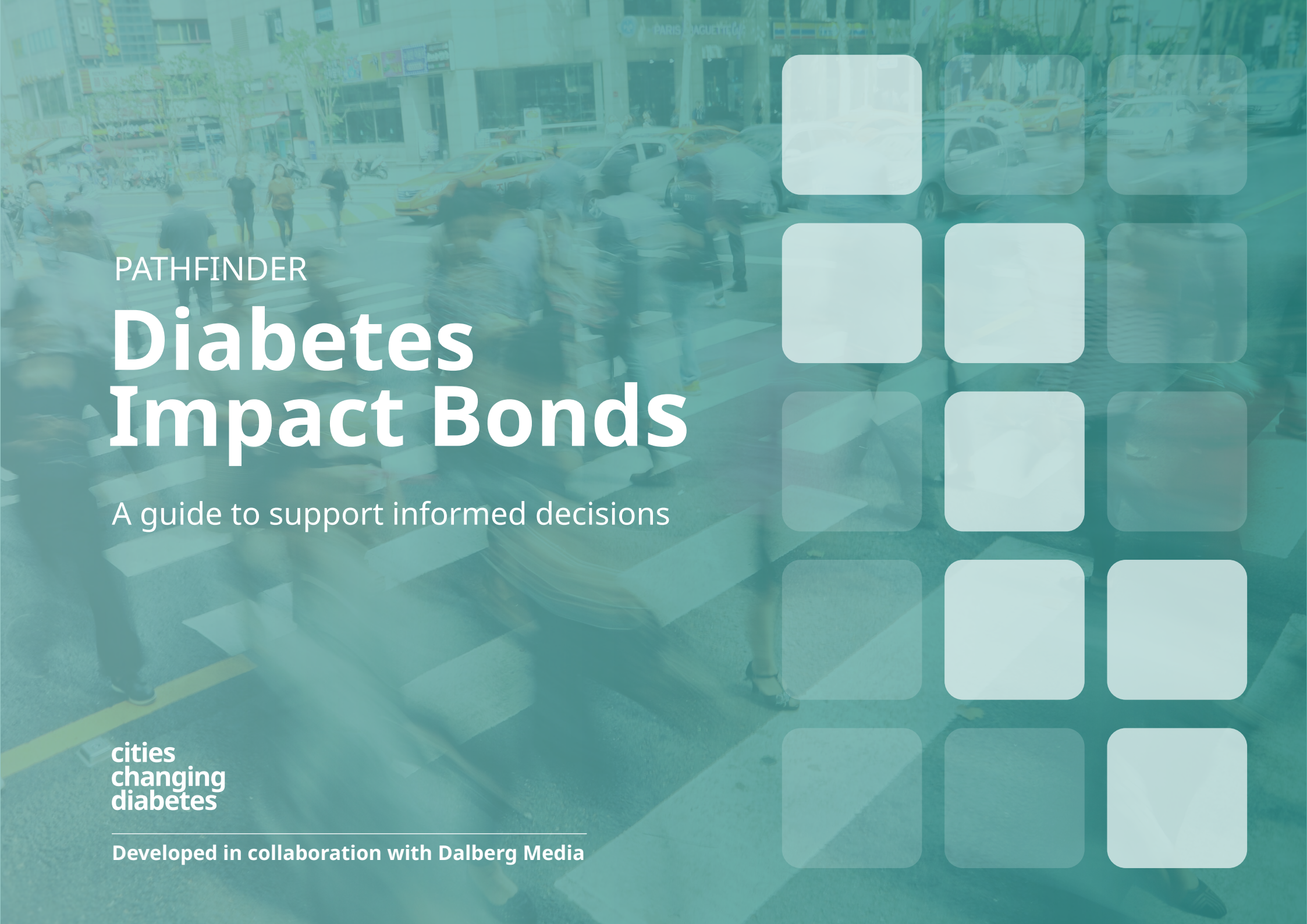


PATHFINDER

Diabetes Impact Bonds

A guide to support informed decisions

cities changing diabetes

Developed in collaboration with Dalberg Media

Impact bonds are an innovative model for mobilising diabetes prevention and care investments. The model has already demonstrated its potential through the experience in several cities around the world.

CONTENTS

INTRODUCTION

Embrace innovation to fund your health investment

City leaders today walk a difficult tightrope. They know that interventions to improve health pay for themselves over the medium- and long-term, but short funding cycles constrain investment capital that could prevent escalating costs or social harm in the future.

Diabetes Impact Bonds offer a viable path to investing in interventions that can sustainably curb or reduce the soaring financial and social cost of diabetes in cities.

Impact bonds are an innovative model for mobilising diabetes prevention and care investments. It has already demonstrated its potential through the experience in several cities around the world, including Aarhus, Denmark, where the formation of a cross-sectoral partnership enabled the city to accelerate the roll-out of a programme that reduces the risk of developing diabetes-related complications. The project reconfirmed what has been seen in other cities, that it is possible to construct an attractive investment case and mobilise additional resources to programmes for preventing type 2 diabetes-related complications.

The scale of the problem demands a new approach

Globally, an estimated 537 million people have diabetes, with 90% of all cases falling into the type 2 category.[1] Overweight and obesity, increasing life expectancy, ethnicity and family history are all factors underlying the prevalence of the disease.[1]

Living with diabetes has vast implications for quality of life, and the economic and social burden of the disease is equally massive.[1] At a global level, the financial costs of diabetes amount to 11.5% of global health expenditure.[1] This equates to 966 billion US dollars in 2021 and the cost is expected to surge as more people become affected by diabetes and related complications.[1]

According to the World Health Organisation (WHO), investing in the prevention of non-communicable diseases (NCDs) can lead to a rate of return worth up to seven times more than the initial investment.[2] Despite these obvious reasons to invest in preventative initiatives, investments in primary and secondary prevention investments remain low. While seven out of 10 deaths worldwide are attributed to diabetes and other NCDs, only 1–2% of health financing goes towards preventing and treating these diseases.

Unlock the potential of Diabetes Impact Bonds in your city

If the global diabetes challenge is to be successfully confronted, a proactive response from urban politicians and health leaders is required. It is time to think differently about routes leading away from diabetes prevalence in cities, and Diabetes Impact Bonds represent the most sustainable option for doing this at present.

This Pathfinder is a step-by-step guide to developing city-based impact bonds for stakeholders. It outlines ways to mobilise additional diabetes prevention and care funds to benefit citizens, patients, taxpayers and society. It can be followed as a linear guide or used as a tool to explain the challenges and opportunities of impact bonds.

The pathfinder is inspired by and illustrated with examples from the first Diabetes Impact Bond in Aarhus, Denmark, in 2021.

BACKGROUND

The impact bond model

This section introduces the basic structure of an impact bond and the roles and responsibilities of key partners involved in an impact bond project.

The section addresses three key questions:

1. What is a social impact bond?
2. How does the model work in practice?
3. What are the fundamental requirements for establishing an impact bond?

1. What is a social impact bond?

A social impact bond is a form of outcomes-based contracting. Although there is no single agreed definition of social impact bonds, most people understand them to be an innovative partnership model that aims to improve the social outcomes for a specific group of citizens.

The partners involved in an impact bond project can be divided into core partners (responsible for the project's outcome), and supportive partners (who connect the various actors, evaluate the interactions and regulate resource flows).

The core partners are normally comprised of a problem owner, a service provider and an investor. The supportive partners, who evaluate and facilitate the interactions, may be comprised of an evaluator and a facilitator. All partners are integral to the social impact bond's success.

Core partners:

Problem owner (most likely a city or a philanthropic foundation)

The problem owner (or 'commissioner') defines the problem and commits to paying for the achievement of clearly defined outcomes. These outcomes could include reducing the number of patients developing diabetes-related complications or decreasing diabetes-related medical expenses.

Service provider

The service provider develops and delivers relevant interventions per the guidelines defined by the problem owner and investors.

Investor

The investor finances a relevant intervention in exchange for a results-based payment.

Supportive partners:

Evaluator

The evaluator monitors the development of the result indicators that regulate the capital flow between the different parties.

Facilitator

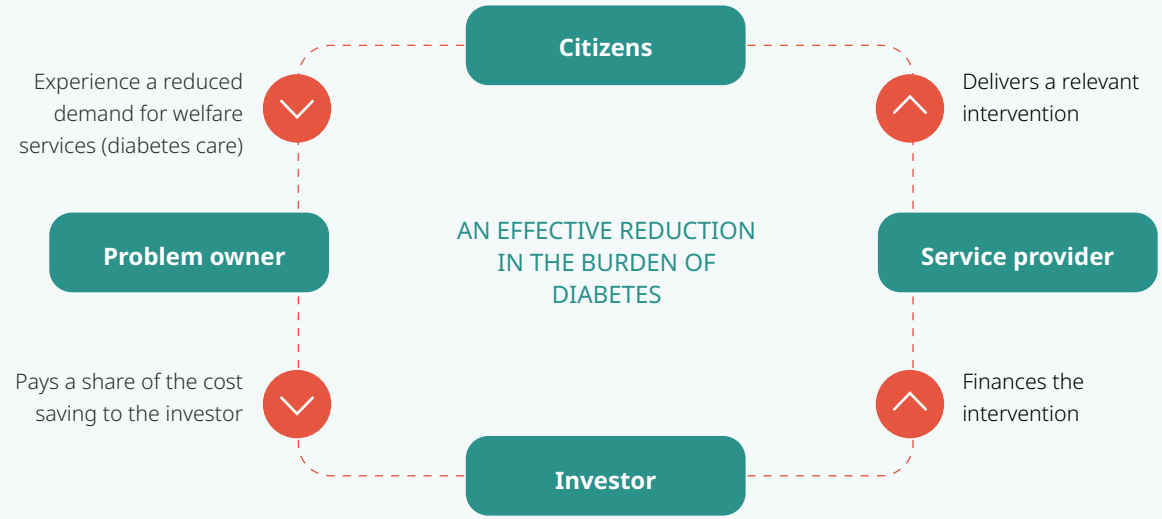
The facilitator facilitates the development of the intervention and regulates the flow of resources among the different partners.

2. How does the model work in practice?

The model is based on the following basic idea: an investor agrees to finance a relevant social intervention in exchange for a commitment from the problem owner to pay if the intervention leads to a positive outcome in one or more well-defined indicators, for example a reduction in blood glucose levels among the target group. The anticipated outcome payment for the investor covers the costs associated with the development and implementation of the intervention, plus a small risk premium to compensate for investor risk that the outcome payment will not cover the cost of the intervention.

One or more service providers deliver the intervention. At the same time, a set of predefined result indicators that determine the investor's outcome payment are monitored and evaluated by an independent evaluator.

Figure 1: The basic structure of an impact bond



3. What are the fundamental requirements for establishing an impact bond?

The establishment of a Diabetes Impact Bond has three basic requirements:

1. Willingness to pay for a positive change

The first criteria for establishing an impact bond is that someone (e.g., a city, a national health authority, or a philanthropic foundation) is willing to pay for the social outcome that a given intervention may produce. Whether the willingness to pay is grounded in a wish to increase the population's well-being or reduce the cost of care – or a combination of different objectives – is secondary. Someone must be willing to commit to a potential outcome payment that will exceed the intervention's cost. Without this, there is no basis for establishing an impact bond.

2. A well-defined theory of change

The second requirement is to establish a viable theory of change that establishes a link between the intervention and a change in social outcome. This will show that it is possible to design an intervention to achieve the outcomes for which the problem owner is willing to pay.

The intervention does not need to be defined in detail from the outset and may include one or more innovative elements that have not previously been tested. However, it will not be possible to create an impact bond unless problem owners and investors are convinced that it will be possible to develop and implement an intervention with a well-defined and quantifiable outcome.

3. Access to relevant data and processes for monitoring and evaluation

The third requirement is to ensure proper monitoring and evaluation of the intervention related to the predefined result indicator. Whether a change in a result indicator can be solely attributed to the intervention or whether it is driven by a combination of unconnected forces, is not the most important thing. More important is that the parties agree that the payments between the problem owner and investor will be determined by the change in a set of well-defined outcome indicators. Indeed, without this condition in place, it is exceedingly unlikely that problem owners and investors will engage in an investment programme.

The remainder of this guide is dedicated to explaining the mechanics of a Diabetes Impact Bond and the recommended path required for its implementation.

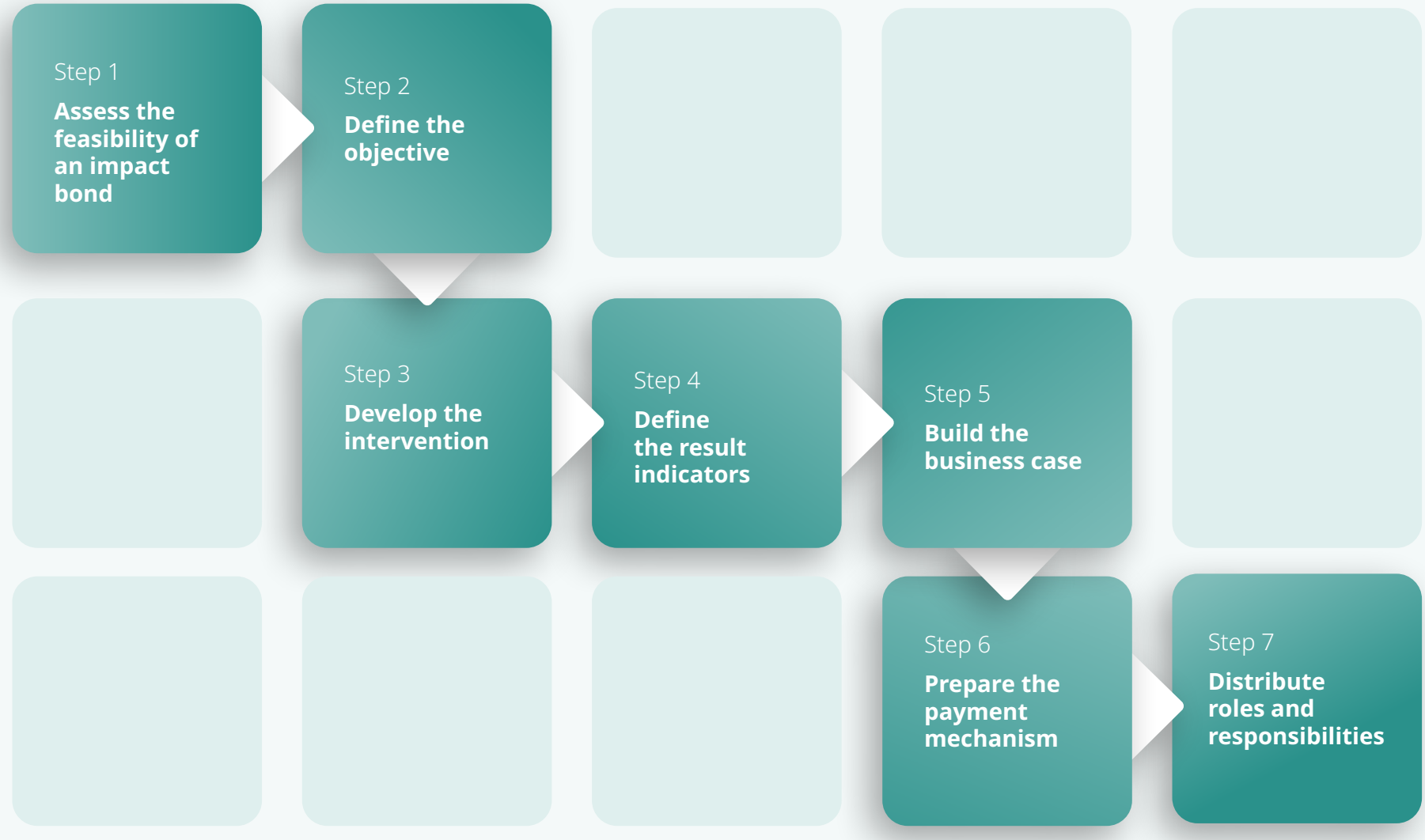
The market for Diabetes Impact Bonds

UK-based Social Finance launched the first Social Impact Bond in September 2010. Since then, it has launched an additional 138 impact bonds—of which 22 focused on health outcomes (as of December 2021). A further 69 impact bonds projects are currently under development in 31 countries.

As of December 2021, at least nine countries have either launched or are developing investment projects focusing on type 2 diabetes or other chronic diseases. Those countries include Canada, Denmark, Finland, Israel, Japan, Palestine, Sweden, the UK, and the US.
scenario, the problem owner would pay purely for the intervention's delivery rather than the impact

DIABETES IMPACT BONDS PATHFINDER

A step-by-step guide to find your path in developing city-based impact bonds for stakeholders



STEP 1

Assess the feasibility of an impact bond

The first step is to determine whether an impact bond is the right tool to apply in the given context.

This section addresses the following three key questions:

1. What are the potential benefits and challenges associated with an impact bond?
2. Which factors could influence the feasibility of an impact bond?

1. What are the potential benefits and challenges associated with an impact bond?

Benefits associated with an impact bond

Impact bonds help to implement interventions that cannot be delivered within the established system.

Mobilisation of additional funding

Cities may face short-term budgetary constraints that make it challenging to mobilise funding for type 2 diabetes prevention and care, or else they are reluctant to finance interventions on traditional terms due to uncertainty about outcomes. An impact bond project enables a city to overcome these challenges by engaging an external investor for access to short-term funding and a financial guarantee that the intervention will generate a value that exceeds the problem owner's cost of engaging in the investment programme.

Increased operational agility

Most city councils face operational rigidities, making it complicated to deliver effective interventions within the established healthcare system. For instance, city councils are often required to think in terms of broad-spectrum interventions that require integrating different instruments and service providers. By contrast, an impact bond can help to increase operational agility as service providers are typically able to deploy resources in flexible ways that are tailored to the specific demands of the problem.

Challenges associated with an impact bond

The use of impact bonds may be associated with challenges that should be considered before deployment.

Increased costs

Impact bonds necessarily involve a number of unavoidable transaction costs. For instance, there is a rigid monitoring and evaluation process to pay for; ongoing coordination and reporting; the cost of developing an investment programme and so forth. Moreover, time and resources are required to form a partnership; design an intervention; establish a business case; specify a payment mechanism; and

establish processes and data structures related to monitoring and evaluation.

In addition, there is an extra layer of costs to the delivery of an intervention as an investor requires a risk premium before agreeing to finance an intervention that does not guarantee an outcome payment in addition to its implementation costs. If an intervention is successful it will be more costly to the problem owner than if it had been financed in a traditional way. The level of this risk premium and hence the potential extra cost associated with this financing model compared to traditional financing models, will vary substantially with the degree of uncertainty related to the intervention.

Risk of inefficiency if parallel delivery systems emerge

Establishing a well-defined investment case requires that the intervention be delineated from existing interventions. It also requires that an observed change in result indicators can be attributed to the specific interventions facilitated by the investment programme. The increased operational agility associated with a social impact bond may make capturing potential synergies between different initiatives more challenging. Thus, if not properly constructed, social impact bonds have the potential to reduce rather than increase efficiency.

Alternatives to a social impact bond

An impact bond is one of many tools that can be used to finance a health intervention. Therefore, the decision to develop an impact bond needs to involve careful consideration of the benefits and challenges associated with the model in a specific situation and context. Other options include:

Status quo
One option is to do nothing and continue with the existing modus operandi. Such an approach will shield the problem owner from potential outcome payments. However, the problem owner (normally the city administration), will have to face the consequences of inaction. One such consequence may be, for example, a rise in the prevalence of diabetes or diabetes-related complications.

Purchase the intervention on regular terms
Another option could be to purchase the intervention on regular terms. In this scenario, the problem owner would pay purely for the intervention's delivery rather than the impact the intervention may generate. This option will reduce the total cost to the problem owner, and remove the need for the problem owner to compensate an external investor for the risk related to uncertain outcome payments. However, the problem owner will be directly exposed to the risk of the intervention not delivering the expected social outcome.

Create an internal investment programme
Finally, a problem owner may consider anchoring the solution in an internal investment programme where it acts as problem owner and investor at the same time. Such a solution reduces the total costs of the intervention by internalising the risk premium that would be otherwise reserved for the investor. In addition, internal investment programmes may also reduce the transaction costs associated with monitoring and evaluation, as the interests of the problem owner and investor are fully aligned. However, an internal investment exposes the problem owner to the risk that the programme will not deliver the expected results. Also, internal financing will not enable the problem owner to overcome the challenge of short-term budgetary constraints.

2. Which factors could influence the feasibility of social impact bond projects?

The assessment of whether an impact bond project could be an effective tool for addressing a specific health challenge needs to include an initial assessment of the problem owner's situation and preferences.

The following factors are good indicators of when a an impact bond may be appropriate for a problem owner:

- The existence of operational rigidities that make it challenging to deliver impactful solutions within the established health system.
- Short-term budgetary constraints that make it difficult to allocate sufficient resources to areas of concern.
- Risk aversion or strong preferences to avoid paying for potentially ineffective solutions.
- An aspiration to explore new innovative solutions without enduring the costs and risks associated with social innovation.
- A preference for enhancing transparency with regard to resource utilisation and the value creation associated with prevention and care provision.

The factors below are good indicators of when an impact bond may not be appropriate:

- Existing programmes make it challenging to design an intervention that is delimited from existing efforts in terms of delivery and impact.
- Complex effect chains and interdependencies make it challenging to establish a strong link between an intervention and a change in a well-defined social outcome.
- The existence of economic structures that imply that the benefits of an intervention are divided between many different stakeholders.
- The inability to operationalise a social outcome into a quantifiable indicator and lack of data and data structures that support ongoing monitoring and evaluation of social outcomes.
- A strong preference for cost efficiency combined with a low level of risk aversion.

CASE STUDY

Aarhus, Denmark

The decision of the Aarhus city council to develop an impact bond was based on the acknowledgement that the city could not offer vulnerable citizens access to effective lifestyle interventions at scale. The demands of risk capital and cross-sector collaboration could not be met within the existing system and called for social innovation. The use of a social impact bond implies that an increased level of operational agility and financial protection against ineffective solutions was essential to the city.

STEP 2

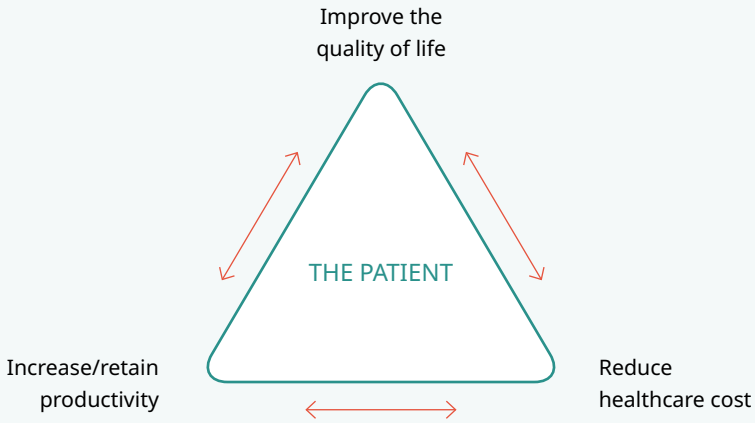
Define the objective

The second step is to define an objective to guide the design of an appropriate intervention.

This section addresses the following three key questions:

1. Which objectives could motivate for the establishment of a social impact bond?
2. What are the opportunities for achieving different objectives along the care pathway?
3. How can one balance different preferences when defining the programme objective?

Figure 3: Clarifying the programme objective



1. Which objectives could motivate the establishment of a social impact bond?

The development of an impact bond starts by specifying an objective. The specification of the objective should proceed from an analysis of the broader strategic goals of the problem owner, as the purpose of an impact bond will be to support these goals. The objective should be a specific social outcome that the problem owner seeks to achieve by initiating the investment programme.

When specifying the objective of a Diabetes Impact Bond, it is often relevant to break it down into three categories: improving quality of life, increasing productivity and reducing healthcare costs by lessening the demand for healthcare services (Figure 3).

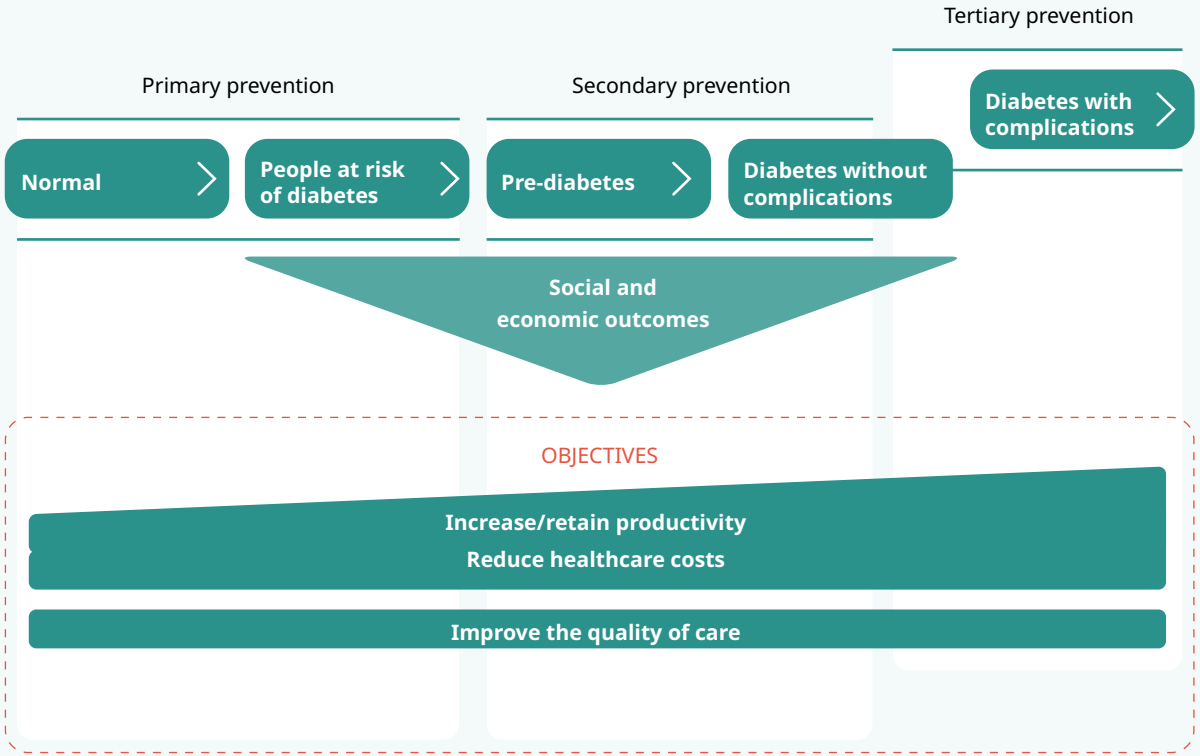
These three objectives will often be closely related. For instance, an intervention that reduces the demand for treatment and care is likely to increase the quality of life and individual productivity among programme participants (for example, by reducing the number of days people cannot work due to poor health). Similarly, an improvement in the quality of life among programme participants will often require a health improvement closely related to the demand for treatment and care. Therefore, a precise specification of programme objectives is essential when designing the intervention.

2. What are the opportunities for achieving different objectives along the care pathway?

Impact bonds can, in principle, be used as a lever to accelerate the implementation of impactful interventions that target a range of challenges along the care pathway. Each step on the care pathway offers an opportunity for improving quality of life, as well as other social benefits such as raising productivity (by lowering the number of sick days), or reducing the demand for treatment and care (Figure 4).

However, the opportunities for achieving the different outcomes will vary along the care pathway. An intervention that aims to increase quality of life for elderly people at risk of developing diabetes-related complications will only have a limited impact on the productivity of those individuals. Similarly, an intervention that aims to promote early detection of diabetes may have a smaller impact on quality of life than an intervention that aims to help people with diabetes manage their disease - at least in the short-term.

Figure 4: Social and economic outcomes along the diabetes care pathway



3. How can one balance different preferences when defining the programme objective?

Beyond clarifying the relative importance of the three categories of objectives, specification of the programme objective will also require clarification of the time preference (how documentable short-term gains are balanced with expected long-term benefits). Additionally, stakeholders may have different preferences regarding the level of change they are seeking as well as the demonstrable link between a given intervention and the realisation of programme objectives (predictability).

Examples of objectives and target groups may be primary prevention, with children and adolescents living with obesity being the target group, or increase efficiency in care by focusing on screening of people living in remote areas, or reduce negative side effects of diabetes with a focus on people experiences diabetes stress (Table 1).

Table 1: Examples of defining potential programme objectives for a social impact bond

Possible objectives	Relevant target groups	Social outcomes		Economic benefits		Predicta-bility
		Short-term	Long-term	Short-term	Long-term	
Enhance primary prevention	Children and adolescents living with obesity	○	✓	○	✓	Low
Increase efficiency in care	People living in remote areas	✓	○	✓	○	Med
Reduce negative side effects of diabetes	People experiencing diabetes stress	○	✓	○	✓	High

Social outcomes and economic benefits can be rated on a scale of low/medium/high.
Predictability can also be rated on a scale of low/medium/high.

CASE STUDY

Aarhus, Denmark

In Aarhus, the main objective of the impact bond was to reduce the number of diabetes-related complications among vulnerable people. The choice to focus on diabetes-related complications was based on an analysis that showed that short-term cost savings were higher for secondary prevention than for primary prevention. The choice to focus on vulnerable people was anchored in a political ambition to reduce inequity in health.

STEP 3

Develop the intervention

The third step is to develop an intervention that can deliver a well-defined outcome with an expected rate of success.

This section addresses the following three key questions:

1. What affects the risk of developing type 2 diabetes and associated complications?
2. Which types of intervention can be included in an investment programme?
3. Which features should be considered when designing an intervention?

1. What affects the risk of developing type 2 diabetes and associated complications?

A range of interconnected factors influence the likelihood of developing type 2 diabetes or associated complications (Figure 5). When planning ways to reduce diabetes prevalence, it is therefore important to realise that an initiative within one area can quickly be offset by an initiative within another area. Likewise, initiatives often have a reinforcing effect on one other. For this reason, diabetes can only be successfully addressed by adopting a holistic health-in-all-policy approach.

Figure 5: Factors that influence the risk of diabetes and diabetes-related complications

Biological factors

Factors including age, gender and ethnicity directly impact the risk of developing diabetes, but there is little one can to do control these risk factors.

Social factors

Factors including personal income; work and family obligations; and level of health literacy (etc.).

Structural factors

Factors including the cost and supply of healthy food and beverages relative to less healthy alternatives; access to facilities supporting social interaction and physical exercise; and the provision of relevant health services (for instance, screening and control facilities).

Cultural factors

Factors including social norms and values, guide daily decision-making within the constraints of structural and social factors.

2. Which types of interventions can be included in an investment programme?

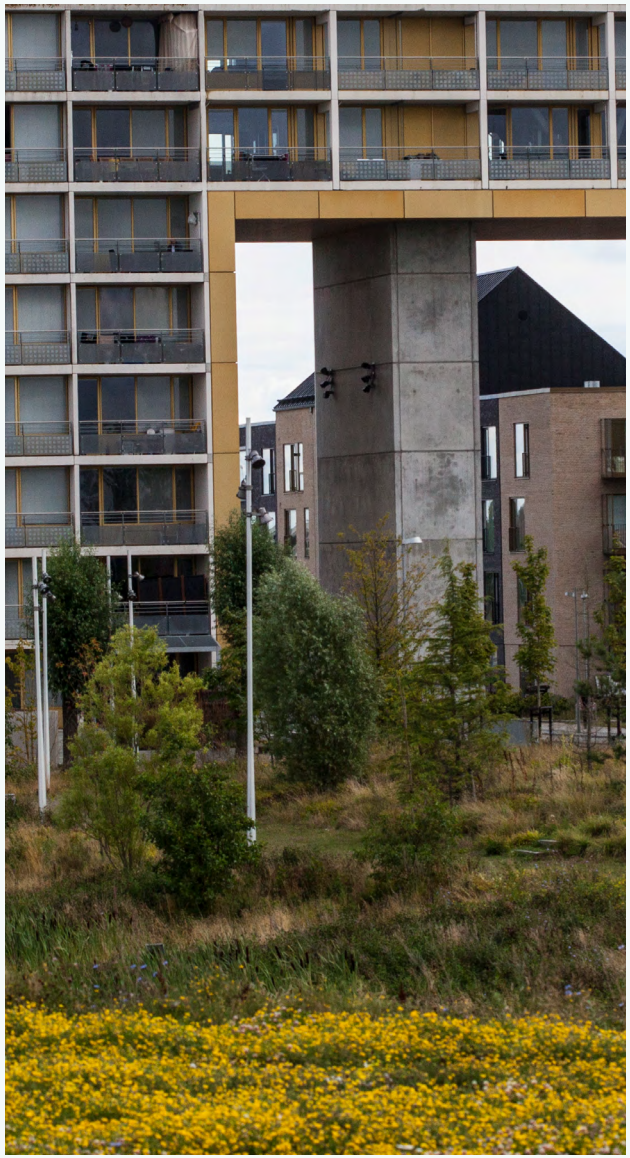
In terms of designing an impactful intervention, it is important to distinguish between micro- and macro-level initiatives (Table 2).

Micro-level initiatives target individuals who take part in a specific programme. By contrast, macro-level initiatives focus on the broader enabling environment, such as the price and availability of healthy food, access to physical infrastructure that promotes active living, and so forth. An investment programme can, in theory, include initiatives at both the micro- and the macro-level. In terms of creating an impact bond, however, micro-level interventions are typically easier to oversee due to the comparative ease of establishing a clear link between a micro-intervention and the achievement of programme objectives. The main reason for this is that the target group for a micro-level initiative will always be clearly defined, which is often not the case in macro-level interventions.

A macro-level initiative (e.g., increasing the supply of skilled healthcare workers) may significantly impact a well-defined programme objective, such as reducing the share of diabetes patients who eventually develop diabetes-related complications. However, it may be challenging to determine whether an observed change in the number of patients who develop disease-related complications can be attributed solely to the increased supply of skilled healthcare workers, or whether it can be attributed to other factors. Therefore, constructing an investment programme that focuses on macro-level variables typically requires both the problem owner and investor to accept greater uncertainty about the link between the intervention and the result indicators that will trigger an outcome payment from the problem owner.

Table 2: Examples of micro- and macro-level interventions

Level of Intervention	Examples
Macro-level	Political commitments, policy changes (e.g., taxation), physical infrastructure, capacity within the healthcare system, education systems, access to information etc.
Micro-level	Patient education, counselling, practical support (e.g., regarding the planning of diets), access to training facilities, equipment, medication, programmes for screening and control etc.



3. Which features should be considered when designing an intervention?

In addition to achieving an appropriate balance between micro- and macro-level initiatives, it is important to consider a range of other issues when designing an intervention. These include the following:

Scale and delimitation

The scope of an intervention will determine how much credit it can take for the realisation of a positive social outcome. If the scope of the intervention is limited, it will be difficult to compellingly link it to any positive social outcome that the intervention sought to address. In turn, this creates a potential challenge when it comes to constructing a meaningful payment mechanism. In addition, the construction of a robust business case requires estimating how a social outcome metric will develop both with and without an investment in an intervention. If the intervention is not clearly delimited from other interventions, it may be challenging to assess its impact.

Length and intensity

The length and intensity of an intervention will fundamentally affect its impact. More prolonged and intense interventions will often deliver better results than shorter and less intense ones. However, increasing the length and/or intensity of an intervention will also increase its capital costs. Capital provision is associated with an opportunity cost for the investor that is directly linked to the time period over which the capital is to be provided. Increasing the duration from one year to two years would thus double the cost of capital, even when other resources remain the same.

Instruments and structure

An intervention will often be based on a combination of different instruments and structures, such as individual counselling sessions and access to peer support. The combination of different instruments may increase the impact of the intervention. Nonetheless, it can also make it more challenging to construct a clear link between the intervention and the outcome—particularly when programme participants receive different combinations of measures to ensure that the intervention is tailored to their unique situation.

Cost, return and cost-effectiveness

The unit costs of different instruments may vary significantly. The use of digital solutions, group sessions, and community involvement can often significantly reduce the unit costs of an intervention and may even increase its effectiveness. However, most investors will focus on total return and the cost-return ratio rather than on costs alone. An investment of 10m USD with an expected return of 10% p.a. may be more attractive than an investment of 1m USD, which offers an expected return of 15% p.a., due to the existence of transaction costs and limitations with regard to the supply of investable projects.

CASE STUDY

Aarhus, Denmark

In the case of Aarhus, the design of the intervention was anchored in the city's strategic diabetes action plan, which combined a range of initiatives at the micro- and macro-level. The intervention was also heavily inspired by a previously piloted intervention design that formed the foundation for establishing the social impact bond. However, with the social impact bond the original solution was adjusted in several ways to further enhance its effect and cost-effectiveness. The final solution involved a combination of individual- and group-based interventions, such as bilateral conversations with relevant healthcare professionals and group-based courses to build social ties between programme participants. All programme participants were offered a unique combination of interventions to ensure that the solutions were tailored to their specific needs and resources.

STEP 4

Define the result indicators

The fourth step is to establish well-defined result indicators to establish a payment mechanism that can regulate result-based payments from the problem owner to the investor.

This section addresses the following three key questions:

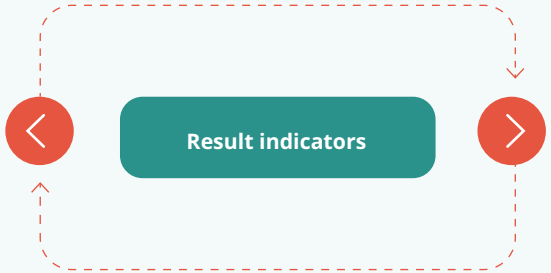
1. What role do outcome indicators serve in a social impact bond?
2. How can the potential outcome indicators be classified?
3. What parameters should be considered in the selection of output indicators?

1. What role do outcome indicators serve in a social impact bond?

The definition of result indicators (i.e., indicators that can monitor and evaluate social outcomes) is a cornerstone of constructing a successful impact bond. This is because these indicators regulate the capital flows between different partners—most notably, the outcome payment from the problem owner to the investor. Well-defined result indicators that can be used as a foundation for the neutral assessment of intervention progress and impact. Besides regulating capital flows in the implementation phase, the specification of result indicators also serves two essential purposes in the development phase. The first of these is to provide a direction for the intervention design. The second is to create a foundation for the construction of the business case to support the mobilisation of outcome funding and risk capital (Figure 6).

Figure 6: The role of result indicators in the development phase

Building an intervention: Create a foundation for identification and development of a meaningful intervention that support the realisation of said objective



Creating a business case: Identify and evaluate social- and financial outcomes that can be achieved through the launch of relevant interventions to support the establishment of a solid business case.

2. How can the potential outcome indicators be classified?

The selection of result indications is closely related to the definition of the programme objective. The indicators are used to evaluate whether the programme is making a measurable contribution to the achievement of the objective.

The result indicators can be divided into two broad groups:

1. Register data

Data that can be assessed without additional interaction with the people affected by the intervention. Register data may include data from electronic health journals, public health registries (e.g., use of medicine), labour market activity (e.g., employment rate), and so forth.

Table 3: Ideas for potential result indicators

	Category	Example	Rationale
Health	**Coping ability**	Health literacy, disease management skills, etc.	… because we want to empower citizens to act
	Behaviour	Diet, physical activity, compliance, attendance to controls etc.	… because a change in behaviour can reduce the risk of developing diabetes-related complications
	Biomarkers	BMI, waist circumference, blood pressure, haemoglobin level etc.	… because the development in biomarkers can be monitored and evaluated objectively
Economic	**Productivity**	Labour market status, labour capacity (ability to work), absence (sick days) etc.	… because the use of healthcare services is associated with a well-defined budget effect
	Healthcare services	Social service e.g. related to management of personal problems etc.	… because health problems and social problems are closely related
	Use of other services	Social services e.g. related to management of personal problems etc.	… because health problems and social problems are closely related
Wellbeing	**Quality of life**	Quality of life, life satisfaction, level of perceived stress etc.	… because a change in wellbeing may influence the demand for public service offerings and improving quality of life is a goal in itself

2. Survey data

Data based on direct interaction with people who are either impacted by the intervention or who observe people that are affected by it (e.g., doctors who are in contact with participants in the health programme).

A range of different data points can be used as result indicators and the optimal choice of an indicator will depend on the preferences among the problem owner and the investor. Since the outcome payment is directly linked to the development in the result indicator(s), the problem owner will require a strong link between the result indicator and the underlying programme objectives. Likewise, an investor will require a strong link between the intervention and the result indicator that is driving the outcome payment from the problem owner to protect the value of their investment.

Table 3 provides some specific examples of potential result indicators for a diabetes intervention programme.

3. What parameters should be considered in the selection of output indicators?

Besides reflecting the core values in the programme objective, the optimal choice of output indicators ought to reflect some more practical considerations. For example, output indicators must take into consideration the ease of collecting and analysing the relevant data points; the level of uncertainty with regard to measurement; and the strength of the relationship between outcomes and programme objectives.

Ease of collecting and analysing data

The access to relevant data points that are publicly available and can be collected free of charge will vary significantly with the objective of the project and the geographic context of the interventions. Collection and processing of register data will typically be associated with fewer transactions costs than collection and processing of survey data. The reasons for this are that a) register data is collected anyway; b) it is based on standards that are commonly accepted; and c) it is typically exposed to different control measures, which reduces the need to add controls that adjust for potential biases, etc.

Level of measurement uncertainty

Data collection and processing will always be associated with some degree of uncertainty. The level of uncertainty can either derive from biases in accessibility (as it may be easier to obtain data from some individuals than others), or biases in the responses. The level of uncertainty is typically higher and less controllable for survey data than for register data, as register data does not suffer from the same subjective perception biases embedded in any kind of self-assessment. Examples of specific biases may include age (as younger people may have a different response rate to older people); digital literacy (as digital-savvy people are more inclined to use digital response forms than people who are less confident using such instruments); socioeconomic status (as more vulnerable people may find it more difficult to mobilise the energy required to respond to questionnaires); and so forth. In many cases, the measurement success rate will vary with the background characteristics of the programme participants. This implies that problem owners and investors need to address potential biases by selecting result indicators carefully.

Strengths of the relationship between the outcomes and objectives

Most data points represent some sort of proxy for an underlying variable, which is of primary interest to the problem owner. Data on blood glucose levels can, for instance, be used as a proxy for the risk of developing diabetes-related complications, while income data can be used as a proxy for self-sufficiency. Despite the practical issues relating to data collection and the management of uncertainties, survey data may often be superior to register data in describing the underlying social objective of an intervention.

CASE STUDY

Aarhus, Denmark

In the Aarhus case, it was decided to focus on one result indicator—long-term blood glucose levels among programme participants. The choice to focus on only one indicator was based on a wish to keep the model as simple as possible. This specific result indicator was chosen due to the strong statistical link between blood glucose levels and the risk of developing diabetes-related complications, and the fact that "blood glucose" could be measured objectively. In addition to this official result indicator, it was also decided to monitor a range of other result indicators, such as the participation rate and the ability of participants to self-manage their condition. This data was then used to stimulate further development of the intervention.

STEP 5

Building the business case

The fifth step is building a business case. It provides problem owners with a degree of certainty that the potential outcome payments will be outweighed by the value created by the intervention.

This section addresses the following three key questions:

1. What is the economic burden of diabetes?
2. How can value creation be quantified?
3. How can an investment programme be altered to improve the business case?
4. How do you build the business case in practice?

1. How to quantify the economic burden of diabetes?

Diabetes imposes a considerable health burden and a significant economic burden worldwide. The global economic burden of diabetes has been estimated at 966 billion US dollars in 2021[1] in terms of both the direct costs associated with treatment and care, and the indirect costs associated with lower productivity related to absenteeism, presenteeism and loss of labour capacity.

The economic cost of diabetes is closely related to the complications experienced by people living with the condition. Studies indicate that the development of minor disease-related complications will ultimately more than double the societal costs of managing diabetes.

The development of a major complication will increase the costs by a factor of five compared to cases where people do not experience any complications[1].

These numbers suggest that interventions that can either prevent or postpone the development of diabetes and associated complications, such as cardiovascular diseases, nerve damage (neuropathy) and kidney failure, have a high potential of improving quality of life and reducing the economic burden of the disease.

2. How can value creation be quantified?

The value generated by a diabetes intervention may be divided into four broad groups: 1. Healthcare savings, 2. Productivity gains, 3. Reduced demand for social services and 4. Non-economic value (Table 3). The value that can be unlocked within each of these categories by a diabetes intervention will vary with the design of the intervention—in particular with regards to the choice of target group.

An intervention aimed at elderly people will, for example, lead to a different level of expected productivity gains than an intervention aimed at people of working age. Likewise, the geographic context will also influence the level of expected cost savings as the access to relevant health care services may differ significantly.

Table 4: Estimating the value of an intervention

Group	Examples
1. Healthcare savings	Primary sector; secondary sector (e.g., hospitals); pharmaceutical drug costs; nursing costs; education and psychological assistance; medical appliances; etc.
2. Productivity gains	Lost income (the employment rate); lost income (e.g., through premature death); absence (e.g., sick days); etc.
3. Reduced demand for social services	Income transfers and other social services.
4. Non-economic value	Quality of life; equality in healthcare provision; etc.

In developing the business case, it may be relevant to distinguish between three groups of distinct parameters. These groups can be thought of as follows: Actual recorded gains, estimated gains and non-financial gains (for example, improvements to quality of life) (Table 4).

In addition, other potential benefits may be considered for inclusion. For instance, another benefit for the problem owner could be gaining an improved understanding of cause-and-effect dynamics, or the establishment of new cross-sectoral partnerships. Whether to include estimated (non-recorded costs) or non-financial rewards (e.g., improvements to quality of life) will vary with both the preferences of the problem owner and the economic realities the problem owner is facing. Even though a risk-averse problem owner might prefer to focus solely on recorded costs savings when establishing the payment mechanism, there are often good reasons to map and evaluate all potential benefits as a means of improving understanding of the entire value created.

Furthermore, a deeper understanding of positive side effects may constitute important knowledge for the decision-makers—for example, by influencing their willingness to accept various risks.

Table 5: Making a case for preventing or postponing diabetes and related complications

	Pro's	Con's
Actual recorded costs	Unambiguous link to specific budget posts	May be challenging to establish a clear-cut link
Estimated costs (e.g., based on the use of statistical modelling)	Authorities can assign a value to a change in a risk factor	A change in a risk factor will not guarantee an actual cost saving
Quality of life (and other non-economic factors)	More nuanced assessment of the "true" value of an intervention	The budgetary effect of a change in a soft parameter may be unclear

3. How can an investment programme be altered to improve the business case?

Even though the business case for investing in primary or secondary prevention is often attractive when evaluated at the societal level, the construction of a business case that unlocks an outcome payment from the problem owner (e.g., a municipality), can be hampered by three challenges.

Challenge 1: Preventing or postponing diabetes and related complications

The gains of preventing or postponing diabetes and diabetes-related complications are typically distributed between different public entities at the local, regional, and national levels. In addition, many private sector players such as insurance companies, and employers will also reap part of the benefits. Hence, even though the business case might be robust when evaluated at the societal level, it may be less attractive when evaluated at the city level or at the level of a specific department within the city.

Challenge 2: The gains will be distributed in the long-term

The gains associated with implementing a relevant intervention will be distributed over several years and may not be significant in the short-term. The cost of inaction will be limited in the short-term and will protect the problem owner with a slower increase in costs over time. This is only natural, as the costs of managing the disease can only be expected to decrease gradually as the intervention takes effect over time.

Challenge 3: A potential increase in other costs

The effective management of diabetes might lead to an increase in other costs, as people might live longer—and hence might develop different health profiles over time. For instance, the decreased costs of treating diabetes may be replaced by the increased costs of providing elderly care. If the problem owner assigns a value to "quality of life", this might not constitute a challenge.

Significant as they are, these challenges do not imply that it is impossible to construct an attractive business case for a diabetes prevention and care programme. Each challenge can be mitigated or managed in different ways. The fact that gains tend to be distributed between different parties can, for instance, be addressed by the construction of an outcome fund based on resources from multiple stakeholders. Likewise, the challenge of gains gradually materialising over time can be circumvented by establishing innovative funding mechanisms that enable an entity to front-load a future cost-saving. For instance, this can be done by obtaining a loan in which repayment is linked to the development of a specific indicator.

Alternatively, the challenges can also be managed pragmatically by simply focusing on narrower target

groups, for whom an impactful intervention will create a significant short-term value for a specific partner. One example of such a target group would be people at high risk of developing a major diabetes-related complication. Development of such a complication could lead to a significant and well-defined increase in the demand for hospital treatment within the foreseeable future. significant and well-defined increase in the demand for hospital treatment within the foreseeable future.

4. How do you build the business case in practice?

It is vital to acknowledge from the outset that a business case for a social intervention will always be associated with a certain degree of uncertainty. If the degree of uncertainty involved in an intervention is not a major factor for the problem owner, then purchasing the intervention using a traditional fee-for-service model may be a better alternative to anchoring it in an impact bond. On the other hand, if the degree of uncertainty is a significant barrier to creating an intervention, this might be a good reason for using an impact bond as the impact bond will effectively protect the problem owner from the risk that an intervention will not deliver the expected social outcome.
If the commitment to a potential outcome payment poses a serious risk for the problem owner, it would be wise for them to explore all options that can help to reduce the level of uncertainty associated with the intervention outcome. One way to do this would be to include the problem owner's actual spending on healthcare services as an explicit result indicator to ensure that there is a direct link between outcome payments and recorded cost savings.

Methodological considerations when constructing a business case

The value of preventing diabetes or providing better care to avoid the development of diabetes-related complications can be estimated in different ways. Even though specific ground rules need to be reflected in each approach, and no single methodology is unambiguously better than the others.

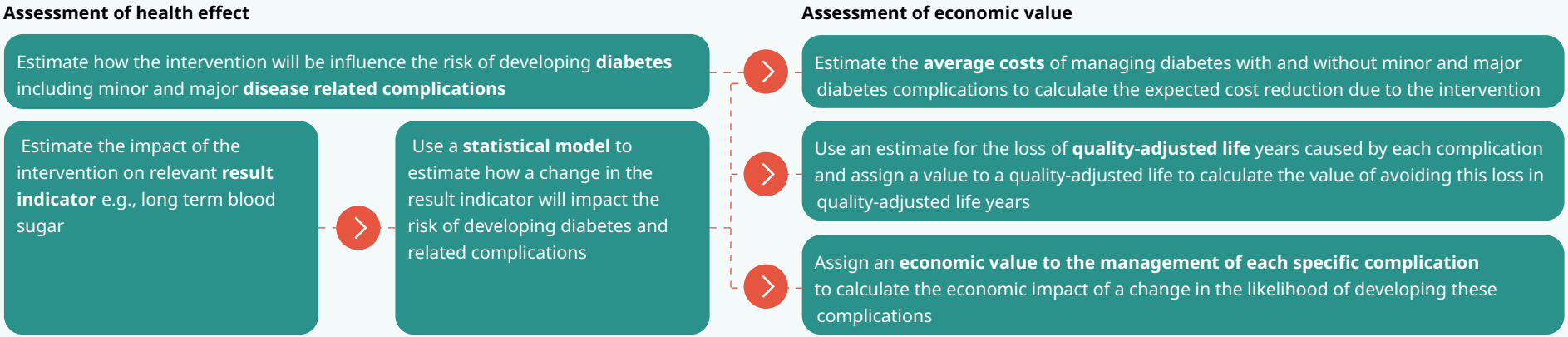
Just as stakeholders may have different preferences regarding what to include and exclude in the construction of the business case (cf. the discussion above), they may also have different methodological approaches (based, for example, on their different levels of risk aversion).

Figure 7 provides some examples of how to estimate the economic impact of an intervention, which is inspired by the development of the social impact bond in Aarhus, Denmark.

An impact bond is more than "just" an intervention

In addition to these solutions, attractive engagement opportunities may be unlocked by acknowledging that an impact bond is not a traditional investment programme but a partnership model that generates a

Figure 7: Defining the scope of the investment case

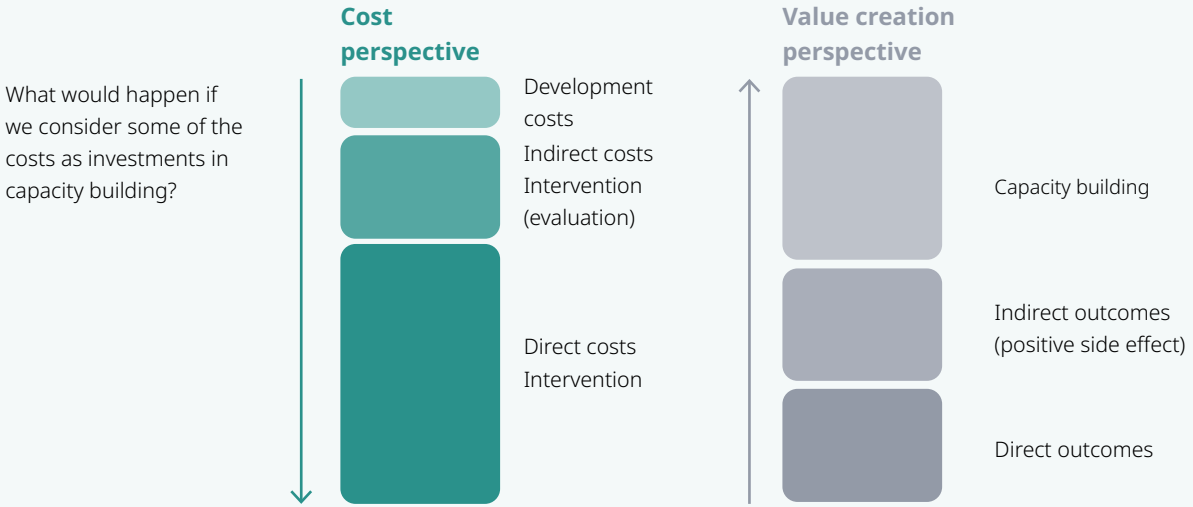


value which exceeds pure monetary cost savings. A social investment programme will typically include a range of costs and gains that are not solely linked to delivering a specific intervention. As an example, the development and implementation of an impact bond will generate new insights and learnings inside the organisations involved. As such, part of the development cost might also be considered an investment in capacity building.

Likewise, collecting data about social outcomes that regulate capital flows between the problem owner and the investor may also provide the parties with valuable insights about the social challenge that the investment programme aims to address. Therefore, part of the costs associated with the investment programme can be considered an investment in a collective good. This could be an argument for seeking to separate funding for some programme elements from other sources, which would reduce the budget for the investment problem and hence the need for risk capital and outcome payments.

Figure 9 provides some examples of how the costs and values associated with the initiation of an investment programme can be altered by considering the investment programme as part of a larger social innovation agenda.

Figure 8: Defining the scope of the investment case



CASE STUDY

Aarhus, Denmark

The business case was built in three steps. It first involved a simple "back of the envelope" estimation of the value of preventing a person with diabetes from developing a diabetes-related complication. This estimation was derived from an academic study that described the average costs of diabetes-related care for people with and without complications. This created a foundation for a strategic decision to invest time and resources in developing an investment programme and nuanced business case.

The second step was an assessment of the likelihood that a specific intervention would lead to a reduction in long-term blood glucose levels among programme participants. A statistical model was used to simulate the health status trajectory of programme participants to estimate how the intervention would influence their risk of diabetes-related complications and hence their demand for diabetes-related care. The assessment also involved a review of the likely impact of quality adjusted life years (QALYs). A price was assigned to the different health outcomes to calculate the expected monetary value of the intervention.

STEP 6

Preparing the payment mechanism

A difference between financing an intervention using an impact bond and a traditional financing model is that the payment for the service is linked to the outputs of the service and not the inputs that generate these outputs.

This section addresses the following three key questions:

1. What are the basic requirements of a payment mechanism?
2. What are the most important parameters related to the technical design?
3. What are some good rules of thumb when designing a payment mechanism?

1. What are the basic requirements of a payment mechanism?

The payment mechanism is the cornerstone of the investment programme as it regulates the outcome payments from the problem owner to the investor. The payment mechanism must fulfil two binding conditions to ensure that the investment programme is acceptable to both parties (Figure 9).

Two fundamental conditions

The first condition is that the expected value of success
The first condition is that the expected value of success should always be higher than the potential outcome payment triggered by the success. However, it should be noted that the understanding of "value" might differ from problem owner to problem owner. Where some problem owners might only focus on monetary value, other problem owners may interpret "value" in a broader sense and include within it various types of social values, such as improvements to quality of life. Likewise, some problem owners might only consider the value that has been created and documented at the time for the outcome payment. Others may also include potential value creation in the future, which can be linked to an intervention that has already been delivered (such as the expected cost savings derived from an observed reduction in the risk of developing diabetes-related complications).

Figure 9: Fundamental requirements for a payment mechanism

Public authority perspective
Expected value of success > Potential outcome payment

...but "value" can cover more than monetary value

Investor perspective
Expected outcome payment X Expected rate of success > Costs

...but costs and expected rate of success can be influenced

The second condition is that the expected outcome payment from the problem owner (i.e., the outcome payment caused by success multiplied by the expected rate of success) should exceed the costs associated with the development and delivery of the intervention (including a risk premium), which may differ significantly from programme to programme and investor to investor. Some philanthropic investors might even be willing to accept a negative return on their investment to support the realisation of their social objectives.

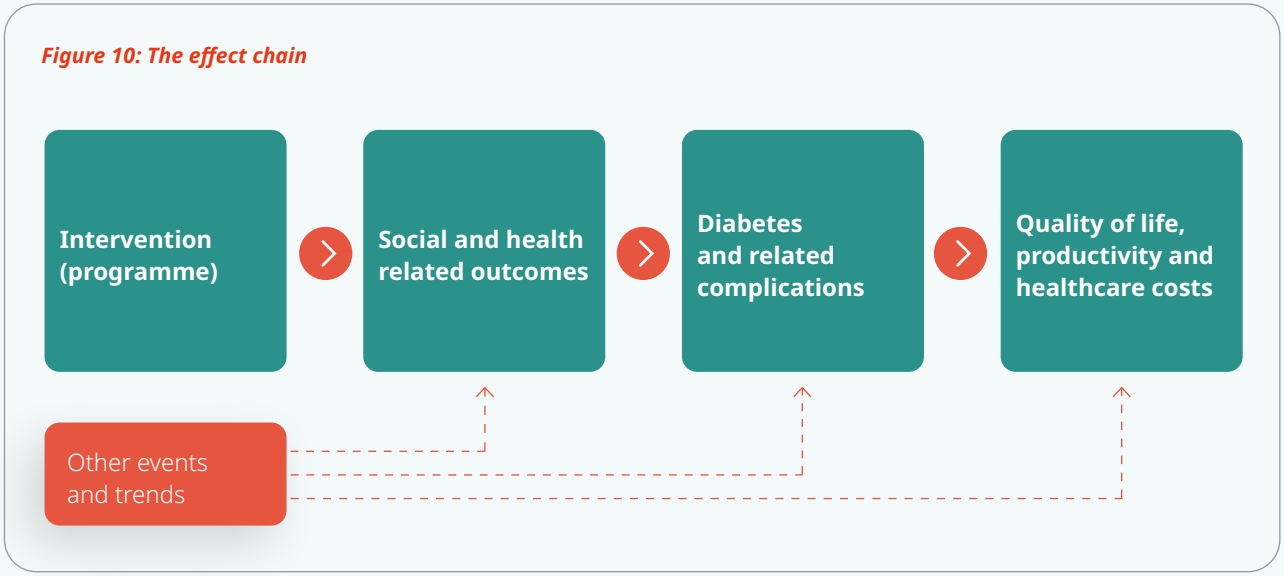
The link between intervention and impact

In the construction of the payment mechanism, it is important to acknowledge that the development of social outcomes (e.g., the long-term reduction in blood glucose levels) will be influenced by a range of modifiable factors (e.g., diet, physical activity and community setting), and non-modifiable factors (e.g., age, gender and ethnicity). Establishing a social impact bond requires that it is possible to establish a clear link between the programme objective and the intervention.

If the link between intervention and social outcomes is not sufficiently strong, the rationale for using an outcome-based payment mechanism will lose relevance, as the problem owner cannot be sure that the outcome payment is justified. Figure 10 shows places where other events might have a synchronistic influence on intervention outcomes.

However, it is important to acknowledge that the lack of a strong link may also benefit the problem owner, as the impact generated by an intervention may be (partly) offset by another event outside the programme. Should this happen, the result would be a reduction in outcome payments. In most cases, however, it will be possible to construct a set of meaningful result indicators that reduce the influence of randomness.

Figure 10: The effect chain



2. What are the most important parameters related to the technical design?

At the highest level, most important issues to be addressed when developing a payment mechanism include 1) Relevance, 2) Accuracy, and 3) time horizon. These are addressed in sequence below:

1. Relevance

As the project's purpose is to support the realisation of a well-defined goal, it is essential to ensure that the incentive structures embedded in the payment mechanisms support the programme objectives. If the programme seeks to support the realisation of several goals simultaneously (e.g., an improvement in quality of life and cost savings), it is important to reflect this in the payment mechanism. Investors and service providers may be inclined to focus on activities that would unlock the most significant financial reward, yet if a problem owner has an explicit desire to enhance "well-being" or other soft goals, it may be relevant to include such goals directly in the payment mechanism.

2. Accuracy

One of the most complex issues relating to the construction of impact bonds is to find an adequate balance between practical applicability (i.e., simplicity) and academic rigour (i.e., completeness) in the payment mechanism. On the one hand, one could argue that the partnership model is already very complex. This could, therefore, be an argument for pursuing a simple payment mechanism to avoid adding any further layers of complexity. On the other hand, it may be argued that the payment mechanism should include all the parameters required for creating an incentive structure that supports the realisation of every programme objective as well as possible, even if this implies a need to include a range of parameters.

In selecting parameters, it is important to acknowledge that result indicators will often be correlated, and an investment programme can therefore contain more result indicators than the ones included in the payment mechanism. Thus, the potential exclusion of some parameters in the payment mechanism ought not to be seen as an indication of indifference towards these parameters. A problem owner might monitor the development in these parameters even though they are not directly linked to an outcome payment.

3. Time horizon

The optimal choice of time horizon regarding outcome payments needs to satisfy a balance between three conflicting interests – for both the problem owner and the investor. Firstly, some problem owners might have difficulty locking in potential outcome payments for longer periods as they will only be in charge of the budget for a limited period and cannot make firm commitments on behalf of future administrations.

On the other hand, many problem owners might prefer to have a payment mechanism in which part of the payment is linked to long-term effects, as this incentivises the development of solutions that create lasting results. Secondly, some investors might prefer to get their money back within a relatively short window of time to reduce their risk exposure (the long-term effect of an intervention might be more challenging to predict, just as investments in impact bonds will typically be illiquid). However, other investors might prefer long-term contracts (for instance, to reduce the level of transaction costs associated with the development of investment programmes). The balance between these conflicting interests differs from project to project.

Still, in the selection of an appropriate time frame, it is important to keep in mind that a prolongation of the repayment period will almost always lead to an increase in the capital's share of total costs, as the capital provided by commercial investors is typically delivered at a higher cost than capital provided through other channels (e.g., traditional loans guaranteed by a public institution). The relative attractiveness of using impact bonds as a mechanism for financing a given intervention would, therefore, be influenced by the choice of repayment period as specified in the payment mechanism.

3. What are some good rules of thumb when designing a payment mechanism?

The optimal design of the payment mechanism will vary according to the nature of the project, not least in terms of the preferences among key stakeholders. There are, however, some general rules of thumb that could serve as guiding principles in the development process.

1. Keep it simple as possible

The estimation of the value that an investment will typically yield is based on several simplifying assumptions, and will hence be characterised by some degree of uncertainty. Creating a very complex payment mechanism makes it even harder for decision-makers to assess the expected value of a project, which can result in the programme becoming less attractive to the problem owner and/or the investor. Even though the inclusion of more parameters may be motivated by a desire to protect the problem owner or the investor, it may have the opposite effect insofar as the inclusion of more parameters reduces the level of transparency. In short, it may be better to embrace uncertainty instead of trying to fight it.

2. Ensure a high level of ownership

The mobilisation of outcome funding is arguably the most challenging task when creating an impact bond. A city that commits to an outcome payment will eventually have to pay for the intervention, which implies that they would need to mobilise funds for the outcome payment. Even though a strong business case might support the intervention, it is essential that the people responsible for managing the budgets feel a high level of ownership for the construction of the payment mechanism to avoid any internal conflicts regarding outcome payment.

CASE STUDY

Aarhus, Denmark

The payment mechanism in Aarhus was based on two elements linked to the same underlying result indicator: long-term blood glucose (HbA1c) levels. The first element, an assessment of whether an individual manages to reduce their HbA1c level by at least 8.5%, was evaluated three times over three years. The second element was a collective assessment of the aggregate change in the target group's HbA1c levels, assessed at the end of the three-year investment period.

A combined payment mechanism took individual and collective assessments into account to balance city and investor interests. A model based on individual assessment would have failed to ensure that the outcome payments from the municipality would be outweighed by a cost-saving, as a decrease in HbA1c levels in one individual might be offset by an increase in another. A model based on collective assessment would expose the investor to a risk of not receiving any payment if a rise in one subgroup offset a decrease in another section of the target group.

STEP 7

Distributing roles and responsibilities

The roles and responsibilities of the different partners (problem owners, service providers and investors) need to be clearly outlined in the organisational setup (who will do what) and the financial setup (who will carry which risks).

This section addresses three key questions:

1. What do you need to consider in designing the delivery model?
2. How do you create a financial model with adequate distribution of risk and rewards?
3. What are the opportunities for revising the traditional financial model?

1. What do you need to consider in designing the delivery model?

The intervention can be developed and delivered by either an internal service provider (e.g., people the problem owner already employs), external service providers (e.g., private companies or civil society organisations), or both. An intervention designed and delivered by internal service providers is able to take advantage of the service providers' familiarity with existing efforts. Hence, using internal service providers may increase effectiveness and ensure that the problem owner fully captures the insights and learnings generated by the investment programme. However, the use of internal service providers can also make it difficult to guarantee the required delimitation from other efforts, which exposes the investor to additional risk in terms of the protection of their investment.

The use of external service providers may protect the investor from this risk, but the protection may come at the expense of a decrease in effectiveness. If the impact of the specific interventions in the investment programme is highly correlated with other interventions delivered outside the programme, using an external service provider can make it more challenging to unlock potential synergies

Table 6: Fundamental requirements for a payment mechanism

	Potential strengths	Potential weaknesses
Internal service provider	• Internal synergies	• Lack of transparency
External service provider	• A high degree of flexibility	• Risk of inefficiency

between interventions. In addition, the use of external service providers may also lead to the establishment of parallel delivery systems, which may make it harder to reap the benefits of learning (Table 6).

2. How do you create a financial model with adequate distribution of risk and rewards?

An investment project involves two forms of risk:

Operational risk

The risk that the intervention will not lead to the expected improvement in the defined outcome metric—for example, an increase in the level of health literacy, reduction in blood glucose levels, and an improvement in perceived quality of life.

Impact risk

The risk that a change in an outcome metric will not create the expected impact that triggered the problem owner's willingness to pay—for example, reduced costs of treatment and care, increased productivity, and improved quality of life.

The two types of risk can, in principle, be carried by either the problem owner or the investor. However, the investment programme will not fulfil the criteria for an impact bond if the problem owner bears the entire burden of both the operational risk and the impact risk. Since the problem owner may have several reasons for agreeing to provide an outcome payment, which may or may not be included in the payment mechanism, the problem owner will typically carry the impact risk. Conversely, the investor will typically carry the operational risk, as the primary responsibility of the investor is to provide the risk capital required for achieving the programme objectives.

Table 7: Distribution of operational risk and impact risk

	Intervention		Health status		Revealed needs		Budget
Budgetary effect The outcome payment is directly linked to specific posts that can be monitored and evaluated objectively e.g., expences to medication	1	▷	2	▷	3	▷	4
Budgetary effect The outcome payment is linked to revealed needs with the assumption that a change in these needs will have an impact on the budget either in the short or long term	1	▷	2	▷	3	▶	4
Health status The outcome payment is linked to change in the health status of individuals with the expectation that a change in health status (e.g., in terms of a reduction in blood sugar) will lead to an expected change in the need for treatment, care and social support, which in turn will be associated with a well-defined budgetary effect.	1	▷	2	▶	3	▶	4

▷ Investor carries risk ▶ Public authority carries risk

The key question regarding the distribution of risk will therefore be regarding who should bear the brunt of the risk (Table 7).

Since the target population's change in health status will always be affected by more than the intervention alone, investors might argue that the problem owner should bear the greater risk (as certain influential factors fall beyond the investor's control). On the other hand, the problem owner might argue that their willingness to pay is anchored in the outcome and impact of an intervention and not in the output of the intervention. Therefore, the payment mechanism would need to be based on outcome metrics (e.g., the prevalence of diabetes-related complications, observed demand for healthcare services, etc.) instead of output metrics (e.g., observed change in diet or physical activity, reduction in blood glucose levels, etc.). Since the costs of capital are closely related to risk, the investor may reserve the right to decide who should carry which risk, though this will typically be determined as part of a larger negotiation.

3. What are the opportunities for revising the traditional financial model?

Different financing variations could be considered, even though the investor typically carries the operational risk while the problem owner carries the impact risk.

One of these variations includes an extra party in the programme, who would be willing to carry part of the risk associated with the link between output and outcomes or between outcomes and budgetary impact. As an example, a central health authority might be willing to provide a city administration with a financial guarantee that long-term cost savings would back a short-term outcome payment to incentivise the city to engage in an investment programme that could potentially yield a high social return and, hence, also benefit the central health authority. In practice, such a solution could involve the establishment of a public outcome guarantee fund with the sole purpose of providing the municipality with financial support in case the city should not be able to reap the expected financial reward associated with the change in result indicator that regulates outcome payments.

Another variation would be to simply allocate the full responsibility of the programme objectives to the investor and, thus, ignore the different links in the causal chain of effects and keep a strict focus on the financial impact of the intervention. In practice, such a model could involve the construction of a simple payment mechanism with one parameter in terms of public spending on healthcare services for individuals who take part in the programme.

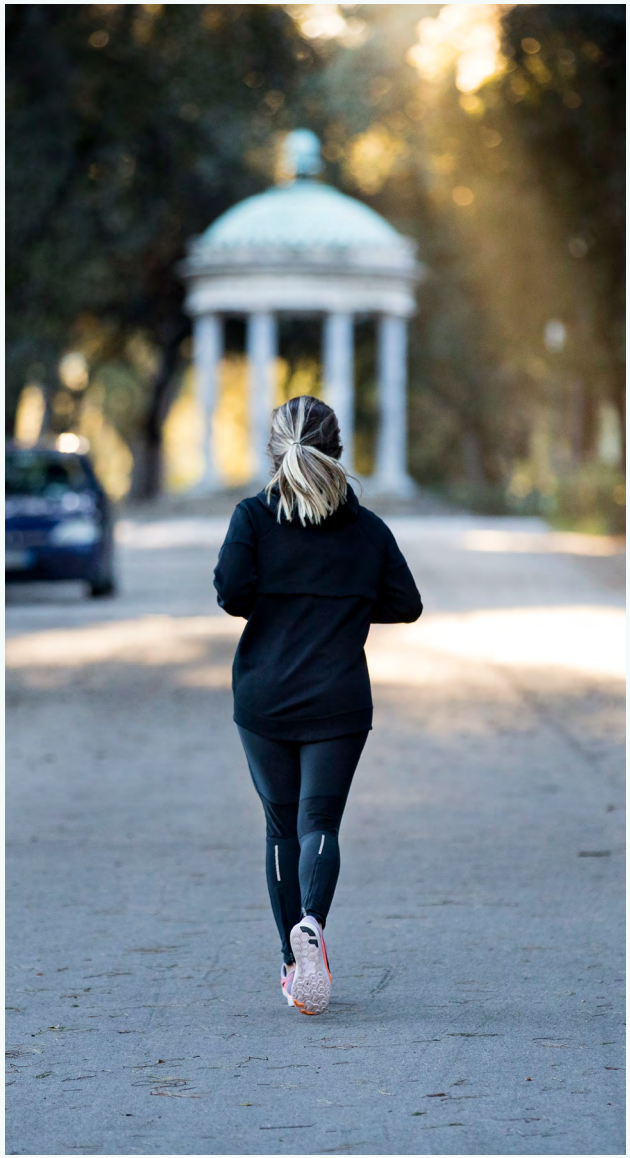
Getting a head start

Three key learnings from Diabetes Impact Bonds in practice

As discussed throughout this guide, a Diabetes Impact Bond is an innovative partnership model that can be used as a lever to accelerate investments in diabetes prevention and care. Several attractive features characterise the model, and under the right circumstances, it can serve as an effective tool to mobilise additional funding for impactful interventions. It can also enhance efficiency by increasing the level of operational agility.

However, the impact bond model is still a novel approach that is unknown to most players. The model may challenge existing practices, and the development of an investment case may be demanding at times. Still, as demonstrated by the Aarhus case, much value can be unlocked for those embarking on the journey to develop impact bonds under the right circumstances. For example, creating an investable project that will effectively reduce the burden of diabetes, enhance understanding of essential effect chains, and stimulate cross-sectoral collaboration.

Due to the complexity of the model, setting yourself up for success in the beginning is crucial.



Three key learnings from Diabetes Impact Bonds in practice

1. Start with the problem

A Diabetes Impact Bond is one among many different tools that can be used to address a specific public health problem. To ensure that a diabetes bond is the best model to solve the problem, it is important to start the development process by creating a solid understanding of the problem and considering the different opportunities for addressing it. One should start by defining the problem and then choose an appropriate instrument, like a Diabetes Impact Bond, to address the problem. Not the other way around.

2. Engage the right stakeholders

A Diabetes Impact Bond programme will always form part of a greater strategy for diabetes prevention and care and will involve many of the same stakeholders who are involved in other relevant initiatives that either address the same target group or the same underlying problems. Establishing an inclusive development process involving a broad range of stakeholders is instrumental for mobilising knowledge and fostering the right level of ownership across the relevant public health stakeholders, which is required if the investment programme is to create actual value.

3. Be patient

Developing a solid investment case for diabetes prevention and care can be a challenging task requiring the engagement of several stakeholders with unique preferences, experiences, and competences. A successful development process calls for a combination of analysis, dialogue, negotiation etc., and may be time-consuming due to the number of stakeholders involved. It is therefore important to remain patient in the process and embrace challenges as opportunities to expand and strengthen the network and collaboration between core stakeholders with the same goals. Trust and respect are essential ingredients for forming true partnerships and can only be developed over time. Still, as demonstrated by the Aarhus case, the process will be rewarding for all those involved in the Diabetes Impact Bond programme—not least for people living with diabetes

Contact

Bo Wesley
Cities Changing Diabetes programme team
bowe@novonordisk.com

Dalberg Media
For more information visit www.dalberg.com

References

1. International Diabetes Federation. *IDF Diabetes Atlas 10th ed.* Accessed November, 2021. https://diabetesatlas.org

2. Bloom DE, Chisholm D, Jané-Llopis E, Prettner K, Stein A, Feigl A. *From Burden to "Best Buys": Reducing the Economic Impact of Non-Communicable Diseases.* World Health Org, Geneva, Switzerland. 2011; PGDA Working Paper No. 75.

cities
changing
diabetes