sort out legal aspects: consult with legal teams about the expected legal problems that could arise from the start of the company.
- Start operations: after sorting out everything else, we only need to start operating as planned.

Expected problems

From development we can expect to have some problems during these stages and later in the life of the company, such as:

- Competition from established companies: there are many similar companies in India, so the competition is fierce. We aim to stand out from the rest with the different measures mentioned in our marketing plan, basically relying on differentiation and close feedback from our first customers.
- High initial costs: the setting up costs are extremely high, so we depend on a good business plan with realistic objectives to appeal to the investors.
- Budget constrains: during the first years of operation we need to stick firmly to the projected finances of the business plan in order to avoid a budget deficit.

Budget

Our initial budget is set up at Rs.11.000.000, which is the estimated value at which we can operate without losses on the first year. We aim at a 30% debt financing, in the form of a 4 year loan with an 8% yearly interest. The remaining 70% comes in the form of equity financing, which is distributed evenly between the three investor partners.

The initial investment will mainly be used for the overhead expenses, such as leases, fixed assets and all the setup costs. We also consider a percentage of the initial loan as a way to cover for the expected losses of the first year due to the reduced load of work we can expect on a new business. In a future projection, the costs are mostly fixed, so we have a high expected revenue in future years.

5. Operations Plan

As mentioned before, the plan is to operate from the Ambattur Industrial Estate, located in Chennai, in the south of India. Since Chennai is a big and important place for all the research and development associated with the southeast of Asia, is a strategic point to target all the developing industry of neighboring countries such as Bangladesh, Nepal, Pakistan, etc.

The facilities will be adapted as an innovative and high end technology center, adapted with latest technology and software in order to fulfil adequately the need for engineering presenting in these countries. We also target at a professional environment, adapted to host the necessary meetings needed to go further in the development stage.

The initial strategy is to serve local small companies that can't afford the established prices in the market, emphasizing in the developing economies of the neighboring countries. Once established in the market we aim to globalize the company, helping companies all around the world externalize their engineering needs in order to reduce their R+D costs.



Figure 5.1: map of India



Figure 5.2: map of Southeast Asia

6. Managerial Team

Organization

The organization structure has three verticals headed by three owners. Consulting and Marketing team has 3 employees with an extended support from technical team. The HR team has 2 members with support from technical team, and oversee the externalized finances and accounting. The technical team has five groups which work under different projects. One engineer from each group will support either Marketing or Finance teams. The organization structure is as shown in figure 6.1:

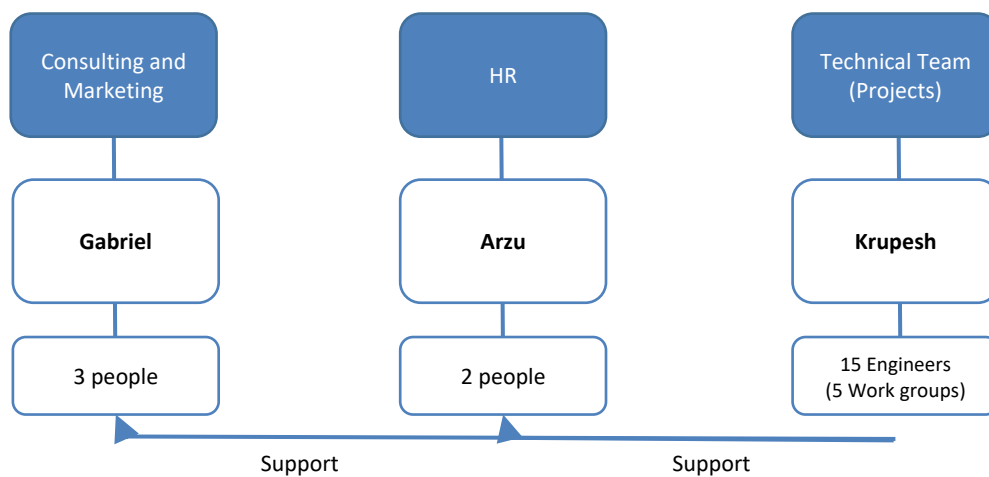


Figure 6.1: organizational structure

The three owners are the key managers heading three departments. The Consulting and Marketing team is headed by Gabriel. HR team is headed by Arzu, while the Technical team is headed by Krupesh. The manpower is effectively utilized with mutual support between the three departments.

Company cash management is prioritized over income retained earnings. Still, owing to good profit Managers are paid well. The three managers have equal equity and responsibilities. Hence, the salaries are almost equal.

The Human Resources team will be responsible for professional support services. The engineers and managers needs are taken care. Recreational programs are planned periodically. Special occasions are celebrated. Apart the appraisals, the special qualities and contributions of the employees are considered through awards.

7. Calendar

Our Master's Program is the foundation for technical expertise required for this start-up. But, mere bookish knowledge can never lead to success. Hence, it's decided to start this firm after a rich experience of five years. The plan is to start preparation three months ahead of the actual start of operation. The timeline is explained following table.

Table 7.1: calendar of operations

Month	Activity
January – February	Approval of business model by government / complete registration and legal procedure.
February – Mid-February	Apply for bank loan / initial partner meeting and purchase decisions.
Mid-February	Plan for building lease.
March	Obtain loan from bank / the marketing team contacts the clients to advertise about company.
End March	Calculate basic expenditures / capital left / asset structure and financing / planning for first month.
April	Launch the idea and introduce service in market.

8. Risk and critical problems

The following risk and critical problem to be tackled for continuous growth of the company.

Competition

- Initial penetration in customer base: differentiation is key on the first year, given that we are entering a competitive market with lots of established companies. We aim at small companies since they can't afford the services of big consultancies, and we trust that our development helps them grow to bring us new products and new prospective clients.
- Difficulty in retaining previous customers: we aim at good quality service in order keep our most loyal clients. Feedback from them is essential, as also is a good channel to receive it and work on it, to improve our quality over the years.

Financial risks

- High initial cost of setting company: good and strict business plan following is needed to overcome this point, since it's easy to lose priorities and start losing money.
- No net income in the first year: first year is only loss, which is covered by the initial investment. Same as before, we need to stick to our business plan, which already consider the eventual set back of the first year.

Management risks

- Small company can result in overload of projects: we need to stay true to our objectives to avoid this point. We are focused on good experience to our clients, so part of that is not overloading our company, in order to maintain or delivery times as expected and get good reviews from our customers.

All measures are planned to overcome the problems. The financial risks are considered in budgeting, which are well expected to overcome risks within a year.

9. Financial plan

Estimated Income Statement

Five year plan is considered. In the first year overhead costs are high in relation to the income. Table 9.1 show the profits for our 5-year period:

Table 9.1: profit projection

OPERATING BUDGET					
PROFIT AND LOSS ACCOUNT					
	Year 1	Year 2	Year 3	Year 4	Year 5
	Rs.	Rs.	Rs.	Rs.	Rs.
Sales	19490000,00	42890000,00	36830000,00	61375000,00	99540000,00
Cost of Sales	15592000,00	26327000,00	1532650,00	1841250,00	1990800,00
Gross Profit	17930800,00	40257300,00	35297350,00	59533750,00	97549200,00
Gross Profit %	0,92	0,94	0,96	0,97	0,98
Overheads					
Staff	15375000,00	15375000,00	18825000,00	21000000,00	26250000,00
Production	7544250,00	5654250,00	7434000,00	8804250,00	10439100,00
Premises	3795000,00	795000,00	855000,00	915000,00	4005000,00
Transport	510000,00	1020000,00	1110000,00	2150000,00	3220000,00
Selling and promotion	2358290,00	5189690,00	5266690,00	11477125,00	18613980,00
General expenses	62700,00	62700,00	66000,00	68200,00	70400,00
Finance	1335660,04	1335660,04	1335660,04	1335660,04	0,00
Depreciation	180000,00	180000,00	240000,00	300000,00	360000,00
Total overheads	31160900,04	29612300,04	35132350,04	46050235,04	62958480,00
Net Profit/(Loss)	-13230100,04	10644999,96	164999,96	13483514,96	34590720,00
Tax on profit/(loss)	0,00	1916099,99	29699,99	2427032,69	6226329,60
	-13230100,04	8728899,97	135299,97	11056482,27	28364390,40
Drawings					
Profit retained in business	-13230100,04	8728899,97	135299,97	11056482,27	28364390,40

The details of overhead costs are illustrated in table 9.2. The building is leased for four years. Yet we can observe that overhead costs are increasing over time due to considerable expense on marketing and promotional offers. 5% to 15% of the sales revenues are used in advertising and promotional offers.

Estimated Cash management

The cash flow statements over five years are shown in table 9.3. Cash management is planned quarterly over five years. Loan is cleared within the planned duration. During the entire period of five years positive cash balance is maintained at the end of the year.

Break even analysis

A breakeven analysis is done to determine the amount of hours to work for making a profit. Fixed and variable cost rise with time, so everything is accounted quarterly. The contribution ratio for the hour of work fluctuates around 60% and 80%. After the analysis is done we obtain that the breakeven point comes at the end of the first year, with a cumulative work of approximately 3000 hours, as seen in the figure below:

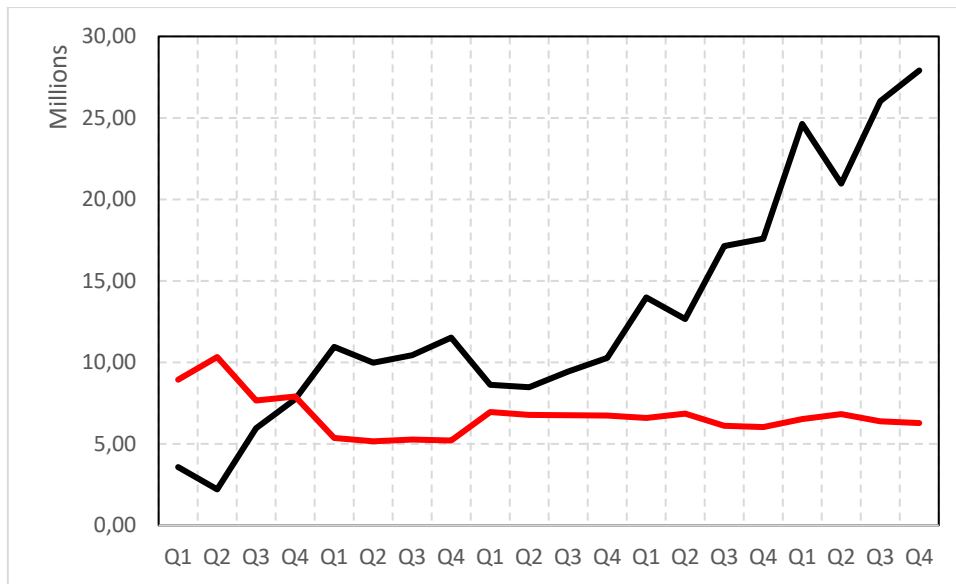


Figure 9.1: breakeven analysis

Cost control System

Cost control is one of the main objectives in service firms. Well planned manpower management is effective tool in cost cutting. The manpower and equipment (Computer licenses) are perfectly planned. The technical team is divided into five groups and these groups work in two shifts per day. Hence, cost is saved on additional software licensing. Also, three departments are mutually supporting each other to effectively utilize the manpower.

The marketing and finance departments are diplomatically dealing with the clients during project approvals, ensuring no loss on projects.

Table 9.2: overhead expenses

OPERATING BUDGET					
ANALYSIS OF OVERHEADS					
	Year 1	Year 2	Year 3	Year 4	Year 5
	Rs.	Rs.	Rs.	Rs.	Rs.
<u>Staff costs</u>					
Gross staff salaries	12300000,00	12300000,00	15060000,00	16800000,00	21000000,00
Employer's PRSI	1845000,00	1845000,00	2259000,00	2520000,00	3150000,00
Bonuses, etc.	246000,00	246000,00	301200,00	336000,00	420000,00
Staff training costs	615000,00	615000,00	753000,00	840000,00	1050000,00
Other staff costs	369000,00	369000,00	451800,00	504000,00	630000,00
Total staff costs	15375000,00	15375000,00	18825000,00	21000000,00	26250000,00
<u>Production overheads</u>					
Software Licenses	5250000,00	5250000,00	6300000,00	7560000,00	9072000,00
Maintenance	45000,00	45000,00	60000,00	75000,00	90000,00
Equipment	1800000,00	0,00	600000,00	600000,00	600000,00
Insurance on equipment	90000,00	90000,00	120000,00	150000,00	180000,00
Other costs	359250,00	269250,00	354000,00	419250,00	497100,00
Total production costs	7544250,00	5654250,00	7434000,00	8804250,00	10439100,00
<u>Premises costs</u>					
Rent	3000000,00	0,00	0,00	0,00	3000000,00
Heat, light & power	540000,00	540000,00	600000,00	660000,00	750000,00
Insurance	75000,00	75000,00	75000,00	75000,00	75000,00
Cleaning	90000,00	90000,00	90000,00	90000,00	90000,00
Maintenance	90000,00	90000,00	90000,00	90000,00	90000,00
Total premises costs	3795000,00	795000,00	855000,00	915000,00	4005000,00
<u>Transport costs</u>					
Lease costs	0,00	0,00	60000,00	60000,00	120000,00
Fuel	0,00	0,00	40000,00	80000,00	80000,00
Insurance	0,00	0,00	6000,00	6000,00	12000,00
Road Tax	0,00	0,00	4000,00	4000,00	8000,00
Public transport	10000,00	20000,00	0,00	0,00	0,00
Air fares	500000,00	1000000,00	1000000,00	2000000,00	3000000,00
Total transport costs	510000,00	1020000,00	1110000,00	2150000,00	3220000,00
<u>Selling and promotion costs</u>					
Advertising	974500,00	3002300,00	3683000,00	9206250,00	14931000,00
Promotion	974500,00	1286700,00	736600,00	613750,00	995400,00
Trade fairs	194900,00	428900,00	368300,00	613750,00	995400,00
Other costs	214390,00	471790,00	478790,00	1043375,00	1692180,00
Total selling and promotion costs	2358290,00	5189690,00	5266690,00	11477125,00	18613980,00
<u>General expenses</u>					
Telephone	20000,00	20000,00	20000,00	20000,00	20000,00
Postage	2000,00	2000,00	2000,00	2000,00	2000,00
Office expenses	15000,00	15000,00	18000,00	20000,00	22000,00
Accountancy fees	10000,00	10000,00	10000,00	10000,00	10000,00
Legal & other fees	10000,00	10000,00	10000,00	10000,00	10000,00
Other costs	5700,00	5700,00	6000,00	6200,00	6400,00
Total general expenses	62700,00	62700,00	66000,00	68200,00	70400,00
<u>Finance costs</u>					
Interest on loans/overdraft	315427,84	315427,84	315427,84	315427,84	0,00
Mortgage	875000,00	875000,00	875000,00	875000,00	0,00
Charges/fees	23808,56	23808,56	23808,56	23808,56	0,00
Other	121423,64	121423,64	121423,64	121423,64	0,00
Total finance costs	1335660,04	1335660,04	1335660,04	1335660,04	0,00
<u>Depreciation</u>					
Machines and equipment	180000,00	180000,00	240000,00	300000,00	360000,00
Total depreciation costs	180000,00	180000,00	240000,00	300000,00	360000,00
Total Overheads	31160900,04	29612300,04	35132350,04	46050235,04	62958480,00

Table 9.3: cash flow projections

CASHFLOW PROJECTIONS								
5 Year projection								
	Year 1				Year 2			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Opening balance	0,00	6834774,99	1299549,98	114324,97	70665,47	2876668,96	4887272,45	7275075,94
Incoming								
Loans	3500000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Sales	3580000,00	2210000,00	5960000,00	7740000,00	10950000,00	9980000,00	10440000,00	11520000,00
Equity partners	7500000,00	0,00	600000,00	0,00	0,00	0,00	0,00	0,00
Total income	14580000,00	2210000,00	6560000,00	7740000,00	10950000,00	9980000,00	10440000,00	11520000,00
Outgoing								
Overheads:								
Staff	3843750,00	3843750,00	3843750,00	3843750,00	3843750,00	3843750,00	3843750,00	3843750,00
Production	1886062,50	1886062,50	1886062,50	1886062,50	1413562,50	1413562,50	1413562,50	1413562,50
Premises	948750,00	948750,00	948750,00	948750,00	198750,00	198750,00	198750,00	198750,00
Transport	127500,00	127500,00	127500,00	127500,00	255000,00	255000,00	255000,00	255000,00
Selling/promotion	589572,50	589572,50	589572,50	589572,50	1297422,50	1297422,50	1297422,50	1297422,50
General expenses	15675,00	15675,00	15675,00	15675,00	15675,00	15675,00	15675,00	15675,00
Finance costs	115165,01	115165,01	115165,01	115165,01	115165,01	115165,01	115165,01	115165,01
Loan repayments	218750,00	218750,00	218750,00	218750,00	218750,00	218750,00	218750,00	218750,00
Private drawings	0,00	0,00	0,00	0,00	100000,00	100000,00	100000,00	100000,00
Taxes	0,00	0,00	0,00	38434,50	685921,50	511321,50	594121,50	788521,50
Total expenses	7745225,01	7745225,01	7745225,01	7783659,51	8143996,51	7969396,51	8052196,51	8246596,51
Net cash flow	6834774,99	-5535225,01	-1185225,01	-43659,51	2806003,49	2010603,49	2387803,49	3273403,49

Year 3				Year 4				Year 5				5-Year Period
Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Rs.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
10548479,44	10132772,68	10189685,17	10438178,41	11375471,65	12929098,47	13392125,29	17524652,11	11375471,65	17739383,25	21102094,85	10438178,41	0,00
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3500000,00
8630000,00	8480000,00	9440000,00	10280000,00	13990000,00	12660000,00	17135000,00	17590000,00	24630000,00	20970000,00	26030000,00	27910000,00	260125000,00
0,00	600000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	8700000,00
8630000,00	9080000,00	9440000,00	10280000,00	13990000,00	12660000,00	17135000,00	17590000,00	24630000,00	20970000,00	26030000,00	27910000,00	272325000,00
												0,00
4706250,00	4706250,00	4706250,00	4706250,00	5250000,00	5250000,00	5250000,00	5250000,00	6562500,00	6562500,00	6562500,00	6562500,00	96825000,00
1858500,00	1858500,00	1858500,00	1858500,00	2201062,50	2201062,50	2201062,50	2201062,50	2609775,00	2609775,00	2609775,00	2609775,00	39875850,00
213750,00	213750,00	213750,00	213750,00	228750,00	228750,00	228750,00	228750,00	1001250,00	1001250,00	1001250,00	1001250,00	10365000,00
277500,00	277500,00	277500,00	277500,00	537500,00	537500,00	537500,00	537500,00	805000,00	805000,00	805000,00	805000,00	8010000,00
1316672,50	1316672,50	1316672,50	1316672,50	2869281,25	2869281,25	2869281,25	2869281,25	4653495,00	4653495,00	4653495,00	4653495,00	42905775,00
16500,00	16500,00	16500,00	16500,00	17050,00	17050,00	17050,00	17050,00	17600,00	17600,00	17600,00	17600,00	330000,00
115165,01	115165,01	115165,01	115165,01	115165,01	115165,01	115165,01	115165,01	0,00	0,00	0,00	0,00	1842640,15
218750,00	218750,00	218750,00	218750,00	218750,00	218750,00	218750,00	218750,00	0,00	0,00	0,00	0,00	3500000,00
300000,00	300000,00	300000,00	300000,00	500000,00	500000,00	500000,00	500000,00	1000000,00	1000000,00	1000000,00	1000000,00	7600000,00
22619,25	0,00	168419,25	319619,25	498814,42	259414,42	1064914,42	1146814,42	1616468,40	957668,40	1868468,40	2206868,40	12748409,53
9045706,76	9023087,51	9191506,76	9342706,76	12436373,18	12196973,18	13002473,18	13084373,18	18266088,40	17607288,40	18518088,40	18856488,40	224002674,68
-415706,76	56912,49	248493,24	937293,24	1553626,82	463026,82	4132526,82	4505626,82	6363911,60	3362711,60	7511911,60	9053511,60	48322325,32

As can be seen from the statements, the investors start receiving money at second year, with increasing earning year after year, as a way to appeal to the investors.