Stage 5: Calculating the SROI
You will now have collected all the information together to enable you to calculate your SROI. You will also have recorded qualitative and quantitative information that you will need in the report. As you will want people to read your report, remember to keep the information you include to a minimum. This stage sets out how to summarise the financial information that you have recorded in the previous stages. The basic idea is to calculate the financial value of the investment and the financial value of the social costs and benefits. This results in two numbers – and there are several different ways of reporting on the relationship between these numbers.

If you are carrying out an evaluative SROI analysis, then the evaluation should ideally take place after the period for which the outcome was expected to last. However, interim evaluations will still be useful in order to assess how well the intervention is working and to provide information to support any changes. If you are comparing actual results against a forecast you will need the information relating to the time periods over which your outcomes last.

There are four steps to calculating your ratio, with an optional fifth:

5.1 Projecting into the future
5.2 Calculating the net present value
5.3 Calculating the ratio
5.4 Sensitivity analysis
5.5 Payback period

All these stages will be outlined below. We will discuss each step before asking you to do your own calculations.
5.1 Projecting into the future

The first step in calculating your ratio is to project the value of all the outcomes achieved into the future. In step 3.3, above, you decided how long an outcome would last. Using this, you will now need to:

- set out the value of the impact (from step 4.4) for each outcome for one time period (usually 1 year);
- copy the value for each outcome across the number of time periods it will last (as recorded in the Duration column on your impact map); then
- subtract any drop-off you identified (step 4.3) for each of the future time periods after the first year.

In the worked example this was done using Excel. We have not included an example of a blank Excel sheet because different people have different approaches to Excel and because we have found that standard approaches cannot be easily used for different situations. It is easier to set up your own spreadsheet using the worked example and the description in the text as a guide.¹

The worked example – drop-off and impact projected in future years

Look at the impact map for Wheels-to-Meals on page 104: the yellow section shows you how the columns for impact have been completed.

If we take the line for GP practice nurse group sessions, the duration is 5 years and the drop-off 10%. The 10% is an estimation of the likelihood that residents will use the knowledge they gain less as time goes on as they forget the sessions.

So the calculation Wheels-to-Meals used to work out the effect of drop-off on the projected impact into future years goes like this:

<table>
<thead>
<tr>
<th>Impact in year 1</th>
<th>= £1,539.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact in year 2</td>
<td>yr1 impact less drop-off</td>
</tr>
<tr>
<td></td>
<td>£1,539.00 less 10%</td>
</tr>
<tr>
<td></td>
<td>£1,539.00 x 0.9 = £1,385.10</td>
</tr>
<tr>
<td>Impact in year 3</td>
<td>yr2 impact less drop-off</td>
</tr>
<tr>
<td></td>
<td>£1,385.10 less 10%</td>
</tr>
<tr>
<td></td>
<td>£1,385.10 x 0.9 = £1,246.59</td>
</tr>
<tr>
<td>Impact in year 4</td>
<td>yr3 impact less drop-off</td>
</tr>
<tr>
<td></td>
<td>£1,246.59 less 10%</td>
</tr>
<tr>
<td></td>
<td>£1,246.59 x 0.9 = £1,121.93</td>
</tr>
</tbody>
</table>

¹ See www.thesroinetwork.org for information on developments in software that will assist in completing this stage.
Impact in year 5

yr4 impact less drop-off
£1,121.93 less 10%
£1,121.93 x 0.9 = £1,009.74

5.2 Calculating the net present value

In order to calculate the net present value (NPV) the costs and benefits paid or received in different time periods need to be added up. In order that these costs and benefits are comparable a process called discounting is used. Discounting recognises that people generally prefer to receive money today rather than tomorrow because there is a risk (eg, that the money will not be paid) or because there is an opportunity cost (eg, potential gains from investing the money elsewhere). This is known as the ‘time value of money’. An individual may have a high discount rate – for example, if you would accept £2 in one year’s time, instead of £1 now, that implies a discount rate of 100%.

This is a controversial area and one where there is ongoing research and discussion. The main problem with using discounting in SROI is that it encourages short-termism by discounting the future. This is especially problematic for environmental outcomes, where the value may even increase. This betrays the extent to which people actually value their future and their children’s future.

There is a range of different rates. For the public sector, the basic rate recommended in HM Treasury’s *Green Book* is 3.5%. The Stern Review on the economics of climate change argued that it was not ethically defensible for pure time preference to be applied to cost-benefit calculations where these involved significant wealth transfers from the future to the present and used lower rates. Following the Stern Review, HM Treasury published supplementary guidance on intergenerational wealth transfers, in which a reduced discount rate of 3%, which eliminates the pure time preference element, is applied alongside the usual discount rate.²

This issue is under review by the Measuring Social Value consortium, and the aim is to produce further guidance on discounting in due course.

The process is to discount the projected values over time, as you set out in stage 5.1, above. This can be easily done if you are using Excel, which has functions for calculating Present Value and Net Present Value.

Although this calculation is automated in Excel (=NPV, discount rate, value1, value 2...), it may be useful to know how the calculation for Present Value works and this is shown below (’r’ represents the discount rate):

² More information on the different elements that make up the discount rate is set out in Annex 6 of the *Green Book*. 

Here is a fictional example for an organisation called Youth Work, where \( r = 3.5\% \), or 0.035.

<table>
<thead>
<tr>
<th>Year</th>
<th>Benefits (( £ ))</th>
<th>Discounted Values (( £ ))</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>£448,875</td>
<td>( \frac{£448,875}{(1.035)} )</td>
<td>1,750,444</td>
</tr>
<tr>
<td>Year 2</td>
<td>£414,060</td>
<td>( \frac{£414,060}{(1.035)^2} )</td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>£389,935</td>
<td>( \frac{£389,935}{(1.035)^3} )</td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>£355,648</td>
<td>( \frac{£355,648}{(1.035)^4} )</td>
<td></td>
</tr>
<tr>
<td>Year 5</td>
<td>£319,005</td>
<td>( \frac{£319,005}{(1.035)^5} )</td>
<td></td>
</tr>
</tbody>
</table>

Having calculated the Present Value of your benefits, you can deduct the value of your inputs (the investment) to arrive at the Net Present Value (NPV).

\[
NPV = \text{[Present value of benefits]} - \text{[Value of investments]}
\]

In the Youth Work example the investment was £576,000. Therefore, the net present value would be calculated as follows:

\[
NPV = £1,750,444 - £576,000
\]
\[
= £1,174,444
\]

### 5.3 Calculating the ratio

You are now in a position to calculate the initial SROI ratio. This is a very simple sum. You divide the discounted value of benefits by the total investment.

\[
\text{SROI ratio} = \frac{\text{Present Value}}{\text{Value of inputs}}
\]

An alternative calculation is the net SROI ratio. This divides the NPV by the value of the investment. Both are acceptable but you need to be clear which you have used.

\[
\text{Net SROI ratio} = \frac{\text{Net Present Value}}{\text{Value of inputs}}
\]
The worked example – calculating the SROI (discounting and net present value)

Look at the Impact Map for Wheels-to-Meals on page 105: the green section shows you the value of the discounted benefits.

Using Excel and the NPV function, the total present value of our example has been calculated following the above method. Wheels-to-Meals also used the 3.5% discount rate.

Total present value = £81,741.93

Net present value = total present value - total inputs
£81,741.93 - £42,375 = £39,366.93

SROI = total present value / total inputs
£81,741.93 / £42,375 = £1.93: £1

So for Wheels-to-Meals, there is £1.93 of value for every £1 of investment.

5.4 Sensitivity analysis

One of the strengths of setting up a spreadsheet is that it is possible to assess the importance of elements of the model relatively easily; by altering the figures, the spreadsheet will make all the changes to the calculation for you. After calculating the ratio, it is important to assess the extent to which your results would change if you changed some of the assumptions you made in the previous stages. The aim of such an analysis is to test which assumptions have the greatest effect on your model.

The standard requirement is to check changes to:

• estimates of deadweight, attribution and drop-off;
• financial proxies;
• the quantity of the outcome; and
• the value of inputs, where you have valued non-financial inputs.

The recommended approach is to calculate how much you need to change each estimate in order to make the social return become a social return ratio of £1 value for £1 investment. By calculating this, the sensitivity of your analysis to changes in estimates can be shown. This allows you to report the amount of change necessary to make the ratio change from positive to negative or vice versa.

We are interested in which changes have a significant impact on the overall ratio. It is these that you would consider as potential priority areas in managing the value you are creating. For example, if your result is sensitive to changes in a particular indicator you may want to prioritise investment in systems to manage (and resources to improve performance in) that indicator.
In general the greater the change that you need to make in order for the SROI to become £1 for every £1 invested, the more likely it is that the result is not sensitive. It is also possible that a choice you made earlier between two proxies is now resolved because the choice doesn’t affect the overall ratio. All of these findings should be discussed in the final SROI report.

This focus on the significant issues will help you keep your report short.

**The worked example – sensitivity analysis**

Let us consider, as an example, how Wheels-to-Meals explored the sensitivity of the top row of the Impact Map, which covers the outcome ‘fewer falls’ (you will need to consider all rows). This was a useful row to work with as it resulted in the biggest financial value on the Impact Map, so needed scrutiny.

- **Impact.** Low deadweight and attribution were identified in this row. This could be an issue. What if this was wrong and, for example, more of this change was down to others than Wheels-to-Meals had realised? How far out would the attribution figure have to be for the SROI to fall to £1: £1?

  Using the spreadsheet to change the numbers and repeat the calculations, attribution would have needed to be 53% for the SROI to become £1: £1 rather than the 5% we have identified. If this were the case, the impact would fall from a total for this row of £81,648 (for all three financial proxies) to £40,394, reducing the SROI to £1: £1.

  The change in attribution from 5% to 53% is a 960% increase.

- **Financial proxies.** There are three financial proxies in this row. As an example, we will see how Wheels-to-Meals assessed the sensitivity of the financial proxy from the NHS cost book for ‘geriatric continuing care inpatient’.

  The change required to this figure (in this case a reduction) for the SROI to fall to £1: £1 is for the financial proxy to drop from £7,220 per admission/stay to £1,093 – a change of 85%. This figure is, therefore, more sensitive, although the value would still need to change significantly, so Wheels-to-Meals felt that the proxies it had chosen were adequate.

Remember that the SROI figure is based on an incomplete example and this has implications for the sensitivity analysis. The point of the example is to show how it is applied.

It would also be possible to now present the results from a different perspective. For example, if the cost of admission/stay fell to just over £1,093, the social return of Wheels-to-Meals would still be more than £1: £1.
5.5 Payback period (optional)

The ‘payback period’ describes how long it would take for an investment to be paid off. Specifically, it answers the question: at what point in time does the value of the social returns start to exceed the investment? Many funders and investors use this kind of calculation as a way of determining risk in a project. While a short payback period may be less risky, a long payback period is often a feature of activities that can generate significant long-term outcomes, thus longer-term core funding is required.

Often the investment will be paid back over a period of months rather than whole years and so is reported in months. Assuming that the annual impact is the same each year, the first step is to divide the annual impact for all participants by 12 to get impact per month. Then divide the investment by the impact per month to get payback period in months.

The basic formula is:

\[
\text{Payback Period in Months} = \frac{\text{Investment}}{\text{Annual impact}/12}
\]

**Over to you: Financial projections**

You can now complete your financial projections on your Impact Map.