



## DEVELOPING A SUSTAINABLE BUSINESS MODEL FOR INDEPENDENT FUEL STATION IN ADELAIDE

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### ABSTRACT:

In this Thesis, a sustainable business model is being presented in a way that which can highlights the long-term relationships in between the customers and encouraging the consumerism of goods and services. Through the help of a business model a company can able to operate the flow of funds in between the customer and suppliers. The prime objective of the company is to control the vertical integrated oil. The main purpose of the project is to focus upon some significant areas which primarily include the operations, social responsibility, technology and the human resources. This project comprises of generation of the free cash flows while to create the long-term value for the shareholder. The system and operation analysis has also been presented and explained properly which highlight the Development process, permits required, market analysis and cost/benefit analysis of the independent service station.

### INTRODUCTION:

In any developed societies service stations are very important need. Many people have a dream of starting and developing their own business in the oil and gas industry because this one industry where even though there are ups and downs but there are plenty of chances to make profits. It is true that in the oil and gas industry huge investments are required in the initial stages but in the long run it maximizes the profits.

Though in the long run it's going to be profitable but planning to develop an independent service station is going be expensive in the initial stages like government permissions, initial capital, heavy market competition and marketing etc. If the business is developed in the proper plan it doesn't take longer period to break even. Among all the basic necessities fuel has also become part of our lives to carry out day to day activities. As any other market the pricing of fuel also depend on the pressures of supply and demand and consumers always choose the service station which supply for the cheap prices. So, it is very important to choose the fuel suppliers for the service station who can compete well in the local markets. In this chapter, the requirements for developing an independent service station will be clearly discussed.

### DEVELOPMENT OF SOLUTION:

Once the solution has been considered, it is now important to make sure that it is developed. Unless and until the solution is developed, it's very hard to decide exactly how it can be implemented and whether it is going to be a feasible solution. In this chapter, we are going to develop the solution. We are looking at developing an independent service station as an alternative solution and to develop



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it and what are the requirements for it and decide which can be the most viable one.

In this development of the solution, we are going to look at it from different perspectives like what are the requirements and permissions needed to develop the new service station.

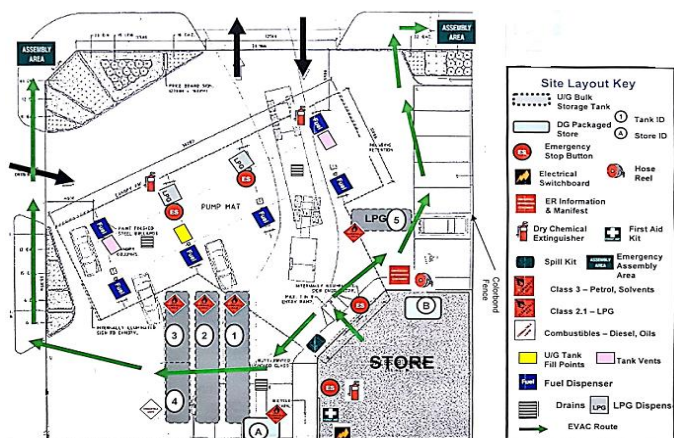
## CHOOSING THE LOCATION:

Choosing the location is very important when thinking to start a service station because the heavy competition with already well established service stations is the biggest challenge and to develop own market. The truth behind the success of the business lies between how well you are promoting the business in the community by delivering excellent customer service and providing high quality products. In the local community if the service station is going to be only one then there are high chances to blossom fast as there is no competition. Besides everything the truth is that in Adelaide choosing the location is the biggest challenge because of high competition with already owned market by national companies. Choosing the location along the busiest road side will help in improving the business because it will be very accessible for the commuters passing and for the local community people without disturbing the traffic. Important points that should be considered while choosing the location for service station are:

- For the success of the service station business statistical view of population is very important.
- Financial strength of the local population.
- Total number of service stations and services offered by them like carwash, cafeteria and mechanical workshops etc.
- Service station facilities like CCTV security, parking facilities.
- Local counsel laws and permissions.
- Apart from choosing the location choosing the brand name for the station is also a tough task because the brand of the service station also plays a key role for promoting the business.

## PROPOSAL OF SERVICE STATION LAYOUT:

### Layout





## Figure 1: Service station layout

After finalizing the development plan for your business it's better to meet the local council for approval because the council member will verify the plan if any permissions or approvals needed for development.

Some types of permissions required for development of businesses are:

1. Developing a new business store like retail food stores, commercial businesses etc.
2. If any reworks in the store like changing the exits of the store.
3. When fixing business sign boards to the building.
4. Extending the business to the footpath by placing heaters, arranging chairs for the customers out of the premises.
5. If any additional development works inside the developed store.

## Service Station approvals

### Council approvals

What's emerging as an interesting phenomenon is the autonomous attitude to learning, which is not as career-and-credentials-oriented as it is geared towards raising happy confident independent thinking children. Some are goal-oriented and believe they'll do better job at educating their kids and helping them to develop, but parents also thinking that if continuous and comprehensive evaluation takes if and only if learning takes place, so, learning is important we have to facilitate first to learn in every aspects of the child, after only evaluation comes. For all these reasons I made some suggestions in general.

According orange city council of Australia the owner of the service station should take certain approvals from the local councils before starting a business.

There are different types of approvals provided by the orange city council of Australia they are

1. **Exempt development:** The developments which has very small impact on the environment does not require the council approval but should follow the standards by following the development control plan(DCP) and sometime need approvals if any changes are being made like water, sewer or storm water systems.
2. **Complying development:** The developments that has impact on the environment need an approval certificate complying development certificate(CDC) from either council or private certifier and should follow the standards and need permissions if any changes are being made like water, sewer or storm water systems.
3. **Development consent:** For the developments that has impact on the environment should need council merit assessment and should even inform the people living in the surroundings because they may be disturbed by the developments. This type of developments may also require permissions from government organizations like RTA and need a traffic management plan as per orange local environmental plan 2000. In this process construction certificate is also needed to complete the construction and need an occupation certificate to occupy the



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building and should follow the standards and need permissions if any changes are being made like water, sewer or storm water systems.

4. **Construction:** For construction, the owner of the business should get a construction certificate from the council if it's not a complying development following the Australian standards. (Orange city council)

## **Soil Contamination Tests**

Under the conditions of Environmental Protection Authority (EPA)1993 before starting of the business the soil and water tests should be done weather the soil is free from contamination and suitable for the business. Soil and water tests are done by collecting sample from different places of the site and tested. If the results show that the soil is contaminated, then the site is not suitable for service station and if there is no contamination then its suitable for service station and this is the main test to be done before starting of any service station. (Environmental Protection Authority 1993).

Since the service station offers variety of services like car wash, mechanical workshops, cafeterias and even retail goods apart from fuel service so there are plenty of chances that effects the environment. (Elkholy, SM, Sabry, Ti&Alsalamah, IS 2009).

## **Required permissions from government authorities**

As per POEO Act the Environmental protection licenses from EPA are needed if any storage or generation of hazardous wastes are taking place in the service station. Generally, these permissions are needed only for industries that cause severe harm to the environment. Though these licenses are not required for service stations but should follow environmental laws. (Authority of Victoria 2003).

## **Trade waste permissions**

To connect the waste water (chemical water) from the car wash or the waste water from the service to the drains every service station should take the written agreement from the local council which contains all the conditions to connect the waste water to the sewage.

## **Dangerous goods storage and safety**

The service station stores high flammable liquids like petrol, diesel and liquefied petroleum Gas in bulk in the underground tanks for this the owner of the service station should take Permission from the council and inform them storage capacity of the underground tanks. (Environmental Protection Authority 1993).

## **Manifest book**

As per dangerous goods and handling act 2000 a manifest book should be maintained in the service station about the places where dangerous goods are stored and about the quantities stored in the service station. The manifest book should be placed in a place where it is available for emergency services authority. The manifest book should contain the information up to date if there are any changes made in the storage of dangerous goods.



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## **Solution implementation**

No solution or alternative can be efficient for the business or effective unless and until it is completely developed and planned on how to implement and detailed planning is always the key to success. They can't just change their course of operations in one day and start with the other the very next. The amount of investment, efforts and expertise put into any venture for such organizations is great and therefore a lot of risk is involved. It is not just the knowledge of any alternative that needs to be known, in fact every possible thing related to that one piece of information must be analyzed because only in this way the plan can fully be able to master the implementation. Keeping the cost and environmental factor in mind about the business there is need to implement this solution into the business model.

## **Design of service station**

For any service station forecourt is very important because underground fuel tanks that contain the most dangerous goods like petrol, diesel and liquefied petroleum gas are stored in bulks in the underground tanks of the service station and the fuel dispensing area are the major parts that occupy the forecourt. Coming to the risk factors forecourt is the most dangerous area in the service station so it should be designed properly to minimizing the risk.

Designing of the service station is directly correlated to the fuel supplying wholesale company's because the fact is that the owner of the service station must make an agreement with fuel supplying wholesale companies as a third party to receive income about the business buy selling the fuel of that wholesale company as an agent with some negotiations.

## **Some of the negotiations are**

1. Company to help the owner of the service station to invest and construct the forecourt which includes (Underground storage tanks, fuel pumps, take legal permissions etc.) if the owner is willing to sell the fuel of that company for long period like 30 years by agreeing to be as an agent to the company by taking 3 cents per liter on petrol, diesel and 7 cents per liter on LPG but fuel prices being fixed by the company.
2. To sell the fuel of the company along with investment but fuel price being monitored by the company with daily fixed fuel commission irrespective of the sale on long term agreements.
3. To sell the fuel by taking 7 cents per liter on petrol, diesel and 12 cents per liter on LPG with no long-term benefits and agreements but fuel prices being fixed by the company but no long term or fixed agreements.

## **Implementation process for Underground tanks**

All underground storage tanks should be designed, installed and tested as per UPSS regulations. As per the regulations

- The storage must be designed and installed by the professionals.



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- The storage system must contain the equipment which protects from pollution.
- During the design and installation of underground tanks the person who is responsible for this process should follow the Australian standards, code of practices and all other requirements.
- All the manufacturer instructions should be strictly followed during installation process.
- All the installation and design processes with all Australian standards should be recorded and saved for future references.
- Drawing that configure the installation of the site should be maintained for future reference.

### **Records maintenance**

All the documents relating to the performed tests, drawings, design and installation process of the underground tanks should be safe guarded for the future reference as per Environmental protection plan (EPP), when carrying out during risk assessments. Even if the owner of the service station change all the records should be transferred to the new owner of the service station. (Ahmed, Mirza Munir, Kutty, Khamidi, MohdFaris 2011).

### **Required equipment for underground tanks**

All the equipment should meet the requirements of mandatory pollution protection equipment as per the regulations as

### **Non-corrodible tank**

- As per the law all underground tanks should be non-corrodible.
- Should be built with fiber-reinforced thermosetting resin that have enough space to store motor spirit like petrol, diesel and liquefied petroleum gas (LPG).
- Inside of the tank should be built with the steel and for outside with fiber-reinforced thermosetting and should make sure there is enough space between the walls where the interior mass of the tank is good with the motor spirit.
- All the documents relating to the performed tests, drawings, design and installation process should be safe guarded for the future reference as per Environmental
- protection plan (EPP). Even if the owner of the service station changes all the records should be transferred to the new owner of the service station.

### **Non- Corrodible Piping**

- As per the requirements all the underground petroleum storage systems should contain non-corrodible piping.
- These are made of fiber-reinforced thermosetting resin that is good with petrol.
- These should be built with flexible plastic with UL971 standards which doesn't harm the environment.



- All the documents relating to the performed tests, drawings, design and installation process should be safe guarded for the future reference as per Environmental protection plan (EPP). Even if the owner of the service station change all the records should be transferred to the new owner of the service station.

### **Secondary Containment of tanks**

- Usually these tanks should include twofold walled tanks with a small space or another set of tanks establishment that will give approach protection to environment as well as human health and safety. All the documents relating to the performed tests, drawings, design and installation process should be safe guarded for the future reference as per Environmental protection plan (EPP). Even if the owner of the service station change all the records should be transferred to the new owner of the service station.

### **Secondary containment of piping**

- It consists of twofold walled piping with a small space or another form of establishment that will give approach protection to environment. All the documents relating to the performed tests, drawings, design and installation process should be safe guarded for the future reference as per Environmental protection plan (EPP). Even if the owner of the service station change all the records should be transferred to the new owner of the service station.
- **Overfill protection**
- As per the regulation of Underground petroleum storage systems must be protected with either mechanical or electrical devices which will notify when the petrol is being overfilled while delivering into the tanks and which will even record the incidents. It should be installed in either of the places like tank fill piping, vent piping and vapour recovery piping. 3D laser and scans advanced data processing methods can also be used to check the levels of the horizontal storage tanks and protect the tanks from over filling. (Kanya, V 2012).
- **Tank pit observation wells**
- Generally, these tanks pits help by testing if there are any leaks of petrol or vapour in UPSS. These tank pits help by blocking any leakage petroleum from the tanks. These are located at the down slope of the underground tanks. For any service station, it's very important to have one well for tank pit.

### **Fuel leak**

Now a day fuel leaks are becoming very common issue in majority of service station causing pollution to the environment and contaminating soil and underground water though there were many changes brought to stop this issue by developing double walled tanks and pipes still early stages of detection of the fuel leaks is very advantages. One new method implemented was regular fuel monitoring of fuel dips and performing fuel leak tests which is effective to solve environmental contamination. (Sigut, M, Alayon, S & Hernandez, E 2014).



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## Fill point

The place where fuel will be delivered into the tanks is called the fill point. Some of the practices for the service stations are:

- There should be only one fill point for one tank.
- Easy access for loading or unloading of fuel with maximum six metres hose.
- Easy visual access for everyone.
- Special identification on the site layout.

## Dispenser sumps

The requirements for dispenser sumps are:

- They should be installed underneath the dispenser.
- They will collect the leaks from the dispensers.
- There should be a safe place for the removal of any motor spirit water that is collected from the dispenser sumps.
- It protects containment of the environment from petrol leaks.
- For future reference if there is any fluid collected by the dispenser sumps record should be maintained.

## Cathodic protection for tanks and pipes:

- The design and installation of underground steel tanks should be as per the regulation of 1,2 of AS2832 and for pipes it should be as per AS2832.1
- The following requirements are for both steel tanks and steel pipes.
- Di-electric coating should be used for both the steel tanks and steel pipes.
- The design and installation of these steel tanks as well as pipes should be done under the guidance of the specialist with the requirements of part 1 and 2 of AS2832 legislation and should be certified by the specialist. This certificate should be saved until the life of the tank. (Fitzgerald, JH 1997)

## Earthing of UPSS:

- As per AS/NZ 1020 (AS/NZ 1995) and AS/NZ 3000(AS/NZ 2007) all the underground storage systems should be earthed to decrease the risk of static build up. Before the installation of the UPSS the resistance of the land must be tested by the specialist and should be certified. All the documents relating to the performed tests, drawings, design and installation process should be safe guarded for the future reference as per Environmental protection plan (EPP). Even if the owner of the service station change all the records should be transferred to the new owner of the service station. (Udoetok, ES & Nguyen, AN 2011).





## Storm water and trade Wastewater

The regular issue is to design the forecourt to manage efficiently in stopping the rainwater entering the service station, waste water contamination of the service station by

- Extending the canopy of the service station which cover the fuel dispensers by 10°.
- Running the unpolluted rainwater from rooftops directly into rainwater drainage systems in the service stations.
- Design of the service station should be such that the storm water drains must be constructed away from the fuel dispensers.
- The forecourt should be designed in such a way that the base should be inclined by 2% and making sure this bund area is sealed with flexible strips which collects all the wastes to the covered collection pit.



**Figure 2: Image of Storm water collecting system in the service station**

- Secured alarms are fixed to make a sound when these pits are completely full when the alarm sounds due to the resonance automatically a pump will be started collecting the waste by separating both oil and water.
- Frequent monitoring of these separators is needed to ensure whether its working properly or not.
- From the oil and water separator except the storm water all other liquids are sent to the sewer and as per the trade water agreement these liquids will be collected by licensed authorities. (Department of waste management and energy efficiency 2008).



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(Figure 3: Image of Sewer system in the service station)

## Car wash

Implementation of car wash is not that big challenge in the service stations. The main issue is the council permits and trade waste permits to drain the chemical water which needs to be collected, treated and sent to the sewer. Water should not be escaped from the car wash bay area for that



Figure 4: Image of car wash system in a service station

- The car wash bays should be concreted and to avoid uneven sprinkles the car wash should be closed on two sides of the bay.
- At the entrance of the car wash bay speed bump should be placed.



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- Roof tops should be constructed for a car wash to prevent unwanted dust, rain water entering the carwash area.
- Since water drained from the car wash is the chemical water that should be drained separately to the sewer with the help of oil and water separator to prevent entering it into the storm water drains. (Department of waste management and energy efficiency 2008).
- Car wash plant room should be separately constructed to avoid noise pollution.

### Convenience store:

Design of store and implementation is very important to improve the sales in the service station because merchandising plays a key role. For the improvement of the sale first the presence of store, the arrangement of shelves, arrangement of products, easy access to the products and finally the availability of products are the key factors which attract the customers and which in return helps in improvement of sale.

Designing of the shop floor includes

- Number of isles on the shop floor.
- Number of shelves for each isle.
- Number of freezers on the shop floor.
- Display management of cold room and all other products.
- Assortment management.
- Console area.
- Safety measures.

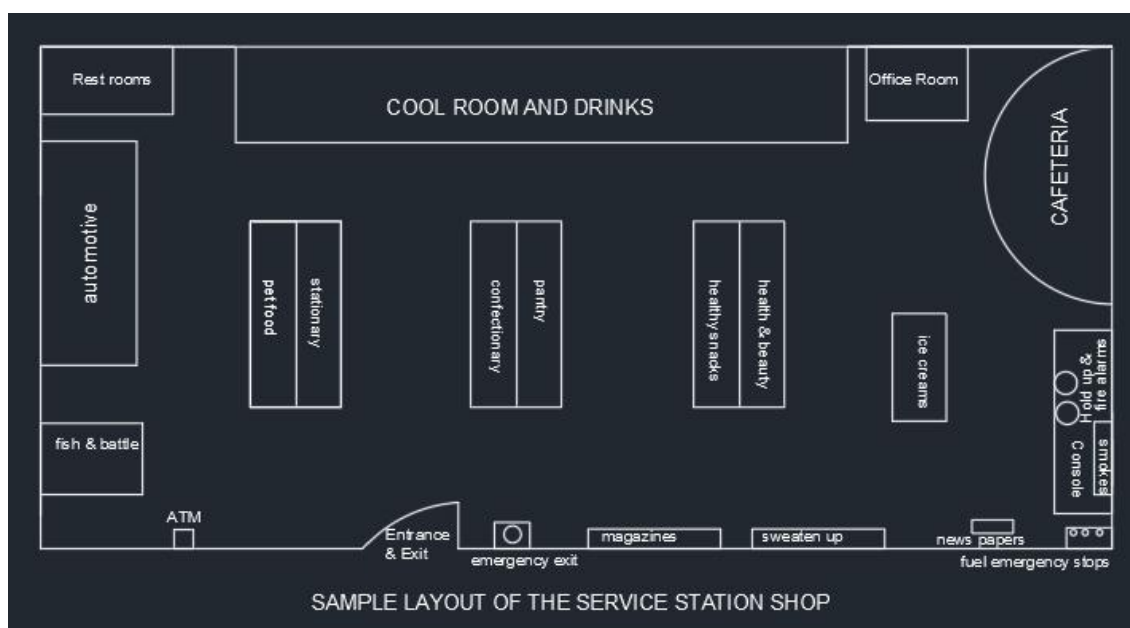


Figure 5: Sample layout of the service station



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## **Operational process:**

The process starts when the vehicles enters the service station either for fuel or on customer's necessity. If the customers enter for the fuel they will choose the pumps that are free and ready to use, they would choose the desired fuel that is suitable for the vehicle like petrol, diesel or LPG and fill the vehicle with the fuel with the required quantity and enter the store and look around if they want do any shopping. Next process is the payment, once the console operator receives the payment for the fuel from the customer the pump will be unlocked by the console operator for the next customer to use. (Galankashi, M, Fallahiazouard, E, Moazzami, A, Helmi, S, Rohani, J &Yusof, N 2016).

## **Testing and evaluation**

As per the development act 1993 there are some environmental issues associated with the service stations relating to car wash, cafeterias and due to some domestic cleaning procedures apart from fuel deliveries so environmental assessment is required frequently prior starting of service station and frequently further. (Development Act 1993).

Testing & evaluating of service station is the process through which the new service station is testing and evaluated to bring site to use. Especially for new service station it's very important to carry testing and equipment by the specialist. (Environment Protection Authority (EPA) 2008).

As per the dangers and explosive atmosphere act 2002 the design construction should be risk free. The new service station should be developed under the guidance of certified engineer to reduce the risk of exploder. (Development Act 1993).

The risk of any service station can be reduced by verifying the overall safety of the service station by the recognized officer this must be done before the service station as per the design and construction standards like: -

- i) Verifying the records of under tanks and pipes weather they are free from leaks.
- ii) All hazarder's and dangers sign are properly fixed in the correct places.
- iii) All vapour recovery system are checked.
- iv) Monitoring of proper installment emergency system and there working condition. (Ahmed, Mirza Munir, Kutty, Khamidi, MohdFaris 2011).

## **Electrical circuits**

Initially testing of electrical circuits should be carried efficiently and should be certified by the electrical engineer because which petrol cannot be delivered in to the underground tanks to test the dispensing of fuel pumps until the electrical circuits are certified. All the electrical works on the service station should be tested and certified because the pipes may cause electrical hazards while delivering fuel into the tanks. (Udoetok, ES & Nguyen, AN 2011. 23-29).

## **Vapour presser**

As per the instructions given by the manufacture testing of vapour recovery system must be all before the fuel is delivered in to the underground tanks and before its dispersed from the pumps by the



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concerned person and must be certified and should record for the future references.

### **Underground tanks**

Before the fuel product are delivered in to the tanks the internal device like drop pipes fuel over fill monitor should be tested this process can be done by the performing by testing tank with and without the devices and tests should be done under guidance tank manufacture and should be certified.

### **Pipe work**

All the pipe work should be carried by under the guidance of the technically as per manufacture guideline. The pipe work releasing to the storage tanks connection vapour recovery system connection double lined pipes fill point connection etc. The testing result of all the pipe work should be certified and must be recorded testing of the pipe work relating to final joints should be tested after the fuel has been delivered in to the storage tanks.

### **Fuel pumps**

Fuel pumps should be tested after the petroleum products and delivered in to the storage tanks weather any leaks from the hose nozzle, and valves.

### **Record keeping**

All the tests carried out should be certified and all their records should be tested and recorded safe guarded for future reference because if any maintained work all carried in the future in the service station. A petroleum inspector may ask the records of the safety certificate records for the work details.

### **Cost/Benefit analysis**

Completing your statistical surveying, financial and cost investigation and obviously, practicality thinks about service station is very expensive in the field of oil and gas industry. On the off chance that you get things just before propelling your service station business, it won't take you much time before you equal the break even. It is used to estimate, organization strength and weakness of alternatives for example daily transaction, financial activities etc. It is utilized to decide choices that give the best way to deal with accomplish benefits while protecting savings. The main purpose of cost benefit analysis is, to decide whether a choice is sound, confirming whether its advantages exceed the expenses, and by how much and to give premises to looking at ventures which includes contrasting the aggregate expected cost of every choice against its aggregate expected advantages.

Based on the length and type of project or business, a money saving advantage investigating may likewise need to represent incomes and expense that happen over period and compare how financial esteems change after some time. This could be done by calculating NPV (net present value) which shows us overall cash inflows and cash outflows of project. Figuring NPV as a component of as cost benefit analysis can help to know the profitability and inflation on project. Three major steps involved in preparing cost benefit analysis. 1. Identifying cost 2. Identifying benefits and 3. Comparing both.



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1. Identifying cost: start by conceptualizing every single potential cost which may incorporated like hardware, finance, travel costs, license etc. and other monetary based costs. We should also consider non- financial cost or non-monetary cost for example uncertainties and risks that has been taken for the project may affect the outcomes of the project. Every financial incentive for expenses happening after some time ought to be computed in present esteem terms to make appraises that are as exact as could be expected under the circumstances.
2. Identifying Benefit: As mentioned above, it can be difficult to decide precise income projections, and certain intangible benefits might not have clear monetary values, so this progression can be more testing than distinguishing and adapting costs. Advantages can go from direct benefits and expanded generation to upgrade worker fulfilment or decreased natural effect. Similarly, as with costs, the qualities appointed to benefits likewise should be appeared in present esteem terms for more exact investigation.
3. Comparing Both: when you have recorded every one of the expenses and benefits, you can contrast the aggregate with check whether the expenses exceed the Benefits. If the two aggregates are equivalent or close, you may need to check your estimates, ensure no expenses or benefits have been disregarded, and lead re-examined investigation. As you analyze expenses and benefits, consider to what extent it will take for benefits reimburse the expenses. This helps to know whether the project is beneficiary or not.

### Cost of starting a new service station

With regards to beginning a new service station many considerations surround the total expenditure needed for the effective starting of the service station. Considerations about the location for starting the business and about the services to implement and finally about the budget required to start the new business.

Cost analysis for starting a brand-new service station:

Brand registration fee	\$150/year
Licenses and permits	\$10,000
Consultant fee for business plan	\$3000
Insurances cost	\$20,000
Cost of land for service station	\$200,000
Underground fuel tanks	50,000*5=\$250,000
Underground gas storage tank	\$75,000
Fuel dispensing pumps	25,000*5=\$125,000
Car wash, Vacuuming machines and installation	\$125,000
Cafeteria machines and installation	\$100,000
Fuel stock	\$150,000
Inside store furniture (tables, isles, ventilators, signboards, cold room and freezers)	\$100,000
Service station website and console software	\$5000
Marketing	\$5000
Forecourt development (Canopy, car parks, safety fire extinguishers, spill kits, drainage systems connections etc.)	\$200,000
All other expenses	\$15,000
<b>Total:</b>	<b>\$1,233,150.00</b>



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### Sales forecast

During the study of the service station industry some information regarding the sales and services has been gathered and gathered some information from the managers in the field of oil and gas industry. So, mostly the calculations are based on this assumption sales.

As per the negotiations discussed in chapter 6 with the fuel companies. Here we choose to sell the fuel by taking 4 cents per liter on petrol, diesel and LPG with no long-term benefits and agreements but fuel prices being fixed by the company but no long term or fixed agreements to explain the sales of the service stations after installation of service station.

### Carwash and vacuuming sales

Carwash/week	Quantity	Revenue total
\$10 Express wash	25	\$250
\$15 Deluxe wash	20	\$300
\$7 Taxi wash	25	\$175
Manual car wash	150	150*5=\$750
<b>Total</b>	<b>170</b>	<b>\$1475.00</b>
<b>Vacuumping</b>		
Bay 1	20	\$60
Bay 2	25	\$75
Bay 3	30	\$90
Bay 4	30	\$90
Bay 5	25	\$75
<b>Total</b>	<b>120</b>	<b>\$390.00</b>

Table 2: Carwash and vacuuming sales

As per the research from some service stations offering the car wash service a 40% average sales has been taken for calculation purposes. In an automatic car wash variety of services will be offered like express wash, deluxe wash, taxi wash. Total revenue from car wash and vacuuming service per week is \$1865.00 and per month is \$7460.00.

### Profitability Estimation

#### Hours

#### 24/7 Operation

INCOME			Net on GST	GST	Net of GST
Shop + Cafeteria + Car wash(55000+15,000+7460)			\$ 7,460.00	\$ 7,041.82	\$70,418.18
Fuel Commission for the month @ 4 cents per lit			\$ 18,000.00	\$ 1,636.36	\$16,363.64
Epay Commission			\$ 50.00	\$ 4.55	\$ 45.45
<b>Total income</b>			<b>\$ 95,510.00</b>	<b>\$ 8,682.73</b>	<b>\$ 86,827.27</b>
<b>Gross Profit</b>			<b>\$ 95,510.00</b>	<b>\$ 8,682.73</b>	<b>\$ 86,827.27</b>
<b>Expenses</b>					
General maintenance			-\$ ,200.00	-\$109.09	\$1,090.91
Insurance & Repairs @ 57.50 per day			-\$ 1,748.96	-\$ 159.00	\$ 1,589.96
car wash maintenance			-\$ 1,000.00	-\$ 90.91	\$ 909.09
Telephone & Internet			-\$ 90.00	-\$ 8.18	\$ 81.82
Rubbish Removal			-\$ 90.00	-\$ 8.18	\$ 81.82
Accountant fee			-\$ 150.00	-\$ 13.64	\$ 136.36
Software Charges			-\$ 196.00	-\$ 17.82	\$ 178.18



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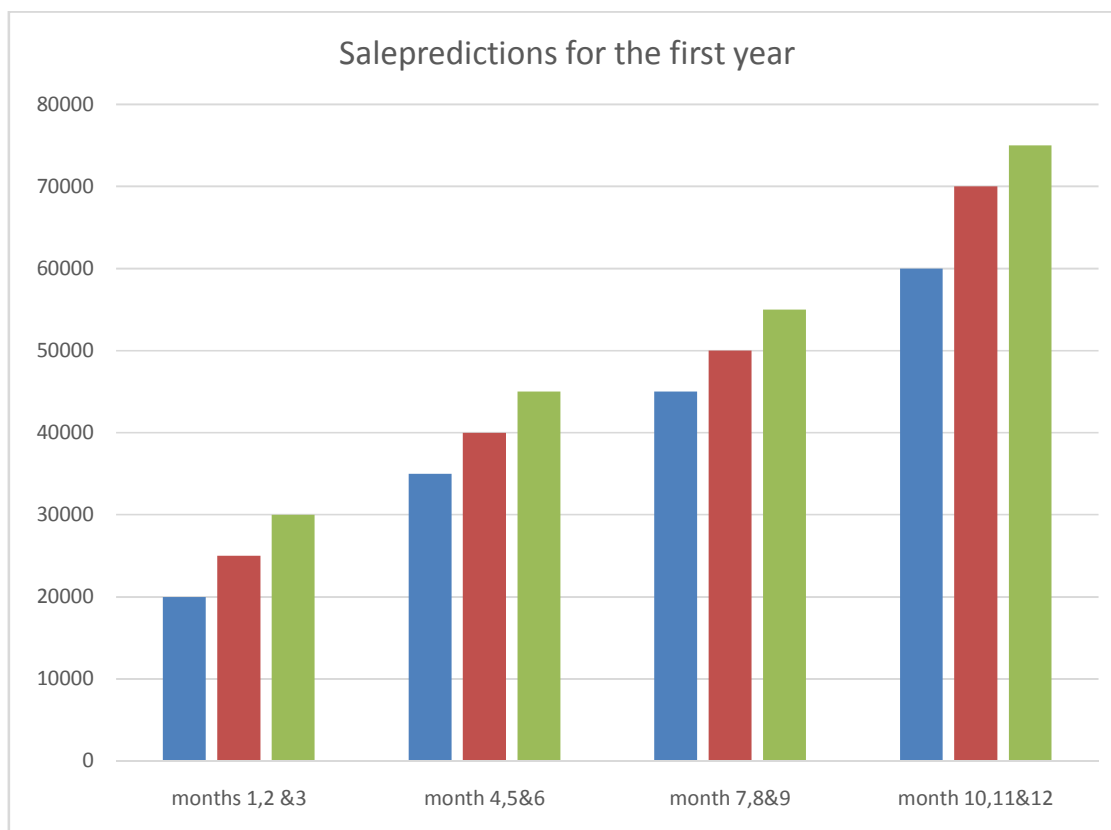
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Pest Control				-\$ 54.00	-\$ 4.91	\$ 49.09
Stationary				-\$ 50.00	-\$ 4.55	\$ 45.45
Gardening				-\$ 70.00	-\$ 6.36	\$ 63.64
Security				-\$ 100.00	-\$ 9.09	\$ 90.91
Electricity				-\$ 4,500.00	-\$ 409.09	\$ 4,090.91
Drive off and inabilities wastage				-\$ 200.00	\$ -	\$ 200.00
	Hrs	\$ ph.	p day			\$ -
Wages @ \$25.05 per hour for 24 hour, for the month	24.00	25.05	728	-\$ 36,472.80	\$ -	\$ 36,472.80
Super	9.5%			-\$ 3,464.92	\$ -	\$ 3,464.92
Workover	5.0%			-\$ 1,823.64	\$ -	\$ 1,823.64
<b>Total Expenses</b>				<b>-\$ 51,210.31</b>	<b>-\$ 840.81</b>	<b>\$ 50,369.50</b>

**Profit For The Month** **\$36,457.77**

**Table 3: Profitability estimation for the new service station**

**Monthly sales predictions:**



**Graph 1: Sales prediction for the first year**

It is predicted that during the first three months of the business, there would be no profits due to improvements of the business and to improve the loyalty of the business towards the customers as it needs time. In the fourth month, it is estimated to be break even and after the fourth month the business starts building and move towards profits.

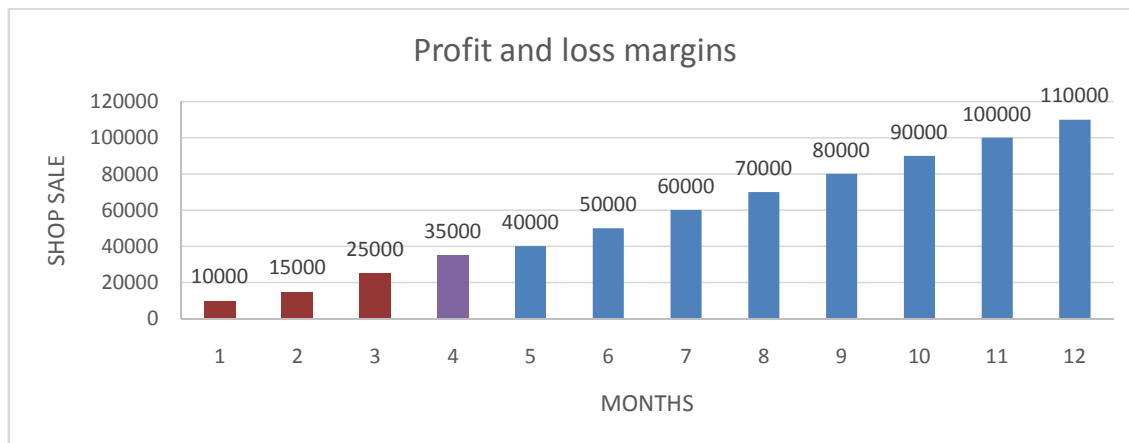




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## Break even analysis



**Graph 2: Break even analysis of the independent service station**

It is projected that until fourth month the service station would gain no profits and will catch the breakeven point when the shop sale moves to 35000 and further results in profits.

### Payback period

Payback period is calculated by dividing the cost of the project with the monthly average cash flow. Here the estimated cost of the project is \$1.23 million and the monthly average cash flow is predicted as \$86,827.27

$$\begin{aligned} \text{Payback period} &= \frac{1,233,150.00}{86,827.27} \\ &= 14.20 \text{ months} \\ &= 1.18 \text{ years} \end{aligned}$$

Since the point of cash flow is chosen at 12<sup>th</sup> month after starting the service station. So, the payback time is 2.18 years.

### Discussions

In oil and gas industry service station business is always profitable but choosing the type of business is very important. In this research the solution provided is the independent service station. Though starting an independent service station from scratch is bit expensive but it’s proved in the study that the business is profitable.

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