

Project value and funding sources, EUR	1 scenario			2 scenario		
	EUR, without VAT			EUR, without VAT		
	Total	2018	2019	Total	2018	2019
Investments in fixed assets - equipment	1,528,273.20	611,309.28	916,963.92	0.00	0.00	0.00
Investments in fixed assets - buildings	3,000,000.00		3,000,000.00			
Salary of the project implementation team	140,000.00	56,000.00	84,000.00	0.00	0.00	0.00
Purchase of services	750,000.00	375,000.00	375,000.00	8,000,000.00	4,000,000.00	4,000,000.00
Total value of the project	5,418,273.20	1,042,309.28	4,375,963.92	8,000,000.00	4,000,000.00	4,000,000.00
Private investment (third party)	1,200,000.00	500,000.00	700,000.00	0.00	0.00	0.00
Own funds	2,718,273.20	92,309.28	2,625,963.92	8,000,000.00	4,000,000.00	4,000,000.00
Financing of credit institutions	1,500,000.00	450,000.00	1,050,000.00	0.00	0.00	0.00
Project funding sources, total	5,418,273.20	1,042,309.28	4,375,963.92	8,000,000.00	4,000,000.00	4,000,000.00
	0.00	0.00	0.00	0.00	0.00	0.00

Loan terms

Private investment

Duration - 5 years, interest rate - 5 percent.

Refund - at expiration.

Bank loan

Duration - 3 years, interest rate - 3 percent.

Repayment - a monthly loan balance of EUR 500,000 is repaid.

Assumptions for the first scenario:

Project: to build a factory, including buildings and machine tools required for production.

Increase in sales: it is planned that after the implementation of the project, the sales volumes will increase by 50% from the current ones and should continue to increase by 10% annually.

Cost: an additional 10 people with an average salary of the company will be needed to service the new production capacity.

Costs: marketing budgets would need to be further adjusted to maintain projected sales growth.

Duration of the project: 2 years.

Assumptions for the second scenario:

Project: will carry out active marketing activities and develop an electronic product.

Increase in sales: sales are expected to grow by 30% during the campaign every year. In subsequent periods, growth is expected to fall to 15%.

Cost: the provision and development of services will require the hiring of 10 people with 2x the average salary of the company starting in the first year.

Costs: after campaign end, advertising budgets are expected to fall to € 1 million per year.

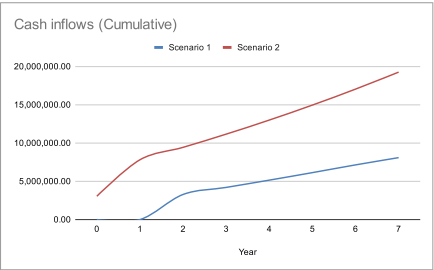
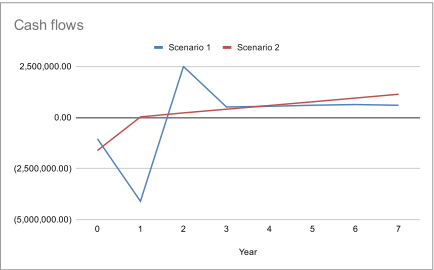
Duration of the project: 2 years.

Scenario 1								
YEAR	0	1	2	3	4	5	6	7
INFLOW								
Increase in revenue	0	0	3,730,044	1,119,013	1,230,915	1,354,006	1,489,407	1,489,407
PV of Cash Inflow	0	0	3,277,950.26	921,866.00	950,615.01	980,260.57	1,010,830.65	947,594.62
Cumulative Inflow	0	0	3,277,950.26	4,199,816.26	5,150,431.27	6,130,691.84	7,141,522.49	8,089,117.11
OUTFLOW								
Cost of Good Sold(COGS)	0.00	0.00	546,947	142,206	156,427	172,070	189,276	208,204
Investments in fixed assets - equipment	611,309.28	916,963.92	0	0	0	0	0	0
Investments in fixed assets - buildings	0.00	3,000,000.00	0	0	0	0	0	0
Salary of the project implementation team	56,000.00	84,000.00	233,786.61	239,631.28	245,622.06	251,762.61	258,056.68	264,508.10
Purchase of services	375,000.00	375,000.00	0	0	0	0	0	0
Additional marketing expenses after the project	0	0	52,334	57,568	63,325	69,657	76,623	76,623
Interest to Bank and Investors	0.00	0.00	55,207.54	55,207.54	55,207.54	31,745.76	31,745.76	0.00
Cash Outflow	1,042,309.28	4,375,963.92	888,275.51	494,612.87	520,581.05	525,234.98	555,701.70	549,335.00
PV of Cash Outflow	1,042,309.28	4,102,210.25	780,613.50	407,472.18	402,036.14	380,254.67	377,143.67	349,499.50
Cumulative Outflow	1,042,309.28	5,144,519.53	5,925,133.03	6,332,605.21	6,734,641.34	7,114,896.01	7,492,039.68	7,841,539.18

WACC =	6.673%
NPV	247,577.93
CashFlow	(1,042,309.28) (4,102,210.25) 2,497,336.77 514,393.82 548,578.87 600,005.90 633,686.98 598,095.12
IRR	2%
ROI	3.16%
Opportunity cost	1,127,322.98

Scenario 2								
YEAR	0	1	2	3	4	5	6	7
INFLOW								
Increase in revenue	3,045,835	5,147,461	1,891,132	2,174,802	2,501,023	2,876,176	3,307,603	3,803,743
PV of Cash Inflow	3,045,835	4,766,167.76	1,621,341.29	1,726,428.22	1,838,326.35	1,957,477.13	2,084,350.65	2,219,447.45
Cumulative Inflow	3,045,835	7,812,002.76	9,433,344.06	11,159,772.29	12,998,098.63	14,955,575.76	17,039,926.41	19,259,373.86
OUTFLOW								
Cost of Goods Sold(COGS)	718,043.19	1,213,492.99	320,437.99	368,503.69	423,779.24	487,346.13	560,448.05	644,515.26
Investments in fixed assets - equipment	0.00	0.00						
Investments in fixed assets - buildings								
Salary of the project implementation team	0.00	0.00	467573.228	479262.5587	491244.1227	503525.2257	516113.3564	529016.1903
Purchase of services	4,000,000.00	4,000,000.00						
Additional marketing expenses after the project	0.00	0	1000000	1000000	1000000	1000000	1000000	1000000
Interest to Bank and Investors								
Cash Outflow	4,718,043.19	5,213,492.99	1,789,011.22	1,847,766.25	1,915,023.37	1,990,871.36	2,076,561.41	2,173,531.45
PV of Cash Outflow	4,718,043.19	4,827,308.32	1,532,931.43	1,466,516.42	1,407,599.34	1,354,953.69	1,308,585.93	1,268,234.72
Cumulative Outflow	4,718,043.19	9,545,351.51	11,078,282.94	12,545,099.36	13,952,698.71	15,307,652.30	16,616,238.23	17,884,472.95

WACC =	8.00%
NPV	1,374,900.91
CashFlow	(1,672,208.17) (61,140.56) 88,409.86 259,611.80 430,727.00 602,523.54 775,764.72 951,212.72
IRR	12%
ROI	7.69%
Opportunity cost	(1,127,322.98)



After-Tax Cost of DebtBank=Interest RateBank*(1-Tax Rate)	
Tax Rate	14.52%
After-Tax Cost of DebtBank	2.56%
After-Tax Cost of DebtPrivate	4.27%
Bank Loan Amount:	1,500,000.00
Private Investment Amount:	1,200,000.00
Total Debt: 2,700,000	
Proportions:	
Bank Debt Proportion:	55.60%
Private Debt Proportion:	44.40%
Weighted Cost of Debt	3.32%
Cost of Equity (Re):	10%
Equity Weight	50.17%
Debt Weight	49.83%
WACC	6.673%

Summary							
For this project, I've added additional assumptions, to make it a bit more sensible. Firstly for the Sales revenue, I've calculated the Growth %, which was about 62 % from 2016 to 2017, as this is a startup I've assumed that it will still grow even if we initiate any of the scenarios in our knowledge and added a conservative growth rate of 50 %, assuming that we will grow within the market that we have and do not spend more in any direction except for the scenarios given. As overall young startups as this one grow at a much faster rate. Secondly, for the WACC, I've calculated the WACC for the 1st scenario, with the calculation, given above, which ended up being 9.182 %, whereas for scenario 2 I was unable to calculate the WACC as I've had insufficient data to build such calculations. But I've found that as startups are viewed as higher risk companies, their average WACC weighs at around 15 %, although looking from the Interest rates and the WACC that I've calculated from the first scenario a more logical WACC of 8 % was chosen for the 2nd Scenario. And as compared to the 1st Scenario where we have actual fixed assets that could be sold off, whereas all of the assets in Scenario 2 are intangible it seems reasonable to choose different WACC's. For the 1st scenario, I've also assumed additional costs to marketing at +10% each year. For the 2nd scenario I've added 1million for marketing purposes after the implementation of the project as assumed. For the salaries, I've taken into account inflation and just taken the average salary in the company and added it up to Cash outflows. Lastly, I've added COGS(Cost of Goods Sold) directly from the implementation of both scenarios on their own, where I've only assumed a bit of a discounted price for goods as we would most likely be able to bargain better prices from our growth in production from both scenarios. As we can see from the data gathered, both projects provide us with some sort of returns, although scenario 2 is a lot more expensive, it also seems to be a lot more lucrative for the company and its shareholders. Although given the sums that would be needed to fund this project the company would need to issue more stocks or find new investors as given our cashflows for years 2016 and 2017 we would be unable to build a project of this scale with our own funds. Whereas Scenario 1 provides us with a safer bet using, private investors and banks. Although we would have to pay about 228 thousand to interest in loans. The ROI in 7 years for Scenario 1 is a lot lower than Scenario 2 as Scenario 2 provides us with growth from its initial stages which then compensates for the losses from the initial investments, whereas Scenario 1 only provides with additional revenue after the 2 years of project implementation. Overall on all aspects of the project Scenario 2 seems like a more feasible endeavor than Scenario 1. The same is provided with the opportunity costs for both projects, as we can see we lose about 1 million by choosing the first scenario instead of the second. There are still a lot of possible outcomes for both scenarios that could make them seem more effective, but in either case it seems that the 2nd Scenario is a lot more feasible compared to the 1st one.							

	Monthly payment	Yearly	3 years	5 years	Interest	Yearly interest
Bank Loan Interest (3 years)	43,621.81	523461.7734	1570385.32		70,385.32	23461.77335
Private Investment Interest (3 years)	22,645.48	271745.7645	815237.2934	1358728.822	158,728.82	31745.76447

Total Funding: 65,418,273.20 (assuming this total includes both equity and debt financing)

Total Equity: 2718273.2 (Own Funds)

Total Debt: 62,700,000

Legend	
Historical data	
Projections for each scenario	

Legend	
Historical data	
Projections for each scenario	

Cash inflows

Scenario 1 (blue line) and Scenario 2 (red line) are compared over 7 years. The Y-axis represents cash inflows from 0.00 to 20,000,000.00. Scenario 2 consistently shows higher cash inflows than Scenario 1 after year 1.

Year	Scenario 1	Scenario 2
0	0.00	0.00
1	~2,000,000.00	~8,000,000.00
2	~4,000,000.00	~10,000,000.00
3	~5,000,000.00	~12,000,000.00
4	~6,000,000.00	~14,000,000.00
5	~7,000,000.00	~16,000,000.00
6	~7,500,000.00	~17,000,000.00
7	~8,000,000.00	~18,000,000.00

Cash flows

Scenario 1 (blue line) and Scenario 2 (red line) are compared over 7 years. The Y-axis represents cash flows from (8,000,000.00) to 2,800,000.00. Scenario 1 shows a significant initial drop in year 1, while Scenario 2 remains relatively stable and positive.

Year	Scenario 1	Scenario 2
0	0.00	0.00
1	~-2,500,000.00	~1,000,000.00
2	~2,500,000.00	~1,000,000.00
3	~1,000,000.00	~1,000,000.00
4	~1,000,000.00	~1,000,000.00
5	~1,000,000.00	~1,000,000.00
6	~1,000,000.00	~1,000,000.00
7	~1,000,000.00	~1,000,000.00

Cash outflows

Year	Scenario 1	Scenario 2
0	0.00	5,000,000.00
1	5,000,000.00	10,000,000.00
2	5,500,000.00	11,000,000.00
3	6,000,000.00	12,000,000.00
4	6,500,000.00	13,000,000.00
5	7,000,000.00	14,000,000.00
6	7,500,000.00	15,000,000.00
7	8,000,000.00	17,000,000.00

Statement of profit or loss(Income Statement), EUR

	Articles	2016	2017
I.	SALES REVENUE	2,714,177	4,414,254
II.	COST OF SALES	998,290	1,121,942
	<i>Depreciation and amortization</i>	0	0
	<i>Materials (raw materials)</i>	992,552	1,076,893
	<i>Wage</i>		
	<i>Rental of industrial premises</i>		
	<i>Others</i>	5,738	45,050
III.	GROSS PROFIT (LOSS)	1,715,888	3,292,311
IV.	OPERATING COSTS	1,367,820	2,932,586
IV.1	For sale	726,794	534,192
	<i>Depreciation and amortization</i>		
	<i>Wage</i>		
	<i>Marketing</i>	352,544	523,344
	<i>Others</i>	374,250	10,848
IV.2	General and administrative	641,026	2,398,395
	<i>Depreciation and amortization</i>	140,511	203,122
	<i>Wage</i>	499,967	1,368,507
	<i>Rent of premises</i>		
	<i>Others</i>	548	826,766
V.	OPERATING PROFIT	348,068	359,725
VI.	ANOTHER ACTIVITY	4,344	89,548
VI.1.	Income	4,344	89,548
VI.2.	Costs	0	0
VII.	FINANCING AND INVESTING ACTIVITIES	-9,701	-21,799
VII.1.	Income	3,369	2,735
VII.2.	Costs	13,070	24,534
X.	LOSSES		
XI.	PROFIT (LOSS) BEFORE TAX	342,711	427,474
XII.	INCOME TAX	54,291	62,090
XIII.	NET PROFIT (LOSS)	288,420	365,384

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Articles	Actual	
	2016	2017
FIXED ASSETS	1,321,427	1,249,623
INTANGIBLE ASSETS	1,346	1,573
Patents and licenses	0	0
software	0	0
Other current assets	1,346	1,573
TANGIBLE ASSETS	1,184,829	1,098,770
Land	0	0
Buildings and structures	728,234	585,547
Machinery and equipment	323,297	222,931
Vehicles	130,161	249,226
Other equipment, tools and installations	3,137	41,066
Construction work in progress	0	0
Financial assets	135,253	149,280
OTHER FIXED ASSETS	0	0
CURRENT ASSETS	416,805	520,089
STOCKS	162,813	187,469
Raw materials and components	45,580	29,899
Unfinished production	0	0
Finished products	0	0
Goods for resale	0	0
Other	117,232	157,570
AMOUNTS RECEIVABLE DURING ONE YEAR	68,365	152,063
Trade receivables	59,869	131,713
Other receivables	8,496	20,350
OTHER CURRENT ASSETS	0	0
CASH AND CASH EQUIVALENTS	185,627	180,558
TOTAL ASSETS:	1,738,232	1,769,712

PERSONAL CAPITAL	456,359	821,743
CAPITAL:	2,896	2,896
Authorized capital	2,896	2,896
Discount extras	0	0
Other	0	0
REVALUATION RESERVE	0	0
RESERVES:	290	290
Mandatory	290	290
Other	0	0
Retained Earnings (LOSS)	453,173	818,557
Profit (loss) for the reporting year	288,420	365,384
Profit (loss) for the previous year	164,753	453,173
	0	0
GRANTS AND SUBSIDIES	0	0
	0	0
PAYMENT SUMS AND LIABILITIES	1,281,873	947,970
AMOUNTS PAYABLE AFTER ONE YEAR AND NON-CURRENT LIABILITIES	523,639	105,178
Financial debts	394,759	0
Other debts	75,011	105,178
Other	53,869	0
AMOUNTS PAYABLE WITHIN ONE YEAR AND CURRENT LIABILITIES	758,233	842,792
Current part of long - term debt	42,556	54,738
Financial debts	89,785	0
Debts to suppliers	267,060	391,348
Other	358,832	396,705
TOTAL EQUITY AND LIABILITIES:	1,738,232	1,769,713

821,743

1,769,713

Current ratio 0.62

Quick ratio 0.394665420

Debt-to-Equity Ratio 1.15360806

Debt-to-Assets Ratio: 0.535663083

Gross Profit Margin #REF!

Operating Margin #REF!

Net Profit Margin #REF!

Articles	Actual	
	2016	2017
Cash inflow (including VAT):	3,418,805	5,477,917
From customers	3,284,155	5,341,247
Others	134,650	136,670
Cash benefits:	-2,865,267	-4,917,990
Money paid to suppliers	-2,232,104	-3,598,007
For wages	-499,967	-1,368,507
Fees paid	-238	70,323
Other benefits	-132,959	-21,799
Net cash flows from manufacturing	553,537	559,927
Acquisition of fixed assets	-351,467	-243,494
Transfer of fixed assets	0	291,013
Other cash flows from investing activities	-131,719	-14,028
Net cash flows from investing activities	-483,186	33,492
Shareholders' contributions	0	0
Dividends are paid		
Obtaining loans	53,869	0
Repayment of loans	-56,672	-576,913
Interest paid	-11,717	-13,756
Other cash flows from financing activities	2,254	-7,818
Net cash flows from financing activities	-12,266	-598,488
Cash flow	58,085	-5,069
Amount of money at the beginning of the	127,542	185,627
Amount of money at the end of the year	185,627	180,558

Check	0	0
	0	0