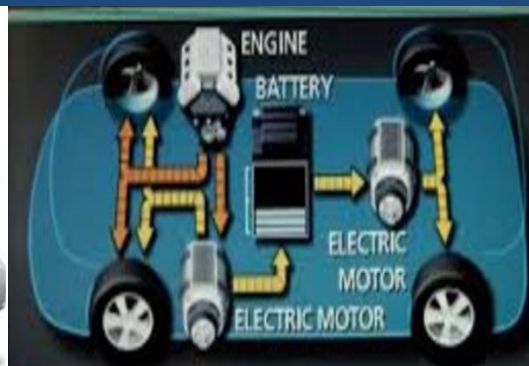
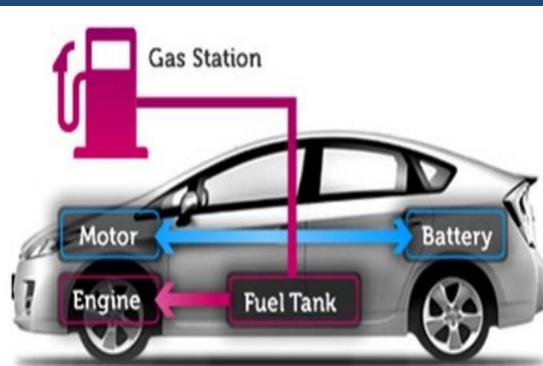


Pre-feasibility study for Establishment of Maintenance Center for Hybrid Vehicles



2017

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1. Executive Summary

Karak city is located in the south of the Kingdom of Jordan. It borders from the south by Tafilah and from the north by Madaba. Karak is the sixth Jordanian city according to the census of 2015. The city noticeably lacks to the existence of any maintenance center for hybrid Vehicles and even in the near cities.

Hence the idea of the project is to establish maintenance Center for hybrid Vehicles in Karak city with an area of 300 m² to serve the residents there and to provide the needed periodic maintenance services to mechanical services and exchanging spare parts and tires.

The project will be specialized in maintenance of hybrid Vehicles which requires skilled workers. At the beginning it is suggested that working hours will be 8 hours daily, later on it might be exceeded to 10 hours daily. In addition, the project will provide job opportunities for karak's residents.

the following table shows the main results of the project:

Table 1: Main results of the project

Results	
Total Investment Requirement (JD)	131,905
Internal Rate of Return (IRR)	27.08%
Pay-Back Period (year)	6
Net present value (JD)	304,386
Job Opportunities	9
Annual Revenue Projections (10 years)	3,470,533
Total Operating Expenses (10 years)	1,832,442
Net Profit (10 years)	256,511

2. Key Highlight of Jordan

Jordan Hashemite Kingdom area is 89342 Kilometers with a population exceed 9.8 Millions distributed among 12 Governorates.

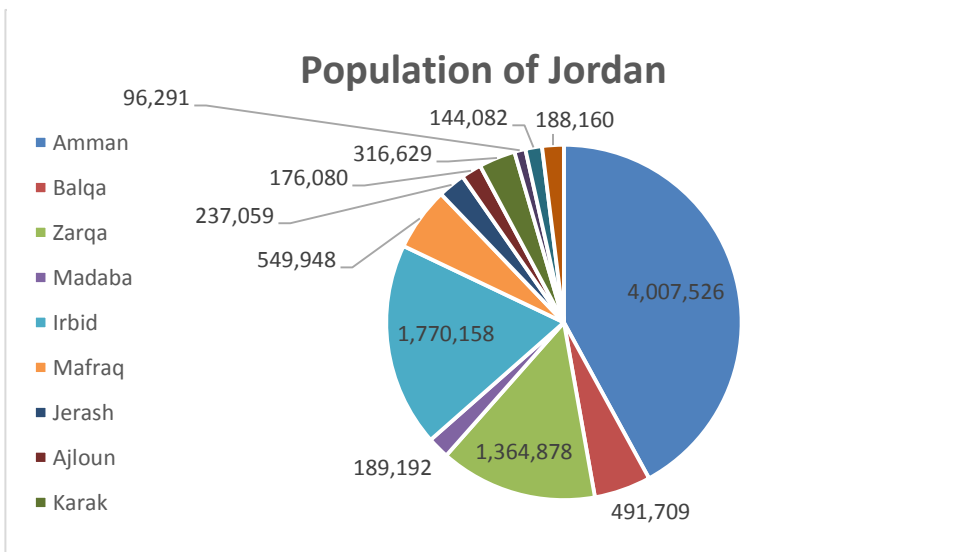
Jordan is bounded by Saudi Arabia, Iraq, Syria and Palestine from the South, East, North and west respectively. Jordan climate is mostly arid desert with rainy season between November to April Months.

Jordan is a free market economy, ranked as the fifth freest economy in the MENA region in the Index of Economic Freedom. Its free market economy enjoys strong partnerships amongst its neighboring country as well as Europe and the USA. Jordan is a signatory of several bilateral and multilateral trade agreements such as (Free Trade Agreement with the US and the EU, a Free Trade Agreement with the EFTA states, an FTA with Singapore, A member of the Greater Arab Free Trade Agreement (GAFTA) and a signatory of the Aghadir Agreement. Looking at the range of countries these agreements cover and facilitate trade between, one is confident to say that Jordan has business gateways and partnerships across the globe.

Population Overview

Based on the latest surveys done by Department of Statistics (DOS) in 2017, total number of population has reached around 9.814.995 with an increase rate of 2.88% from 2016 year, figure below summarizes the population distribution among the kingdom governorates.

Figure 1 Population of Jordan



Department of Statistics (DOS), 2015

Moreover, and based on the latest survey conducted by (DOS) which related to population nationality distribution over the governorates, it was found that total Non-Jordanian residents constitutes around 30% of the total population. Half of these are Syrians (1.3 Million) concentrated mainly in Amman Capital (436 Thousand) then Irbid (343 Thousand), Mafraq at 208 Thousand and Zarqa at 175 Thousand.

Jordan prides itself in its youthful population with 35% of ages below 15 years old and only 4% with ages above 65 years old. Table below summarizes population distribution of Jordanians according to Age Group:

Table2 Population Distribution according to Age Group

Age Group	Population %	Males	Females
0-14 Years	%35.04	%19.2	%18.2
15-64 Years	%61.02	%30.7	%28.6
More than 65 Years	%3.94	%1.6	%1.6

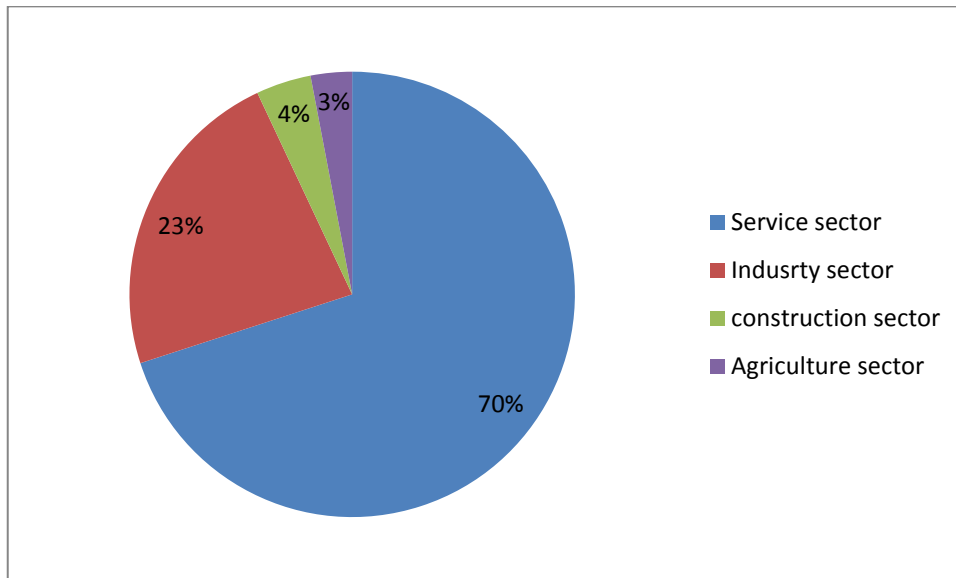
Department of Statistics (DOS), 2015.

Overview of Jordan Economy

Classified as an upper middle economy by the World Bank and as a country of High Human Development by the UNDP, Jordan is an important financial power in the Middle East. Its small market witnessed growth in the last two decades since King Abdullah II accessed the throne. Jordan's GNI per capita has increased in the last four years due to the basket of economic reforms that were enacted in the recent decade such as (the new Income Tax Law, Public Private Partnership Law and Investment Law). These laws aim to encourage the participation of the private sector in the Kingdom's economic development and provide an enabling legislative environment for current and new investment opportunities.

The Jordanian economy is overwhelmingly services oriented and its contribution in the GDP is 68.1%. The contribution of the industrial sector is 22.4%, the construction sector is 4.2% and the agricultural sector is 2.9%. These contributions are aimed to increase to (27.4%), (5.8%) and (3.4%) respectively and that of the service sector is due to decrease according to Jordan 2025 vision.

Figure 2 Sectors Contribution to Jordan's Economy



Jordan's exports include variety of textiles, potassium, phosphates, fertilizers, vegetables and pharmaceutical products. While it's main imports are crude and refined petroleum. Distinguished by its strategic location, on the crossroads between Asia, Africa and Europe with strong connections to the Levant and the GCC, Jordan has a regional market of interest that represents US\$3.8 trillion market and comprising 380 million consumers.

Jordan infrastructure ranks comparatively well (38th out of 148 comparable economies), with an extensive 8000 KM road network connecting Jordan domestically and externally the new Queen Alia International Airport and the Port of Aqaba are the major gateways to the international market. In addition to some mega projects such as the Red- Dead Sea Canal and the national railway network that will be developed to position Jordan as a hub for regional commerce.

Jordan banking system is quite sophisticated, resilient and in compliance with international standards, making it very attractive and trustworthy to investors. This is reflected in the fact that 50% of equity in licensed banks in Jordan is held by non-Jordanians, and non-residents' deposits in Jordanian banks witnessed a steady growth of 19.2%.

Moreover, realizing the value of MSMEs to drive economic growth, the government has developed the national Strategy for the encouragement of entrepreneurship and the development of micro small and

medium sized enterprises for 2015-2019. This shows the commitment of the Jordan government to enhance the private sector development and leveraging the country's strong human capital.

Jordan prides itself in its youthful population. It's the country most valuable capital. A tech savvy well educated and trained workforce attracts a lot of investors to Jordan. More than 20.4% of Jordan's GDP is dedicated to the education and capacity building for the labor force, this has resulted in securing a 91% literacy rate and enabled Jordanians to be among most hired and qualified middle-eastern workforce.

Such solid, diverse and resilient characteristics of the Jordanian economy and investment scene position Jordan as a competitive investment destination.

Major Economic Indicators

- **GDP Growth**

The Jordanian economy slowed and reached 2.4 percent in 2015 compared to growth rate of 3.1 in 2014 and similar to MENA growth rates.

The growth also slowed for trade, restaurants and hotels; manufacturing; transport; and electricity and water. Meanwhile, finance, insurance, and business services advanced at a faster pace.

- **Inflation rate**

Inflation rate decreased to 0.9 in 2015 after 2% decline in the previous year. Inflation Rate in Jordan averaged 3.1 percent from 2011 until 2015.

- **Unemployment**

The unemployment rate in Jordan was recorded at 13 percent in 2015, comparing to 11.9 percent a year earlier. This increase due to the current instability in the labor market structure as well as high competition from low cost foreign labors especially from Syria.

- **External Sector**

A number of risks manifested in 2015, the closure of land trade routes with Syria and Iraq and the deepening instability in the region adversely impacted many external sector indicators such as trade, tourism and direct Investment.

Moreover, loans disbursements increased by JD 545.3 million, due to the use of the International and Arab Monetary Funds (IMF and AMF) credit facilities. As an outcome of these developments, the overall balance of the balance of payments registered a surplus of JD 328.7 million in 2015, compared with a surplus of JD 1,550.7 million in 2014.

Further, net international investment position (IIP) witnessed an increase in the Kingdom's net obligations to abroad; to reach JD 24,357.5 million, compared to a net obligation of JD 22,578.8 million at the end of 2014 as a result of the increase in the stock of external financial assets and liabilities of all resident economic sectors to reach JD 18,657.9 million and JD 43,015.5 million; respectively.

External Debt in Jordan increased to 9390.50 JOD Million in 2015 from 8030.10 JOD Million in 2014. External Debt in Jordan averaged 5433.67 JOD Million from 1988 until 2015, reaching an all time high of 9390.50 JOD Million in 2015 and a record low of 3640.20 JOD Million in 2008.

Investment Climate in Jordan

Investment in Jordan is considered as one of the vital sources to boost the economy considering that Jordan's economy is among the smallest in the Middle East, with insufficient supplies of water, oil, and other natural resources, underlying the government's heavy reliance on foreign assistance.

The country's location, supported by myriad free trade agreements (FTAs) offering access to 1.5bn consumers, enables the kingdom to be a strategic trade route to many of its neighboring countries and regions.

Jordan aspires to create a competitive investment destination capitalizing on its many advantages mentioned above. The government focused its efforts to implement significant advances in structural and legal reform. These efforts are represented in the new Investment Law of 2014, the tax law, in addition to other endeavors related to providing greater access to credit for MSMEs, and by providing greater investment incentives to specific priority sectors identified by the new Investment law and the Jordan 2025 vision.

furthermore, in its endeavor to enhance the business environment, several geographically industrial states were created across the kingdom. These range in type to include (industrial estates, free zones and special economic zones). Under the new Investment Law, these zones are given a number of incentives that include a tax rate of 0% on exports, sales tax, import duties, social service tax, dividends tax and a 5% income tax from all economic and manufacturing activities undertaken in the development zones. As for the investments in Free Zones, they enjoy Exemptions from customs duties, income tax exemptions and exemptions from land and building taxes among others. Both development and free zones also enjoy facilitations regarding visa and residency permits for investors and workers in addition to Repatriation of capital and profits in a convertible currency. Such estates have succeeded in attracting relatively large amounts of FDI to Jordan.

Key National Investment Priorities:

Jordan Investment commission worked on taking a leading role in the application of government policies to promote and attract domestic and foreign investments and create an investment environment that stimulates economic performance through investment promotion strategy launched in 2016

Jordan investment commission aims to:

- Regulating the special provisions governing Development Zones and Free Zones in the Kingdom and developing them placing them in service of the national economy as well as monitoring their functioning.
- Developing plan and programs to stimulate domestic and foreign investments.
- Establishing trade centers and organizing exhibitions as well as opening markets and organizing trade missions in order to promote national products, in addition to marketing and development of national exports and encouraging investment.
- Taking appropriate decisions related to private or public institutions to improve Investors' confidence in Jordan's investment environment.

3. Market Analysis

Project Description

The idea of the project is to establish maintenance Center for hybrid Vehicles which serves the local community. The Centre's services include: batteries maintenance (hybrid), repairing the electrical and mechanical problems and providing full check up for vehicles using computers, in addition to oil changing services.

The idea of this project was chosen because these types of projects are highly profitable. Moreover, there is an increase of hybrid vehicles annually. Karak city lacks of hybrid service centers. The project will serve karak city in addition to south of Jordan

Project Objectives

Project objectives are summarized in the following points:

- Providing karak city with hybrid maintenance center that provides high quality services.
- Achieving high profit because there are no competitors in the city.
- Providing job opportunities, which leads to improve the economic status.
- Supports the services-sector in the southern region of Jordan.

Proposed Service

The project aims to provide full services to hybrid vehicles in karak city, including batteries maintenance and replacement, mechanical and electrical services, periodic maintenance, oil and tires changing in addition to sell and replacement of spare parts.

Target Segments

The project targets the following segments:

- Owners of hybrid Vehicles in Karak.
- Hybrid Vehicles that needs emergency service on the roads.
- Owners of hybrid Vehicles in South of Jordan.

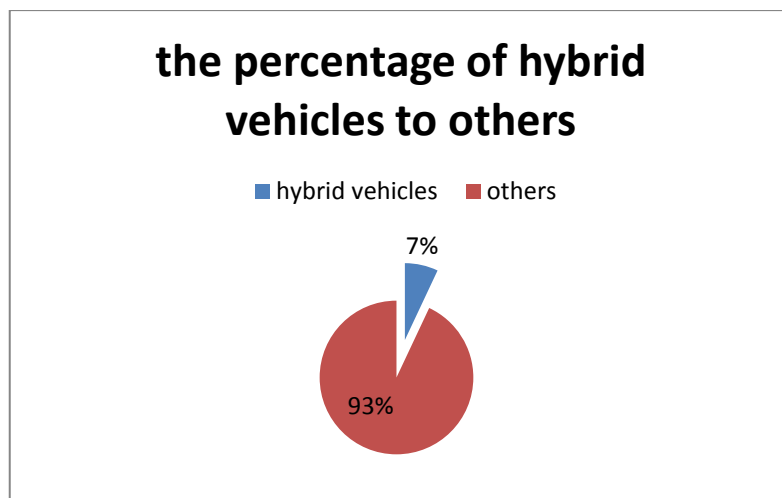
Market Size Analysis

Market analysis was based on the number of private Vehicles in Jordan market which includes the following:

- Fuel vehicles.
- Hybrid Vehicles.
- Electric Vehicles.
- Desiel Vehicles.

The following figure represents the percentage of hybrid vehicles to others based on the report from Drivers and Vehicles License Department:

Figure 3 The Percentage of hybrid cars in Jordan for the year 2015/2016



The total number of hybrid vehicles in Jordan amounted to 71,460 vehicles in 2015/2016, representing 7% of the total vehicles. The estimated number of private vehicles in Jordan is about 951,130 vehicles based on Drivers and Vehicles License Department report for the year 2015/2016.

1.1 Competitors analysis

There is no direct competition to the suggested project due to lack of maintenance Centers for hybrid vehicles in Karak, there is indirect competition with maintenance centers for gasoline vehicles by providing some mechanical maintenance, changing tires and oils, selling and exchange some parts for some hybrid vehicles.

Project capacity

The suggested project can serve all clients, where the estimated capacity is up to 200 vehicles distributed on daily working hours.

Prices analysis and pricing policy

The following table shows the assumed prices based on similar service centers:

Table 3 proposed prices

The suggested prices	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Oil changing + general maintenance	35	36	37	38	39	41	42	43	44	46
Avg. price for hybrid vehicles parts	90	93	95	98	101	104	107	111	114	117
4 tires exchange	280	288	297	306	315	325	334	344	355	365

Expected revenue analysis

The maintenance centers of hybrid vehicles is characterized of high profits revenues, the following table shows the project revenues analysis for the ten years:

Table 4 project revenue analysis

Item	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Oil exchanging + general maintenance price	70560	83059	85551	99132	102106	105169	120360	123971	127690	131521
The price of vehicles parts	103680	106790	137493	141617	145866	180290	185699	191270	197008	202918
Four tires price	47040	48451	49905	51402	52944	109065	112336	115707	119178	122753
Total	221280	238301	272948	292151	300916	394524	418396	430948	443876	457193

4. Technical Analysis

Human resources

Table 5 Required human resources

Job title	Number
Project Manager	1
Engineer	1
Accountant	1
Technician	3
Worker	2
Salesman	1
Total staff	9

Location analysis

Karak is considered an ideal location to establish an advanced maintenance center as it will be the first technical maintenance Center that is specialized in hybrid vehicles, due to the increase of hybrid vehicles in Karak and generally in South of Jordan. Also, Karak is located close to the linking road between Amman and Aqaba which helps to provide emergency maintenance and repair damaged vehicles. Karak is considered to have a low rental prices compared to Amman which makes it a strategic place to establish this suggested project.

Technical requirements analysis

1.1.1 Land and construction works

The proposed project area requires 300 m² divided into:

- Two facades
- Parts and tires shop.
- Management Office and sanitation

Machinery and equipment

The following table shows needed machinery and equipment:

Table 6 Machinery and equipment

Machinery and equipment	Qty
Hydraulic car lifter	4
Crane gear	4
Wheels jack	4
Air pump	2
maintenance equipments	2
Check up devices	1
Tools for tires exchange	2

Furniture

The project needs the following furniture and furnishings:

Table 7 required furniture

Furniture	Qty
General Furniture	1
Metal shelves	20
Movable and stationary tables	8

Legal requirements and procedures

Ministry of Industry and Trade

To register a company the Ministry of Industry and Trade should be visited to start the legal procedures to obtain the registration certificate of commercial name and ID number of the company. As it is important to have the registration certificate of the company and the lease contract and the ID of the owner for the issuance of profession license and then fill out the following documents:

Maintenance Center for Hybrid Vehicles

- Affiliation document in Chamber of Industry and Commerce \ Karak.
- Statement of bank deposit.
- Issuing a work permit which requires the site plan and the approval of the municipality of Karak.

The Municipality should be visited to obtain the approval and the following fees should be paid:

- Professional fees X Ratio of capital (determined by the municipality).
- 15 JD advertising fee
- Waste charges 20% of professional fees.
- Health fees.

The Ministry of Environment:

The approval of the Ministry of Environment requires submission of the following documents:

- The coordinates of the plot
- Registration certificate (from ministry industry and trade).
- Land scheme
- Organizational chart.

The documents should be sent to the Directorate of Environment in Karak governorate, then transferred to the Ministry of Environment. An application request should be submitted to the Ministry of Environment and technical form is filled in. The documents are submitted to the Licensing Committee.

Chamber of Industry: Registration in the Karak Chamber of Commerce shall be submitted by presenting the commercial register, the lease contract and the identity of the person concerned.

The fees shall be according to the capital of the project, amounting to JD 600

Financial fees required for service:

- The amount of (100) hundred dinars is required when applying for permission to establish new industrial projects or when adding a new line of production.
- (100) Dinars shall be collected upon detection of the factory or workshop or a new line of production and monitoring of production operations upon issuance of the detection decision and the receipt should be attached to the decision.

5. Financial Analysis

The Financial Part illustrates all the assumptions which were used when we have developed the study including project expenses related to capital expenditures, operating expenses (Fixed and Variable costs) followed by illustrating project revenues.

Assumptions

Calculation Assumptions:

- The weighted average cost of capital used in the study is 10.75% as it was calculated considering risk free and debt Interest rates as well as Market risk premiums to consider alternative opportunity costs for investor.
- Income tax on the net project income is 5 % during the life time of the project.
- Project working capital has been estimated and added to project cash outflows at the beginning of the project and annual increase in working capital has been also estimated and added to the operating expenses then net working capital has been added to total cash inflows at the end of project lifetime.

The time span for the financial study is 10 years starting from 2018, where annual increase rates have been estimated as per the tables below:

Assumptions

Table 8 General Assumptions

General Information	
All Financial Numbers (Currency)	Jordan Dinars
Financial Study Time Span (Years)	10
Expected Project First Operating Year	2018
Last Year in the Financial Study	2027

Table 9 Currency Exchange Rates

Exchange Rates	Jordan Dinars
American Dollar	0.708
Euro	0.760

Table 10 working time assumption

Work time	
Number of weeks in the year	48
Number of working days in the week	7
Number of days in the year	360
Daily working hours	14

Table 11 Annual Growth Rates Assumptions

Annual Growth Rates	Average
Annual Population Growth Rate	2.20%
Annual Sales Price Increase Rate	3.00%
Annual Expenses Increase Rate	3.00%
Annual Increase Rate in Employees Salaries	4.1%

(1) and (2) Source: Inflation Rates, Central Bank of Jordan

(3) Source: Social Security

Table 12 Expenses Assumptions

Expenses Assumptions	
Raw Materials and Packaging from Total Revenues	40.00%
Utilities Expenses from Total Revenues	6.00%
Maintenance Expenses from Total Revenues	1.50%
Depreciation Expenses from Total Revenues	0.50%
Insurance Expenses from Total Assets Value	0.50%
Marketing Expenses from Total Revenues	0.50%

Table 13 Income Tax Assumptions

Income Tax Assumptions	Value
(1) Average Income Tax in Jordan	20%
(2) Income Tax Deduction	0%
Income Tax after Deduction	20%
(3) Compulsary Reserve Percentage	10%
Other Assumptions	value
(1) Annual Monthly Salaries have been calculated after multiplying monthly salaries by:	16

Table 14 Risk Premium

Risk Premium	
(1) Risk Free Rate of Return	6.50%
(2) Return to Debt Maturity	9.48%
(3) Market Risk Premium	10.12%
Income Tax Rate	20%
(4) Beta	0.89
Growth Rate	4.00%

(1) Source :Damodaran's Country Default Spreads and Risk Premiums Report

(2) Source :Central Bank of Jordan

(3) Source :Damodaran's Country Default Spreads and Risk Premiums Report

(4) Source :Damodoran Beta By Sector, , pages.stern.nyu.edu

Table 15 Weighted Average Cost of Capital

Weighted Average Cost of Capital	
Average Return on Risk Free Investment	%6.50
Return to Debt Maturity	%9.48
Market Risk Premuim	%10.12
Income Tax Rate	20%
Bets	0.89
Equity	52,762
Loans Value	79,143
Loans	
Cost of Borrowing before Tax	%9.48
Cost of Borrowing After Tax	%9.01
Loans Value	79,143
Loans Percentage	%60
Equity	
Cost of Equity	%15.5
Equity Value	52,762
Equety Percentage	%40
Gross	
Project Value	131,905
Weighted Average Cost of Capital	%10.75

Capital Expenditures

The estimated cost of the project is 131,905 JD and it covers machinery and equipment, furniture, pre-operating expenses and working capital. The following tables summarize the details of these expenses:

Table 16 Machinery and equipment Capital Expenditure

Machinery and equipment	QTY	Unit cost (JD)	Total cost (JD)
Hydraulic car lifter	4	3,900	15,600
Gear crane	4	600	2,400
Wheels jack	4	300	1,200
Air pump	2	400	800
maintenance equipments	2	6,000	12,000
Check up devices	1	2,000	2,000
Tools for tires exchange	2	7,500	15,000
Total			49,000

Table 17 Furniture Capital Expenditure

Furniture	QTY	Unit cost (JD)	Total cost (JD)
General furniture	1	1,500	1,500
Metal shelves	20	200	4,000
Movable and stationary tables	8	500	4,000
Total			9,500

Table 18 Pre-Operating Expenses

Pre-operating expenses	Estimaited cost (JD)
Governmental fees	1,500
Transportation	1,500
Marketing	1,500
Training	2,500
Total cost	7,000

The initial working capital reflects the project's amounts needed to cover all the expenses during operation until the project starts generating income, the following table shows the components of the initial working capital:

Table 19 Working Capital

Working Capital	No. of Months	%	Estimated Cost (JD)
Operating expenses	3	%25	29,209
General and administrative expenses	3	%25	3,828
Marketing expenses	3	%25	277
Indirect Salaries	3	%25	21,100
Total			54,414

Table 20 Expenses Summary

Capital expenditure summary	Cost (JD)	Contingency	Cost (JD)	%
Machinery & Equipment	49,000	10%	53,900	%40.9
Furniture	9,500	10%	10,450	%7.9
Pre-Operating Expenses	7,000	10%	7,700	%5.8
Working capital	54,414	10%	59,855	%45.4
Total (JD)	119,914		131,905	100%

Sources of Funding

The financing structure of the project consists of loans and Equity. The investment cost of this project is estimated at (131,905) JD, where 60% of the project will be financed through loans (79,143) JD, and the remaining (40%) through (Equity) with (52,762) JD. The following table summarizes the general structure of the required financing:

Table 21 Sources of Funding

Funding Sources	Amount	Percentage
Equity	52,762	%40
Loans	79,143	%60
Total	131,905	%100
Use of Fund	Amount	Percentage
Capital Expenditures	64,350	%48.78
Pre-Operating Expenses	7,700	%5.84
Working Capital	59,855	%45.38
Total	131,905	%100.00

Operating Expenses

The following table summarizes the expected operating expenses for the proposed project (2018-2027):

Table 22 Operating Expenses

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Raw Materials from Revenues	88,512	95,320	109,179	116,861	120,366	157,810	167,358	172,379	177,550	182,877
Service benefit expenses from revenues	13,277	14,298	16,377	17,529	18,055	23,671	25,104	25,857	26,633	27,432
Maintenance from Revenues	3,319	3,575	4,094	4,382	4,514	5,918	6,276	6,464	6,658	6,858
Disposables from Revenues	1,106	1,192	1,365	1,461	1,505	1,973	2,092	2,155	2,219	2,286
Others	10,621	11,438	13,102	14,023	14,444	18,937	20,083	20,685	21,306	21,945
Total	116,836	125,823	144,117	154,256	158,884	208,309	220,913	227,540	234,367	241,398

General and Administrative Expenses

The following table summarizes the expected general and administrative expenses for the proposed project (2018-2027):

Table 23 General and Administrative Expenses

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Telecom	500	515	530	546	563	580	597	615	633	652
Hospitality	500	515	530	546	563	580	597	615	633	652
Stationary and Printing	100	103	106	109	113	116	119	123	127	130
Transportation	500	515	530	546	563	580	597	615	633	652
Training	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657
Miscellaneous	322	331	341	352	362	373	384	396	408	420
Total	1,392	1,434	1,477	1,521	1,567	1,614	1,662	1,712	1,764	1,816

Marketing Expenses

Table 24 Marketing Expenses

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Marketing Expenses	1,106	1,192	1,365	1,461	1,505	1,973	2,092	2,155	2,219	2,286

Human Resources

The total annual salaries and monthly wages has been estimated on 16 months for the purpose of considering annual increments on salaries as well as payments related to social security and health insurance, etc.

The following table summerizes the expected annual salaries and wages, considering annual increment on salaries as per the income statement:

Table 25 expected number of employees

Job title	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Project Manager	1	1	1	1	1	1	1	1	1	1
Accountan	1	1	1	1	1	1	1	1	1	1
Engineer	1	1	1	1	1	1	1	1	1	1
Technician	3	3	3	3	3	3	3	3	3	3
Worker	2	2	2	2	2	2	2	2	2	2
Salesman	1	1	1	1	1	1	1	1	1	1
Total number of employees	9	9	9	9	9	9	9	9	9	9

Table 26 Expected monthly Salaries and Wages (2018-2027)

Job title	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Project Manager	1,500	1,562	1,626	1,692	1,762	1,834	1,909	1,987	2,069	2,154
Accountant	400	416	433	451	470	489	509	530	552	574
Engineer	850	885	921	959	998	1,039	1,082	1,126	1,172	1,220
Technician	450	468	488	508	528	550	573	596	621	646
Worker	375	390	406	423	440	458	477	497	517	538
Salesman	425	442	461	479	499	520	541	563	586	610

Table 27 Expected Annual Salaries and Wages (2018-2027)

Job title	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Project Manager	24,000	24,984	26,008	27,075	28,185	29,340	30,543	31,796	33,099	34,456
Accountant	6,400	6,662	6,936	7,220	7,516	7,824	8,145	8,479	8,826	9,188
Engineer	13,600	14,158	14,738	15,342	15,971	16,626	17,308	18,017	18,756	19,525
Technician	21,600	22,486	23,408	24,367	25,366	26,406	27,489	28,616	29,789	31,011
Worker	12,000	12,492	13,004	13,537	14,092	14,670	15,272	15,898	16,550	17,228
Salesman	6,800	7,079	7,369	7,671	7,986	8,313	8,654	9,009	9,378	9,763
Total annual salaries	84,400	87,860	91,463	95,213	99,116	103,180	107,411	111,814	116,399	121,171

Depreciations

The following tables illustrate cost of Capex and Depreciation rates:

Table 28 Capex and Depreciation Expenses

Capex Cost and Annual Depreciation Rates	Cost (JOD)	Depreciation Rate	Annual Additions Percentage
Machineries	53,900	%10.0	%2.0
Furniture	10,450	%10.0	%5.0
	64,350		

Table 29 Depreciations and Additions on Construction Works

Capex, Annual Additions and Depreciations	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Fixed Assets	64,350	65,951	67,599	69,296	71,045	72,847	74,704	76,618	78,592	80,627
Total Depreciation Expenses	6,435	6,595	6,760	6,930	7,105	7,285	7,470	7,662	7,859	8,063
Total Accumulated Depreciation	6,435	13,030	19,790	26,720	33,824	41,109	48,579	56,241	64,100	72,163
Total Additions	0	1,601	1,648	1,698	1,749	1,802	1,857	1,914	1,973	2,035
Total Net Book Values	57,915	52,920	47,809	42,577	37,221	31,738	26,125	20,377	14,492	8,464

Loan

The table below summarizes all details related to the loan such as annual installments and payment methods for the remaining amount of the loan for each year of the project.

Table 30 Loan Details

Loan Value					79,143
Annual Interest Rate					9.48%
Loans Period					5
Grace Period					0
Loan Starts at year:					2018
Annual Payment					20,601
Number of Payments					5
Year	Annual Payment	Interest	Capital	Loan Remaining Value	
2018				79,143	
2019	20,601	7,503	13,098	66,045	
2020	20,601	6,261	14,340	51,705	
2021	20,601	4,902	15,700	36,005	
2022	20,601	3,413	17,188	18,817	
2023	20,601	1,784	18,817	0	

Income Statement

Table 31 Income Statement

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenues										
Sales Revenues	221,280	238,301	272,948	292,151	300,916	394,524	418,396	430,948	443,876	457,193
Gross Operating Revenues	221,280	238,301	272,948	292,151	300,916	394,524	418,396	430,948	443,876	457,193
Operating Expenses	(116,836)	(125,823)	(144,117)	(154,256)	(158,884)	(208,309)	(220,913)	(227,540)	(234,367)	(241,398)
Gross Operating Profit	104,444	112,478	128,832	137,896	142,032	186,215	197,483	203,407	209,510	215,795
<i>Gross Profit Percentage</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>	<i>%47</i>
Salaries and Benefits (Indirect	(84,400)	(87,860)	(91,463)	(95,213)	(99,116)	(103,180)	(107,411)	(111,814)	(116,399)	(121,171)
General and Administraive	(15,314)	(15,773)	(16,247)	(16,734)	(17,236)	(17,753)	(18,286)	(18,834)	(19,399)	(19,981)
Markeing Expenses	(1,106)	(1,192)	(1,365)	(1,461)	(1,505)	(1,973)	(2,092)	(2,155)	(2,219)	(2,286)
Pre-Operating Expenses	(7,700)									
Gross Indirect Expenses	(108,520)	(104,825)	(109,074)	(113,407)	(117,857)	(122,906)	(127,788)	(132,803)	(138,017)	(143,438)
Income before Interest,	(4,076)	7,653	19,758	24,488	24,175	63,310	69,695	70,604	71,492	72,357
Fixed Assets Depreciations	(6,435)	(6,595)	(6,760)	(6,930)	(7,105)	(7,285)	(7,470)	(7,662)	(7,859)	(8,063)
Income before Tax and Interests	(10,511)	1,058	12,998	17,559	17,071	56,025	62,224	62,942	63,633	64,294
Bank Interests	(7,503)	(6,261)	(4,902)	(3,413)	(1,784)	0	0	0	0	0
Income Before Tax	-18,014	-5,203	8,096	14,145	15,287	56,025	62,224	62,942	63,633	64,294
Income Tax	0	0	0	-2,037	-3,057	-11,205	-12,445	-12,588	-12,727	-12,859
Net Profit	-18,014	-5,203	8,096	12,108	12,230	44,820	49,779	50,354	50,906	51,435

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<i>Net Profit Percentage</i>	<i>%8-</i>	<i>%2-</i>	<i>%3</i>	<i>%4</i>	<i>%4</i>	<i>%11</i>	<i>%12</i>	<i>%12</i>	<i>%11</i>	<i>%11</i>
Compulsory Reserves	0	0	-810	-1,211	-1,223	-4,482	-4,978	-5,035	-5,091	-5,144
Retained Earnings	-18,014	-23,217	-15,931	-5,034	5,973	46,311	91,112	136,431	182,247	228,538

Expected Cashflows Statement

The table below summarizes project cashflows statement, where net cash flows are positive during all years as below:

Table 32 Expected Cashflows

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Cash Inflows from Operating Activities										
Net Profit	-18,014	-5,203	8,096	12,108	12,230	44,820	49,779	50,354	50,906	51,435
Bank Interests	7,503	6,261	4,902	3,413	1,784	0	0	0	0	0
Depreciation	6,435	6,595	6,760	6,930	7,105	7,285	7,470	7,662	7,859	8,063
Total Operating Cashflows before Additions to Working Capital	-4,076	7,653	19,758	22,451	21,118	52,105	57,250	58,016	58,766	59,498
Inventory (Increase/Decrease)	-7,376	-567	-1,155	-640	-292	-3,120	-796	-418	-431	-444
Accounts Payables (Increase/Decrease)	4,721	363	739	410	187	1,997	509	268	276	284
Working Capital (Increase/Decrease)	-2,655	-204	-416	-230	-105	-1,123	-286	-151	-155	-160

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Net Cashflows from Operating Activities	-6,732	7,448	19,342	22,220	21,013	50,981	56,963	57,865	58,610	59,338
Cashflows from Investments Activities										
Fixed Assets (Procurement)	-64,350	-1,601	-1,648	-1,698	-1,749	-1,802	-1,857	-1,914	-1,973	-2,035
Net Cashflows from Investments Activities	-64,350	-1,601	-1,648	-1,698	-1,749	-1,802	-1,857	-1,914	-1,973	-2,035
Cashflows from Financing Activities										
Capital	52,762									
Loan Amortization	-13,098	-14,340	-15,700	-17,188	-18,817	0	0	0	0	0
Bank Interest Rate	-7,503	-6,261	-4,902	-3,413	-1,784	0	0	0	0	0
Loans	79,143	0	0	0	0	0	0	0	0	0
Net Cashflows from Financing Activities	111,304	-20,601	-20,601	-20,601	-20,601	0	0	0	0	0
Net (Increase/Decrease) in Cash	40,223	-14,753	-2,907	-78	-1,337	49,179	55,106	55,951	56,637	57,303
Cashflows at the Beginning of Period	0	40,223	25,470	22,562	22,484	21,147	70,326	125,432	181,383	238,020
Cashflows at the End of Period	40,223	25,470	22,562	22,484	21,147	70,326	125,432	181,383	238,020	295,323

Expected Balance Sheet

The balance sheet is one of the main statements which the project depends on, as it reflects the financial position of the entity and is usually estimated on the last day of the financial year.

All financial information and analysis of the project shall be the estimated for the years (2018-2027) as shown in the table below:

Table 33 Expected balance sheet

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Assets										
Current Assets										
Cash	40,223	25,470	22,562	22,484	21,147	70,326	125,432	181,383	238,020	295,323
Inventory	7,376	7,943	9,098	9,738	10,031	13,151	13,947	14,365	14,796	15,240
Total current Assets	47,599	33,413	31,660	32,222	31,177	83,477	139,379	195,748	252,816	310,563
Non Current Assets										
Fixed Assets (net)	57,915	52,920	47,809	42,577	37,221	31,738	26,125	20,377	14,492	8,464
Total Non Current Assets	57,915	52,920	47,809	42,577	37,221	31,738	26,125	20,377	14,492	8,464
Total Assets	105,514	86,333	79,469	74,799	68,398	115,215	165,504	216,125	267,308	319,027
Liabilities										
Current Liabilities										
Remaining amount of Loan	4,721	5,084	5,823	6,233	6,420	8,417	8,926	9,194	9,469	9,753
Total current Liabilities	14,340	15,700	17,188	18,817	0	0	0	0	0	0
Non Current Liabilities										
Long Terms Loans	51,705	36,005	18,817	0	0	0	0	0	0	0

Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Long Term Liabilities	51,705	36,005	18,817	0	0	0	0	0	0	0
Total Liabilities	70,766	56,788	41,828	25,050	6,420	8,417	8,926	9,194	9,469	9,753
Owners Equity										
Shareholders Contributions	52,762	52,762	52,762	52,762	52,762	52,762	52,762	52,762	52,762	52,762
Statutory Reseve	0	0	810	2,020	3,243	7,725	12,703	17,739	22,829	27,973
Retained Profits	18,014-	23,217-	15,931-	5,034-	5,973	46,311	91,112	136,431	182,247	228,538
Total Equity	34,748	29,545	37,641	49,749	61,979	106,799	156,578	206,932	257,838	309,273
Total Liabilities and Equity	105,514	86,333	79,469	74,799	68,398	115,215	165,504	216,125	267,308	319,027

Feasibility Indicators

There are more than one method to calculate the discounted cash flow statement. However, in this study, WACC was used to calculate the discounted cash flows and net investment value. The Company's financing structure is based on equity and loans; therefore, the discounted rate should be adjusted according to WACC based on the following assumptions, the following table illustrates the net expected free cash flow of the project:

Table 34 Free Net CashFlows

Net Cashflows	Before Operating	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Final value
Net Free Cashflows	-131,905	968	5,848	17,694	20,523	19,264	49,179	55,106	55,951	56,637	57,303	882,483
Discount Factor	1.00	0.82	0.74	0.66	0.60	0.54	0.49	0.44	0.40	0.36	0.33	0.33
Net Present Value for Cash Flows	-131,905	790	4,305	11,760	12,316	10,438	24,060	24,342	22,315	20,396	18,632	286,940

The table below illustrates payback period for the project, as it is one of the indicators which investors care about before taking the investment decision as they need to know when the project will return the invested amount of money. Payback period definition is the total required period so that the project generates a total money equal to the total invested capital expenditure, as investor is always looking to return the full invested amount of money at the earliest possible.

Table 35 Payback Period

Payback Period	Before Operating	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Net Free Cashflows	-131,905	968	5,848	17,694	20,523	19,264	49,179	55,106	55,951	56,637	57,303
Project Value Returned	131,905	130,937	125,089	107,395	86,873	67,608	18,429	-36,677	-92,628	-149,265	-206,568
Payback Period (Year)	6	1	1	1	1	1	1	0	0	0	0

Table 36 Financial Analysis Results

Weighted Average Cost of Capital (WACC)	%10.75
Net Present Value for Cashflows	304,386
Payback Period	6
Internal Rate of Return	%27.08

Sensitivity Analysis

Sensitivity analysis is conducted to investigate the effects of changes in significant inputs of the financial analysis. This includes changes in revenues, total investment costs, and operating costs.

Table 37 Sensitivity Analysis

Sensitivity Analysis	Internal Rate of Return	Payback Period	WACC
Original Scenario	%27.08	6	10.75%
Revenues declined by 10%	%20.21	8	10.75%
Operating Expenses Increased by 10%	%18.83	8	10.75%

Conclusions and Recommendations

Based on the profitability analysis and considering that project internal rate of return is higher than WACC, it is concluded that the project is feasible as the net present value for the project is positive 304,386 Jordan Dinars considering that the project provides 9 Job Opportunities for the governorate residents.

Maintenance center for hybrid vehicles