How to Build a Simple Financial Justification

What you get
A convenient way to assess the financial attractiveness of an investment opportunity.

When to use
As the financial basis of a business case to invest in new equipment, a new process, or a new initiative.

What you need
Can be drawn up on an analysis pad, or even the back of an envelope. A pen, paper, and calculator will help, but a computer spreadsheet is ideal for the job. A free template is available for download at www.consenna.com/resources.

Time required
From 1 to 2 hours for a small project, to several days and weeks for a larger multifaceted initiative.

Preparation
You need to understand the costs associated with the project and the impact that it is likely to have in terms of cost savings, cost avoidance, and any additional income generated. What costs arise at the outset, and what income and savings are phased over subsequent years?
Table 1. Suggested layout of a Cash Flow Forecast.

<table>
<thead>
<tr>
<th>Expected Cash Flows</th>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$K Investment</td>
<td>-100</td>
<td>-10</td>
<td>-10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$K Cost Avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>$K Cost Savings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>$K Income Benefits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>$K Total Cash Flow</td>
<td>-100</td>
<td>60</td>
<td>50</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>$K Cumulative Cash Flow</td>
<td>-100</td>
<td>-40</td>
<td>10</td>
<td>70</td>
<td>130</td>
<td>190</td>
</tr>
</tbody>
</table>

Method

1. **Layout.** Set up a Cash Flow Forecast using a layout similar to the example in Table 1.

2. **Positive or negative?** Investment is an outflow of cash and so should be input as a negative value. Cost savings, cost avoidance, and income are effectively inflows and so enter these as positive values.

3. **Investment.** What expenditure is required for the new investment or initiative? What is the cost of asset purchases and related services? What will be spent on the investment over the life of the project? Enter the level of initial investment in ‘Year 0’, and any subsequent investment expenditure as annual values in the year in which they occur.

4. **Cost avoidance.** Are there any items of future expenditure that can be avoided as a direct result of the investment? Enter them as annual values in the year in which they occur.

5. **Cost savings.** Identify cost headings that will be affected by the investment. What level of savings can be made specifically as a result of the investment?

6. **Income.** What additional income will flow into the organisation as a result of the investment? What contribution will the investment make to income generation? This is not ‘top-line’ revenue, but the retained margin after cost of sale and any other additional expenditure required to generate the revenue.

7. **Total cash flow.** A simple total of the entries in the column above.

8. **Cumulative cash flow.** The total of all cash flows that have occurred from the outset of the project. Initially, cumulative cash flows are negative because the cost of investment exceeds the returns that it has generated. Later, they turn positive when the cumulative returns exceed the cost of the investment.
Table 2. Summary of Results.

These can be calculated using built in functions of spreadsheets such as Microsoft Excel.

Interpreting the results

The summary in Table 2 includes some of the most widely used investment appraisal metrics. They are all calculated form the projected cash flows. There is no need to understand the detailed arithmetic (you can leave that to the spreadsheet), but it is useful to be aware of what each metric indicates about the expected stream of cash flows:

1. **Analysis period.** Returns typically accumulate over time. It is important to define the period over which returns are being assessed, especially when alternative scenarios are being compared,

2. **Total investment.** The total expenditure required for the project over the analysis period.

3. **Total return.** The total of cost savings, cost avoidance and income benefits over the analysis period.

4. **Cash flow discount rate.** Converts future cash flows into today's money.

5. **Net present value.** The net value of the cash inflows and outflows over the analysis period, converted into today's money. Expressed as a money value, and answers the question, “How much will we make on this investment?”

6. **Internal rate of return.** The discount rate that produces a net present value of zero. Expressed as a percentage rate, just like an interest rate. IRR is a good way to compare competing projects or alternatives. All other things equal, the higher the IRR, the more attractive the investment. Some organisations have a ‘hurdle rate’, a minimum rate of return below which investments will not be considered.

7. **Return on investment.** A simple ratio of the cost of an investment to the returns it generates over the analysis period. Expressed as a percentage. The higher the percentage, the more attractive the investment.

8. **Payback period.** The time taken for the investment to be recouped. Typically measured in years or months, and answers the question, “How quickly do we get our money back?” All other factors equal, the shorter the payback period, the lower the perceived risk.

9. **Currency and units.** It is important to state currency and units, although the formulas used to perform the calculations remain the same regardless of which currency or units are used.
**Which metric is best?**

There is no single metric that is better than the rest, and they each say something different about the cash flows. In fact, the metrics do not always agree on the best alternative. Decisions are often based on taking several metrics into account, and making a judgement based on financial and other factors. It depends on the needs and preferences of decision makers, and so it is worth establishing what information they want to take into account.

**Key points**

- Sensitivity analysis should be performed to see how sensitive the financial justification is to changes in assumptions and anticipated levels of income and savings.
- Risk is just as important a consideration as return. For larger projects, risk and contingency analysis should be performed to complement the financial analysis.
- The simple model outlined in this document is designed to explain basic concepts. It is unlikely to serve fully the needs of decision makers when considering a substantial investment proposal. However, the principles are sound, and do provide a solid foundation for a more detailed and sophisticated model.
- The model only takes financial measures into account and provides just one element of viability analysis or business case justification. It does not take into account less tangible factors such as brand image, reputation, and quality of service, all of which can make important contributions to the achievement of strategic objectives.
- The process of building the model, gathering the data, and debating the likely impacts can be just as useful as the results themselves.

**More information**

Please refer to the Microsoft Excel template that accompanies this document. This, and other free resources, are available for downloading at [www.consenna.com/resources](http://www.consenna.com/resources).

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**About Consenna**

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