



DESIGNING  
EFFECTIVE  
OUTCOME  
METRICS AND  
MEASUREMENT  
SYSTEMS

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## PURPOSE

This guide will look at the creation of effective outcome metrics and measurement systems. We have selected this as it is a commonly asked question and an area in which commissioners report a lack of capacity. Our aim is that this will complement commissioners who have already proceeded through the initial phases of business case development and analysis.

# 1 Introduction

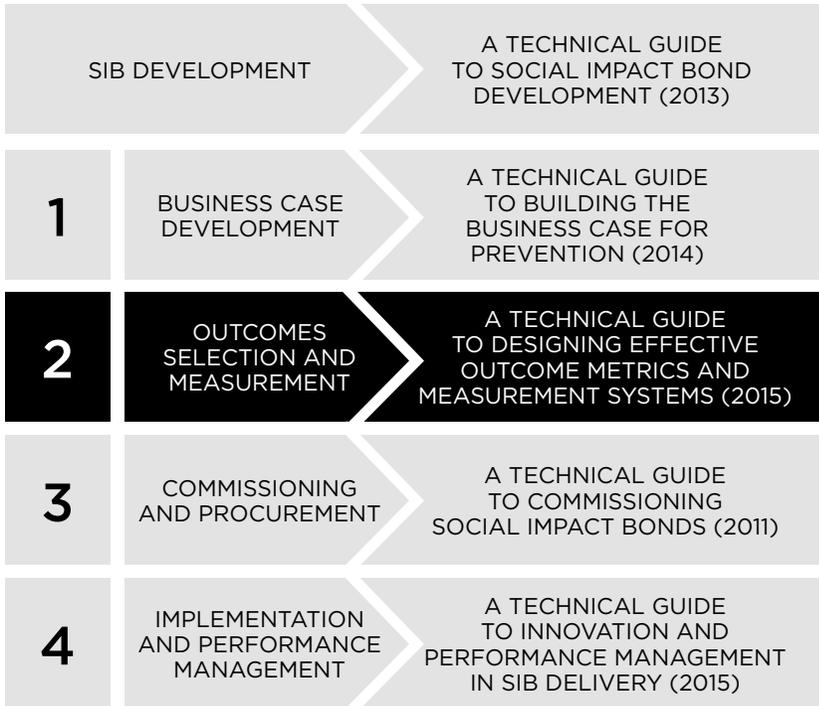
The concept of commissioning by outcomes is becoming central to efforts to make radical improvements to public services in an era of enormous social and economic change. Social Impact Bonds (SIBs) are one of a range of mechanisms to enable public commissioners to focus service delivery on achieving specific outcomes.

At its most fundamental, a SIB is an outcomes-based contract between a public sector commissioner and an investor/group of investors. Success within SIBs is measured by changes in social outcomes. A crucial stage in the development of SIBs is the selection of outcomes and the measurement and metrics used to evaluate success. It is at this point that turning the theory into practice can present a range of technical challenges. This guide has been produced to help organisations considering outcomes-based commissioning to overcome these technical challenges. For a more detailed description of how SIBs work, please see page 8.

This guide is part of a series of SIB Technical Guides produced by Social Finance. These are intended to accompany the journey an organisation may take when developing a SIB; and it is important to note that outcomes selection and measurement is not usually the first step in this process. To find out more about the Social Impact Bonds and how they work, please refer to our previous Technical Guide *'Developing Social Impact Bonds'*.<sup>1</sup>

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<sup>1</sup> See <http://www.socialfinance.org.uk>



## Definitions

This Guide uses the 2020 Public Services Trust taxonomy for outcomes:

- **Inputs** are “the intervention[s] provided” – for instance a service for substance misuse for families in crisis through drug addiction is provided
- **Outputs** are the “direct and tangible products from the activity” – the family attends the service
- **Outcomes** are the “changes that occur for stakeholders as a result of the activity” – the service helps to reduce substance addiction within the family and remove the risks to the children of being taken into care

## 2 Why commission by outcomes?

As budgets reduce, demand increases and public expectations about public services change, the fundamental question public commissioners must grapple with is how to improve social outcomes for people and communities with increasingly limited resources. This objective is not new – over the past 30 or so years, in the journey through New Public Management, Compulsory Competitive Tendering, targets and nationally set KPIs, and the ‘choice’ agenda, governments in the UK have been using new strategies to improve the impact of public services. While improvements have been made, these are yet to match the scale of the challenge, pushing public sector leaders to look beyond traditional approaches to public service contracting and delivery.

This has led public sector commissioners to focus on social outcomes. The advantage of this is that social outcomes are a close analogue for social value, which makes them a good barometer for judging the impact of public expenditure. However, while they are a truer measure of value and impact than inputs or outputs, they are not as straightforward to measure. As a result public sector leaders have tended to use inputs and outputs as the measures of success. Such approaches are now commonly accepted as having several limitations.

In particular, approaching public service delivery through a focus on contractually specified inputs, or even outputs, has been found to present difficulties on a number of levels:

- Contracting by inputs or outputs risks providers cutting costs without having accountability for the quality of service provided
- Input or output oriented contracts do not leave room for innovation or adaptation in service provision

- Management attention becomes consumed by compliance with procedure, with few levers to pull if the contract is being complied with but ultimate objectives are not being met

By contrast, commissioning for outcomes can bring a range of benefits if designed effectively. The 2020 Public Services Trust lists the benefits of outcomes based approaches as follows:

- Clear definition of the aims of the programme
- Powerful and focused incentives to achieve them
- Full responsibility for their achievement to the service deliverer
- Innovation to find better ways to realise outcomes
- Freedom to personalise services

As this list demonstrates, outcomes-based approaches can have a wide impact on public service delivery. This technical guide will provide a tangible framework for one component of the outcomes-based commissioning approach: **the selection and measurement of outcomes.**

### 3 How does commissioning by outcomes work?

Switching to an outcomes-based approach challenges some of the central tenets of traditional public service management and requires a different commissioning and contracting strategy. While inputs can be measured at the time of delivery, outcomes can typically only be measured post-delivery. For public sector managers rightly concerned with accountability and performance management, this can present a different set of considerations.

In addition to this, the relationship between inputs and outcomes is in almost all instances uncertain. There is a risk that specified inputs or outputs will not lead to improvements in outcomes. For instance, a drug and alcohol intervention for chaotic families can be implemented relatively easily. Assuming that there is funding available and an effective provider, there is minimal chance the inputs will not be achieved. Ensuring that it then achieves its outputs – families accessing the service – is less straightforward, but not an unmanageable risk and one that can be mitigated. However, certainty that the service then goes on to help the families combat their drug and alcohol problems, and as a result reduce the level of risk presented to the children, is far harder to ensure. This implicitly is why outcomes have become so central to commissioners' focus – the evidence that links inputs or outputs to outcomes is frequently sparse.

The exception to this rule would be situations in which there is established empirical causal link between inputs or outputs and outcomes, such as an immunisation programme. For this there would be little value in an outcomes based approach, as there is a high certainty that should the inputs and outputs be successfully achieved, the outcomes will follow.

There are a number of ways in which contracts can be structured around outcomes, of which the principal mechanism is a payment-by-results model. In most cases, following commissioning, the outcomes must be measured so that the effectiveness of the approach can be judged. This is typically done through establishing a baseline and then measuring the differences in outcomes post-intervention in comparison with this. For interventions working with complex social issues, this can bring technical challenges. The rest of this guide details methods for effectively commissioning by outcomes.

This guide looks at outcomes-based commissioning through the lens of Social Impact Bonds (SIBs). These are one method of driving performance towards outcomes, though our aspiration is that the principles of this technical guide could be applied to outcomes based commissioning that does not use a SIB mechanism.

## 4 Social Impact Bonds and outcomes-based commissioning

### **Overview of the SIB model**

SIBs are a form of outcomes-based contract in which public sector commissioners commit to pay for significant improvements in social outcomes (such as a reduction in offending rates, or in the number of people being admitted to hospital) for a defined population.

SIBs are an innovative way of attracting new investment around such outcomes-based contracts that benefit individuals and communities. Through a SIB, private investment is used to pay for interventions, which are delivered by service providers with a proven track record. Financial returns to investors are made by the public sector on the basis of improved social outcomes. If outcomes do not improve, then investors do not recover their investment.

SIBs provide up front funding for prevention and early intervention services, and remove the risk that interventions do not deliver outcomes from the public sector. The public sector pays if (and only if) the intervention is successful. In this way SIBs enable a re-allocation of risk between the two sectors. The diagram below is an example of a typical SIBs structure.

### **What makes a SIB approach to outcomes different to other forms of outcomes based commissioning?**

While SIBs are a form of outcomes based commissioning, they have some important distinguishing features when compared with a standard payment-by-results models.

- The provider organisation is not required to take delivery risk

## The Peterborough Social Impact Bond



- External capital is used to fund the service, from investors who have a combined social and financial interest
- The investors have a mechanism to hold the delivery providers to account

When developing a SIB, an outcome metric will be established. This will typically be done through the following processes of:

- **Identification** of the outcomes that represent the creation of social value – specific to the social issue being addressed
- Establishing a **baseline or counterfactual**
- **Valuation** of the outcomes, in accordance with the objectives of the commissioner
- Creation of a means of **measuring and attributing** the impact of the intervention on the outcomes that is both objectively accepted by all parties involved and perceived as being acceptable by all parties including the wider community
- **Evaluation** of impact

From a managerial standpoint, the key objective is to judge whether the interventions funded are having their intended impact. As a result, this process aims to produce a means of measuring impact in a way that is rigorous and robust.

# 5 Selecting outcomes

## **Finding the right measure**

To successfully develop a SIB, it is essential to specify the outcomes to be measured in advance of the programme becoming operational. This is a crucial part of the contract agreed between commissioner and investor and means that there is common consensus on what will be viewed as success within a project and by extension, what will trigger an outcome payment.

The process of identifying outcome measures can have a number of stages, and is not strictly linear. In some instances outcome selection may be straightforward because the objectives of the project are easily quantifiable. For instance, a programme that seeks to improve educational attainment would have a ready-made outcome metric provided by the standardised exams and qualifications framework in operation.

In other instances, selection can require a number of iterations to alight on an outcome that is both meaningful and measurable. A programme designed to improve community cohesion, for instance, has few outcome measures that can be practically used and which directly reflect improvements in cohesion. As the true objective of the project is hard to quantify, a commissioner may choose to look at outcomes that indicate that this broader objective are being achieved. For example, a commissioner may use rates of racial harassment, the range of incomes within a particular residential area, or civic participation as lead indications of the overall level of community cohesion.

The reality of constructing outcome measures and metrics is that often a trade-off is required between trying to capture the overall objectives of the project, and measuring what it is

possible to quantify. So far as the measure chosen still confers what can be said to be a meaningful measure of the project's objectives, this can be a healthy discussion to have in the development of the SIB.

Where it is not straightforward to identify a meaningful and measureable outcome, there are some approaches and resources available to help select outcomes.

### Questions to Consider when Defining an Outcomes Metric

A series of questions which demand greater specificity can be one means of turning the intangible into the tangible.

<b>1</b>	WHAT DOES SUCCESS LOOK LIKE FOR THE PROJECT?
<b>2</b>	WHAT OBJECTIVE MEASURES OF THIS SUCCESS ARE AVAILABLE?
<b>3</b>	OF THESE MEASURES, WHICH ONES ARE LINKED TO EXISTING DATA SOURCES THAT CAN PRACTICALLY BE USED?
<b>4</b>	WOULD THIS BE A MEANINGFUL ASSESSMENT IN TERMS OF REFLECTING GENUINE POSITIVE IMPROVEMENTS IN PEOPLE'S LIVES?
<b>5</b>	IF THIS DATA DOES NOT ALREADY EXIST, COULD IT BE CAPTURED OBJECTIVELY AND WITHOUT REQUIRING SIGNIFICANT ADDITIONAL RESOURCES?

## Outcomes Matrices

Big Society Capital have developed an Outcomes Matrix to help social sector organisations to identify outcomes and the data sets available to measure them. Outcomes are listed at both an individual or a community level.

<http://www.bigsocietycapital.com/outcomes-matrix>

A similar resource has been compiled by New Philanthropy Capital.

<http://www.thinknpc.org/publications/mapping-outcomes-for-social-investment/>

Between these two resources there are a range of tangible outcome measures listed by broader social interest area:

- Housing and essential needs
- Education and learning
- Education, Employment and training
- Physical health
- Substance use and addiction
- Mental health
- Personal and social well-being
- Politics, influence and participation
- Finance and legal matters
- Arts and culture
- Crime and public safety
- Local area and getting around
- Conservation of the natural environment and climate change

EDUCATION, EMPLOYMENT AND TRAINING OUTCOMES

Outcome	Outcome Measure
Is in suitable employment, education or training and has the on-going support to maintain it if necessary	<p>Is in suitable education</p> <ul style="list-style-type: none"> <li>• Is in full-time education</li> <li>• Is in part-time education</li> <li>• Level of attendance</li> <li>• Enjoys education</li> </ul> <p>Is in suitable training</p> <ul style="list-style-type: none"> <li>• Is in part-time training</li> <li>• Is in full-time training</li> <li>• Level of attendance</li> </ul> <p>Is in suitable employment</p> <ul style="list-style-type: none"> <li>• Is in part-time employment (at least 16 hours per week)</li> <li>• Is in full-time employment (35 hours per week)</li> <li>• Level of attendance</li> </ul> <p>Has maintained employment</p> <ul style="list-style-type: none"> <li>• Has maintained employment for 6 months, 1 year, 2 years</li> <li>• Has a permanent contract</li> <li>• Has work-life balance</li> </ul>
Has developed the necessary soft skills and attitude through employment, education or training (including social skills, attitude and motivation)	<p>Improved attitude and motivation</p> <ul style="list-style-type: none"> <li>• Has demonstrated an improvement in attendance records</li> <li>• Has demonstrated an improvement in time keeping</li> <li>• Has developed an aspiration to work</li> <li>• Has developed self-confidence</li> <li>• Is satisfied with their employment, education or training</li> </ul> <p>Improved interpersonal and social skills</p> <ul style="list-style-type: none"> <li>• Has developed communication skills</li> <li>• Has developed teamwork and relationships building skills</li> </ul> <p>Improved knowledge on personal strengths and weaknesses</p> <ul style="list-style-type: none"> <li>• Has developed self-awareness skills</li> </ul>

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<p>Has developed the necessary technical hard) skills through employment, education or training (including literacy and numeracy, job search skills and job-specific qualifications)</p>	<p>Increased level of attainment</p> <ul style="list-style-type: none"> <li>• Has started a grade/degree/diploma</li> <li>• Has completed a grade/degree/diploma</li> <li>• Level of attainment</li> </ul> <p>Improved general preparation for work</p> <ul style="list-style-type: none"> <li>• Level of numeracy</li> <li>• Level of literacy</li> <li>• Level of IT skills</li> <li>• Level of problem-solving skills</li> </ul> <p>Improved vocational preparation</p> <ul style="list-style-type: none"> <li>• Has attained a job-relevant qualification</li> <li>• Has attained job-relevant know-how</li> <li>• Has attained relevant level of experience</li> </ul> <p>Improved job search skills</p> <ul style="list-style-type: none"> <li>• Has an updated CV</li> </ul> <p>Improved job search skills</p> <ul style="list-style-type: none"> <li>• Has an updated CV</li> <li>• Has an improved ability to identify and contact suitable job opportunities                             <ul style="list-style-type: none"> <li>○ Number of interviews attended</li> <li>○ Number of applications sent</li> <li>○ Number of job offers received/accepted</li> </ul> </li> <li>• Has participated in job skills coaching</li> </ul> <p>Improved interview skills</p> <ul style="list-style-type: none"> <li>• Has developed presentation skills</li> <li>• Has developed communication skills</li> <li>• Is able to present themselves and past experiences in a positive way</li> </ul>
<p>Has found a way to address barriers to employment, education or training (including childcare, disability or benefits issues)</p>	<p>Would be financially better off in work than not</p> <ul style="list-style-type: none"> <li>• Differential between income and benefits</li> </ul> <p>Improved access to affordable childcare</p> <p>Improved access to affordable transportation</p> <p>Improved access to job-specific resources</p> <ul style="list-style-type: none"> <li>• Has appropriate clothing for interviews</li> <li>• Has access to courses</li> <li>• Has access to the internet and media for job searching</li> </ul>

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## Thinking through the fundamentals

Once an outcome measure has been selected, the next stage is to consider the practicalities of measuring these outcomes, thinking through issues such as **timing, aligned incentives, perverse incentives and deadweight**.

### Time scales

The time scale over which outcomes are measured is important for a number of reasons.

- **Outcome sustainability**

The time scale selected should ideally leave time to make an assessment of whether positive outcomes have been sustained. For instance a programme to help people stop smoking may have a big impact while the participants are engaged in the intervention. However, the health benefits of stopping smoking will only be achieved if this is sustained over a longer period of time. In this instance, monitoring smoking cessation over a period of 6-12 months, or even longer, would enable commissioners to assess the long-term impact of the intervention and only pay where impact is sustained.

- **Financial planning for providers and investors**

If a payment-by-results model is being used, the time scale of outcome monitoring will determine the timing of outcome payments which will have a material impact on the financial planning of the providers or investors who take the risk to pay for the service delivery upfront. The longer the outcome measurement period, the more expensive it will be for investors or providers putting in the risk capital.

Investors in SIBs will typically look for a repayment period of a maximum three years between starting the intervention with a cohort and outcome measurement.

Keeping the outcome measurement period relatively short is advantageous for both commissioner and investor – shorter time-scales reduce the costs of capital for commissioners and for investors mean they can recycle their investments into new projects more quickly.

- **Ability to modify service delivery in light of data about what works**

As with many new service delivery models, SIBs use adaptive systems, data and feedback loops to help improve performance dynamically in real-time. Being able to view outcomes data can be a valuable management tool and helps to inform adaptations that will make the service more successful. Shorter time-scales for outcomes measurement will assist this process.

Ideally SIBs should aim to use outcome measures informed by consideration of the trade-off between the reduced costs of capital and increased management information that shorter time scales can bring, and the greater certainty of sustained impact that longer time scales indicate. There are some social outcomes, for instance those aimed at in the early years, which by their nature will only be measurable over a long period of time. One solution to this is to use interim or surrogate outcome measures.

### Surrogate Outcomes

*“A surrogate outcome is one which is a proxy for the true outcome of interest; for example, reconviction rates are used as a surrogate for reoffending rates, because they are far easier to measure (as people might be never caught for the crimes they commit).”<sup>2</sup>*

When considering whether to use a surrogate outcome, it is often a trade-off between a measure that aligns closely with a project’s ultimate objectives but may not be practical to use, and a measure

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2 Cabinet Office Test, Learn, Adapt Developing Public Policy with Randomised Controlled Trials (2012)

which is more pragmatic but is one or more steps removed from the overall objective/s. In such cases, this pragmatism should be weighed against the decrease in certainty that what is being measured is what really matters.

In addition to being used as a proxy measure, surrogate outcomes can also be used as an interim indicator of outcomes. This is particularly useful within a SIB context if the time-lag between intervention and impact is greater than two to three years, for instance in early intervention programmes. This can be applicable in cases where there is empirical evidence of a link between the interim indicator and the 'true' outcome, even if this may not be a perfect causal link. It is also still worthwhile measuring the 'true' outcome as well as the surrogate outcome. This contributes further evidence to the statistical relationship between the two and will assist future programmes.

### **Binary vs Frequency**

Another important consideration when selecting outcomes is how to frame success. Many outcomes can be measured in either a binary way or a frequency way, each of which will have a different impact on how success is perceived within the project. It can also influence the way that providers may operate, and so is worth considering.

Reducing reoffending is an outcome measure for which binary or frequency measures could be used. Reducing reoffending as an outcome can be measured by reconviction events. In a binary measure, this would be framed as the number of offenders who have been reconvicted of a crime. A frequency measure of the same outcome would look at the total number of reconviction events.

While a binary measure may provide a more absolute interpretation of success, it may also mean that improvements in individual's circumstances are not recognised. For instance, if working with a cohort of offenders who are all expected to commit five offences over a year, there would be considerable

social value in reducing these events for each individual to one. A frequency measure would be a better option in this situation, as a binary measure wouldn't recognise this success.

### **Perverse Incentives**

The SIB development process should also consider the behavioural impact the outcome selection might have on the delivery organisation, and ways of mitigating any conflicts or perverse incentives. A perverse incentive occurs when outcome payments could incentivise action which has a detrimental impact on social outcomes. While the risk of perverse incentives is something to be considered in any outcomes based approach, it should also be noted that perverse incentives and 'gaming' can and do exist in many of the service and delivery structures already in place across public services in the UK. For instance, the use of targets as performance measures in the NHS can incentivise staff to advocate treatment where it is not necessary, or to leave patients in ambulances rather than A&E to avoid breaching target waiting times. Police forces may be incentivised to arrest inappropriately due to targets set for the number of arrests or decreases in crime levels.

Decisions may boil down to a consideration of two imperfect choices, both with a risk of perverse incentives, and choosing the one which can be managed most effectively.

There are two main perverse incentives that payment-by-results contracts should strive to avoid:

**Cherry Picking** – the ability of the provider organisation to select only the 'easiest' members of a population to work with as a means of maximising outcome payments at the expense of the harder-to-help groups.

**Parking** – the flipside of cherry picking, is ignoring the harder-to-help groups and depriving them of the service because they are harder to earn outcome payments for. SIBs benefit from – in

most cases – paying providers to deliver by activity and with investors taking the risk for the delivery of outcomes. This reduces the risk that providers will engage in behaviours such as ‘parking’ or ‘cherry picking’ of service users, because their payment will not be tied to success of individual service users. The underlying philosophy of this approach is that it is better for the attention of service providers to be focused on delivering the service, and not to be distracted by considering which members of the cohort are most valuable in terms of payment. By removing this consideration, the chances of perverse incentives occurring are reduced.

However, there remain risks that in spite of this the outcome metrics will still create perverse incentives and consideration should be made of these prior to sign-off. The overall design of the SIB should ensure providers have an incentive to work with every service user who is eligible and would benefit from the scheme – this requires accurate profiling of the characteristics of service users who will benefit from the programme.

The Essex Social Impact Bond set clear and objective referral criteria for entry into the funded intervention. The service provider is then paid upfront to deliver the intervention to each and every individual who meets this criteria and who agrees to engage in the programme. This eliminates the risk of parking and cherry-picking within the programme, as there is no ability or incentive for the provider to reject individuals from the programme.

The design of the scheme should also create an independent referral mechanism so that providers do not have undue influence on the service users engaged in the programme – ideally a referral mechanism should have clear objective criteria and the provider required to work with all service users who meet these criteria.

## What Makes a Good Outcomes Metric?

Measures of success should focus on the best possible outcomes for service users.

A good outcome metric should:	Example
Protect against perverse incentives and take account of deadweight	Service provider must work with all short sentence offenders Outcomes must be attributable to intervention
Provide an incentive to focus on sustained success	Measuring performance over a 2-3 year period to encapsulate client journey
Ensure the root causes of the problems are addressed and comprehensive solutions developed	Focus on improved outcomes e.g. reduction in reoffending rates, engagement with positive activities
Encourage providers to work together towards a common goal of addressing service users' needs	Sustained success can only be achieved with the help of all service providers
Take account of the nature of the outcome expected	Is the value of the outcome something that is only present in a binary way, or can value be expressed in degrees or by frequency?
Be clearly definable and calculable	The data has a fully defined numerator and denominator and there is a clear understanding of what clean, objective data looks like for this metric

## 6 Outcome measurement and attribution

The key purpose of the outcome metric is to demonstrate the level of impact the intervention has. In the world of government evaluation, this is typically referred to as “**additionality**” and means the net impact after allowances have been made for what would have happened had the intervention not been used. To calculate additionality, there are some concepts it is useful to bear in mind. The *HM Treasury Green Book*<sup>3</sup> lists the most common of these as follows:

- **Deadweight** refers to outcomes which would have occurred without intervention
- **Leakage** effects benefit those outside of the spatial area or group which the intervention is intended to benefit
- **Displacement** and **substitution** impacts are closely related. They measure the extent to which the benefits of a project are offset by reductions in positive outcomes elsewhere

Not all of these will be relevant in every Social Impact Bond, but they are worth considering at the outset of the outcome metric design. Deadweight is something that will have to be factored in in all circumstances as it is the basic test of whether the impact was a result of the intervention, or would have happened anyway.

It is essential that the metric meets three basic principles:

**Rigour, Objectivity and Consistency of Data Collection.** The measure must be rigorous so that there is assurance the right things are being measured. Objectivity is required so that there is confidence that the data used to evidence the outcomes is free from bias. Consistency ensures that over time, the same thing is being measured.

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3 HM Treasury – The Green Book: Appraisal and Evaluation in Central Government (2011)

## Hierarchy of Evidence

There is a range of ways of demonstrating additionality of outcomes achieved through measurement. The Cabinet Office has developed a hierarchy of evidence quality, which we have adapted:<sup>4</sup>



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4 Cabinet Office - Social Impact Bonds Knowledge Box - Outcome Measurement (2013) - [http://data.gov.uk/sib\\_knowledge\\_box/comparisons-and-counterfactual](http://data.gov.uk/sib_knowledge_box/comparisons-and-counterfactual)

In practice, choosing the measurement system to use will be based on a range of considerations, such as cost, pragmatism and the quality of existing evidence available. In general, the more robust the measurement system the more costly it will be to use. To date, SIBs in the UK have tended to use matched control trials, historical baselines or tariffs as a means of measuring outcomes. Tariff models work by compiling a list of outcomes sought, and assigning a value to these (typically value per participant). The value assigned is a function of the value of the outcome and the expected level of deadweight. These outcomes are then measured, and outcomes paid according to the tariff when they are achieved.

As the use of SIBs grows in the UK, there is an emerging view that tariff models are the best option as they are simpler and more cost-effective to use than matched control groups or historical baselines. SIBs commissioned so far by central government have all adopted this model. By comparison, in the US, SIBs have tended to use the Randomised Control Trials to measure outcomes. This reflects the typically higher financial value of US SIBs, and the primary aim of demonstrating the efficacy of evidence-based interventions on a large scale. Ultimately, there is no one commonly held view on which outcomes measure should be used. The most crucial element of the decision will be that commissioners, providers and investors are all satisfied that the measure will robustly record additional impact.

## CHOOSING AN OUTCOMES FRAMEWORK – FACTORS TO CONSIDER

Outcome Attribution Model	Randomised Control Trial	Matching	Historical Baseline	Tariff Model	Before and After Study
Summary	Participants are randomly allocated to an intervention group and control group. Outcomes compared between the two.	Participants are statistically matched to individuals with similar observable characteristics not receiving the intervention. Outcomes compared between the two.	Outcomes in the intervention group are compared against outcomes achieved by a historic cohort with similar observable characteristics	Outcomes are measured through a standardised criteria. Outcome payments fixed prior to delivery based on expected costs of non-intervention. No comparison against a non-intervention group.	Outcomes of intervention group measured before and after programme, then compared against each other.
Pros	Most robust method available  Controls for deadweight	Can be used when intervention is not randomly assigned  Robust and controls well for deadweight	Can be used where RCT or matching not practically or ethically feasible.  Has some control for deadweight	Straightforward to structure and manage	Simple  Inexpensive
Cons	Expensive  Complex  Time-consuming  Intervention must be randomly assigned  Some ethical concerns re withholding of intervention	Expensive  Time-consuming  Risks of sampling bias	Does not account for broad societal or legislative changes  Time consuming  Relatively costly, especially if small contract size	Hard to take account of deadweight  Requires evidence of statistical relationships between variables  More risk of perverse incentives	Difficult to assess impact of programme
Examples	US Salt Lake City early childhood intervention SIB	Peterborough SIB	Essex Edge of Care SIB	DWP Innovation Fund  DCLG Fair Chance Fund	No known SIB examples

# 7 Case studies

## MATCHED CONTROL GROUPS

### **Peterborough Prison Social Impact Bond**

The Peterborough Social Impact Bond was the first ever SIB. It raised £5m to work with c.3000 short-sentence offenders leaving Peterborough prison. The SIB funds a wraparound support service designed to address the multiple and complex needs of the client group.

The outcome used to judge the success of the project is reductions in reconviction events. This is a proxy outcome for reductions in reoffending, which as described above is harder to measure as not all crimes reach a conviction.

Outcomes are measured across three cohorts of 1000 individuals. The attribution mechanism is a matched control group, against whom the number of reconviction events is compared. The control group is selected from the Police National Crime Database using Propensity Score Matching. For every 1 individual worked with in Peterborough, up to 10 statistically similar individuals are selected for the matched control group.

Individuals can access the Peterborough intervention for 12 months post-release. Their reconviction history is then monitored for a further 12 months to indicate sustainment of outcomes.

Results for the first cohort of 1000 prisoners on the Peterborough Social Bond (SIB) demonstrated an 8.4% reduction in reconviction events relative to the comparable national baseline. The results were compiled by independent assessor Professor Darrick Joliffe and his team from Qinetiq and the University of Leicester, for the Ministry of Justice, using the PSM methodology. The independent assessor calculated that there were 142 reconvictions per 100 prisoners in Peterborough compared to 155 reconvictions per 100 prisoners in the control group.

### **Essex Edge of Care Social Impact Bond**

The Essex Social Impact Bond funds intensive therapeutic support to adolescents who are at risk of entering the social care system. The intervention works with the parents and adolescents to improve challenging behaviour, which is a key driver of care entry within this cohort. The objective of the project is to reduce the amount of time that the adolescents spend in care. The SIB was launched in 2012 and was the first SIB with a local authority commissioner in the UK.

The Essex SIB uses a frequency outcome measure – the aggregate number of “care placement days saved” – compared against a baseline aggregate number of care days experienced by a historical comparison group. The historical comparison group was derived through detailed analysis of case files from adolescents who met the eligibility criteria for MST three years prior to the start of the SIB. Their journeys were then followed to establish the counter-factual scenario – the total number of care days we would expect such a cohort to have if the service offer remained unchanged.

The payment mechanism is based partly on observed care placement days saved over a 30-month tracking period and partly on the projected care placement days saved beyond the tracking period.

There are a number of reasons for using this measure of success and the tracking and payment mechanism described:

- The use of a frequency metric rather than a binary one encourages the service to work with all cases, and reduces perverse incentives to keep individuals out of care (where this is the best option);
- Each individual is tracked over a 30-month period to measure days spent in care, thereby providing incentives for sustained success in reducing care, not just for the initial period post MST intervention; in addition, payment for the projected care placement days saved beyond the tracking period is calculated based on the impact achieved over the whole 30-month period, thereby increasing the incentive for maintaining success over that period;
- The 30-month tracking period for individuals both in the comparison group and in MST cohorts also helps ensure that ECC is paying out as much on observed impact as possible, and the reduces the likelihood that ECC pays for days out of care which would have occurred regardless of whether or not MST was provided;

**Essex SIB (continued)**

- “Care placement days saved” represents cashable cost savings to ECC as most are variable costs; and
- The timeline for outcome payments is designed so that payments are made as soon as possible, allowing early outcome payments to be “recycled” to fund the SIB intervention in later years.

TARIFF BASED MODELS

**Department of Work and Pensions Innovation Fund  
[information taken from the Innovation Fund ITT Annex 8]**

The DWP Innovation Fund (IF) is designed to improve educational attainment and employment outcomes for disadvantaged young people at high risk of becoming NEET after leaving school. Over two rounds, the IF launched ten SIBs, each using a standardised outcomes tariff.

The outcomes in the tariff are proxy outcomes for long-term sustained employment. To place a value on these the DWP used available evidence to estimate the likely impact that a given increase in a proxy outcome would have on eventual benefit/employment status. Because many of these outcomes are associated with education, in many cases these are done indirectly – estimating the impact of the outcome on educational attainment, and then the impact of that improvement in educational attainment on eventual employment outcomes.

The financial value of each outcome derived is based on the savings to DWP from a young person of going into completely additional employment for two financial years starting 2012/13. This figure excludes indirect tax revenues and increased benefits and costs that accrue to other government departments. It is also not discounted by Net Present Value.

In order to translate many of these outcomes, which are often educational in nature, into a value that represents their impact on employment DWP calculated the employment rate impact according to the level of the outcome.

For example, for Level 2 outcomes it used UK Commission for Employment and Skills (UKCES) estimates of the employment rate for NQF Level 2 in order to “convert” these outcomes. The DWP then multiplied this with assumptions made about additionality to arrive at a monetary value for each outcome.

### **Additionality Estimates**

In order to estimate the “additionality” of each of the following outcomes DWP took the baseline of performance for a deprived/disadvantaged group, often using a proxy indicator, and either the national average, or the performance of a significantly less disadvantaged group. The two were then compared to obtain an estimate. In each case the Job Seeker’s Allowance saving and in most cases the appropriate employment rate for the associated NQF Level were used to translate these figures into a value to DWP.

The DWP acknowledge that this does not represent a full analysis of additionality, since it does not include any allowance for the extent to which the proxy outcomes might have been achieved anyway (the deadweight). But it does represent an estimate of the likely maximum value to DWP of achieving the proxy outcome.

### **Payment**

DWP will pay for one or more outcomes per participant which can be linked to improved employability. Providers were able to select the most relevant outcomes at the bid stage. The total cost of outcomes payable to each individual participant cannot exceed £11,700. This figure is based on a proportion of out of work benefits to a young person over a three-year period. In bidding for the Innovation Fund 1 and 2, many applicants offered a discount on the tariff payment.

Outcome Measure	IF R2 Tariff	Additionality %
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**Age 14 and 15**

Improved attitude to school/ education	£700	8%
Improved attendance at school (for persistently absent pupils)	£1,400	16%
Improved behaviour at school	£1,300	14%
QCF accredited entry level qualifications (below GCSE)	£900	10%

**Age 16+**

Improved attitude to school/ education	£700	
Basic Skills	£900	10%
First QCF Level 1 Qualification	£1,100	12%
First QCF Level 2 Qualification	£3,300	36%
First QCF Level 3 Qualification	£5,100	54%
Entry into First Employment	£3,500	59%
Entry into Sustained Employment	£2,000	

## 8 Step-by-step guide to outcome selection and measurement

1. Can the objective of the project be clearly defined?	Yes – go to Q.2 No – questions to consider Consider the ultimate social impact the project aims to make
2. Can this objective be distilled into a quantifiable measure?	Yes – go to Q.3 No – Questions to consider Are there components of this objective which can be quantified? Are there proxy measures for this objective?
3. Is this measure already in use and data collected as part of business as usual?	Yes – go to Q.4 No – questions to consider <ul style="list-style-type: none"><li>• Is there a similar measure that is currently collected?</li><li>• What would be involved in setting up a new system to collect data required for this measure?</li><li>• Would this be worth the additional resource, when compared against using an alternative measure or proxy measure?</li></ul>
4. Is the intervention likely to make an impact on this measure within a reasonable time-frame (1-3 years)	Yes – go to Q.5 No – questions to consider What is the likely time horizon? Are there any measures which are lead indicators of this outcome, which could be used in the interim?

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5. Would using this outcome create any perverse incentives for provider organisations?	No - go to Q.6 Yes - questions to consider Is there a way to use referral criteria to mitigate this? Would the choice of a binary or frequency measure mitigate the potential for perverse incentives?
6. Is it possible to construct a baseline to compare changes in the outcome measure against?	Yes - the outcome measure selected meets the requirements of a Social Impact Bond outcomes framework No - questions to consider Would this outcome measure be most suited to a matched trial, historical baseline or tariff model? Does the resource implication of this fit with the scale and size of the SIB?

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## 9 Conclusion

The nature and shape of public services is changing rapidly in the face of unprecedented challenge. At the heart of much of this change is an increased focus by commissioners on the social outcomes they seek to achieve. If successful this can have a powerful impact on the way that we contract for and deliver services to some of the most vulnerable members of society. The effectiveness of outcomes based commissioning lies in the ability to align the incentives of multiple stakeholders around the same objective/s. While this seems an obviously positive proposition, to date the silo-ed nature of public services and ineffective contracting approaches have often prevented this from happening.

Commissioning by outcomes can be employed in a range of commissioning approaches, and is a central feature of the Social Impact Bond model. This guide aims to make the process of outcomes based commissioning more accessible, in particular focusing on the different ways in which any technical challenges can be addressed. The process will ultimately require trade-offs to be made and crucially, the most important factor in the outcomes design of a SIB is that all stakeholders are satisfied that the metrics chosen will accurately reflect the social impact created by the model.

## Appendix 1 – Support available to develop Social Impact Bonds (SIBs)

### **What financial support is available?**

- In Summer 2013, the Big Lottery Fund launched a £40m Commissioning Better Outcomes fund with the aim of growing the market in social impact bonds and other outcomes based investment instruments. The fund complements the £20m Social Outcomes Fund launched by the Cabinet Office in November 2012.
- Applicants to the Funds will be public service commissioners (such as local authorities) who will use the funding to top up payments to a delivery partner or via a social investment intermediary for providing certain services and delivering pre-agreed outcomes.
- Big Lottery Fund has appointed Social Finance in partnership with the Local Government Association (LGA) to offer a support package for those developing Social Impact Bonds (SIBs) and other Payment by Results (PbR) based social investments as part of Commissioning Better Outcomes.
- Social Finance and LGA provide a range of support, including the publication of technical guides, development of online tools, holding webinars and production of podcasts, as well as offering workshops and diagnosis of further development needs. This will support proposals that could then go on to access technical development grants from Commissioning Better Outcomes, leading to a possible contribution to outcomes payments from either or both of the outcomes funds.
- The Big Lottery Fund has made over £3m available as 'Development Grants' to help commissioners develop

SIBs. This can be accessed on the condition that they have had an Expression of Interest (EOI) approved by the Fund. Commissioners can apply for between £10k-150k and the funding can be used to fund technical support requirements including undertaking financial modelling work, local data analysis, provider engagement, intervention selection and costings, outcome metric design, capital raising, procurement and commissioning work. Each development grant is subject to value for money checks to ensure that funding impact is maximised.

- Applicants for CBO need to be aware that, like all other Big Lottery Fund grants, CBO funding must be directed at people and communities most in need in the charitable, educational, environmental and health sectors. It must be used for purposes that are additional to statutory provision. Proposals must engage with the final beneficiaries and those working with them.

## Appendix 2 – What are the Outcomes Funds looking for?

### **Each fund has its own specific focus that reflects the respective missions of the Big Lottery Fund and the Cabinet Office.**

The programme outcomes for Commissioning Better Outcomes fund are:

- Improved skills and confidence of commissioners with regards to the development of SIBs.
- Increased early prevention being undertaken by delivery partners, including VCSE organisations, to address deep rooted social issues and help those most in need.
- More delivery partners, including VCSE organisations, able to access new forms of finance to reach more people.
- Increased learning and an enhanced collective understanding of how to develop and deliver successful SIBs.

### **The programme outcomes for Social Outcomes Fund are:**

- Increased innovation in public service delivery through outcomes based commissioning.
- Improved cross-government working in public service delivery and encouraging co-payment by different commissioners.
- Increased number of SIBs addressing complex needs and demonstrating ability to replicate by standardising the process.
- Increased capacity for SIBs as a long term tool of government to improve outcomes and reduce costs, by supporting

SIBs that test cashability of savings and ensure evidence is gathered to:

- Determine performance of interventions on their primary outcome
- Increase evidence on the impact of interventions on wider outcomes
- Improve outcome valuation.



### **Tom Symons**

Tom is an Associate at Social Finance and joined the team in 2012. His main area of work is the development of Social Impact Bonds for local authorities and the health sector. His work includes the social issue areas of children, complex families as well as health and social care integration. Before joining Social Finance Tom worked in a number of roles across the local government sector, most recently as an Advisor in the finance team at the Local Government Association, specialising in public service reform and local economic development. Prior to that Tom was a Senior Researcher at the New Local Government Network where he published widely on a range of topics, including public sector efficiencies and service redesign. Tom began his career at the London Borough of Islington.



January 2015

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WE BELIEVE THAT  
IF SOCIAL PROBLEMS  
ARE TO BE TACKLED  
SUCCESSFULLY, THE  
ORGANISATIONS SEEKING  
TO SOLVE THEM NEED  
SUSTAINABLE REVENUES  
AND INVESTMENT TO  
INNOVATE AND GROW.

Our role is to devise the financial structures and raise the capital to enable this to happen.

Social Finance injects market principles into funding in a way that stands or falls on results – both social and financial. We support social organisations to raise and deploy capital; we work with government to deliver social change; and we develop social investment markets and opportunities.

Now more than ever, there is a pressing need to harness social investment to make a long-term difference to society.

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