

Finance Management & Planning

Project Appraisal (Week 6)

This Week

- Any Questions on NPV, Payback , IRR and PI / BCR
- Overview of Assignment
- Questions

Assignment Requirements

TASK DESCRIPTION

You are managing a project team that has identified a capital investment project that you want to champion within your organisation.

The identified project will:-

- bring an innovation change to your business.
- add value to a current process within your business.
- bring more productivity through efficiency improvements within your organisation.

Since identifying this opportunity you have been asked to present your project to your senior management team highlighting the cost of the project and the expected improvements it will bring to your organisation.

Your presentation should be no more than 10 power-point slides and a business report of a maximum of 3 pages, include an appendix showing your calculations of financial appraisal tools and an appendix showing your references to wider reading.

Can you please confirm your project outline before starting any work on the above and also confirm with your organisation on the use of any company information being used within the project work.

- **Marking Criteria**

Engagement with Literature	10%
Knowledge and understanding	20%
Cognitive and intellectual	35%
Practical application	20%
Transferrable Skills	15%

Financial Appraisals Tools



Project Appraisal Assignment

Presentation – Max of 10 Slides

- Introduction – Why are we here, what are we discussing ?
- What does the project bring or solve for the business
- Timeline for implementation
- Cost of Project
- What is the full lifespan of the project ? 5 Year / 10 years etc
- Any issues that implementation will cause
 - Redundancy
 - Disruption
 - Down time
- What is the rational of your business
 - Payback ie less than 2 years
 - IRR greater than 20%
 - Positive NPV from a WACC of x%
- Model the project
- What are your options for funding the project?
- Conclusion and recommendation

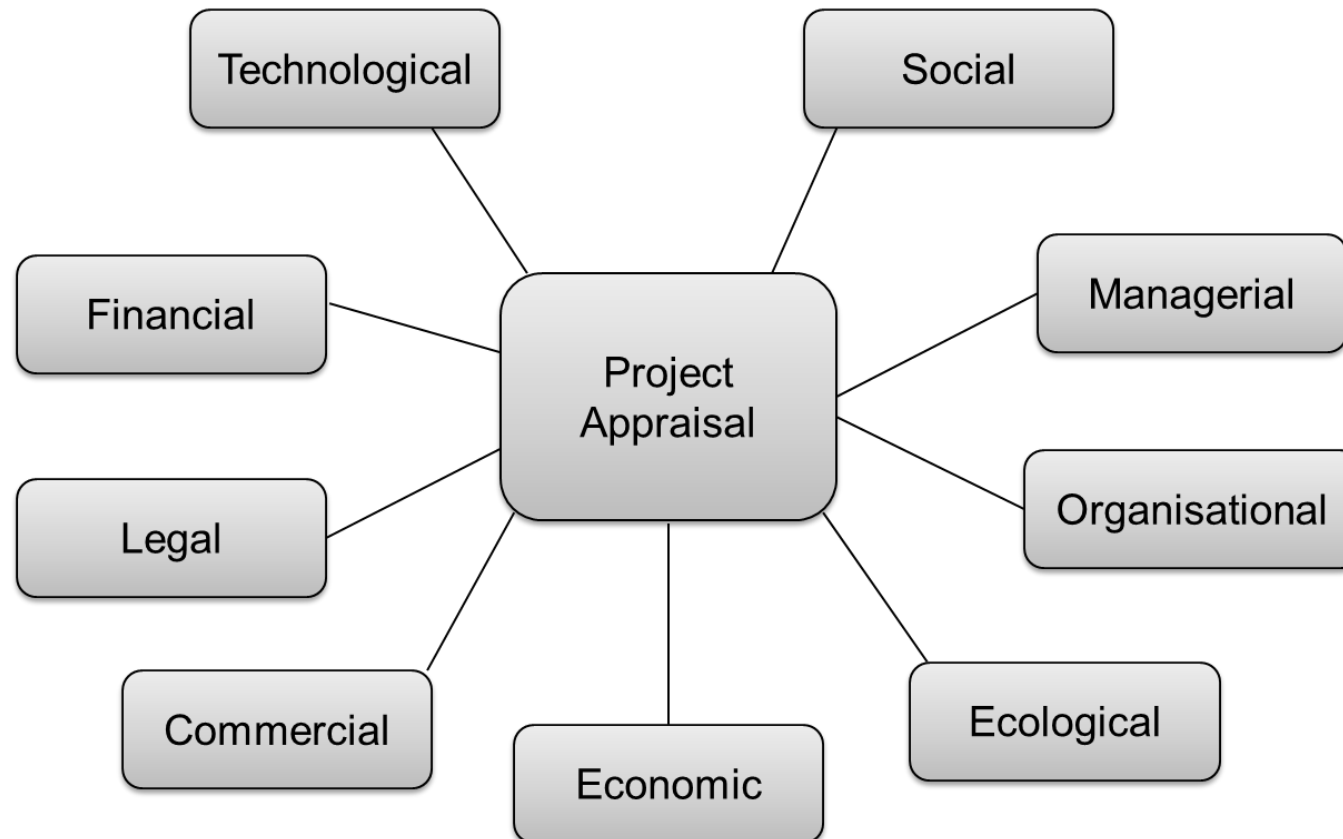
Handout – Max of 3 pages plus reference list

- Overview of the project, the findings and recommendations
- Linking in to your wider reading of explaining the use of the models
- Linking in to your wider reading linking to Funding options the business could utilise outside their own cash.
- Reference list.

Copy of the models that you have used in an appendix

Seek approval for all company information used within your presentation

Remember to think about the implications based from all viewpoints where possible.



Your Company has asked you to appraise the following investment project for a new product line.

Project has a life span of 4 years

Purchase of New Machine is £820k with a scrap value at the end of the project of £100k

Requirement of a calibrator which costs £18k and has a scrap value of £3k at the end of the project.

Set up costs of £50k

There is a question mark over the future saleable value of the product due to market conditions and it has been assessed as below:-

Weak market	£22 per unit	(Probability 25%)
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Medium market	£28 per unit	(Probability 40%)
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Strong Market	£32 per unit	(Probability 35%)
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Sales and Production numbers are as below

Yr 1 15,000

Yr 2 22,000

Yr 3 33,000

Yr 4 41,000

Variable cost of each unit is £14.00

Overhead costs are £46,000 per year

For this first review , inflation and tax implications are to be ignored.

WACC rate of 8% to be used for the model.

Calculate Payback period , NPV and IRR.

What do we need to know to complete our appraisal

Investment level

Future Cashflows

WACC level

What do we need to know to complete our appraisal

Investment level

Investment and Recovery

Machinery Costs

Set up Costs

Scrap Value at end of Project

	Year 0	Year 1	Year 2	Year 3	Year 4
Machinery	820	0			-100
Calibrator	18	0			-3
Set up costs	50	0			
	888	0	0	0	-103

Future Cashflows

- Selling Price per units
- Units Sold
- Variable Costs
- Overhead Costs

Selling Price

Weak	25%	22.00	5.50
Medium	40%	28.00	11.20
Strong	35%	32.00	11.20
			27.90

Year	0	1	2	3	4
Inflation	0%				
Selling price	£27.90	£27.90	£27.90	£27.90	£27.90
Units		15,000	22,000	33,000	41,000
Revenue		£418,500.00	£613,800.00	£920,700.00	£1,143,900.00
Inflation	0%				
Variable Cost	£14.00	£14.00	£14.00	£14.00	£14.00
Variable Costs		£210,000.00	£308,000.00	£462,000.00	£574,000.00
Inflation	0%				
Overheads		£46,000.00	£46,000.00	£46,000.00	£46,000.00
Net Cashflow	-£888,000.00	£162,500.00	£259,800.00	£412,700.00	£626,900.00

- WACC Level
- 8%
- Have we everything we need to model this project ?

Investment	-£888,000.00				£103,000.00
Year	0	1	2	3	4
Inflation	0%				
Selling price	£27.90	£27.90	£27.90	£27.90	£27.90
Units		15,000	22,000	33,000	41,000
Revenue		£418,500.00	£613,800.00	£920,700.00	£1,143,900.00
Inflation	0%				
Variable Cost	£14.00	£14.00	£14.00	£14.00	£14.00
Variable Costs		£210,000.00	£308,000.00	£462,000.00	£574,000.00
Inflation	0%				
Overheads		£46,000.00	£46,000.00	£46,000.00	£46,000.00
Net Cashflow	-£888,000.00	£162,500.00	£259,800.00	£412,700.00	£626,900.00

WACC	8%
NPV	£273,604.37

IRR calc	18.50%
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Your Company is looking to implement a new machine for a new product to be delivered to market with an agreed sales profile with customers over the next 5 years.

The Assumptions are as follows :-

New machine	£415k
Implementation costs	£100k
Consultancy fees	£ 50k

Expected Sales profile is 100,000 units in year 1 rising by 50% each year , maximum machine capacity is 200,000 units per annum.

Sales price is £10.00 per unit with a Gross Margin of 15%
Additional Overheads relating to the new line is £25,000 per annum
Inflation on Overheads is expected to be 5% per annum from year 2 onwards.

WACC is 12%

The Businesses criteria for projects to proceed is a Payback of less than 3 years and PI of 1.6.

Investment	-£565,000.00					
Year	0	1	2	3	4	5
Inflation	0%					
Selling price	£10.00	£10.00	£10.00	£10.00	£10.00	£10.00
Units		100,000	150,000	200,000	200,000	200,000
Revenue		£1,000,000.00	£1,500,000.00	£2,000,000.00	£2,000,000.00	£2,000,000.00
Inflation	0%					
Variable Cost	£8.50	£8.50	£8.50	£8.50	£8.50	£8.50
Variable Costs		£850,000.00	£1,275,000.00	£1,700,000.00	£1,700,000.00	£1,700,000.00
Inflation	5%					
Overheads		£25,000.00	£26,250.00	£27,562.50	£28,940.63	£30,387.66
Net Cashflow	-£565,000.00	£125,000.00	£198,750.00	£272,437.50	£271,059.38	£269,612.34

WACC	12%
NPV	£224,213.47

PI	1.40
IRR calc	17.14%

What could we do to improve the PI ?

Next 2 weeks

Sources of Finance video

Start your assignment – get an outline together so that we can discuss on the 5th August