# *Investment Appraisal For Telecoms Operator*

Appraised using Shark Investment Software © 2005 Shark Finesse Ltd

## Basis of Preparation

This appraisal has been prepared in order to provide Telecoms Operator with the potential financial implications and investment returns arising from the proposed solution.

It is based upon a number of stages that together provide an assessment of the investment returns likely to be delivered as a result of project acceptance. It compares specific, identifiable financial returns that arise against the cost of this solution.

This assessment is based upon information and explanation from Telecoms Operator and is indicative only. It is therefore not a part of the contractual offer from DSL Test Supplier.

## Background to Investment Appraisal

The sales proposal for this solution is submitted separately – and should be cross-referred to this appraisal.

In order to complete the investment appraisal Telecoms Operator has requested the use of the following appraisal methods:

- Net Present Value

  A financial measure of whether a proposal delivers a "profit" or a "loss" using an annual cost of money applied to the timing of spend and savings. It includes the initial cost of the equipment / services, the monthly cost of maintenance, compared to the financial benefits accruing. The result is the change in shareholder value to be anticipated from project acceptance.

- Internal Rate of Return

  The return rate per annum to undefined taking into account: initial cost of the equipment / services, monthly cost of maintenance, and comparing these to the timing of benefits identified as a result of implementing the project. The "percentage" answer is compared to the minimum requirement specified by undefined for approval.

- Payback

  This is a comparison of the initial outlay of monies, to buy equipment or services, against the time taken for the savings to cover the initial outlay. This derives an answer which is a time measure, and is usually quoted in months / years.

- Discounted Cash Flow – to NPV and IRR

  A detailed statement of all the cash flows and timings that underpin the results provided for Internal Rate Of Return and Net Present Value analysis.

| Cash Cost of Solution | | |
|---|---|---|
| Cost Type | Cost | Month |
| Supply and installation of DSL Test System | 6,150,000 | 0 |
| Cash cost of solution | 6,150,000 | |

| Monthly Costs | | |
|---|---|---|
| Cost Type | Cost | Months |
| Services (Maintenance and calibration) | 12,500 | 1-24 |
| Average monthly cost | 12,500 | |

## Benefits Evaluation

Selection of the savings / benefits modules arising supporting this appraisal :-

| Churn Reduction | |
|---|---|
| Annual revenue | 119,000,000 |
| Current churn rate (%) | 10 |
| Target churn rate (%) | 7.5 |
| Gross margin (%) | 75 |
| Reduction in churn post solution (%) | 2.5 |
| Margin Generated Year 1 | 1,204,034 |
| Margin Generated Year 2 | 3,465,385 |
| Equivalent monthly margin generated (€) | 194,559 |
| Impact Life (months) | 1-24 |

| Reduce Install Time | |
|---|---|
| Total number of jobs per month | 25 |
| Current job time (hours) | 5 |
| Target time post solution (hours) | 4 |
| Monthly time saving (hours) | 25 |
| Annual average loaded cost per person | 70,000 |
| Monthly savings (€) | 897 |
| Impact Life (months) | 1-24 |

| Installation/Maintenance | | |
|---|---|---|
| Benefit Type | Benefit | Months |
| Installation (provided by DSL Test Supplier) | 212,000 | 1-24 |
| Trouble Ticketing Fix | 200,000 | 1-24 |
| Total monthly benefits (€) | 412,000 | |

## Total Benefits Summary

A summary of the individual Evaluators :

| Benefits Summary | |
|---|---|
| Churn Reduction | 194,559 |
| Reduce Install Time | 897 |
| Installation/Maintenance | 412,000 |
| Peak monthly benefits | 607,456 |

## Return On Investment Appraisal Elements

| NPV Calculation | |
|---|---|
| Period (months) | 24 |
| Cash costs of solution | 6,150,000 |
| Total one time benefits | 0 |
| Peak monthly benefits | 607,456 |
| Average monthly costs | 12,500 |
| Discount (interest) rate % | 12 |
| NPV (€) | 6,414,402 |

**Discounted Cashflow Analysis - NPV**

| **Month 0** | -6,150,000 | | | | |
|---|---|---|---|---|---|
| | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Month 1 | 411,809 | 532,481 | 0 | 0 | 0 |
| Month 2 | 423,003 | 541,262 | 0 | 0 | 0 |
| Month 3 | 433,981 | 549,860 | 0 | 0 | 0 |
| Month 4 | 444,745 | 558,276 | 0 | 0 | 0 |
| Month 5 | 455,298 | 566,513 | 0 | 0 | 0 |
| Month 6 | 465,645 | 574,573 | 0 | 0 | 0 |
| Month 7 | 475,786 | 582,458 | 0 | 0 | 0 |
| Month 8 | 485,724 | 590,173 | 0 | 0 | 0 |
| Month 9 | 495,465 | 597,717 | 0 | 0 | 0 |
| Month 10 | 505,007 | 605,094 | 0 | 0 | 0 |
| Month 11 | 514,356 | 612,307 | 0 | 0 | 0 |
| Month 12 | 523,512 | 619,356 | 0 | 0 | 0 |
| | | | | **Total** | 6,414,402 |

| IRR Calculation | |
|---|---|
| Period (months) | 24 |
| Cash costs of solution | 6,150,000 |
| Total one time benefits | 0 |
| Peak monthly benefits | 607,456 |
| Average monthly costs | 12,500 |
| IRR % | 130 |

**Discounted Cashflow Analysis - IRR**

| **Month 0** | -6,150,000 | | | | |
|---|---|---|---|---|---|
| | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| Month 1 | 387,840 | 244,196 | 0 | 0 | 0 |
| Month 2 | 375,195 | 233,776 | 0 | 0 | 0 |
| Month 3 | 362,527 | 223,666 | 0 | 0 | 0 |
| Month 4 | 349,894 | 213,872 | 0 | 0 | 0 |
| Month 5 | 337,348 | 204,395 | 0 | 0 | 0 |
| Month 6 | 324,933 | 195,237 | 0 | 0 | 0 |
| Month 7 | 312,685 | 186,397 | 0 | 0 | 0 |
| Month 8 | 300,637 | 177,873 | 0 | 0 | 0 |
| Month 9 | 288,816 | 169,661 | 0 | 0 | 0 |
| Month 10 | 277,244 | 161,758 | 0 | 0 | 0 |
| Month 11 | 265,941 | 154,159 | 0 | 0 | 0 |
| Month 12 | 254,921 | 146,858 | 0 | 0 | 0 |
| | | | | **Total** | Negl. |

| Payback Calculation | |
|---|---|
| Cash costs of solution | 6,150,000 |
| Total one time benefits | 0 |
| Peak monthly benefits | 607,456 |
| Average monthly costs | 12,500 |
| Payback (months) | 12.25 |

## Summary of Project Returns

| | |
|---|---|
| Cash Cost of Solution (€) | 6,150,000 |
| Average Monthly Costs (€) | 12,500 |
| Period (months) | 24 |
| Peak monthly benefits (€) | 607,456 |
| | |
| Net Present Value (€) | 6,414,402 |
| Internal Rate of Return % | 130 |
| Payback (months) | 12.25 |
| | |
| Based upon an assumed cost of capital of | 12% |

## Final Project Appraisal Summary

The Investment Appraisal outlined above is based upon identified benefits that would accrue to Telecoms Operator as a result of project acceptance.

The investment evaluation of these costs and savings has been completed using the Shark appraisal tool. The output from this tool is fully visible and can be audited by Telecoms Operator if so required.

This indicative analysis stands separately from the contractual elements of the DSL Test Supplier solution and is necessarily dependent upon the benefits identified jointly with Telecoms Operator.