

Measuring sport investment outcomes

Draft user guide for council staff and sport organisations



October 2017

Welcome!

The purpose of this user guide is to provide sport organisations and council staff a tool to measure the outcomes delivered by investment in sport. These outcomes may include social, economic, health and various other benefits.

Following the steps in this user guide, you will be able to:

- ★ gain an understanding of what has worked well
- ★ measure the efficiency and effectiveness of your project
- ★ refine and improve current processes
- ★ ensure value for money and delivery of desired outcomes

Applying the outcome measurement steps across multiple projects will enable you to:

- ★ compare similar projects in a consistent manner
- ★ articulate the aggregated returns and outcomes of multiple projects
- ★ make trade-off decisions between competing investment options



Quick tips

This document provides guidance on measuring sport investment outcomes. You can adopt it in part or in full, depending on time, data, resources and skills available to you.

Here are some tips to help you get the best results out of this exercise.

- **Go as broad and as deep as possible** – Try to complete every step in this guide. Collect as much evidence and data as possible to inform your analysis. The data could be both quantitative and qualitative (for example: surveys, academic literature, photographs or records of conversations and meetings). Focus on the quality and relevance of the data.
- **Define everything and quantify where possible** – Numerical indicators can make it easier to track progress over time, but are not always possible. Instead of forcing a numeric value on everything, focus on things that can be measured. The objective of the exercise should be to present the information in a comprehensive and accessible way to inform decisions.
- **Be explicit about assumptions and data constraints** – If it's difficult or costly to conduct a full analysis, be transparent about the reasons. Identify the key assumptions that drive the project's success and critically assess how changing the assumptions will change the project.
- **Seek feedback** – Test your assumptions and results with experts and key stakeholders. They might be able point you to a new data set and/or provide input to your analysis.
- **Plan ahead** – A general rule of thumb is to put aside **5-10%** of the project funding at the beginning for evaluation and monitoring. This could be difficult to do in practice but planning ahead is always advised and could save you a lot of time and money later on.

Working example

A fictional working example (see below) is used throughout this user guide to demonstrate how the outcome measurement tool can be applied in real life.

Fictional working example

North Shore Tennis Incorporated

is a local tennis club based in Belmont, Auckland.

It is mainly run by volunteers. It has experienced a constant decline in memberships in the last five years. Current members are mostly in the 45-65 age group.

The tennis club wants to submit a proposal to Auckland Council for a community grant to run a free coaching programme to teach intermediate school kids how to play tennis.

The programme can help market the club to the local community and attract new members.

The challenge for the club now is to identify the benefits of the programmes and how they align with Auckland Council's strategic outcomes.

Auckland Council will then:

- consider benefits specified in the proposal and their alignment with council's strategic outcomes and priorities
- consider the amount of the grant requested and whether the investment is going to provide value for money
- compare the proposal with other community grant applications
- decide whether to fund the programme.



Section 1 of this user guide explains the key components of the outcome measurement tool.

Section 2 explains when and how to use the outcome measurement tool, draw conclusions and report results.

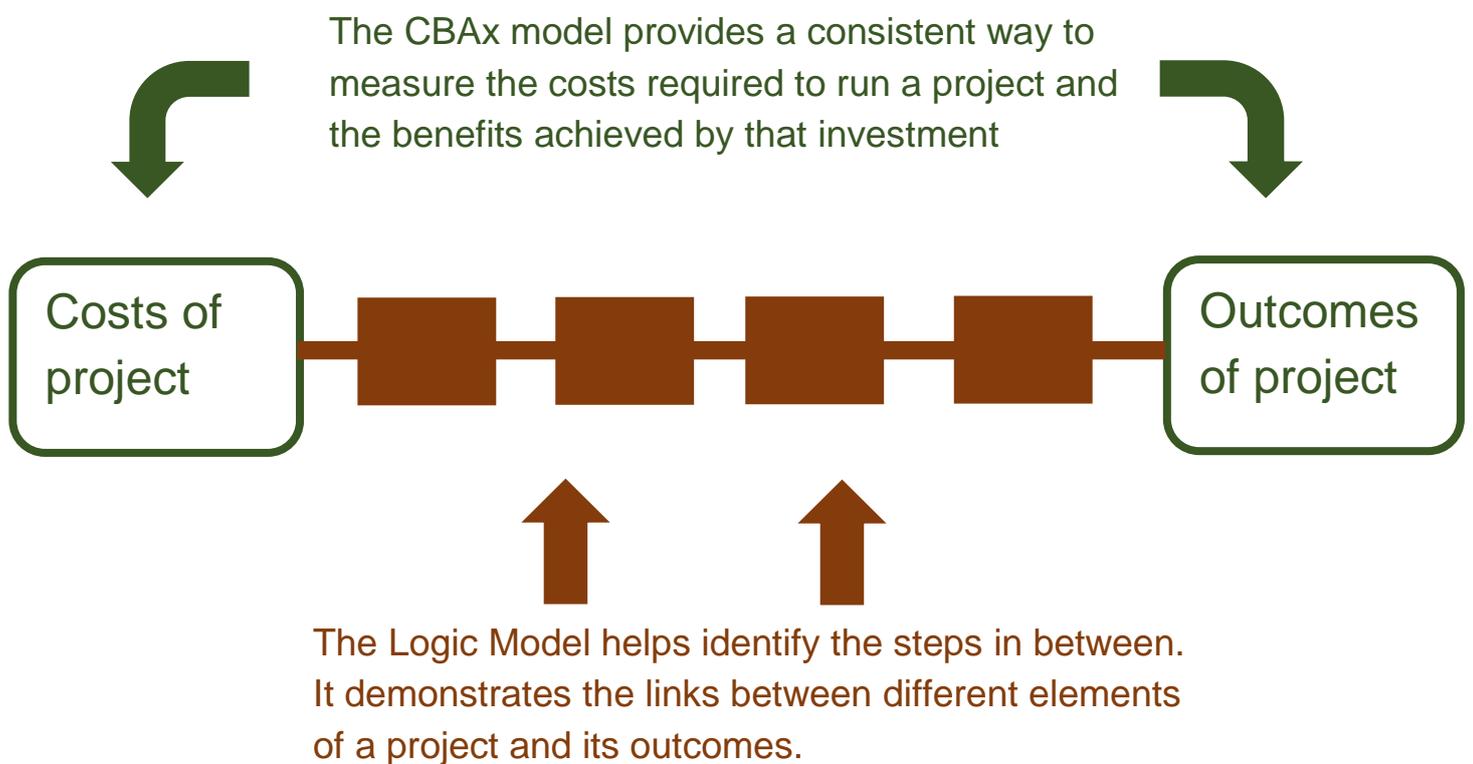
Section 3 walks through the tool, step-by-step.

Section 4 provides best practice guidelines for applicants or funders who wish to adopt the outcome measurement tool.



1	Key components of outcome measurement.....	6
2	Applying this guide in practice.....	9
3	Stepping through the tool.....	12
4	Best practice guidelines for applicants and funders.....	17
5	Need more help?.....	19
	Appendix 1: Standard template.....	20
	Appendix 2: Example of an intervention logic.....	22
	Appendix 3: Examples of costs and benefits and how to collect data.....	23
	Appendix 4: Discounting the outcomes and costs.....	29
	Appendix 5: Sensitivity Analysis.....	30

The outcome measurement tool presented in this guide consists of two main components – the **Cost Benefit Analysis (CBAX) Model** and the **Logic Model**.



Sections 1.1 and 1.2 explain the two models in details.

1.1 Cost Benefit Analysis Model (CBAX)

The CBAX is recommended by the New Zealand Treasury and the Chief Economic Office of Auckland Council as a robust tool to measure the outcomes of policy initiatives and investment projects.

One key advantage of CBAX is it allows a consistent way to consider all the relevant impacts on outcomes, including the health, social, environmental, educational, economic outcomes. The key steps of CBAX, using the North Shore Tennis Incorporated example, are illustrated below.

Steps

1 Identify project objectives and counterfactual (i.e. a 'do nothing scenario')

In the North Shore Tennis Incorporated example:

Project objective = to run free coaching sessions for 11-13 year olds to increase their participation in sport
Counterfactual = no free tennis coaching currently provided by the private market

2 Identify groups that will be directly and indirectly affected

Direct group = 20% of 11-13 year olds in the Devonport-Takapuna area who are currently inactive
Indirect groups = parents, caregivers, teachers, GPs, local DHB

3 Identify and quantify the costs and outcomes of each group compared to the counterfactual

Costs = \$20,000 of club staff costs and \$1000 to buy new tennis balls and racquets
Sport outcome = Increase physical activity level of participants
Health Outcome = Decrease visits to local GP (\$500 saving per year) and lower risk of diabetes over the lifetime (\$2 million)
Economic outcome = Creation of 3 part time coaching jobs (\$20,000)
Educational outcome = Improved educational attainment and retention rates of participants

4 Identify the timing of the costs and outcomes and discount them to the same time period

The \$2 million lifetime savings due to lower risk of diabetes will happen over many years - try to calculate the saving per year and discount it to the dollar value in 2017.

This exercise will help improve accuracy of analysis and makes comparisons between costs and benefits possible.

5 Test assumptions – how would the costs and benefits change if the assumptions change?

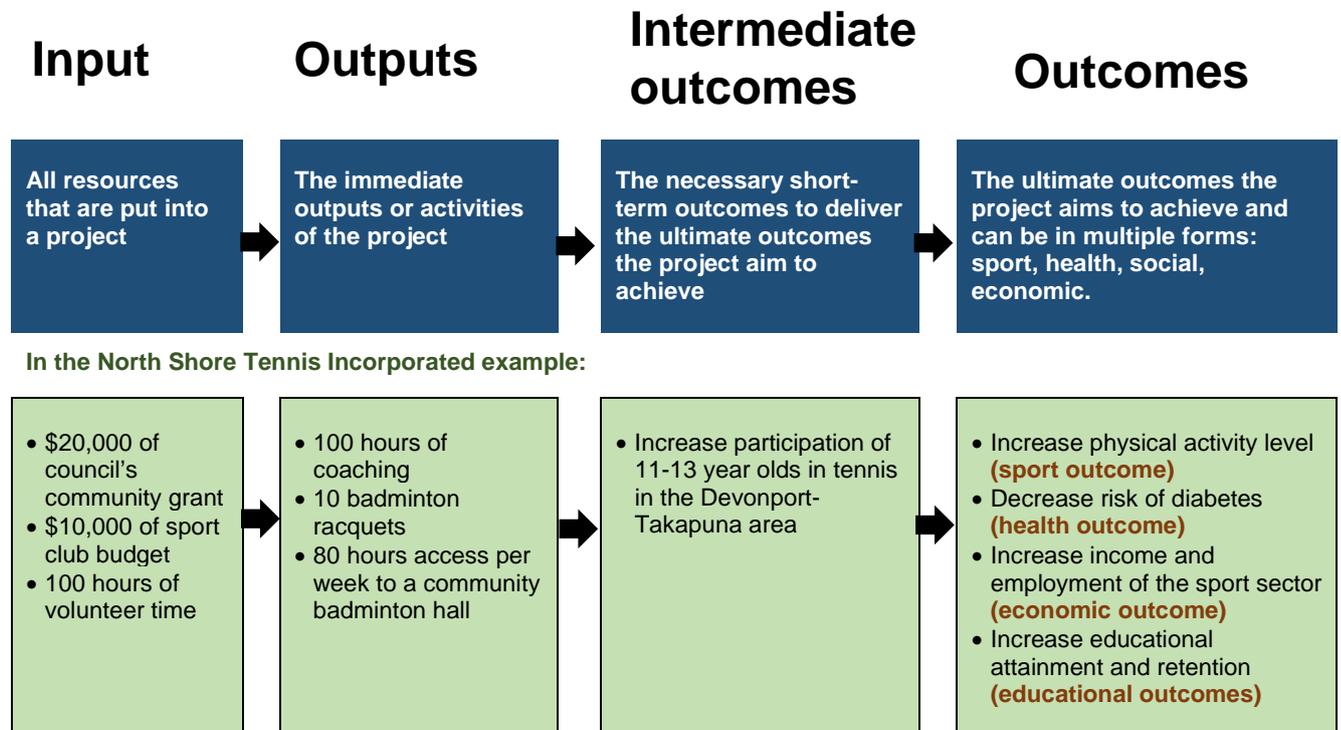
The benefits and impacts on outcomes rely heavily on students' willingness to participate in the coaching programme and to continue playing tennis after completing the programme.

How would the outcomes listed in Step 3 change if:

- less than half of the target group is willing to participate in the programme?
- 20% of participants drop-off the programme after the first session?
- 30% of participants choose not to continue playing tennis after completing the programme?

1.2 Logic model

A basic logic model (also often referred to as ‘an intervention logic’) have the following elements:



Depending on how complicated the project is and how broad the outcomes are, your logic model could be very simple or very complex. [Appendix 2](#) provides an example of a complex intervention logic for sport investment to achieve council's *Auckland Plan* outcomes. You can use this as a starting point and tailor it to suit your business needs.

Developing a logic model could bring clarity to the process, in particular:

- ★ It demonstrates **the links between different elements** of a project and its outcomes – throughout this process you will be made more aware of the assumptions and necessary conditions to make your project effective. Logic Model is particularly useful when the project is detailed and specific, and the intended outcomes are broad and aspirational
- ★ It provides **a frame of reference** to go back to for collecting data, evaluation and monitoring **at each step of the project** – this helps you check progress throughout different stages of the project and ensure it is being delivered as intended.

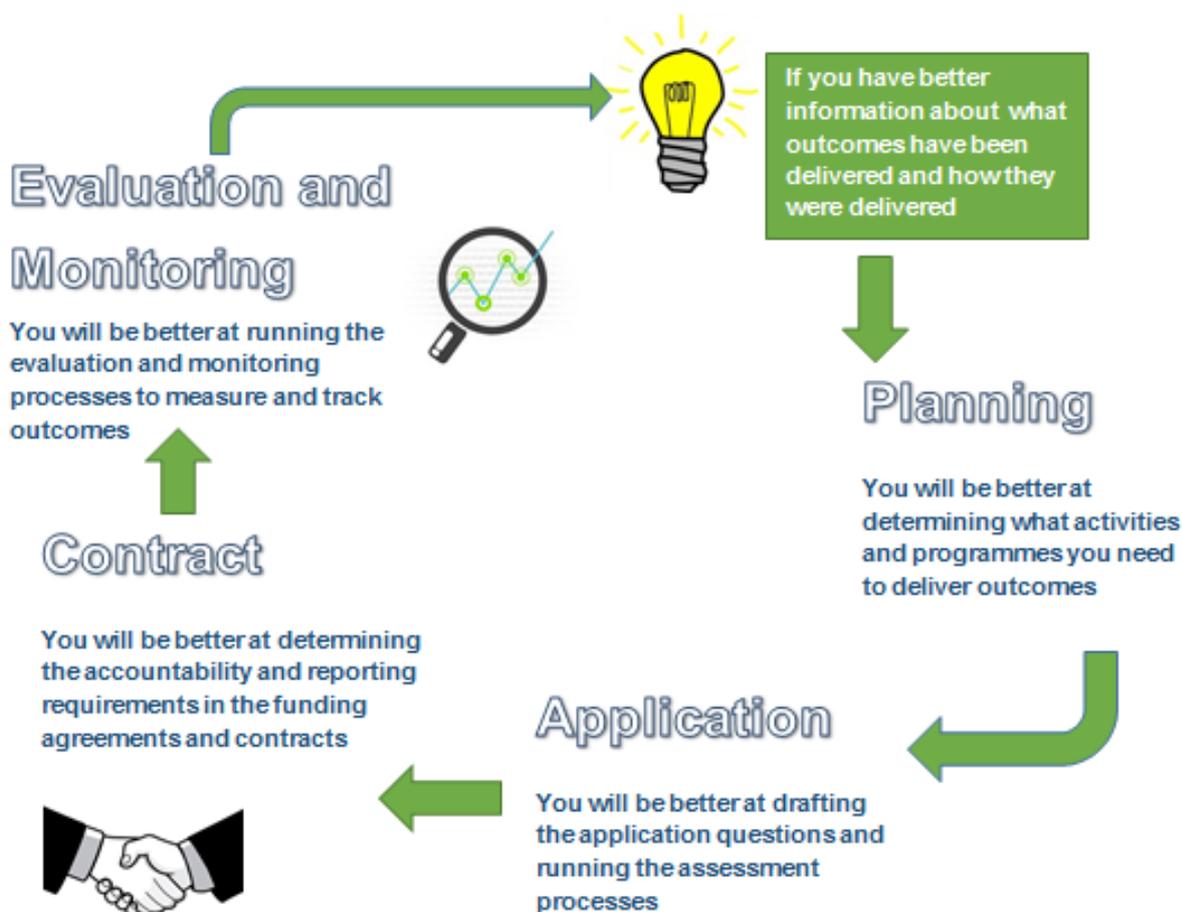
2.1 When and how to use this guide?

Traditionally, outcome measurement is the *final* step in the investment cycle as part of evaluation and monitoring phase.

The disadvantage of this approach is, often without careful consideration of what the outcomes are and how they should be measured at the beginning of the process, not enough data would be collected to make quality measurement. Collecting data retrospectively could be very costly and doesn't always provide the best results.

Ideally, the best time to start considering outcome measurement is **at the start** of an investment cycle (in our working example, during the application stage). The outcome measurement process should be embedded in **each stage of the investment cycle**.

As the information collected at each stage of the investment cycle informs the others, **a continuous feedback loop** will be formed to inform future investment decisions.



If you have already started the investment process without considering outcome measurement, it's never too late to start. Outcome measurement is an ongoing process that evolves as organisation's policies and strategies develop.

The steps set out in this guide are meant to be repeated as frequently as required. A general guide is to attempt every step but tailor the scale to meet your business needs. It would be a decision that balances:

-  The scale of investment and capability and resources constraints of your organisation (**be proportional**)
-  The level of data and information required to make informed decisions (**be encompassing**).

In circumstances when data and information is not readily available or too difficult/costly to collect, this user guide provides suggestions and examples of how a scaled-down analysis could be undertaken to inform decisions (see Section 3).

2.2 Drawing conclusions from your analysis

It is extremely difficult to prove any changes in broader outcome indicators are related directly to a sports project.

However, it may be possible to argue that **on balance** the project has made some positive contributions to the strategic outcomes. However this claim will need to be supported by:

-  a strong 'logic model' that identifies the links between different components of the projects and the intended outcomes
-  good evidence and robust measures of outcomes at each stage of the investment cycle
-  assessment of the relative contribution of other factors to achieving outcomes.

2.3 Reporting the results

The results of outcome measurement can help refine current investments, inform future decisions and showcase achievements.

In North Shore Tennis Incorporated example:

North Shore Tennis Incorporated could use the results to refine its future community programmes. It could also showcase the health, social, economic and educational outcomes of its tennis programmes to potential club members, local community and investors.

Auckland Council could use the results for:

- ★ **evaluation, monitoring and auditing** – the results will provide a clear line-of-sight between the free coaching programme delivered by North Shore Tennis Incorporated and council's strategic priorities
- ★ **stakeholders engagement** –outcomes from the tennis programme could help inform future conversations with key stakeholders about the likely benefits of sport programmes. Over time, this could improve knowledge and capability of both council staff and the sector and inform future investment decisions
- ★ **communication with public** – council will be able to present outcome of the tennis programme in a simple, easily-accessible way. This will help demonstrate the value of investment council makes on behalf of the ratepayers and increase transparency and accountability of council investment.

This section walks you through the key steps of measuring sport investment outcomes.

Steps 1-8 are critical steps and you are advised to complete them to gain the necessary information for decision-making. **Steps 9-10** are more technical but will provide richness and additional accuracy to the analysis.

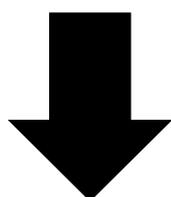
A template that incorporates each step is provided in the **Appendix 1** to assist you incorporate the steps in your current investment and evaluation processes.

The fictional working example is used again to guide you through the steps. More examples and guidance on how to apply the tool in practice are provided in **Appendix 3**.

Step 1: Rationale of project

In the North Shore Tennis Incorporated example:

<p>Explain why it is important to carry out the project. What is it trying to achieve?</p>	<p>The free coaching programme will help increase sport participation of youth.</p>
<p>Will it achieve a specific outcome e.g. an Auckland Council strategic priority?</p>	<p>To be eligible for a sport community grant, the programme will need to contribute to the Auckland Sport and Recreation Strategic Action Plan outcome 'to make Aucklanders more active, more often.'</p> <p>Increased sport participation will contribute to multiple outcomes in the Auckland Plan to make Auckland 'a world class city where talent wants to live'.</p>



Step 2: The status quo

In the North Shore Tennis Incorporated example:

<p>Explain the ‘do nothing’ scenario.</p> <p>The answer could be in the form of ‘costs’ to community and/or ‘lost opportunities.’</p>	<p>There are two thousand youth of the age 11-13 living in the Devonport-Takapuna local board area, 20% of them are inactive. Most of the 20% are Asian girls.</p> <p>Costs of doing nothing could be those 20% Asian girls continue to have low participation and higher future health costs.</p> <p>Lost opportunities could be the two existing tennis courts owned by North Shore Tennis Incorporated are currently under-utilised.</p>
<p>Provide data and evidence to support your answer.</p>	<p>Statistics NZ, Census and Sport NZ survey data of the number of 11-13 kids in the Devonport-Takapuna local board area, including their ethnicity, gender, level of physical activities and types of sports they played.</p>



Step 3: Target groups

In the North Shore Tennis Incorporated example:

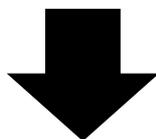
<p>Explain who is the programme intended for? Who is the core group that will be directly affected?</p>	<p>The programme targets 50 Asian girls who currently attend Belmont Intermediate School.</p>
<p>Provide data and evidence to support your answer.</p>	<p>Recent survey data shows Asian, and particularly females, are more likely to be inactive compared to other demographic groups.</p>



Step 4: Other groups

In the North Shore Tennis Incorporated example:

<p>Explain the groups that might be indirectly affected.</p>	<ul style="list-style-type: none"> • Parents of the 50 Asian girls • Other students • Teachers • Belmont Intermediate School, GPs and the local community
<p>Provide data and evidence to support your answer.</p>	<p>Recent survey and research show youth sport participation have various indirect effects on families, schools and local community.</p>

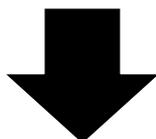


Step 5: Inputs

In the North Shore Tennis Incorporated example:

<p>Explain the inputs of the programme.</p>	<ul style="list-style-type: none"> • Council contributes \$20,000 through a community grant • North Shore Tennis Incorporated contributes \$10,000 and volunteer support
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See [Appendix 3](#) for example of different types of inputs.



Step 6: Activities and outputs

In the North Shore Tennis Incorporated example:

<p>Explain the 'immediate' activities and outputs the programme will deliver.</p>	<ul style="list-style-type: none"> • 200 hours of coaching time • 20 new tennis racquets and 10 balls • 20 hours access per week to the two tennis courts owned by the club
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See [Appendix 3](#) for example of different types of activities and outputs.

Step 7: Intermediate costs and outcomes

In the North Shore Tennis Incorporated example:

<p>Explain what will the activities and outputs deliver?</p>	<p>The intermediate outcome is to increase sport participation – this will contribute to the outcomes set out in <i>Auckland Sport and Recreation Strategic Action Plan</i>.</p> <p>The free coaching, new equipment and access to tennis courts could increase sport participation of Asian girls in Belmont Intermediate School by 20%.</p>
<p>Provide data and evidence to support your answer.</p>	<p>A recent survey shows many Asian girls at Belmont Intermediate School) are keen to become more active but don't have the skills.</p> <p>The survey also shows cost to participate is not a barrier for the target group (note if cost is a barrier then ongoing support to these girls will be more effective than a one-off grant).</p>
<p>Identify <u>duration</u> of the costs and outcomes.</p>	<p>The costs are one-off.</p> <p>The outcomes are likely to be ongoing. Participants of the programme are expected to learn the skills within four months. They are then expected to become a member of North Shore Tennis Incorporated and continue to play tennis on a regular basis.</p>
<p>If possible, quantify the immediate costs and outcomes. Put a monetary value only if it can be done in a meaningful way.</p>	<p>Increase sport participation of 50 Asian girls in Belmont Intermediate School from 35% currently to 55% in six months.</p>
<p>Specify how the costs and outcomes can <u>be tracked over time</u>. Where will the data come from?</p>	<p>Northern Tennis Incorporated to conduct a participant survey before and after the programme to monitor participant's</p> <ul style="list-style-type: none"> • physical activity levels • health conditions • willingness to play tennis on a regular basis after finishing the programme.

Step 8: Long-term costs and outcomes

In the North Shore Tennis Incorporated example:

<p>Explain what long-term outcomes will the immediate outcomes lead to?</p> <ul style="list-style-type: none"> • Specify the long-term outcomes for each group and the process to get to the long-term outcomes • Identify <u>duration</u> of the costs and outcomes for each group. 	<p>Increased in sport participation of 50 Asian girls in Belmont Intermediate from 35% to 55% will lead to:</p> <ul style="list-style-type: none"> • more Asian girls having higher physical activities and better social interactions with peers, which may then lead to: <ul style="list-style-type: none"> - lower mental and physical health risks (Duration = lifetime) - better learning results (Duration = next 5-10 years) - better employment outcomes (Duration = after 5-10 years and last for 30-40 years) - improved overall wellbeing and life satisfaction (Duration = lifetime) • the parents of the Asian girls may: <ul style="list-style-type: none"> - have lower health costs (Duration = next 5-10 years) - have better interactions with school and with other parents (Duration = next 2-3 years) • teachers and school may have better educational attainment, retention and NCEA pass rates (Duration = next 2-3 years) • the local community may experience better social cohesion (Duration = next 10-20 years) <p>All of the above will contribute to the outcomes in the Auckland Plan to make Auckland 'a world class city where talent wants to live'.</p>
<p>If possible, quantify and monetise the costs and outcomes. If it is not possible, be explicit about why not and the assumptions you used.</p>	<p>It may be too costly to quantify and monetise all benefits in this case, however, Northern Tennis could draw on findings from similar studies, but be explicit about the assumptions and limitations.</p>
<p>Provide data and evidence to support your answer.</p>	<p>Survey data and research findings that support the various costs and benefits of increased sport participation on youth, parents, teachers, school and local community.</p>
<p>Specify how the costs and outcomes can be <u>tracked over time</u>. Where will the data come from?</p>	<p>Northern Tennis Incorporated to conduct multiple surveys on participants, parents and teachers on the various outcomes before and after the programme, and a follow-up survey after one year.</p>

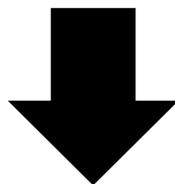
See [Appendix 3](#) for example of different types of long-term outcomes and how they could be monitored over time.

Step 9: Timing of the costs and benefits

In the North Shore Tennis Incorporated example:

<p>Consider <u>when</u> the costs and benefits you identified in Steps 7 and 8 will occur/take effect.</p>	<p>The costs of the programme are one-off and will occur in the first year.</p>
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If the costs and benefits of your project occur over multiple time periods then you might want to consider converting the estimated values to the same time period. This process is called 'discounting'. It will improve accuracy of analysis and make comparisons between costs and benefits possible. [Appendix 4](#) provides further explanation of the discounting process.



Step 10: Testing assumptions

In the North Shore Tennis Incorporated example:

<p>Often the estimation of costs and benefits relies on several assumptions.</p> <p>Explain the likely magnitude of change if your assumptions change.</p>	<p>This exercise assumes all participants will complete the programme and continue to play tennis on a regular basis.</p> <p>Describe the likely changes to the intermediate and long-term outcomes with</p> <ul style="list-style-type: none">• different drop-off rates• different participation rate over the life time of the participants
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A robust and sophisticated process to test assumptions is to run a 'sensitivity analysis'. See [Appendix 5](#) for further information.

Outcome measurement is an ongoing and evolving process. It should be a two-way commitment between the applicants and funder of sport projects.

Throughout the process, organisational knowledge and capability will grow, leading to smarter investments, more effective mechanisms and better outcomes for both parties.

The table below sets out the high level commitments of applicants and funders.

Applicants

Funders

- | | | |
|---|---|---|
| <ul style="list-style-type: none">• Understand the status quo |  | <ul style="list-style-type: none">• Use the status quo identified by applicants as baseline for comparisons and monitoring |
| <ul style="list-style-type: none">• Understand the objectives of investment and articulate how the project will help achieve them |  | <ul style="list-style-type: none">• Be transparent about the objective and the assessment criteria.• Provide plenty of examples to help applicants understand what you are looking to achieve• Assess applications based on the alignment with investment objectives• Be consistent throughout the entire investment cycle |
| <ul style="list-style-type: none">• Understand the costs and outcomes of your projects and provide good evidence to support (e.g. sector endorsement) |  | <ul style="list-style-type: none">• The quality and coverage of data and evidence provided by applicants will be a critical part of the assessment |
| <ul style="list-style-type: none">• Tell us how the costs and benefits you identified can be evaluated and monitored over time |  | <ul style="list-style-type: none">• Use the information provided by applicants as basis for drafting the KPIs in the funding agreements |



This report sets out the basic steps to measure outcomes of sport investment. You can find additional examples and further guidance in the appendices.

If you have further enquiries, contact XXX

Appendix 1: Standard template

Outcome measurement tool

Name of Programme:	
Organisation:	
Date:	

1. What is the rational of the project/activity/programme?

Explain why it is important to carry out the project. Will it achieve a specific council strategic priorities or outcomes?

2. What is the 'status quo'?

Explain the 'do nothing' scenario. What are the costs and lost opportunities? What data and evidence to you have to prove this?

3. Who are the target groups?

Explain who is the programme intended for? Who is the core group that will be directly affected? What data and evidence to you have to prove this?

4. What other groups could be affected?

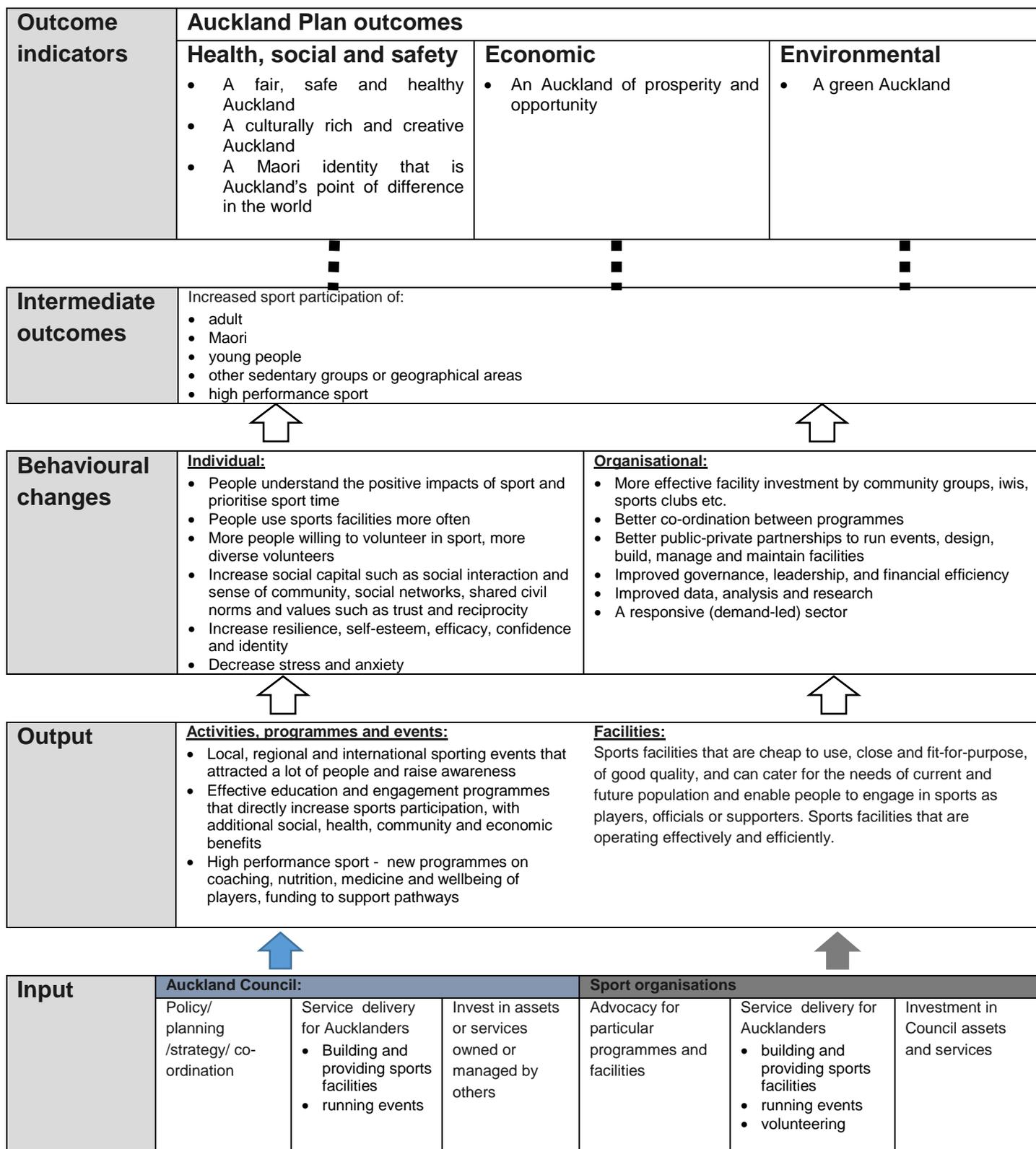
Explain the groups that might be indirectly affected. What data and evidence to you have to prove this?

5. What are the inputs into the programme?

	Council	Organisation	Other
Direct financial			
Other inputs			

6. What will the project/activity/programme deliver?			
E.g. hours of coaching, number of tennis racquets Note: In spreadsheet put in calculation			
7. What are the intermediate costs and impacts on outcomes?			
Cost/benefit	Duration	Data/evidence source	Can the cost/benefit be quantified, if so, please provide the information. If not, please explain why
To the target groups:			
To the indirect groups:			
8. What are the long-term costs and impacts on outcomes?			
Cost/benefit	Duration	Data/evidence source	Can the cost/benefit be quantified, if so, please provide the information. If not, please explain why
To the target groups:			
To the indirect groups:			
9. How will costs and benefits be monitored over time?			
Where will the data come from? How do they compare with the status quo?			
TOTAL QUANTIFIABLE COSTS (PV \$)			
Low			
High			
Best Estimate			
TOTAL QUANTIFIABLE BENEFITS (PV \$)			
Low			
High			
Best Estimate			

Appendix 2: Example of a logic model for sport investment



Appendix 3: Examples of costs and benefits and how to collect data

Inputs	
Direct inputs	<p>Direct inputs into sport programmes include:</p> <ul style="list-style-type: none"> • Programme budget • Programme staffing and nature of sporting and non-sporting expertise • Type and quality of sports equipment • Access to facilities (free and paid for) and frequency of access • Transport requirements • Expenditure on promotion, educational materials
Indirect inputs	<p>These include contributions from various partners, such as staff time, free accommodation, free use of facilities for activities, assistance with promotion. Although these are not always easy to quantify, some effort should be made. Such inputs are often crucial to the success of programmes, yet may remain hidden. In such circumstances the true 'cost' and nature of the programme may be misunderstood.</p>
Community resources	<p>What resources are available to the organisation in the community for all aspects of its programme? For example:</p> <ul style="list-style-type: none"> • Current sporting infrastructure (teams, facilities, equipment). • Nature of community links and networks (e.g. teachers; community workers; parents). • Relationships with schools and access to in-school and out-of-school children. • How do you gain access to participants; via other NGOs; via schools; via community consultation?
Where do it collect the information?	<p>Direct and indirect Inputs</p> <p>Much of this information relates to quantifiable resources which can be recorded via normal audit, accounting and record-keeping procedures (which need to be constantly updated).</p> <p>Community resources</p> <p>Most clubs and sport organisations will have a clear understanding of their local communities, but it is useful to undertake a stocktake (e.g. existing teams, clubs, pitches, equipment, active volunteers). This should be constantly updated.</p>

Intermediate outcomes – Improved sport participation

Why should I collect the information?	<p>One of the key aims of sports programmes is to improve sport participation by providing more sport opportunities and options.</p> <p>The extent to which this aim is met is a key measure of effectiveness and lays the basis for addressing the broad personal and social goals of such programmes</p>
What information should I collect?	<ul style="list-style-type: none"> • General increases in participation, especially among target groups • Number and type of people taking part • Frequency of participation (e.g. daily, weekly or monthly) • Length and intensity of participation • Number of teams/clubs established
Where do I collect the information from?	<ul style="list-style-type: none"> • Survey with participants before and after the programme regarding their intention to participate in sport. • Enrolment registers • Facilities/equipment hire records • Attendance registers (for information about the number of individual participants and not simply volume of use) • Programme records • Leader/coach reports
Possible data sources of sport participation	<ul style="list-style-type: none"> • Statistics New Zealand http://www.stats.govt.nz/ – for general demographic and sport participation and health data in New Zealand and by region • Sport New Zealand Insight Tool http://www.sportnz.org.nz/managing-sport/insights/ – for detailed local demographic and sport participation data

Long-term outcomes – sport outcomes

Why should I collect the information?	Sport outcomes could include: <ul style="list-style-type: none">• The sustainability and further development of sport in the community (and sport organisations) depends on the production of skilled and committed sports people• The individuals' achievement in sport
What information should I collect?	<ul style="list-style-type: none">• Number/type of participants improving skill levels, performance and sporting competence• Sporting skills: these will relate to specific sports and will relate to basic skills, tactics and rules• Number of talented individuals being identified• Number of development pathways provided for talented athletes and coaches to pursue careers at a higher level
Where do I collect the information from?	<ul style="list-style-type: none">• Observation and systematic evaluation by coaches• Tests for skill levels• Structured discussions with participants to assess understanding and their development

Long-term outcomes - Health outcomes

<p>Why should I collect the information?</p>	<p>Sport participation can be used for both <u>treatment</u> and <u>prevention</u> for physical and mental illness and improve participants' overall health.</p> <p>With regard to physical health, the evidence strongly indicates that exercise and sport can prevent a number of chronic diseases, most commonly cardiovascular disease, diabetes, some cancers, strokes, osteoporosis and premature deaths.</p> <p>The amount of evidence linking sports and exercise to mental health benefits is growing, and demonstrates both primary benefits in terms of prevention and secondary benefits in terms of its therapeutic benefits. Several studies have shown that sport and exercise can lower the risk of depression and suicide and other neurological conditions such as PD and AD and create therapeutic benefits for depression, anxiety and tension, eating addictions and body dysmorphic disorders, age-related cognitive decline, the severity of AD and some symptoms of schizophrenia.</p>
<p>What information should I collect?</p>	<ul style="list-style-type: none"> • Number GP visits per year • Number of school absence due to illness per year • Health of participants e.g. weight, BMI, blood pressure etc
<p>Where do I collect the information from?</p>	<ul style="list-style-type: none"> • Health tests of participants before and after the programme • School absence records • Survey with local GPs and nurses • Structured discussions with participants, parents and teachers

Long-term outcomes – Social and community outcomes

<p>Why should I collect the information?</p>	<p>Sports programmes could lead to development of individual and collective potential. Properly delivered, inclusive and participant-centred sporting programmes and the sense of achievement derived from the development of sporting skills are presumed to lead to a range of impacts among regular participants such as:</p> <p><u>Social capital</u></p> <p>Evidence shows sport participation could directly or indirectly lead to:</p> <ul style="list-style-type: none"> • Development of social relationship skills: including self-esteem, self-efficacy, cooperation, reciprocity, a sense of belonging. • Bonding capital: greater social connectedness, networking and social interaction - largely among a fairly homogeneous population. • Bridging capital: greater awareness of others, better understanding of others, greater social inclusion/connectedness and mixing across heterogeneous population groups. • Linking capital: ties between people in dissimilar social situations, enabling individuals and groups to access formal institutions. • Impact: reduced social and ethnic tensions, reduced problem behaviour; more collective action and community involvement, NB volunteering. <p><u>Anti-social behaviours and crime rates</u></p> <p>Evidence also shows sport participation could help prevent anti-social behaviours and crime rates, particular for youth. The relationship are not as direct, but via personal factors (e.g. participants' self-esteem) and external support (e.g. from peers, teachers, parents, school and community).</p>
<p>What information should I collect?</p>	<p><u>Social capital</u></p> <ul style="list-style-type: none"> • Reduced sense of social isolation and strengthened friendship networks • Increased self-esteem and self-confidence • Improved social skills (e.g. comfortable meeting new people, willing to seek and accept advice, can work cooperatively; understands impact of behaviour on others) • Positive attitudes to the future and improved aspirations <p><u>Anti-social behaviours and crime rates</u></p> <ul style="list-style-type: none"> • Increased trust and a sense of communal responsibility
<p>Where do I collect the information from?</p>	<ul style="list-style-type: none"> • Before-and-after surveys • Post-programme self-assessed change • Self-completion questionnaires for participants • Face-to-face Interviews with participants • Small group discussions about effectiveness of the programme

Long-term outcomes – Educational outcomes

Why should I collect the information?	<p>The relationship between sport participation and education outcomes is not direct. The literature points to three possible routes or pathways by which sport participation may translate to educational benefits:</p> <ul style="list-style-type: none"> • Psychological/affective benefits (as discussed in ‘health outcomes’) • Social capital (as discussed in ‘social outcomes’) • Cognitive benefits including executive/planning, attention, simultaneous and successive tasks; self-esteem, self-efficacy, self-regulation, locus of control; and/or social competence, identification with and attitudes towards school and school-related values and quest for high peer status.
What information should I collect?	<ul style="list-style-type: none"> • Improved cognitive benefits • Increased commitment to education and school • Positive attitudes to the future and improved aspirations
Where do I collect the information from?	<ul style="list-style-type: none"> • School academic reports • Attendance records • Drop-out rates • NZEA pass-rate and % students progressed to tertiary education • Surveys and in-depth discussions with participants and teachers

Long-term outcomes – Economic outcomes

Why should I collect the information?	<p>Sport could have a positive contribution to the local economy through building and construction of facilities, running events and professional business in training and nutrition advice.</p> <p>International events could provide opportunities to reinforce and enhance Auckland’s brand image as an attractive destination to visit and live.</p>
What information should I collect?	<ul style="list-style-type: none"> • No. events run and profits • Club profits • No. volunteers • No. facilities built – no. people employed, costs of materials etc • Supporting businesses? E.g food stalls, uniforms/gear sold
Where do I collect the information from?	<ul style="list-style-type: none"> • Club quarterly and annual reports • Surveys of people after the events • Event budget • Facilities management plans

Appendix 4: Discounting the costs and benefits

The value of money changes over time. Often the costs and benefits occur today worth more than in the future due to inflation and increase in people's earning capacity.

Example: A dollar today can be invested, say in a bank deposit at an interest rate of 5%, so that in a year's time it is worth \$1.05. Receiving \$1.05 in a year's time is therefore equivalent to receiving a dollar now.

If the estimated benefits and costs of your project are likely to occur at various points in time, you will need to convert them into today's money value. This allows costs and benefits with different life spans to be compared. This process of conversion is called *discounting*. The discounted value is also known as the *present value*.

Selecting a discount rate

The New Zealand Treasury uses an 8% discount rate for standard public sector cost and benefit analysis, but this can be adjusted for projects in specific sectors.

Auckland Council's Chief Economist Office recommends a 4% discount rate to be applied in the first instance for Auckland Council proposals with sensitivity analysis at 6% and 8% (see Appendix 5 for further information on sensitivity analysis).

Formula

The present value is calculated by multiplying the estimated value by a *discount factor* which is equal to:

$$1 / (1 + \text{discount rate})^n$$

Where n is equal to the number of years over which the value is being discounted.

Example: Discounting Using the Formula

If the discount rate is 10%, the discounted values of expected costs or benefits are calculated as illustrated in the following table:

Year (n)		0	1	2	3
Discount factor = $1 \div (1 + 10\%)^n$		1.000	0.909	0.826	0.751
Forecast costs or benefits		-100	45	45	45
Discounted values (value x discount factor)		-100	40.909	37.188	33.808
Present value (sum of discounted values)	11.906				

The 'net present value' (NPV) of the project can then be calculated by adding up the present values of all discounted cost and benefit values.

For more information on discounting, visit New Zealand Treasury's social cost and benefit page - <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/guide>

Appendix 5: Sensitivity Analysis

Sensitivity analysis is the study of how sensitive the results of a project are to changes in assumptions and parameters (for example discount rates – see Appendix 4).

It helps decision makers understand which assumptions and parameters are crucial in delivering the project and identifies the tipping point (for example, when the cost of the project is likely to be higher than the benefits).

Scenario analysis

Scenarios are often used in sensitivity analysis. The basic scenarios are conservative, baseline and optimistic scenarios. If the estimated values do not change significantly in different scenarios then the decision maker can have more confidence in the net benefits of the project being achieved. Scenario analysis is typically used in the analysis of smaller projects.

Statistical methods

For larger projects with more variables, statistical methods can be used to deal with uncertainty. One such method is Monte Carlo analysis, which uses random combinations of values for variables many times over to simulate uncertainty. A probability distribution of expected outcomes is produced – which is a picture of the range of potential net present value (see Appendix 4) calculations and their likelihood. This means that the decision maker is informed about the most likely NPV outcomes which can assist with decision making.

For more information on sensitivity analysis, visit New Zealand Treasury's social cost and benefit page - <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/guide>

