



# Business plan paper recycling factory

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# INTEGRATED WATER RESOURCES MANAGEMENT MASTER OF SCIENCE

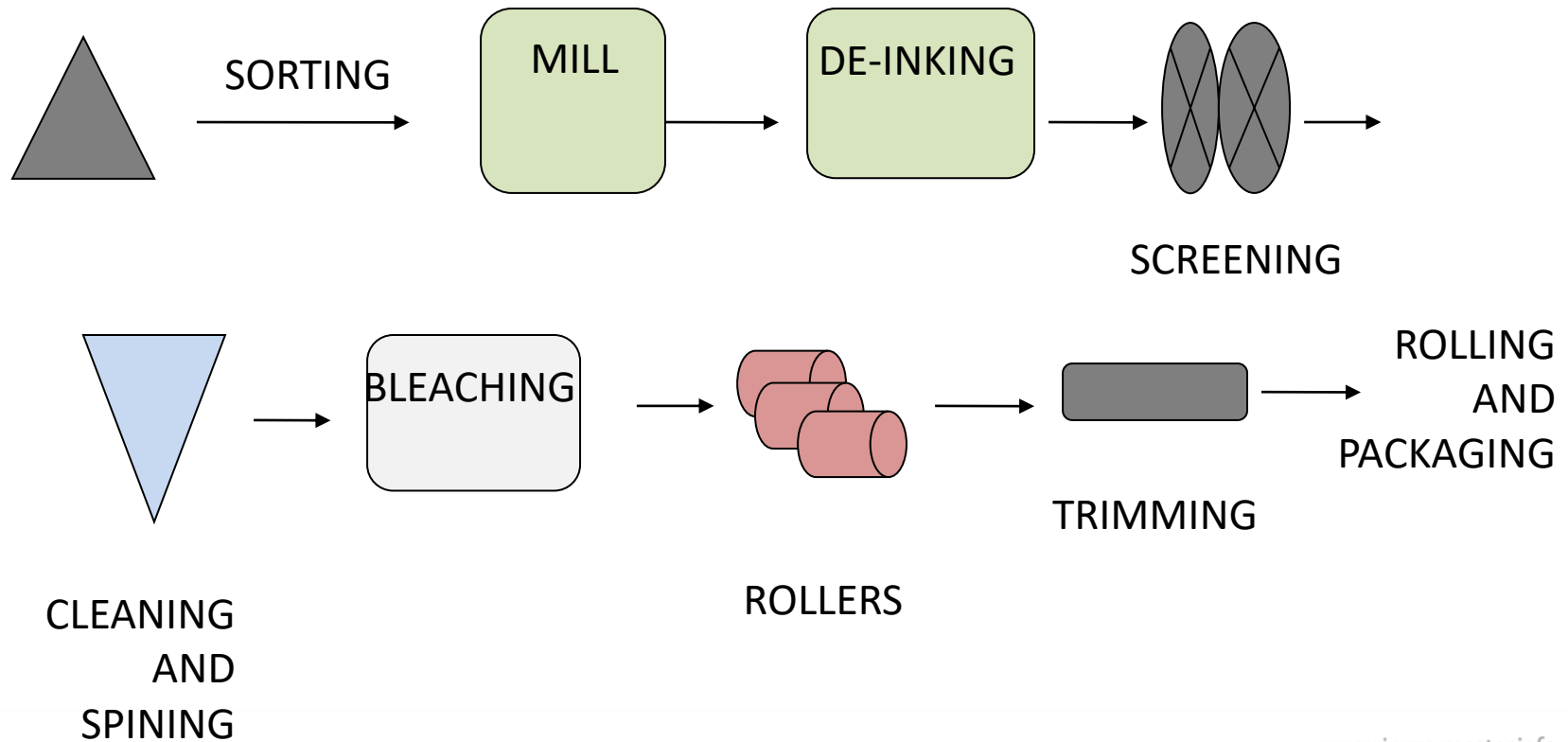


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# Processes description





- Total production: 2750 kg of paper per day .
- Capacity: 1000000kg papers per year
- Work time: 5 days/week, one shift of 8 hours
- We intend to sell at a price of 1.2 \$
- Place of the Factory: Damascus/Syria





# Investment Calculation

Description plant	Investment sum	Dep./ Year	Depreciation
Land	40000	0	0
Additional expenses	4000	0	0
<b>Sum of Land</b>	<b>44000</b>	<b>0</b>	<b>0</b>
<b>Building</b>			
Workshop	60000	20	3000
Offices	20000	20	1000
Fence and gate	20000	20	1000
Parking	3000	20	150
Stores (2)	7000	20	350
<b>Sum of Building</b>	<b>110000</b>	<b>20</b>	<b>5500</b>
<b>Engineering</b>			
Expenditure/planning	100000	10	10000
Licenses	5000	10	500
<b>Sum of Engineering</b>	<b>105000</b>	<b>10</b>	<b>10500</b>

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Description plant	Investment sum	Dep./ Year	Depreciation
<b>Vehicles</b>			
Trucks 3	180000	5	36000
<b>Sum of Vehicles</b>	<b>180000</b>	<b>5</b>	<b>36000</b>
<b>Machinery</b>			
Conveyers 15 m	5000	10	500
Processing mills	700	10	70
Washing machine	1500	10	150
Series of screens (3 ones, 3 m2)	600	10	60
spining-cleaning machine	1000	10	100
Rollers	800	10	80
Heaters	600	10	60
Trimming machine	500	10	50
Packaging machine	900	10	90
<b>Sum of Machinery</b>	<b>11600</b>	<b>10</b>	<b>1160</b>
<b>Others</b>			
Tools	4000	10	400
Bins (150)	3000	10	300
Pumps & water pipes	2000	10	200
wastewater purifiers & Disposal pipes	5000	10	500
<b>Sum of others</b>	<b>14000</b>	<b>10</b>	<b>1400</b>





# Total Investment Calculation

Description plant	Investment sum	Dep./ Year	Depreciation
Land	4,400	0	0
Building	110,000	20	5,500
Engineering	105,000	10	10,500
Vehicles	180,000	5	36,000
Machinery	11,600	10	1,160
Others	14,000	10	1,400
Unexpected	20,000	0	0
Circulating Capital	5,000	0	0
<b>Total Investment</b>	<b>450,000</b>	<b>Total Depreciation</b>	<b>54,560</b>





# Calculation of Consumption Cost

Description plant	cons. per 1 Kg	Price for 1kg	Cost per qun. For 1 kg
<b>Materials</b>			
Chemicals	5 g	30	0.15
detergents	10 g	15	0.15
Pulp	250 g	1	0.25
Packaging materials		0.1	0.1
<b>Utilities</b>			
Energy (fuel & electricity)			0.1
Maintenance costs			0.005
<b>TOTAL</b>			<b>0.755</b>







## Calculation of Labour Cost

Jobs	No. of worker	cost
Drivers	3	28800
Workers for collection	3	21600
Workers for sorting	2	14400
Workers for machines	3	21600
Workers for storing	2	14400
Guard	1	9600
Supervisor	1	12000
Secretary	1	9600
Accountant	1	12000
Manager	1	24000
<b>TOTAL</b>	<b>18</b>	<b>168000</b>





# Total of Investment and Financing

- **Total investment = 450,000 \$**
- **50% own capital funds = 225,000 \$**
- **50% outside financing = 225,000 \$**
- **6% interest**
- **10 years running time**





## Calculation of financing costs

Year	Balance of debt	Interest rate(%)	Interest Costs Paid	Repayment
1	225000	6	13500	22500
2	202500	6	12150	22500
3	180000	6	10800	22500
4	157500	6	9450	22500
5	135000	6	8100	22500
6	112500	6	6750	22500
7	90000	6	5400	22500
8	67500	6	4050	22500
9	45000	6	2700	22500
10	22500	6	1350	22500
<b>Total interest paid</b>			<b>74250</b>	
<b>Total Repayment</b>				<b>225000</b>





# Self Costs per 1 Kg Paper: Period 10 years

	1 Year/ kilo	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
Utilization of capacity(%)	50%	50%	70%	100%	100%	100%	100%	100%	100%	100%	100%
Quantity in kg	500000	500000	700000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000

Cost	Cost /Kg	Cost /Y	Cost /Y	Cost /Y	Cost /Y	Cost /Y	Cost /Y	Cost /Y	Cost /Y	Cost /Y	Cost /Y
Depreciation costs	0.10912	54,560	54,560	54,560	54,560	54,560	54,560	54,560	54,560	54,560	54,560
Financing costs	0.027	13500	12150	10800	9450	8100	6750	5400	4050	2700	1350
Labour costs	0.336	168000	168000	168000	168000	168000	168000	168000	168000	168000	168000
Raw material costs	0.755	377500	528500	755000	755000	755000	755000	755000	755000	755000	755000
Sum of costs		613,560	763,210	988,360	987,010	985,660	984,310	982,960	981,610	980,260	978,910
Costs per 1Kg	1.22712	1.22712	1.0903	0.98836	0.98701	0.98566	0.98431	0.98296	0.98161	0.98026	0.97891





# Calculation of Revenue

➤ We decide to sell the Kg of paper at 1.2 \$

year	output	price per Kg	revenue
1	500,000	1.20	600,000
2	700,000	1.20	840,000
3	1,000,000	1.20	1,200,000
4	1,000,000	1.20	1,200,000
5	1,000,000	1.20	1,200,000
6	1,000,000	1.20	1,200,000
7	1,000,000	1.20	1,200,000
8	1,000,000	1.20	1,200,000
9	1,000,000	1.20	1,200,000
10	1,000,000	1.20	1,200,000



# Computation of cash-flow for 10 years

	1. Year	2. Year	3. Year	4. Year	5. Year	6. Year	7. Year	8. Year	9. Year	10. Year
Revenue	600000	840000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000
Depreciation costs	54,560	54560	54560	54560	54560	54560	54560	54560	54560	54560
Labour costs	168000	168000	168000	168000	168000	168000	168000	168000	168000	168000
Raw material costs	377500	528500	755000	755000	755000	755000	755000	755000	755000	755000
Financing costs	13500	12150	10800	9450	8100	6750	5400	4050	2700	1350
Loss carried forward		-13,560								
Profit before tax	-13,560	90,350	211,640	212,990	214,340	215,690	217,040	218,390	219,740	221,090
Taxes (40%)	0	36140	84656	85196	85736	86276	86816	87356	87896	88436
Profit after taxes	-13,560	54,210	126,984	127,794	128,604	129,414	130,224	131,034	131,844	132,654
Cash-flow (net profit + depreciation)	41,000	108,770	181,544	182,354	183,164	183,974	184,784	185,594	186,404	187,214
Repayment credit	22500	22500	22500	22500	22500	22500	22500	22500	22500	22500
Dividend	18,500	86,270	159,044	159,854	160,664	161,474	162,284	163,094	163,904	164,714





# Total dividend

- Total dividend cumulated over 10 years:  
1,399,802 \$



Thank you•