

Project Selection at Ewing Natural Gas

Inputs

All values in \$ millions, assuming 100% involvement

Project index	Functional Area (FA)	Partnership %	Capex Year 1	Capex Year 2	Capex Year 3
1	FA1	100%	250	100	100
2	FA1	100%	165	99	99
3	FA2	100%	50	100	200
4	FA2	100%	750	500	300
5	FA2	100%	150	300	600
6	FA2	100%	500	150	150
7	FA3	50%	0	0	0
8	FA3	50%	0	0	0
9	FA3	50%	268	402	536
10	FA3	50%	100	200	400
11	FA3	50%	350	250	150
12	FA3	100%	1500	400	400

Answers to the questions appear in yellow. You can enter any 0/1 values in the boxed-in range to see how everything updates.

Note the tricky formulas in cells I36 and J36. These are called *array formulas*. When you enter each of them, you should press Ctrl+Shift+Enter, not just Enter.

Decisions

Capex for company

Project index	Undertake project?	Year 1	Year 2	Year 3
1	1	250	100	100
2	1	165	99	99
3	1	50	100	200
4	1	750	500	300
5	1	150	300	600
6	1	500	150	150
7	0	0	0	0
8	0	0	0	0
9	1	268	402	536
10	1	100	200	400
11	1	350	250	150
12	1	1500	400	400
Totals	10	4083	2501	2935

Number of projects undertaken in functional areas

	Total	Any for FA?
FA1	5	1
FA2	2	1
FA3	3	1

Limits for company capital expenditures

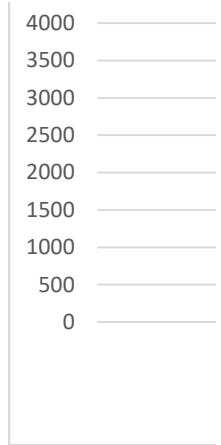
	Year 1	Year 2	Year 3	Total
Limit	4000	4000	4000	10000
Exceeds limit?	1	0	0	0

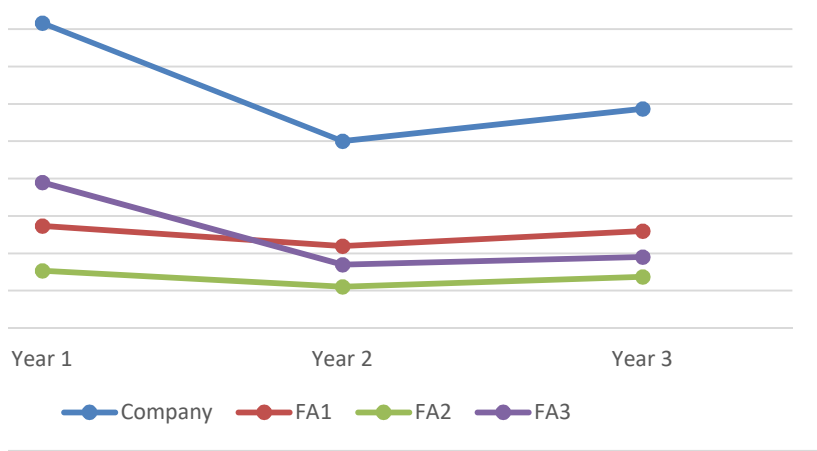
Summary of capex for projects undertaken (useful for creating chart)

	Year 1	Year 2	Year 3
Company	4083	2501	2935

4500

FA1	1365	1099	1299
FA2	768	552	686
FA3	1950	850	950





Capex for FA3

Year 1	Year 2	Year 3
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
100	200	400
350	250	150
1500	400	400
1950	850	950

New production introduction at eTech

Input section

Forecasts of net revenues from existing products, with no cannibalization (\$ millions)

Year 1	10
Annual increase	2%

Inputs for versions of ePlayerX	Low-end	High-end
Fixed development cost (\$ millions)	1.5	2.5
Variable cost	\$100	\$200
Selling price	\$150	\$300
Cannibalization rates	10%	20%

Annual marketing costs (\$ millions)	Year 1	Years 2-4
Mildly aggressive	1.5	0.5
Very aggressive	3.5	1.5

Base case forecast of demand for ePlayerX (1000s of units) with low-end product, mildly aggressive

Year 2	100
Annual increase	5%

Demand adjustment	No competing product		Competin
Marketing\product type	Low-end	High-end	Low-end
Mildly aggressive	0%	15%	-10%
Very aggressive	20%	30%	5%

Tax rate	32%
Discount rate for NPV	10%

Scenarios (0 for no, 1 for yes)

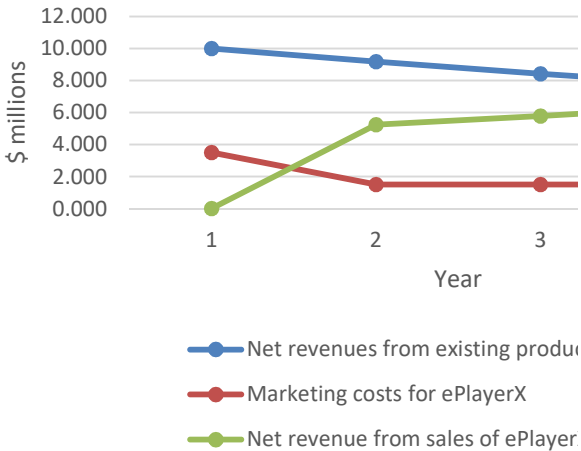
High-end product?	0
Very aggressive marketing?	1
Competing product introduced?	1

Parameters of prod

ePlayerX
 Fixed cost
 Variable cost
 Selling price

Cash flows (\$ millions)	Year 1	Year 2	Year 3
Net revenues from existing products	10.000	9.180	8.427
Marketing costs for ePlayerX	3.500	1.500	1.500
Sales of ePlayerX (1000s of units)	0	105.0	115.8
Net revenue from sales of ePlayerX	0	5.250	5.788
Depreciation	0.375	0.375	0.375
Net cash flow before taxes	6.125	12.555	12.340
Taxes	1.960	4.018	3.949
Net cash flow after taxes	4.540	8.912	8.766
NPV of eTech sales	22.521		

Annual revenues and cost



marketing

g product

High-end



blem, based on 0/1 values to the left

	Marketing costs	
1.5	Year 1	3.5
100	Annual cost, years 2-4	1.5
150	Cannibalization rate	10%
	Demand adjustment	5%
Year 4		
7.736		
1.500		
127.6		
6.381		
0.375		
12.243		
3.918		
8.700		

