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Cathay Life Insurance

January 2020

Cathay Life

Cathay Walker Health Incentive Project
Social Return on Investment Report

CATHAY
WALKER



資誠



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Acknowledgments

Cathay Life Insurance Co., Ltd, the sponsor of "Cathay Walker Health Incentive Project", would like to show appreciation to the team from PricewaterhouseCoopers, Taiwan, who as a consultant provided advice and assistance in relation to the implementation of SROI analysis, the evaluation of SROI result and the preparation of the SROI report of "Cathay Walker Health Incentive Project". We would also like to show our appreciation to all stakeholders for contributing their valuable time, experiences and views toward this SROI analysis and SROI report.

Summary

Facing the challenge of an aging society, healthy aging has become an issue of public concern. Yet, it is hard to get into the habit of regular exercise given the modern day's busy work schedules. Hence, Cathay Life launched the Cathay Walker Project ("the Project" or "Cathay Walker") in August 2018, which combines activities with the Cathay Walker Whole Life Insurance for Major Illness spillover policy, in hopes of getting citizens into the habit of exercise and thus extending life expectancy.

The SROI methodology was adopted to determine if the campaign's implementation strategy effectively achieves project goals, using professional analysis and stakeholder feedback process to determine if the campaign achieved the expected social impact. This is an evaluative SROI report for the period from 9th August, 2018 to 28th February, 2019. After stakeholders' engagement, three major outcomes arising from this project were determined to be improving users' physical health, relieving life stress, and raising policyholders' risk management awareness. This shows that the Project's strategy and execution correspond to the main goals of the Project.

A comprehensive survey and analysis of this study shows that the Cathay Walker Project has created the equivalent of NT\$6.30 social value for every NT\$1 invested. The sensitivity analysis placed the result between NT\$3.90 and NT\$9.22. We also discussed the results and the feedback received from stakeholders with Cathay Life's management in order to optimize the Project and maximize its impact and social benefits.



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Chapter 1 Overall Review

Section 1 Introduction

Following the rise in medical care standards, emphasis on food safety, and popularity of exercise, the average life expectancy of Taiwanese citizens has shown an upward trend. According to Ministry of the Interior statistics¹, the average life expectancy of citizens increased from 78.4 years in 2007 to 80.4 years in 2017; the average life expectancies of both men and women in Taiwan were higher than the global average. Despite the increasing in citizens' average life expectancy, a Directorate-General of Budget, Accounting and Statistics national situation report² pointed out that citizens' unhealthy life expectancy reaches nearly 9 years, which reflects the heavy burden on family caretakers. In addition to living expenses, there are also burdens from medical expenses such as long-term care services. Furthermore, modern people's busy lives and irregular diets and routines have led to a decline in the age of onset for cancer, diabetes, and cardiovascular diseases. Facing with these trends, healthy aging is without doubt the greatest wish and the also deepest concern for any segment of the population.

Government agencies have announced the data and indicators above to remind citizens to manage their health, because having a healthy body is the only way to have a truly wonderful life. In 2018, Sports Administration statistics³ showed that results of the government's "Sport for All" policy are gradually being seen. As healthy living topics attract growing attention, exercise has become growingly popular in Taiwan. If we cross-analyze types of exercise with different purposes for exercise, results showed that people who exercise for health, 83.3% of their main sports are outdoor leisure exercises, of which walking and power walking account for 58.3%, far higher than other types of

¹ Department of Statistics, Ministry of the Interior
https://www.moi.gov.tw/stat/node.aspx?cate_sn=&belong_sn=5992&sn=6176

² Directorate-General of Budget, Accounting and Statistics, Executive Yuan
<https://www.dgbas.gov.tw/lp.asp?CtNode=1481&CtUnit=690&BaseDSD=7&mp=1>

³ Sports Administration, Ministry of Education
<https://www.sa.gov.tw/Resource/Attachment/f1544088726542.pdf>

exercise.

Cathay Life Insurance Co., Ltd. (Cathay Life) is a leader in the life insurance industry in Taiwan. Facing a future of aging populations and limited health insurance resources, Cathay Life began to consider any possibilities for insurance products, so that they can not only provide coverage after policyholders become sick, but also more actively take part in health promotion. Cathay Life hopes to extend life insurance from compensation to prevention. Walking is the simplest way and the most common form of exercise in daily life. Cathay Life implemented the Cathay Walker Health Incentive Project (Cathay Walker, or the Project) in 2018, inviting Taiwanese citizens aged above 20 to walk 7,500 steps every day. Participants set weekly and monthly targets, and incentives are provided if they reach the step target, allowing them to experience the fun of exercise while making exercise a part of their daily lives. At the same time, Cathay Life is the first company to combine insurance with health management, and designed the Walker Whole Life Insurance for Major Illness in coordination with the campaign. The product provides a spillover effect and offers the incentive of reduced premiums for insured persons, leading them to voluntarily change their habits in life, and gradually getting them into the habit of walking to reduce health risks. The main goals of the Project are as follows:

- Get participants into the habit of exercise to maintain physical health, and extends citizens' life expectancy.
- Understand citizens' health habits and develop innovative insurance products and services.
- Connect different industries to provide services, and guide overall industrial upgrade.

Section 2 Information about Cathay Walker

Seeing how modern people's busy lives make it hard to get into the habit of exercise, Cathay Life designed the Project to help walking naturally become a part of citizens' daily lives through three strategies below:



- I. Develop step counter function for Cathay Life's app and promote exercise
Cathay Walker's goal is to make exercise a part of daily life. In order to make this happen, Cathay Life utilizes technology to add a step counter function within the Cathay Walker app. After gaining user authorization, the Cathay Life's app reads the mobile phone's data to collect records on the number of steps participants walk each day. The Cathay Life's app not only has the function of monitoring health data with wearable devices, but also has the function of managing insurance policy.
- II. Provide incentives to encourage regular exercise
The project sets a target of walking 7,500 steps every day. Users receive an initial gift of a 7-Eleven coupons worth NT\$20 the first time they use the app to upload the number of steps they have walked. They receive a 7-Eleven coupons worth NT\$30 the first time they reach the weekly target (walking at least 7,500 steps at least 5 days a week). They receive a 7-Eleven coupons worth NT\$50 the first time they reach the monthly target (walking at least 7,500 steps at least 21 days a month). Afterwards, they receive a prize drawing ticket every time they reach a weekly or monthly target, and have opportunities to win exclusive gifts.
- III. Emphasize prevention and revolutionize conventional insurance function
Walker Whole Life policyholders can choose between a weekly or monthly plan for the incentives to reach the two-year policy step goals. They then enjoy an exclusive discount for purchasing Apple Watch, and if they reach the monthly targets for 12 months or 20 months in the first two years, they will enjoy an additional 5% or 10% rebate on insurance premiums starting in the third year. This way policyholders can improve their health while enjoying greater coverage, extending the function of insurance from compensation after the fact to risk prevention beforehand.

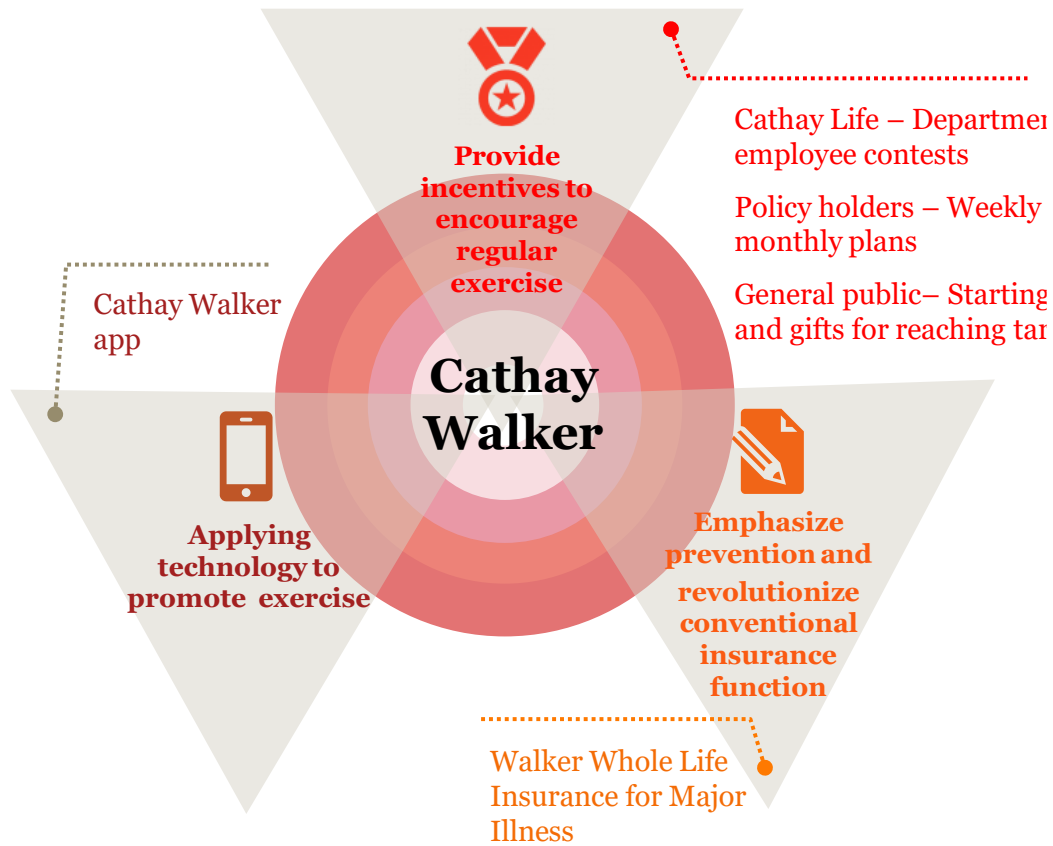


Figure 1: Cathay Walker Implementation Strategies and Content

Section 3 Scope of the SROI Report

1. Assessment scope: Based on the above three strategies, this SROI assessment of Cathay Walker included this Cathay Life app, the incentive program and the Walker Whole Life insurance policy.
2. Assessment purpose: Cathay Life expects that Cathay Walker could last for at five years. For internal management purpose, Cathay Life would like to understand if the design of the Project could help participants develop the regular exercise habit as well as cultivate the risk awareness and risk prevention concept through its link with Walker Whole Life insurance policy. Such understanding can help Cathay Life improve the Project and plan for future development. For external communication purpose, this SROI assessment with the SROI report being assured by 3rd party can increase the credibility to help promoting Cathay Walker and achieve the

goal of one million participants.

3. Assessment period: The assessment period ranged from the commencement of the Project on August 9, 2018 to February 28 2019.

The SROI report uses actual data from the above assessment period and analyzes based on the results of actual stakeholders' changes and impacts during this period. Therefore, this report is classified as an Evaluative SROI report according to *A Guide to Social Return on Investment*⁴.

Section 4 Research Methodology

This report adopts the analysis framework set forth in *A Guide to Social Return on Investment* (2012 revised version; hereinafter referred to as the "SROI Guide") published in the U.K. in 2009. The methodology consists of six stages to concretely illustrate and measure the Theory of Change brought about by inputs, outputs, and outcomes of charitable activities. As the social and economic benefits resulting from the project are expressed in monetary valuation, the impact of the project is better presented. With more transparent and communicable information, we could hopefully make the most out of our project in the future.

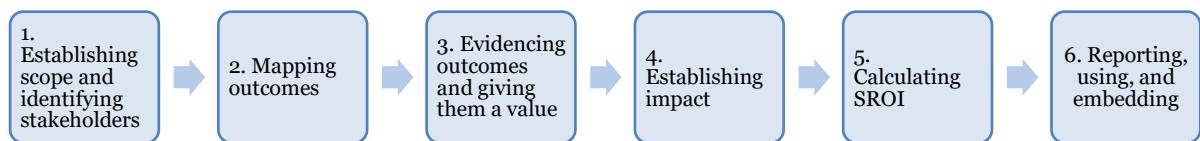


Figure 2: The six stages of SROI

We measured all material impacts on stakeholders based on the SROI Guide, and did not merely consider economic return. As such, we were able to define the relative monetary values of things that cannot be measured, such as

⁴ *A Guide to Social Return on Investment*, Cabinet Office, U.K., 2009, P8.

self-confidence, independence, contentment and other abstract perceptions, which can neither be bought nor sold. In order to make our results more complete and objective, and prevent SROI from being misunderstood as merely a game of numbers, the seven principles of the SROI guide must be rigorously adhered to during this SROI analysis process:

- 1 Involve stakeholders
- 2 Understand what changes
- 3 Value the things that matter
- 4 Only include what is material
- 5 Do not over-claim
- 6 Be transparent
- 7 Verify the result

Figure 3: the seven principles of SROI

Section 5 Risk Assessment

Under the SROI framework, we value abstract, narrative or non-quantitative indicators. A portion of the variables and investigations are based on the literature, hypothesis, or stakeholders' subjective judgment. Therefore, we used the seven principles of SROI in analyzing risks that are relatively likely for this project, and described how we lowered these risks to a tolerable level through our professional judgment and corresponding methods.

Table 1: Risk assessment and response strategies

SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
1. Involve stakeholders	<p>(1.a.) Representativeness of stakeholders: As the number of Cathay Walker participants was as high as 150,000, this study was unable to engage directly with all stakeholder groups.</p>	Overestimating or underestimating SROI results	<p>We applied the following five approaches to respond to this risk: <u>(1.a.)(1). Determine not to separate subgroups:</u> We did consider the demographics might result in different outcomes but concluded not to separate subgroups based on result of analysis blow:</p> <ul style="list-style-type: none"> ■ Qualitative analysis: In Phase I interview, we randomly selected interviewees to ensure we had no bias and covered different demographics group to collect potential outcomes comprehensively. During interview, we observed face to face or inquired about their respective age groups and gender. Based on the above, we noted there are no significantly different



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>outcomes among different gender or different age groups. We also obtained feedback from those did go to gyms with similar outcomes.</p> <ul style="list-style-type: none"> ■ Quantitative analysis: in Phase II questionnaire survey, we also requested information of gender and age and noted the differences of outcomes from different gender or age group are minimum. Please see Appendix I for the example of the Phase II questionnaire. <p><u>(1.a.)(2). Collect data through interview till saturation:</u></p> <p>During Phase I engagement, we extensively interviewed with different types of stakeholders, until we received similar respond.</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>We moved to the next engagement phase when we received no more new information.</p> <p><u>(1.a.)(3). Classify participants based on management purpose:</u></p> <p>We did not screen samplers but classify participants into three groups including employees, policyholders, and members of the general public using data from Cathay Life’s system in order to cover all different experience and changes incurred during the assessment period from all participants. We next performed sampling based on the size of population of different stakeholders group so that there will be no sampling bias.</p> <p><u>(1.a.)(4). Minimize sampling error to an acceptable level:</u></p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>We performed sampling based on population size. We set a 90% confidence level with a 5% margin of error for small populations of less than 5,000 people; We set a 95% confidence level with a 5% margin of error for medium populations of 5,000 to 50,000 people; We set a 95% confidence level with a 3% margin of error for large populations of more than 50,000 people. This makes the analysis results for different types of stakeholders more accurate.</p> <p><u>(1.a.)(5). Reconfirm engagement results and conduct sensitivity analysis:</u> We found the resulting outcomes through the three stages of stakeholders' engagement - interview,</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>questionnaire survey and verification - are very similar. To provide better transparency, in the sensitivity analysis of the SROI report, we also adjusted the SROI by 10% to attain a more reasonable interval.</p> <p>Based on all the above, it's believed that the sampling is comfortable enough to represent the impact experienced by the stakeholders, making it reasonable to use those data to represent and therefore extrapolate to the total stakeholders' population.</p>
	<p>(1.b.) General public may hold stereotypes regarding the insurance industry; they might reject interview or answering questions to avoid being pushed to buy insurance policy</p>	<p>Overestimating or underestimating SROI results</p>	<p>(1.b.) During the interview, Cathay Life employees first explained the purpose of this project; the entire engagement process was then completed by consultants in a third-party role to prevent interviewees from having concerns or refusing to answer. This reduced the</p>

SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			number of invalid samples.
2. Understand what changes	<p>(2.a.) Small number of stakeholders could not clearly express the impact or changes they experienced during the assessment period when we engaged with them. In addition, stakeholders' feedback of outcomes might be constrained by the examples provided.</p> <p>(2.b.) There might be different experiences of changes within the different group of stakeholders</p>	Overestimating or Underestimating SROI results	<p>(2.a.). We focus on the following three approach during three stages engagement process to mitigate this risk:</p> <p><u>(2.a.)(1) Conduct open-end interview and questionnaire survey:</u> All questionnaires regarding confirming changes and outcomes are open-end. Stakeholder are able to respond based on their own unique experiences without being limited to the offered options in the questionnaire. We also summarized and analyzed these specific responses.</p> <p><u>(2.a.)(2) Make professional judgement referring to relevant literature:</u> In addition to engage through interview and questionnaire survey, we also look up assured SROI report and sports/exercise related research paper to</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>understand the potential changes and outcomes to supplement and adjust the chain of event accordingly, if necessary.</p> <p><u>(2.a.)(3) Reconfirm chain of event through three stages engagements:</u> According to supplementary guidance on well-defined outcomes, we re-examined the chain of event based on the process of changing to confirm the outcomes that hold the most value and thus need to be managed. And we then verified the chain of events with stakeholders through discussions.</p> <p><u>(2.b.) Distribute questionnaires to both groups of aggressive participants and passive participants:</u> Before issuing questionnaires, we collected information from Cathay Life internal system to make sure our sampling covered those participated aggressively</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>and those participated passively (based on the frequency of uploading walking steps). We then randomly distributed the questionnaires. Consequently, response received from these questionnaires covered both those participated aggressively and those participated passively. The result of questionnaire survey are very similar from these two groups of participants.</p>
<p>3. Value the things that matter</p>	<p>(3.a.)</p> <ul style="list-style-type: none"> ■ Financial proxies obtained using the approach of asking stakeholders to provide their views (the Method A and Method B as described in the “Response Method”) are generally very likely to be 	<p>Overestimating or underestimating SROI results</p>	<p>(3.a.)</p> <ul style="list-style-type: none"> ■ <u>Use Valuation Method considering other Assured SROI report with similar activities:</u> We considered the valuation method in other assured SROI reports relevant to sports/exercise projects for similar outcomes. We also



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
	<p>overstated.</p> <ul style="list-style-type: none"> ■ In addition, some stakeholders did not understand how this research was conducted and thus refuse to provide value for the outcomes. ■ Some stakeholders were unable to compare the relative importance of individual outcome and therefore, were not able to provide value for the outcomes. 		<p>considered general public experience based on our judgement. We determined method A, B and C considering other SROI reports and SROI guidance to ensure the value selected will broadly within appropriate range. (Method C : Costs directly caused or saved by outcome, Method B : How much stakeholders are willing to pay to achieve the same outcome (include options of range of value in the questionnaire) and Method A : What the other activities that could result in the same outcome are (include options</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>of activities in the questionnaire)</p> <ul style="list-style-type: none"> ■ <u>We engaged with stakeholders to understand the significance of potential outcomes:</u> During Phase I engagement, we asked stakeholders to determine if outcomes were important, average, or unimportant. We next explained the three valuation methods and discussed with them to determine suitable valuation method for each different outcome based on their understanding and experiences. ■ <u>We used options with a wide range of values and weighted average method to</u>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p><u>include views of high and low value:</u> Based on the above, we provided 3 -7 options with varying frequencies, degree, or values for each outcome. When we discussed and determined options, we used those items that the stakeholder would easily relate themselves to in their daily life or in the experience of each different stakeholders. We also selected options that are similar in nature broadly with sports/exercise to better reflect the outcome under discussion. We expected the above would decrease the fluctuation of values to an acceptable</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>degree. We also asked stakeholders to rate the importance of each outcome for engagement discussion during Phase III to support that we value the things that matter.</p> <ul style="list-style-type: none"> ■ <u>We performed sensitivity analysis and highlighted the potential overestimated SROI value due to the use the valuation method of asking stakeholders' views:</u> Please see Table 17: Sensitivity Analysis
	<p>(3.b.) Cathay Walker is an ongoing project; stakeholders may be additionally affected by new events or products released after the assessment period, possibly resulting in</p>	<p>Overestimating SROI results</p>	<p>(3.b.)</p> <ul style="list-style-type: none"> ■ Stakeholders were screened based on when they downloaded the app. We also make sure that all stakeholders



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
	duration of outcomes being overestimated.		<p>participated in the Project during the assessment period during three phases of engagements.</p> <ul style="list-style-type: none"> ■ We clearly stated that the evaluation period is up to 2019 February in the agenda of Phase I stakeholders' engagement and we emphasized that during interview. We have also stated in the Phase II questionnaire that the evaluation period is only up to 2019 February. ■ We calculated outcome durations using weighted averages result from different stakeholders to prevent outcome valuations from being too subjective. ■ We also take into

SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>account stakeholders' opinions in phases I and III, to include the shorter outcome duration in the sensitivity analysis.</p>
<p>4. Only include what is material</p>	<p>(4.a.) Due to participating the Project at different timing with different frequencies, aggressive participants may believe that every outcome is important, while passive participants might not be able to accurately determine the importance of each outcome.</p>	<p>Overestimating or underestimating SROI results</p>	<p>(4.a.) We used different surveys to ensure we only include what is material:</p> <ul style="list-style-type: none"> ■ <u>Degree of changes</u> survey: We set a threshold on the degree of changes information from questionnaire (Please see Appendix I) to include only outcome with weighted average degree of change higher than 50% level to ensure we included what is material. We also reconfirm such information through



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>three Phases engagement to ensure we have the consensus on the materiality of outcome.</p> <ul style="list-style-type: none"> ■ <u>Materiality</u> survey: We also survey through questionnaire the significant level of such an outcome to each stakeholder with a scale of 1-5 (Please see Appendix I). We reconfirmed those outcomes that we included in the total outcome value calculation are supported with the significant level of 3 and above. <p>The above could also support that, those outcomes with total value of less than 5% but included in the</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<p>calculation are also important to stakeholders (for examples, for outcome for office staffs, the reason of being relatively less in total value are caused by smaller number of population) and therefore are considered material for this SROI report. Please see Table 14. Materiality of Outcomes</p>
<p>5. Do not over-claim</p>	<p>People are encouraged to walk more and there are many advantages to exercise; duration of outcomes and drop-off may be too optimistic.</p>	<p>Overestimating SROI results</p>	<p>We mitigate such a risk using following approaches:</p> <ul style="list-style-type: none"> ■ We calculated total outcome value based on the weighted average results from questionnaire survey to avoid misstatement by including only specific selection of questionnaire options.



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			<ul style="list-style-type: none"> ■ We also include duration and drop-off in the sensitivity analysis. ■ We calculated total outcome value using duration number from questionnaire survey up to one decimal without rounding up to avoid overestimating the total value.
6. Be transparent	(6.a.) Due to the huge quantity of data from three Phases of engagement, we are not able to include all the questionnaire survey results data in this SROI report and readers might not understand how we arrived at the information in the impact map.	Overestimating or underestimating SROI results	(6.a.)(1) We used the outcome of “Better physical health” from the stakeholders of “General public” as example to illustrate what data we received from questionnaire survey , how we summarized the questionnaire survey results, and how we used such results to arrive at “Quantity” “Durations”, “Value of proxy” and the

SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
	<p>(6.b.) Due to constraint of the impact map layout in the SROI report, we are not able to indicate all the breakdown details of inputs.</p>		<p>“Deadweight” in the impact map. Please see Section 4 Valuation of Outcomes in Chapter 3.</p> <p>(6.a.2) We also included two worked examples of “Improved company image” from Cathay Life and “Improved job satisfaction” from Sales agents for illustration in Appendix 4.</p> <p>(6.b.) We listed all the financial and non-financial inputs with explanations of calculations in the Section of “Project Inputs”, Table 4: Total resource input into the Cathay Walker Project. We also provided further information regarding input calculation following Table 4.</p>
<p>7. Verify the result</p>	<p>Due to time constraints, not all of the stakeholders in the</p>	<p>Overestimating or underestimating</p>	<p>■ We held workshop with Cathay Life and their employees</p>



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
	<p>study are invited to participate in the verification of final results.</p>	<p>SROI results</p>	<p>from different departments to discuss and verify the results. We conducted phone interviews with representatives of different stakeholders groups to verify the results. We verified the results through interviews and questionnaire surveys for consistency with the real experiences of stakeholders.</p> <ul style="list-style-type: none">■ We also took into considerations of literatures to ensure there would not be significant misstatement.■ We included sensitivity analysis for different factors, which might affect the SROI



SROI Principles	Risk Description	Possible Impacts to the SROI	Response Method
			assessment results, and disclosed the analysis result in the SROI report. Please see Table 17 Sensitivity Analysis.

Based on the reasons above, the SROI rate calculated for this report should not be compared with that of other projects. In addition, our responsible disclosure of this SROI report, expounding on the deductive reasoning process and listing the assumptions and sensitivity analysis, are intended to provide users with complete information to understand the Cathay Walker Project and its social value.

Chapter 2 Involve Stakeholders

During the implementation process of the SROI analysis, the most crucial and most important part is the involvement of the stakeholders. In order to identify stakeholders effectively for the purpose of this SROI assessment, we went through the following three steps.

The first step was to analyze the scope of the Project for a comprehensive survey of potential stakeholders; the second step was to apply AA1000 Stakeholder Engagement Standard (2015) to perform further analysis; and the third step was to continuously consider the inclusion or exclusion and classification of stakeholders and adjust accordingly if necessary.

During this process, we exchanged views with interviewees covering many aspects. First, we discussed with stakeholders on a semi-structured basis, such as whom they think the Cathay Walker campaign would change or impact. Next, we asked stakeholders open-ended questions to verify whether any changes or impacts had been left out. For example, most stakeholders did not mention vendors as beneficiaries of the campaign at first, but after careful consideration of the actual situation, they determined that vendors were in fact stakeholders.



Section 1 Stakeholders Determination

Step 1: Stakeholders survey

During the initial project assessment phase, we learned about potential stakeholders' roles in the project through Cathay Life's Cathay Walker Project Team and relevant information. Based on how they came in contact with the campaign, we divided the potential stakeholders into the implementer, direct stakeholders, and indirect stakeholders, as described below:

- **Implementer:** Cathay Life is the organizer of the campaign and the main source of input resources. The project team is formed from four departments, who jointly planned and implemented the Cathay Walker Project. Specifically, the System Development group is responsible for programming; the Data group is responsible for back-end data collection and statistics; the Product group is responsible for insurance product development; and the Activity Planning and Promotion group is responsible for designing incentives, marketing, and promotion.
- **Direct stakeholders:** Core users of resources; campaign participants who downloaded the app and uploaded the number of steps they walked during the assessment period; policyholders of any Cathay Life product; members of the general public who are not Cathay Life policyholders; and company employees who actively or passively participated in the campaign. Based on the nature of their work, employees can be divided into three categories, namely: office staff responsible for handling administrative affairs; sales agents who are required to visit policyholders; and service center employees.
- **Indirect stakeholders:** Stakeholders who made changes due to the implementer's impacts, but whose changes were mainly due to peripheral activities. Indirect stakeholders here are companies that provided supplies and assisted in project promotion, including the electronic ticket design company; vendors of gifts used as activity rewards; gyms and movie theaters that distributed the activity

experience cards and postcards; and companies that sponsored or set up advertising signboards. Stakeholders who were unexpectedly impacted by the participation of direct stakeholders are also classified as indirect stakeholders; these were mainly wearable device manufacturers.

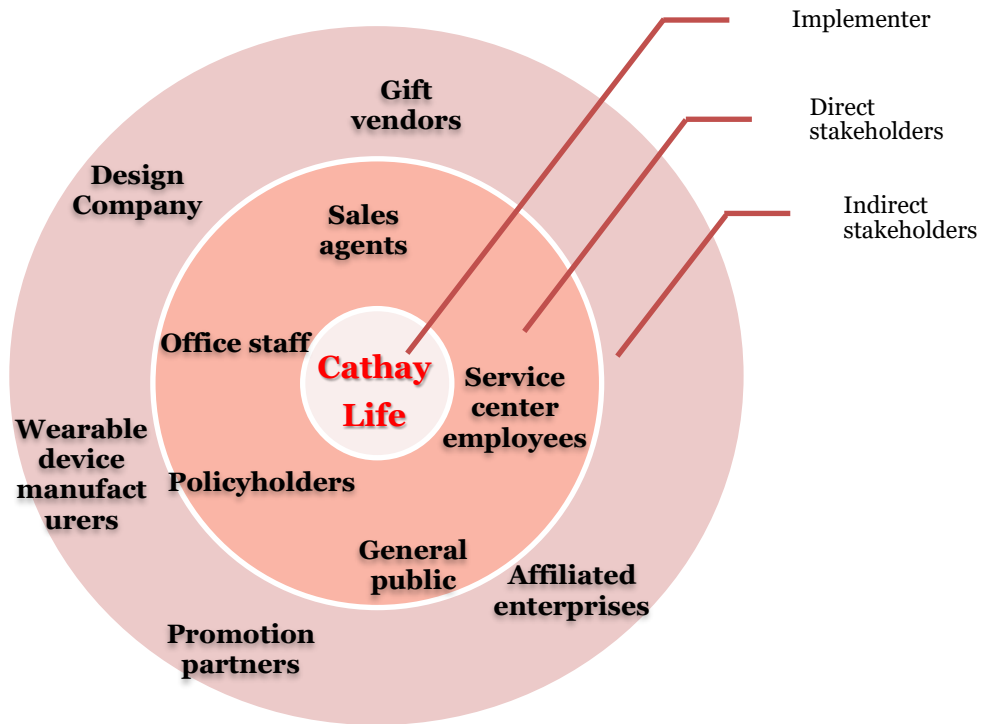


Figure 4: Stakeholders by level and impact category

Step 2 and Step 3: Identification and Engagement

After understanding the stakeholder scope, and based on the project’s goals, this report broadly included all stakeholders who may have affected or been impacted by the Cathay Walker Project.

For the purpose of this assessment, we applied the five principals in AA1000 Stakeholders Engagement Standards (2015), considering Dependency, Responsibility, Tension, Influence, and Diverse Perspectives to identify and engage stakeholders. We further determined stakeholders who should be included within the assessment after referencing data from Cathay Life’s internal system and recommendations from project team members.

Furthermore, in the different engagement phases, we explained to interviewees from each stakeholder group the stakeholders surveyed in this assessment, and asked them to verify whether any stakeholders had been left out and whether the level of impact was consistent with the actual situation. We then continued to revise our understanding of the campaign and stakeholders. Please see Section 2 of this chapter for engagement methods, number of interviewees, and sampling methods used in each phase for determining the overall impact on society of Cathay Walker. .

Based on the results of stakeholder identification, we divided the Cathay Life employees into two groups based on the nature of their work: office staff and sales agents. There was no significant difference in policyholders' outcomes, regardless of whether they purchased Walker Whole Life insurance policy or other insurance policies. Hence, policyholders are not divided into subgroups. 7-Eleven and the five wearable device manufacturers are all classified as vendors. We determined the impact of the Cathay Walker Project on each vendor from various campaign participants. We have summarized the stakeholders' inclusion or exclusion results in the table below.

Table 2: Stakeholder Inclusion, Exclusion and Classification Results

Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
Cathay Life		Responsibility, Influence	Included	Cathay Life produced the project's main outputs, is the project implementer, and is the main source of resources input into the project. After interviewing members of the Cathay Walker Project Team, we determined that the effects of the campaign



Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
				significantly impacted the company, and directly impacted employees, so that they either actively or passively began to go on walks. Cathay Life was therefore included.
Employees	Office staff	Dependency, Responsibility	Included as group of Office staffs	Some supervisors in the company organized departmental contests, causing large numbers of employees to become campaign participants. However, after interviews and the questionnaire survey, we found that the impact on office staff and service center employees was overall similar. Hence, we included service center employees within office staff and included them in the assessment.
	Service center	Dependency, Responsibility		
	Sales agents	Dependency, Responsibility and Influence	Included	We learned from the interviews that even though sales agents did not participate in departmental contests, they often visit policyholders, so they



Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
				became primary campaign participants due to the many opportunities they had to walk. We learned from the questionnaire survey that the project had an unexpected effect on their sales performance. Hence, we determined the impact to be material and included sales agents in the assessment, making them a different subgroup from office staff.
Policyholders	Walker Whole Life	Dependency, Tension and Influence	Included as group of Policyholders	The Cathay Walker Project was implemented in coordination with the Whole Life policy. This made policyholders the target beneficiaries, with over 100,000 people impacted. Hence, policyholders were included within the analysis. After interviews and the questionnaire survey, we found that there was not much difference from policyholders' impact on whether or not they
	Non-Walker Whole Life	Dependency, Tension and Influence		



Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
				purchased the Whole Life policy, so it was unnecessary to divide them into two groups.
Members of the general public		Tension and Influence	Included	The goal of the Cathay Walker Project is health promotion. The project aims to achieve one million participants nationwide, so there is no doubt that the general public is a major target group. During the assessment period, nearly 14,000 people who weren't Cathay Life policyholders participated in the activity. Hence, the general public was included due to the material impact on them.
Affiliated enterprises	Cathay Financial Holdings Co., Ltd.	Dependency and Influence	Inputs included	After interviewing Cathay Life, we learned that the two companies were not directly related in the Cathay Walker Project. However, they both sponsored advertising expenses, which affected the participation of the general public to a certain extent. Hence, we only included its
	Cathay United Bank	Dependency and Influence	Inputs included	



Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
				resource inputs in the assessment.
Promotion partners	Fitness Factory	Responsibility	Excluded	After interviewing Cathay Life, we learned that they only briefly worked together with promotion partners during a certain phase of the project, primarily in the form of vouchers to install the app. However, this had a minimal effect on the customers of Fitness Factory and CatchPlay. Edenred only provided electronic ticket design services, which was determined to be not material, and was therefore excluded from the assessment.
	CatchPlay		Excluded	
Design company	Edenred	Dependency, Responsibility	Excluded	
Gift vendors	7-ELEVEN	Dependency and Influence	Included	Convenience store coupons were the primary walking incentives; coupons with different face values were provided for completing the first walk, reaching the weekly target, and reaching the monthly target. This became the primary incentive for campaign

Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
				participants. Considering that the purchase of coupons by Cathay Life generated actual revenue for 7-Eleven, we included 7-Eleven in the assessment.
	Prize product vendors	Dependency	Excluded	Cathay Walker Project holds a prize drawing for a Lucky Star gift each month. However, after interviewing Cathay Life, we found that the gifts purchased are different each time, so the impact on individual vendors' revenues was minimal; the vendors were thus excluded because their impacts were not material.
Wearable device manufacturers	Xiaomi Corp.	Influence and Diverse Perspectives	Included	A certain number of participants stated in the interview that they had specially purchased wearable devices for the campaign, and questionnaire survey results also show that this impacted different types of
	Apple Inc.			
	Garmin Corp.			



Stakeholder		AA1000 Standard	Inclusion or not	Reason
Category	Subgroup			
	Fitbit Inc.			stakeholders. Even though the sale of wearable devices only accounted for a very small percentage of manufacturers' annual revenue, this is an unexpected and long-term impact that we included within the assessment.
	Samsung Group			

Section 2 Stakeholder Engagement

Through the various phases of engagement, this assessment and this report presents a complete understanding of the implementation of the Cathay Walker Project, as well as the theory of change between its inputs, outputs, and outcomes, so as to determine the actual outcomes of the project. The number of stakeholders engaged in each phases are as follows:

Table 3: Number of stakeholders engaged

Stakeholder		Phase 1 Interview	Phase II Questionnaire Survey		Phase III Verification	Total Phases		
Category	Total Population /Unit	No. of Persons Interviewed	Expected Samples	Valid Questionnaires	Number of People Engaged			
Cathay Life	Cathay Walker Project Team	1 ⁵	4	NA	NA	6	10	
	Employees	Office staff	3,752	9	257	319	18	348
		Service center	1,172	2				
	Sales agents	23,168	2	378	749	2	753	
Policyholders	Walker Whole Life	2,263	3	1,057	1,569	2	1,577	
	Non-Walker Whole Life	103,129	3					
Members of the general public		14,028	4	374	434	2	440	

The stakeholder engagement process is divided into three primary phases, specifically: interview, questionnaire survey, and verification. Each phase's engagement method, purpose and sampling method are detailed below, in order to engage in robust communication with stakeholders.

I. Phase I: Interviews

We performed the following procedures during Phase I engagement:

1. We invited Cathay Life's Cathay Walker Project Team members to a mini workshop, during which we gained an understanding of the project scope and implementation process. This allowed us to discover potential stakeholder groups, and understand the resources input by

⁵ Unit number, representing the entire Cathay Walker Project Team



- the company and actual outputs from the campaign.
2. After identifying potential stakeholders, we randomly selected interviewees to ensure we had no bias and covered different demographics group to collect potential outcomes comprehensively. We conducted semi-structured and in-depth face-to-face, focus group or phone interviews with stakeholders. We interviewed stakeholders one after one until we received no more new information for each stakeholder group. This ensured we reached data saturation, sufficiency, and completeness of potential inputs, outputs, outcomes, adjusting factors and financial proxy for each stakeholder group.
 3. During interview, we observed face to face or inquired about their respective age groups and gender. Based on the above, we noted there are no significantly different outcomes among different gender or different age groups. We also obtained feedback from those did go to gyms with similar outcomes.
 4. We ensured that interviewees participating in the Project during the assessment period (August 2018 to February 2019) and evaluation period is also up to February 2019 through the agenda of Phase I interview agenda and expressed clearly during conversation.
 5. The primary questions are as follows:
 - (1). What was your role or responsibility in the Cathay Walker Project?
 - (2). What are your motives and specific modes of participation for the Cathay Walker Project?
 - (3). What have been your frequency and experience in using the Cathay Walker app?
 - (4). What changes and impacts have participating in the Cathay Walker Project produced for you personally or the people and things around you?
 - (5). How long have these changes lasted?
 - (6). Would the same changes have occurred without participation in Cathay Walker?



- (7). Were there other methods besides Cathay Walker that also helped you gain the same resources or outcomes?
- (8). Did Cathay Walker have a negative or unexpected impact on you personally or the people and things around you?
6. We also considered relevant research papers and public information (such as internet news) that indicated the benefits arising from this type of project (such as health and relaxation arising from walking) in addition to the feedback from stakeholders.
7. We reconfirmed all the information, such as outcomes, chain of event, etc. with stakeholders again through phone interview and amended accordingly before we prepared Phase II questionnaire.
8. We also considered the accessibility of information and its impact, and further determined whether to include the stakeholder in the assessment based on the SROI principles of materiality and Do Not Over-claim. The results based on the above analysis are summarized in Table 2.

II. Phase II: Questionnaire Surveys

In the previous Phase I, we understand the nature of different stakeholder group through randomly selecting interviewees, which we considered would represent the nature and types of the whole population. We summarized the feedback and relevant information obtained. Such a summary indicated that the changes occurred to stakeholders of different age, gender or demographic are similar.

After reaching consensus with stakeholders through all the procedures described in Phase I previously, we designed a variety of questionnaires for different stakeholders including the following considerations:

- We designed indicators to survey whether there existed different changes arising from this Project due to different background, including age, gender or fitness level (go to gym before or during the assessment period). The above consideration was based on our



reading of literatures that use gender, age and demographic for survey and analysis.

- We also considered the potential different changes from stakeholders participating in the Project at different level in addition to use open-end questionnaire to collect feedback that is more comprehensive. We collected information from Cathay Life internal system to make sure our sampling covered those participated aggressively and those participated passively (based on the frequency of uploading walking steps and walking steps target achievement rate). We then randomly distributed the questionnaires. Consequently, response received from these questionnaires covered both those participated aggressively and those participated passively.
- Furthermore, we applied statistical methods to each different stakeholders group to achieve statistically meaningful information for each stakeholders group and to avoid bias of over-emphasizing specific stakeholders group. The sampling method based on population size is described below. Please see table 3 for details:
 1. Large populations with more than 50,000 people: There are more than 100,000 policyholders. We ensured that valid questionnaires had a 95% confidence level with a 3% margin of error.
 2. Medium populations with 5,000 to 50,000 people: There were about 23,000 sales agents and about 14,000 members of the general public who participated in the campaign. We ensured that valid questionnaires have a 95% confidence level with a 5% margin of error.
 3. Small populations with less than 5,000 people: There are fewer than 5,000 office staff. In the project, we first held a brainstorming workshop, and found a high level of consistency in outcomes. We ensured that the valid questionnaires had a 90% confidence level with a 5% margin of error.



- Cathay Life then assisted by validating the correctness and completeness of the content. We hoped, through the questionnaires, to validate whether the outcomes described in the engagement process above did occur, understand the scope of financial proxies and adjusting factors, and effectively measure the impact of each outcome arising from different stakeholders.

In summary, we noted from the questionnaire survey results that the feedback of outcome from stakeholders of different age group, gender or participating level (aggressively or passively) are similar. This result matched that we concluded from Phase I energumen. Based on the above, we concluded not to separate subgroup and used weighted average (by number of responses received) to calculated questionnaire results for impact map analysis.

III. Phase III: Verification

We verified the questionnaire results with stakeholders for consistency with their real life experiences. We performed the following procedures:

- For Cathay Life and its employees, we engaged through face-to-face workshop discussions with employees from different departments. For policyholders and public members of the project, we engaged through phone interviews with stakeholders' representatives from different stakeholders groups.
- During engagement process, we validated the data and results summarized in the first two phases of engagement, including the reasonableness of the chain of events and adjusting factors, as well as the appropriateness of outcome duration and financial proxies, etc. We also clarified concerns or questions in the data with stakeholders to reach consensuses. Please see Table 3 for number of stakeholders engaged.
- In this phase, we engaged through the following discussion:



- i. Please share with us why you participated in this walking project and what impact your participating in this project have on you?
- ii. How long will this impact last? If it will last for more than one year, will such impact decrease after one year? How much it will decrease?
- iii. Based on our interview and questionnaires, stakeholders provided feedback of these changes and impact. Did you experience similar changes or impact?
- iv. Based on our interview and questionnaire, stakeholders provided feedback of the range of values for these outcomes or feedback of options of activities that would result in the same impact. Do you agree with these feedbacks?
- v. Based on our interview and questionnaires, stakeholders provided feedback of the probability that the same outcome would also incur even without this walking project. Is this feedback reasonable based on your experience?
- vi. Based on our interview and questionnaires, stakeholders provided feedback that there are other factors contributing to this outcome in addition to this walking project. What are the proportion of contribution from other factors based on your experience?
- vii. Based on our interview and questionnaires, stakeholders provided feedback that participating in this walking project will not cause harm to other people. Do you agree?

In summary, based on all the three phases' engagement and analysis, and based on the very similar results from the three phases' engagements, we believe that the sampling has reduced sampling error to an acceptable level. The results of sampling are comfortably sufficient to represent the impact experienced by the stakeholders.

Accordingly, we consider our sampling number and results are representative of the whole population, making it reasonable to use those data to represent the total stakeholders' population and to be extrapolated to the results of the whole population.

Considering the population is as big as 150,000, to provide better transparency, in the sensitivity analysis of the SROI report, we also adjusted the SROI by 10% to attain a more reasonable interval.

Chapter 3 Project Outcomes

In Chapter 1, Section 3, we stated the scope and purpose of this SROI assessment and report. We understand and clarify the input and output of Cathay Walker in the following sections first and then the changes stakeholders incurred arising from participating in Cathay Walker so that we can ensure the consistency and relevancy between input, output, and outcomes.

Section 1 Project Inputs

Cathay Walker Project inputs during the assessment period include funds, supplies, and time. The total value of inputs was NT\$110,180,727, which can be summarized as follows by stakeholders:

Table 4: Total resources input into the Cathay Walker Project

Stakeholder	Inputs	Calculations	Value of Inputs (NT\$)	Source
Cathay Life	Target achievement coupon	The actual amount of 7-11 coupon granted to all participants during assessment period for target achievement.	4,865,220	Provided by Cathay Life
	Lucky Star Drawings prize	The actual cost for all drawings gifts, such as backpacks, water bottles, etc. given to monthly drawing winners.	1,316,140	
	Discounts of Walker Whole Life insurance premium	Actual amount of premium discounts granted to stakeholders during assessment period on their Walker Whole Life insurance policy.	920,000	



Stakeholder	Inputs	Calculations	Value of Inputs (NT\$)	Source
		Expenditures for media exposures, press conferences, video production, etc. for marketing and promotion	12,605,866	
	Project team members' time costs	Employees in each department input 22,258 hours × 2018 hourly wage of NT\$150	3,338,700	Data provided by Cathay Life
	The amount Cathay Life paid to sales agents as commission for sales of Walker Whole Life insurance policy	Total premium revenue of Walker Whole Life insurance policy signed in assessment period/number of policy*average commission rate	22,558,716	Provided by Cathay Life
		App and webpage development expenses. Implementation of system and data processing expenses.	2,656,437	
		FinTech exhibition expenses donated by the foundation	150,000	
Cathay Financial Holdings Co., Ltd.		Advertisement expenses to purchase media exposures	7,205,000	Provided by Cathay Life
Cathay United Bank		MRT ATM advertising space	21,300,000	Estimated by Cathay Life
Office staff	Wearable devices	1,571 devices were used in assessment period and the total purchase cost is depreciated using 2.5 years	1,321,412	Questionnaire survey and literatures
	Mobile phones	4,924 participants used mobile phones for 0.5 hour every day during assessment period and the total purchase cost is depreciated using 22	355,451	Interview and literatures

Stakeholder	Inputs	Calculations	Value of Inputs (NT\$)	Source
		months.		
Sales agents	Wearable devices	4,883 devices were used in assessment period and the total purchase cost is depreciated using 2.5 years	4,630,789	Questionnaire survey and literatures
	Mobile phones	23,168 participants used mobile phones for 0.5 hour every day during assessment period and the total purchase cost is depreciated using 22 months	1,672,440	Interview and literatures
Policyholders	Wearable devices	14,285 devices were used in assessment period and the total purchase cost is depreciated using 2.5 years	14,736,115	Questionnaire survey and literatures
	Mobile phones	105,392 participants used mobile phones for 0.5 hour every day during assessment period and the total purchase cost is depreciated using 22 months	7,607,985	Interview and literatures
Members of the general public	Wearable devices	1,947 devices were used in assessment period and the total purchase cost is depreciated using 2.5 years	1,927,810	Questionnaire survey and literatures
	Mobile phones	14,028 participants used mobile phones for 0.5 hour every day during assessment	1,012,646	Interview and literatures

Stakeholder	Inputs	Calculations	Value of Inputs (NT\$)	Source
		period and the total purchase cost is depreciated using 22 months		
Total			NT\$110,180,727	

For the input cost of wearable devices and mobile phones, please see below for further information:

- Regarding the mobile phone cost input:** As participants have to use mobile phone together with Cathay Life App to track (if not using wearable device to track and then upload to mobile phone) and keep record of walking steps for Cathay Walker Project, mobile phone is the input for the Project. However, as there were too many different brand and models of mobile phone to have a complete survey result, this SROI project used the following information for the assessment. (1). We looked into the survey report ⁶ for global average smart phone price of US\$363 (about NT\$10,890). Although mobile phone is the necessity in today's society, it is used widely for calling, messaging, internet surfing, listening to music, etc. and tracking and recording walking steps is only a small portion of it. We decided to include the whole average smart phone price in the calculation without considering its multi-functions due to data availability. (2). We also considered the other survey report (Counterpoint Research)⁷ which indicated it usually took 22 months to change into another new mobile phone. (3). Based on our interview, many participants indicated it usually took them about 0.5 hour for walking to achieve daily target of 7,500 steps. We assumed each participant spent 0.5 hours in walking and used mobile phone to track and/or keep records of walking steps, which is

⁶ T. T Joyce (2018) 智能手機統計，2017 年價格平均漲價 10%。取自 <https://reurl.cc/qDjGqq>

⁷ Counterpoint Research (2017) 國人 22 個月就要換部手機，半數人願花 400 美元以上換新。取自 <https://kknews.cc/digital/lxy3e9g.html>

about 2% (0.5 hours/24 hours). (4). Based on all the above, the mobile phone input cost per participant for the whole 7 months assessment period is calculated as $\$10,890 / 22 \text{ months} * 7 \text{ months} * 0.5 \text{ hour} / 24 \text{ hours}$.

- Regarding the input of wearable devices: As not all Cathay Walker participants use wearable devices to track walking steps and then upload to the mobile phone, we included a question in the Phase II questionnaire to survey if participants used wearable devices to participate in Cathay Walker and if they purchased devices for participating in Cathay Walker. The questions and results are shown below:

options	Sources of devices	Survey results				
		Office staff	Field staff	Policy holders	general public	Average
1	Have already had wearable devices before 2018.08	38%	41%	65%	70%	53.5%
2	Purchased for participating the event of Cathay Walker after 2018.8	42%	38%	18%	17%	28.75%
3	Purchased due to other reasons after 2018.08.	6%	6%	8%	6%	6.5%
4	A gift from others after 2018.08.	15%	12%	8%	4%	9.75%
5	Lucky drawings prize after 2018.08.	1%	3%	1%	2%	1.75%
6	Others, please describe. _____	0%	0%	1%	0%	0.25%

- Regarding the input of wearable devices: Together with the above survey, we also extensively enumerated the different models and brands of wearable devices in the questionnaire. (1). We then used the sales prices listed on each vendor's official websites for each different model indicated in the questionnaire to conduct calculation. These sales price were used for the input of participants' devices cost. (2). The amortization period for the



purchase cost is 2.5 years based on survey⁸ that the highest energy storage efficiency of Lithium-ion battery is around 2-3 years according a research paper regarding Lithium-ion battery, and that the average useful life of smart device is just more than 2 year published by Green Peace⁹.

- For more information regarding the input of wearable devices:
 - The value of wearable devices represents the total value of one wearable device per person who use this device : Regardless of the reasons that participants own wearable devices, either from purchase or drawing prize or gifts from others, as long as participants used wearable devices in assessment period for participating in Cathay Walker, the devices costs are included as input.
 - Ongoing running cost was analyzed and not included accordingly: Ongoing running cost might include the fee for using Bluetooth or WIFI to upload steps recorded by the wearable device to mobile phone. However, the Bluetooth or WIFI cost are not considered an extra cost since participants of this project already have mobile phone equipped with Bluetooth or WIFI (which is very common in Taiwan). Additionally, participants use built-in software to count steps and then synchronize the steps to the Cathay Life app. De facto that there is no extra cost in purchasing and counting app. Although it requires network traffic to upload the recoded number of step onto Cathay Life app, the traffic so small that the participants do not need to adjust the connection cost. In addition, ongoing cost might also include electricity fee for wearable devices and mobile phones to be recharged, but the power consumed by using the active app is very small that the electricity expenses are minimal.

⁸ 根據何冠廷、陳弘源、陳燦耀、方冠榮、張家欽（2019）研究指出，鋰離子電池的電容量會隨著出廠後的時間逐漸減少，2-3年後無論是否使用過，電容量都會降低。

⁹ 綠色和平於2017年公佈的綠色電子品牌評比中提到，在現行商業模式下，電子設備的平均生命週期僅略多於兩年。

Section 2 Project Outputs

Quantifiable outcomes for each stakeholder group during the assessment period for Cathay Life's Cathay Walker Project are described as follows:

Table 5: Outputs of the Cathay Walker Project

Stakeholder		Output	Output Quantity
Cathay Life		Projects developed	105
		Health data records collected from participants	8,566,249 records
		Cumulative number of app downloads	116,671
		Number of prize drawings for Lucky Star gifts	7
		Walker Whole Life policies sold	2,263
Employees	Office staff	Number of participants	4,924
		Total number of steps	4,033,477,043
		Average number of months each person reached target	0.81
		Rewards and prizes received	NT\$358,238
	Sales agents	Number of participants	23,168
		Total number of steps	14,864,549,047
		Average number of months each person reached target	0.38
		Rewards and prizes received	NT\$1,093,895
		Sales commission	NT\$22,558,716
Policyholders		Number of participants	105,392
		Total number of steps	55,490,740,862

Stakeholder		Output	Output Quantity
		Average number of months each person reached target	0.42
		Rewards and prizes received	NT\$3,906,099
Members of the general public		Number of participants	14,028
		Total number of steps	6,269,207,905
		Average number of months each person reached target	0.39
		Rewards and prizes received	NT\$823,128
Gift vendors	7-ELEVEN	Total face value of coupons	NT\$4,865,220
Wearable device manufacturers	Xiaomi Corp.	Number of wearable devices sold	14,138
	Apple Inc.	Number of wearable devices sold	6,334
	Garmin Corp.	Number of wearable devices sold	1,299
	Fitbit Inc.	Number of wearable devices sold	481
	Samsung Group	Number of wearable devices sold	434

The outcomes for different campaign participant groups can generally be discussed in terms of their number of participants, cumulative number of steps, and average number of months each person reached the target.

Policyholders were the largest group of participants, at about 100,000 people. This group was followed by Cathay Life employees at about 28,000 people, including about 5,000 office staff and 23,000 sales agents. The smallest group was the general public, at about 14,000 people.

The campaign's cumulative number of steps reached 80.6 billion steps. Of

these steps, policyholders accounted for about 55.5 billion steps, followed by sales agents at about 14.8 billion steps; office staff only accounted for 4 billion steps, walked less than 6.3 billion steps by the general public.

In terms of the average number of months each person reached the target, office staff ranked number one, at twice the levels of other campaign participants.

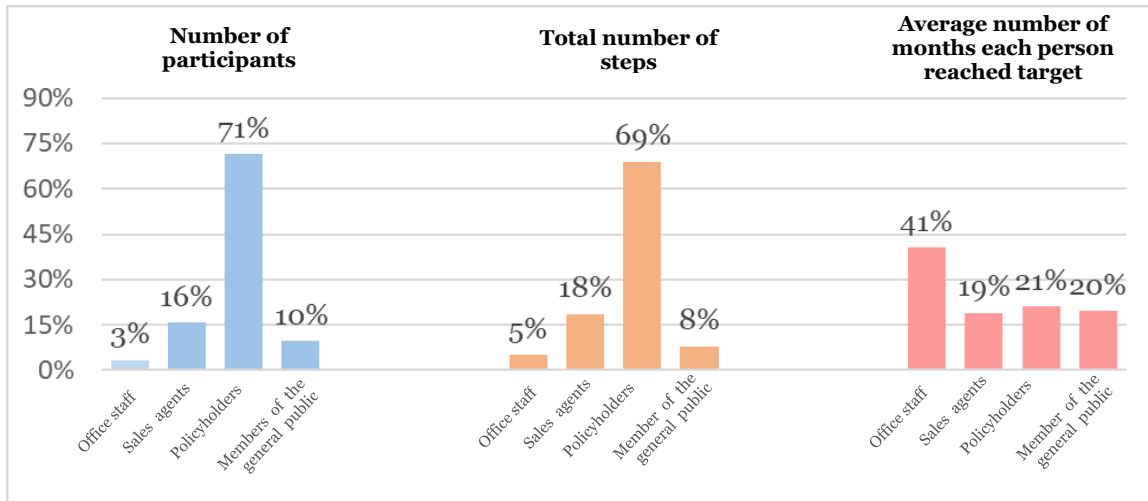


Figure 5: Comparison of campaign participant outputs



Figure 6: Cathay Walker exhibition area on Cathay Life Family Day



Section 3 Understanding Change

We followed the SROI guidance to define outcomes. We interviewed and reconfirmed with stakeholders directly, referenced relevant research papers or literatures, and considered our own experiences and management purpose of Cathay Life over Cathay Walker Project, in order to gain a holistic understanding of changes and potential changes that each stakeholder groups have or might have experienced. We summarized all the information collected as the chains of events. We collected evidences through questionnaires to help clarifying the occurrence of outcomes, significance level of outcomes and outcomes where value was created.

However, if an outcome was determined, through the Phase II questionnaire survey and Phase III verification, to be insignificant or immaterial based on the seven SROI principles and relevant literature, then the outcome is not included in the final calculation and are displayed as dotted lines in the chain of events. Please see Appendix 2 for details.

I. Describe outcomes

During Phase I, we conducted face to face or phone interviewed with focused group or individual interviewee using semi-structure approach to lead the interviewees to consider and tell us “so what happened next?” “what changes have you experienced?” We present the causality of the changes through a chain of events, sorting out the context for each series of changes, then inferred the final expected outcomes;

Based on the stakeholder identification and engagement results in Chapter 2, we divided stakeholders into Cathay Life, office staff, sales agents, policyholders, members of the general public, and vendors. We explain below how each of their outcomes occurred. Related information is briefly described in Table 6 to 11.

1. Cathay Life

Cathay Life regarded comprehensive corporate a stakeholder. We determined the impact of the Cathay Walker Project through feedback from employees, policyholders, and members of the general public, and summarized the impacts into the following four outcomes. Please note that the outcome of “Organization management model optimized” was excluded from Appendix 3 Impact Map based on the analysis in Section 3 Understanding Changes, III Prove outcome, in Chapter 3.

Table 6: Summary of Cathay Life outcomes

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback Key Points
Organization management models optimized	Activities must include cross-department collaboration to be completed → Each department appoints representative to join project team → Benefits communication and coordination between departments → Relevant products and systems developed → Departmental goals effectively linked to organizational goals	Cathay Walker Project Team: “Our organizational culture has also been somewhat impacted. Intra-departmental project work wasn't this close in the past. This project includes different department leading to eliminating selfish departmentalism.”
Company image improved	1. Users feel that Cathay Life is design the activity very attentively → Believe that Cathay Life is	Sales agent: “Health is a topic that resonates with the public and has a positive effect on the

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback Key Points
	<p>not only focus of earn money → Gained favorable impression of Cathay Life</p> <p>2. Employees actively care about the effectiveness of user participation → Received positive feedback from policyholders → Finds company campaign meaningful to society → Increases favorability with Cathay Life</p>	<p>company. It's not just about trying to sell insurance, but also considering policyholders' health issues. This makes my job even more meaningful.”</p> <p>Policyholder: “I didn’t have much feeling at first, but my impression of Cathay Life increased to 7 points because of this campaign.”</p>
Better business performance	<p>Participants download app and begin participating in campaign → Get into the habit of exercise in the participation process, or understand insurance policy information through the app → Purchases Walker Whole Life because it meets needs → More people become customers</p>	<p>Cathay Walker Project Team: “7% of our participants have become our new policyholders because of this campaign. There were over 1,000 people who weren't policyholders in the past, and over 70 of them became new policyholders.”</p>
Negative impression of Cathay Life	<p>Participants download app and begin participating in campaign → Inputs and uploads health information → Becomes concerned about the</p>	<p>Member of the general public: “The interface is not very intuitive, and I don’t know how to use the prize drawing function. Needing to download</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback Key Points
	company collecting personal information	another app to redeem the coupon makes it less appealing. I don't know why they're organizing this campaign; feels like they're trying to collect personal information.”

2. Office staff

After the various phases of stakeholder engagement, we found the office staff include both office and service center employees. We first did observation and surveys with members of the Cathay Walker Project Team, and to understand how most of the employees participated in the Cathay Walker Project. We then used workshops or interviews to determine five outcomes based on the experiences of employees from different departments. The greatest difference here from sales agents was the department contests, which gave employees more opportunities to engage in exchange and interaction; but which also created negative feelings for the small number of employees who were not in the habit of exercising. Please refer to the table below (Please note that the outcomes of “Greater convenience in life” was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome):

Table 7: Summary of office staff outcomes

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
<p>Improved interpersonal relationships</p>	<p>Participates in campaign and urges themselves to exercise → Invites family members to go on walks together → Shares daily life while walking → More frequent interaction between family members</p> <p>Supervisor responds to activities and handles departmental competitions → In order to get afternoon tea among colleagues, encourage each other and care about walking progress → Increased conversation topics and opportunities for interaction between employees</p>	<p>Office staff: “I recommended it to my family members. For example, my older brother has been taking walks after retirement; by downloading the app, he’ll have opportunities to win prizes.”</p> <p>Office staff: “My wife’s department had no contest, and she isn’t in the habit of exercising, but she became willing to go exercising with me for the prize drawing, and it improved our relationship.”</p> <p>Office staff: “The participation rate is really high compared to other activities launched by department of human resource — about 80-90% of office staff and sales agents participated.</p> <p>Department contests with people urging each</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
		<p>other to participate was actually really fun; the people who lost the most had to treat something to others. Even though conflicts happened, opinions have been exchanged within departments that created cohesion.”</p> <p>Office staff: “I try to walk to restaurants that are farther away for lunch. I also share better ways to walk with my colleagues. Everyone talks about how many steps they walked the day yesterday, so our group has getting more active about this topic.”</p> <p>Office staff: “In the past, I would go out with colleagues for tea; now, after participating in the campaign, we go walking. Colleagues who exercise even walk to the yoga classroom together.”</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
<p>Increased stress</p>	<p>Departments organize walking contests → Employees begin to urge themselves to exercise → Step target not reached → Feels self is holding department back</p>	<p>Office staff: “The department and office have the contest. Everyone would post the number of steps they walked in our Line group, so that put some pressure.” Office staff: “I don’t know why I had to be pushed to exercise. During the month of the contest, I would force myself to walk to avoid getting targeted by everyone.”</p>
<p>Better physical health</p>	<p>Participates in campaign and urges themselves to exercise → Hopes to walk more steps than day before → Except oneself to make progress → Gets into habit of walking for exercise → Improves endurance or loses weight</p>	<p>Office staff: “I don't take the MRT, or I get off earlier my station. I weighed 107 kg before joining; I've lost 14.5 kg. This is a support measure for me to examine my lifestyle and make adjustments.” Office staff: “The biggest thing is making it a habit, such as taking my kids out during the holidays. My kids might ride a bike, but I walk so</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
		long as they are in my sight. In the past, I would have chosen to rent a bicycle.”
Stress relief	Participates in campaign and urges themselves to exercise → Hopes to walk more steps than day before → Expect oneself to make progress → Gets into habit of walking for exercise → Has better mood and relieves stress	Office staff: “Walking relieves stress. Sometimes when I’m taking the MRT, I intentionally walk to the next station to get on the MRT, and change my commute routes.”
Greater convenience in life	Participates in campaign and urges themselves to exercise → Noticed that need to always carry mobile phone is inconvenience → Willingness to purchase wearable devices increases → Discovers additional wearable device functions → Applied in handling everyday affairs	Cathay Walker Project Team: “I even purchased a wearable device, began to pay attention to the number of steps I take, and the wearable device even reminds me whether it's time to exercise.”



3. Sales agents

Sales agents need to frequently contact policyholders and are responsible for product sales. Therefore, sales agents have a number of additional outcomes that are specific to the nature of their work. These include a sense of achievement from reaching certain performance targets, and good relationships built with policyholders through professional service. We first did observation and surveys with members of the Cathay Walker Project Team, to understand how most employees participated in the Cathay Walker Project. We then conducted telephone interviews and determined the following six outcomes based on sales agent's experiences (Please note that the outcomes of "Greater convenience in life" and "Improved work efficiency" were excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome):

Table 8: Summary of sales agents' outcomes

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
Improved job satisfaction	1. Participates in campaign voluntarily or through company encouragement → Step target reached → Shares number of steps with policyholders → Show mutual concern about exercise status → Soft topics are easy to sell policies → feel that their services are	Sales agent: "I have reached sales targets for eight consecutive months. Without even realizing it and having no pressure. Cathay Walker is a stepping stone that also promotes other products." Sales agent: "The greatest effect is the number of policyholders I've visited and how many steps."



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	<p>more valuable to customers</p> <p>2. Company introduces Cathay Walker campaign → Has more topics to talk about with policyholders → High acceptance by policyholders → Unexpectedly results in more new contracts → Annual performance is more outstanding than before → Reaching standards for competition</p>	<p>Sometimes when I was walking, I think I'll reach the standard once I visit one or two more policyholders. This is reason why I stepped into top 3,000 people for Summit Meeting of the year.”</p>
<p>Improved interpersonal relationships</p>	<p>1. Participates in campaign voluntarily or through company encouragement → Step target reached → Shares number of steps with policyholders → Improve non-business relations with policyholders</p> <p>2. Participates in campaign voluntarily or through company encouragement → Adjusts commuting habits to reach the target →</p>	<p>Sales agent: “It gave me something else to talk about with policyholders. Having more topics makes conversation less stressful. Policyholders became happier and more relaxed than they used to be.”</p> <p>Sales agent: “I added my husband in. We used to ride our scooter to the Carrefour near our home; now we think to walk more, and spend more time</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	Intentionally increases number of walking steps → Discovers number of steps did not reach target after getting home → Invites family members to go on walks together → Shares daily life while walking → More frequent interaction and exchange between family members	walking together.”
Better physical health	Participates in campaign voluntarily or through company encouragement → Compares with previous daily data → Expects oneself to make progress → Gets into habit of walking for exercise → Improves endurance or loses weight	Sales agent: “I feel in better physical condition than before. I used to get headaches and back soreness. These improved as I went out to exercise. My metabolism also improved and I lost some weight, about 5 kg from when I began, without even making any deliberate diet changes.”
Stress relief	Participates in campaign voluntarily or through company encouragement → Compares with previous daily data → Expect improvement every	Sales agent: “This campaign can relieve my sales pressure.”



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	day → Gets into habit of walking for exercise → Has better mood and relieves stress	
Greater convenience in life	Participates in campaign voluntarily or through company encouragement → Finds that shorter walks with few steps are not recorded → Purchases wearable devices to track walking steps → Discovers additional wearable device functions → Applied in handling everyday affairs	Sales agent: “I bought a Xiaomi Mi Band to record my 7,500 steps. I might drop my phone if I hold it when exercising. I did a group buy with colleagues. It shows the time and works as a step counter.”
Improved work efficiency	Participates in campaign voluntarily or through company encouragement → Has to open app to upload number of walking steps → Uses app more frequently → Notices policy information more quickly on the Cathay Walker platform	Sales agent: “Our average age is about 40-50 years old, and we are hindered by the digital divide, but now we pay attention to information on the app because of this campaign.”

4. Policyholders

Since the Cathay Walker Project was combined with Walker Whole Life policies, we first divided policyholders by whether they had purchased Walker Whole Life. After the various phases of stakeholder engagement, however, we found that the greatest differences between the two stakeholder groups were their motives for and frequency of participation in the campaign. This is because Walker Whole Life policyholders purchased the policy out of need; this causes them to walk more in hopes of reaching the target, and thus increasing their insured amount. However, overall, there was no significant difference in the changes brought by walking exercise for different policyholders' groups. The changes can be summarized into the following six outcomes (Please note that the outcomes of "Greater convenience in life" and "Improved digital application abilities" were excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome):

Table 9: Summary of policyholders' outcomes

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
Improved interpersonal relationships	1. Downloads app and begins participating in campaign → Invites family members to go on walks together to reach targets → Increased amount of time talking and interacting with family members	Policyholder: "I invited my daughter and husband. My husband goes out for a walk after lunch sometimes, and goes on walks with me on holidays." Policyholder: "I send records of reaching targets"



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	<p>2. Downloads app and begins participating in campaign → Introduces it to friends and invites them for walks together → Meets and chats with friends more frequently</p> <p>3. Downloads app and begins participating in campaign → Increases number of walking steps → Sends record of reaching target to sales agent → Show mutual concern about how each other are doing</p>	<p>to my sales agent. We interact more and regularly ask about how we're doing. He even told me he won a coupon.”</p> <p>Policyholder: “I recommended it to friends; everyone asks each other if they reached the target.”</p>
Better physical health	<p>Downloads app and begins participating in campaign → Try to increase the number of steps → Expect improvement every day → Gets into habit of walking for exercise → Improves endurance or loses weight</p>	<p>Policyholder: “When I don’t go on walks, I might not even reach 1,000 steps. I intentionally walk to the park or go shopping to reach the target, so I walked 4,000 or 5,000 more steps after joining.”</p> <p>Policyholder: “I more actively try to reach target when there is an activity. In the past, I usually</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
		walked about 5,000-6,000 steps; now I go out when I haven't reached the goal, which has made me like exercise even more.”
Stress relief	Downloads app and begins participating in campaign → Try to increase the number of steps → Expect improvement every day → Gets into habit of walking for exercise → Has better mood and relieves stress	Policyholder: “Since joining, I force myself to exercise. It changed both my mood and health. I find time to walk and relax.”
Improved digital application abilities	<ol style="list-style-type: none"> 1. Begins participating in campaign after being taught how to download app → Increases app usage rate → Notices other functions due to more frequent mobile phone use → More familiar with mobile in app operating 2. Already had Cathay Life’s app → Increases app usage rate due to participation in campaign → Learned some insurance 	<p>Cathay Walker Project Team: “I didn’t use the app so frequently in the past. Policyholders became more willing to download the app after starting taking walks.”</p> <p>Sales agent: “After teaching a policyholder how to use the app, he walked 10,000 steps every day.”</p> <p>Policyholder: “I already had the app but didn't</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	products can be purchased online	use it often. After participating in Cathay Walker, I opened it almost every single day, and I later began to look at the content. Some insurance policies can also be purchased online.”
Risk management awareness enhanced	Downloads app and begins participating in campaign → Increases app usage rate to check the step count → Pays more attention to the information of the policy → Reviews insurance policy content and gaps → Initiate insurance through relevant channels	<p>Cathay Walker Project Team: “The app is from Cathay Life; policyholders can see gaps in their coverage, such as how much they can borrow against a specific policy.”</p> <p>Policyholder: “After participating in the campaign, I go into the app to check insurance information, and actively inquire about gaps in my insurance. In the past, I hadn't downloaded and didn't know how to use the app.”</p> <p>Policyholder: “I purchased Walker Whole Life after joining in the campaign, because I felt it would push me forward, so I actively contacted</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
		sales agent and told her I want to buy insurance.”
Greater convenience in life	Downloads app and begins participating in campaign → Finds that shorter walks with few steps are not recorded → Purchases wearable devices to track steps walked → Discovers additional wearable device functions → Applied in handling everyday affairs	Policyholder: “I specially bought a wearable device to go on walks; otherwise I would always have to carry my mobile phone. No phone, no step count, so of course I bought a wearable device. It also has other functions, such as heartbeat getting to 130 or 140 on a stationary bike. Policyholder: “Carrying a mobile phone is inconvenient; I need to take care of my child, so I purchased a Xiaomi Mi Band, which also measures my heartbeat and alert me about health information.”

5. Members of the general public

The Cathay Walker Project encourages the public to exercise more. Walking is the easiest habit to get into and the easiest to work into a daily life. It impacts every participant, such as through improved physical condition, mental and physical relaxation, and increased opportunities to interact with others. The general public has no specific identifying features, so there are no particular outcomes. Their greatest difference from policyholders is whether or not they have risk management awareness. Please refer to the table below (Please note that the outcomes of “Greater convenience in life” and “Improved digital application abilities” were excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome):

Table 10: Summary of general public outcomes

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
Better physical health	Becomes interested in campaign and downloads app → To achieve the standard, adjust your lifestyle → Try to increase the number of steps → Gets into habit of walking for exercise → Improves endurance or loses weight	Member of the general public: “In the past, I would walk about 8,000-9,000 steps. Since using the app, I check if I've reached 12,000 before getting off work to see how many more steps I need to walk. It's very easy to reach the target and I feel more energetic.
Stress relief	Becomes interested in campaign and downloads app	Member of the general public: “I keep



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	<p>→ To achieve the standard, adjust your lifestyle → Try to increase the number of steps→ Gets into habit of walking for exercise → Has better mood and relieves stress</p>	<p>checking how many steps I walked today. I have a better mood when I have a goal every day. I’m looking forward to the next campaign. . Otherwise, I feel so lost after the campaign ended.”</p>
<p>Improved interpersonal relationships</p>	<ol style="list-style-type: none"> 1. Becomes interested in campaign and downloads app → Tries to reach step target → Invites family members to go on walks together → Increased amount of time talking and interacting with family members 2. Becomes interested in campaign and downloads app → Tries to reach step target → Introduces it to friends and invites them for walks together → Meets and chats with friends more frequently 	<p>Member of the general public: “I felt like my parents needed it, so I recommended it to them. I went home to connect their wearable devices to cellphones, and I also walked together with them.”</p> <p>Member of the general public: “I =recommended it to a friend who doesn't exercise much but wants to lose weight.”</p> <p>Member of the general public: “I introduced it to about 2-3 friends, and I share information on insurance policies and the campaign with</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
		them.”
Improved digital application abilities	Becomes interested in campaign and downloads app → Adjusts lifestyle to reach targets → Step target reached → Receives coupons for reaching target → Download other apps to redeem coupons → More familiar with the operation of mobile app	Member of the general public: “Needing to download another app to redeem a coupon makes it less appealing, but I also noticed a similar app with better incentives, so I started using that one to record my data.”
Greater convenience in life	Becomes interested in campaign and downloads app → Begins walking → Feels it is inconvenient to carry mobile phone when exercising → Purchases wearable devices → Uses other functions to handle daily affairs	Member of the general public: “In order to record the steps more accurately, I purchased the wearable device after joining in the campaign, and I will notice other health information.”

6. Vendors

Following the different phases of stakeholder engagement, 7-Eleven (which sold the coupons) and five wearable device manufacturers were categorized as vendors. The Cathay Walker Project's impact on all vendors was in increasing their profits from product sales. Please refer to the table below (Please note that the outcome of "Vendor income enhanced" was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome):

Table 11: Vendors chain of events

Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
<p>Vendor income enhanced</p>	<ol style="list-style-type: none"> 1. User participates in Cathay Walker campaign → Tries to walk 7,500 steps every day → Achieves campaign target → Cathay Life issues coupons or gives Lucky Star gift → Business partners sell more products 2. User participates in Cathay Walker campaign → Has to record number of steps → Finds exercise inconvenient when carrying mobile phone or finds shorter walks with few steps are indeed not recorded 	<p>Policyholder: "I specially bought a wearable device to go on walk, otherwise I would always have to carry my mobile phone. It also has other functions, such as heart rate monitoring."</p> <p>Office staff: "I considered buying a wearable device due to the campaign; otherwise my steps for shorter walks wouldn't get counted. That adds up to a</p>



Description of Outcome	Outcome Chain of Events	Stakeholder Feedback
	→ Purchases wearable devices → Vendor sales increase	considerable amount.”

II. Define outcomes

Based on the above chain of event and potential outcome analysis, we understood the stakeholders’ feeling and changes arising from participating Cathay Walker. To confirm the completeness and reasonableness we deduced from above chains of events, we performed the following procedures:

1. We considered relevant literatures, news reporting, sharing from participating Cathay Walker posted on internet.
2. We reconfirmed with stakeholders through workshops or phone interviews the above chain of event to ensure the consistency with their experiences, and adjusted the chain of events when necessary until stakeholders and we reach the consensuses.
3. We prepared the questionnaire based on the above consensuses and distributed questionnaire to reach out more stakeholders for reconfirming the outcomes we concluded are the outcome (point of change) where value is being created.

We included the following outcomes that were discussed more during engagement for better transparency:

(1). Cathay Life - Improved company image :

According to the news report we referred to below¹⁰, a company's image can represent a company's productivity, market position, and a company's holistic capability. A company's image can also create significant value to the company. We further discussed with Cathay Life management and understood there was no sufficient evidence to support the increase of revenue or stock price resulting from better company image.

Based on the above, we concluded the outcome of increased company image based on the feedback from stakeholders that they have higher recognition or awareness of Cathay Life resulting from Cathay Walker.

This outcome also meet one of the management purposes of Cathay Life's launching Cathay Walker to maintain the momentum being a leader of sustainable insurance through creating such a friendly and multi-functional health management eco-system for fulfilling its social responsibly.

Please see further discussion regarding the rationale for our conclusion in IV. Theory of changes analysis in Section 3. Understand Change under Chapter 3.

¹⁰ 北辰雲控（2017）淺談企業形象提升三大策略。財經。取自 <https://kknews.cc/zh-tw/finance/mg4amy.html>



(3). Office staff - Improved interpersonal relationships :

According to relevant literature we referred to below¹¹, the goal and mission given to team would make the team happier, more engaging and more supportive to each other along with the increasing participating level. A good incentive mechanism can stimulate better work performance, passion for work and development potential to continue creating value for a company.

Based on office staffs' feedback, after participating in Cathay Walker and inter-department walking contest, they did not change materially in terms of work efficiency or quality, but did have change in relationship among team members and with superiors (sharing the same conversational topic of walking and contest and having more interaction). Therefore, we concluded the improved relationships between employees is one of the outcomes that value is created to office staff from Cathay Walker.

(4). Office staff - Increased stress and Stress relief :

A portion of office staff provided feedback that the walking contest caused them stress. They have to schedule walking into their busy agenda every week into to achieve walking steps target so that they would not drag the whole department behind in the contest.

However, most employees mentioned during interview that, walking more often to work or back from work really helped them become more energetic and relaxed. To collect more information to support this feedback from employee, we did look

¹¹ 劉玲佑 (2014)。提升團隊凝聚力之行動研究。國立台中教育大學教育行政與管理在職專班碩士論文、劉婉珍 (2012)。組織效能感與工作熱情在人力資源管理效能對工作績效影響之跨層次中介效果研究。國立彰化師範大學人力資源管理研究所碩士論文。

up the literature below¹² that indicate walking can help alleviating depression.

We carefully consider if the above negative impact from contest and positive impact from walking would be offset. Therefore, we took further action below:

- Reconfirmed with office staff during interview. The feedback we received expressed that inter-department walking contest did force them to exercise and did result in pressure. However, they still experienced relaxation when they walk. The two different impact did not happen at the same time and therefore could not be offset.
- We included the questions below to collect feedback from more office staff participants. We received the most feedback on option 4 “Walking helps to relieve the stress in life, but the competition still puts me under pressure”

Question	Options
<p>After interviews and research, we found that the above changes will cause employees to "increasing psychological stress", but also have the effect of "relieving the stress in life" when walking. Therefore, what option best described your experience?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> (1)Walking cannot relieve the stress in life, no psychological stress in competition (If ticked, skip to next question) <input type="checkbox"/> (2)Walking cannot relieve the stress in life, and the competition puts me under pressure. <input type="checkbox"/> (3)Walking helps to relieve the stress in life, and no psychological stress in competition. (If ticked, skip to next question) <input type="checkbox"/> (4)Walking helps to relieve the stress in life, but the competition still puts me under pressure <input type="checkbox"/> Others, please describe _____

¹² 戴怡君、謝秉廷（2009）走路能夠緩解憂鬱。取自 <http://www2.jtf.org.tw/psyche/sportrelief/more-32.php>

- We reconfirmed the above feedback with stakeholders during Phase III engagement.
- We looked up another literature below¹³ that indicate, regardless being forced to exercise or exercise on their own will, exercise can help alleviating depression and sad feeling.

Based on all the above information and analysis, we concluded the two outcomes of “Increased stress” and “Stress relief” should not be off-set.

(5). Policyholders and Member of the general public - Improved digital application abilities :

Participants have to download Cathay Life app and learned how to use this app so that they can upload the walking steps. This outcome is not relating to being able to take advantage of the app and stakeholders’ physical and emotional health being improved. Instead, this outcome is relating to changes of behavior such as “Use app more often to check information about insurance policies”, “Use app to purchase insurance policy on line”, or “Discover mobile phone functions not used before (including listening to music, reading news, playing games, etc)” . Such change of behavior would also create more leisure activity options to participants.

Considering the improved digital capabilities changed the behavior of stakeholders in different aspects, we referred to the research paper of “Living Digitally”, page 9¹⁴ · and we concluded this outcome as improved digital application abilities that created value to stakeholders.

¹³ 班哲明·葛林伍德（2013）強迫運動也能紓壓。取自 <http://hps.hphe.ntnu.edu.tw/zh-tw/news/all/detail/id-1518>

¹⁴ Just economics (2018). Living Digitally – An evaluation of the CleverCogs™ digital care and support system. Retrieved from <https://www.carnegieuktrust.org.uk/publications/living-digitally-an-evaluation-of-the-clevercogs-digital-care-and-support-system/>

III. Prove outcomes

During Phase II, we expanded our sampling through questionnaires to wider stakeholders of each group. We would like to ensure that the outcomes based on chain of events meet the real experiences of office staffs, sales agents, policyholders and general public participants. We also asked participants to provide information or indicate experiences not listed as options in the questionnaires to collect information as comprehensive as possible.

Based on the SROI principles, we needed to establish one or more indicators for each outcome, to evidence whether an outcome occurred, and to calculate and quantify the outcome's occurrence. Please see our analysis below:

1. The procedures we performed to prove outcomes:

To achieve SROI principles, we performed the following procedures:

- In this assessment's Phase I stakeholder engagement, we used interviews to learn about the different stakeholder groups' changes in behavior, state of mind, and values after involvement in the Cathay Walker Project.
- Due to the different circumstances of individual stakeholders, these changes vary in the degree and frequency to which they occurred. Hence, we further established indicators appropriate to different stakeholders based on their characteristics. We invited Cathay Life employees who had a better understanding of the Cathay Walker Project, as well as campaign participants, to fill out the questionnaire on a trial basis.
- We then discussed and revised items that were hard to understand with them.
- We then included the questions in the Phase II questionnaire survey, to serve as the basis for determining the occurrence of an outcome.
- To prevent the design of indicators from producing induced biased outcomes, we considered the subjective perceptions of stakeholder groups, relevant facts, objective observations of relevant parties, and

literature when selecting indicators. For example: The Cathay Walker Project Team periodically analyzes the campaign's back-end data.

- When team members were asked about changes experienced by Cathay Life and employees during the interview, we also asked them to provide recommendations for indicators used for policyholders and members of the general public.
- After gathering evidence from multiple sources, we ensured that the outcomes included in the subsequent assessment did indeed occur and that the outcomes complied with the principle of Do Not Over-claim.

2. The indicators we determined to support outcomes:

Based on the procedures above, we determined the indicators for each outcome of different stakeholders group. Please see below:

Table 12: Overview of stakeholder outcome indicators

Stakeholder	Outcomes	Indicator
Cathay Life	Organization management models optimized	N/A. In Phase I of the engagement process, members of Cathay Walker Project Team determined that the Cathay Walker Project only increased the number of opportunities for different departments to work together, but did not change the organization's management models. <u>Hence, the outcome was excluded because it was not material.</u>
	Company image improved	1. Office staff and sales agents replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred:



Stakeholder	Outcomes	Indicator
		<p>-Became more willing to tell everyone that I am a member of Cathay Life</p> <p>-Have greater faith in my work and are more willing to serve at Cathay Life</p> <p>-Support the company’s common values and are more willing to give my all for Cathay Life</p> <p>3. Policyholders replied in questionnaire as to whether they said outcome occurred or not</p> <p>4. At least one of the following changes occurred:</p> <p>-After joining campaign, felt it was meaningful and became willing to share it with others</p> <p>-Became a new Cathay Life policyholder due to Cathay Walker campaign</p> <p>-I will recommend Cathay Life first when others have similar needs</p> <p>5. Members of the general public replied in questionnaire as to whether they said outcome occurred or not</p> <p>6. At least one of the following changes occurred:</p> <p>-Feel that Cathay Life is more concerned about society than its</p>



Stakeholder	Outcomes	Indicator
		<p>competitors, while still pursuing profitability</p> <ul style="list-style-type: none"> -Willing to view information of Cathay Life for a longer period of time -Became more willing to share information of Cathay Life with others -Became more willing to receive professional services provided by Cathay Life sales agents
	Better business performance	Whether there were new insurance policies signed and increase of profits
	Negative impression on Cathay Life generated	<ol style="list-style-type: none"> 1. Members of the general public replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Concerned about the campaign collecting personal information -Feel that the method for redeeming coupons was insufficiently convenient -Switched to other, similar app due to the discrepancy in the number of steps uploaded through Cathay Life's app
Office staff	Improved interpersonal relationships	<ol style="list-style-type: none"> 1. Staffs replied in questionnaire as to whether outcome occurred 2.



Stakeholder	Outcomes	Indicator
		<p>2-A : At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Share own walking outcomes with family members -Go on walks with family members -Cathay Walker became a topic of conversation with family members <p>2-B : At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Walk to get lunch with colleagues -Became more familiar with and have more to talk about with colleagues -Organized Cathay Walker contests with colleagues <p>2-C : Both of 2-A and 2-B changes occurred.</p>
	Increased stress	<ol style="list-style-type: none"> 1. Staffs replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Have to expend a great deal of effort to reach targets -Worried about not reaching targets and holding the department back -Feel anxious when colleagues talk about Cathay Walker -Become nervous when cumulative step target is announced
	Better physical health	<ol style="list-style-type: none"> 1. Staffs replied in questionnaire as to whether outcome occurred



Stakeholder	Outcomes	Indicator
		<p>2. At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Helps get into habit of exercise/walking -Feel more energetic and less fatigued -Better cardiovascular function -Lose weight -Lowered BMI
	<p>Stress relief</p>	<p>1. Staffs replied in questionnaire as to whether outcome occurred</p> <p>2. At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Walking helps me forget my worries -Walking makes me feel more energetic and less fatigued -I think about going for a walk when I feel stressed -The Cathay Walker campaign relieves work stress
	<p>Greater convenience in life</p>	<p>1. Staffs replied in questionnaire as to whether outcome occurred</p> <p>2. Began using a wearable device to record step count for the Cathay Walker campaign, and at least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Use the wearable device to keep an eye on health data -Use the wearable device's built-in EasyCard function



Stakeholder	Outcomes	Indicator
		<p>-Use the wearable device's calendar and reminder functions</p> <p>-Use the wearable device's GPS function for navigation</p> <p>(Please note that this outcome was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)</p>
Sales agents	Improved job satisfaction	<p>1. Sales agents replied in questionnaire as to whether outcome occurred</p> <p>2. At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -I visited even more policyholders to reach the step target, and helped me to sign more new contracts -Introducing the Cathay Walker campaign helped me feel that my services have more value for policyholders -The Cathay Walker campaign significantly increased my sales performance -Cathay Walker campaign helped me get into the summit meeting
	Improved interpersonal relationships	<p>1. Sales agents replied in questionnaire as to whether outcome occurred</p> <p>2.</p>



Stakeholder	Outcomes	Indicator
		<p>2-A : At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Share own walking outcomes with family members -Go on walks with family members -Cathay Walker became a topic of conversation with family members <p>2-B : At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Cathay Walker campaign helped policyholders be more willing to open up and speak their minds -Policyholders share their walking outcomes with me -Can feel that policyholders are less likely to reject contact with me -Cathay Walker campaign allowed me to interact with policyholders like friends <p>2-C : Both of 2-A and 2-B changes occurred.</p>
	<p>Better physical health</p>	<ol style="list-style-type: none"> 1. Sales agents replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Helps get into habit of exercise/walking -Feel more energetic and less fatigued



Stakeholder	Outcomes	Indicator
		<ul style="list-style-type: none"> -Better cardiovascular function -Lose weight -Lowered BMI
	Stress relief	<ol style="list-style-type: none"> 1. Sales agents replied in questionnaire as to whether outcome occurred or not 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Walking helps me forget my worries -Walking makes me feel more energetic and less fatigued -I think about going for a walk when I feel stressed -The Cathay Walker campaign relieves work stress
	Greater convenience in life	<ol style="list-style-type: none"> 1. Sales agents replied in questionnaire as to whether outcome occurred 2. Began using a wearable device to record step count for the Cathay Walker campaign, and at least one of the following changes occurred: <ul style="list-style-type: none"> -Use the wearable device to keep an eye on health data -Use the wearable device's built-in EasyCard function -Use the wearable device's calendar and reminder functions -Use the wearable device's GPS function for navigation



Stakeholder	Outcomes	Indicator
		<p>(Please note that this outcome was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)</p>
	<p>Improved work efficiency</p>	<p>N/A. During Phase I of the engagement process, office staff supervisors at Cathay Life felt that this outcome was a rarity. Sales agents primarily use internal systems to check information on insurance policies. The Cathay Walker app is not the primary channel by which employee access information. <u>Hence, this outcome was determined to be not material and thus excluded.</u></p>
<p>Policyholders</p>	<p>Improved interpersonal relationships</p>	<p>1. Policyholders replied in questionnaire as to whether outcome occurred</p> <p>2.</p> <p>2-A : At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Share own walking outcomes with family members -Go on walks with family members -Cathay Walker became a topic of conversation with family members <p>2-B : At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Invite friends to go on walks



Stakeholder	Outcomes	Indicator
		<p>together</p> <ul style="list-style-type: none"> -Cathay Walker became a topic of conversation with friends -I share walking outcomes with Cathay Life sales agents -Inspired me to participate in similar campaigns, where I made even more friends with shared interests <p>2-C : Both of 2-A and 2-B changes occurred.</p>
	<p>Better physical health</p>	<ol style="list-style-type: none"> 1. Policyholders replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Helps get into habit of exercise/walking -Feel more energetic and less fatigued -Better cardiovascular function -Lose weight -Lowered BMI
	<p>Stress relief</p>	<ol style="list-style-type: none"> 1. Policyholders replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Walking helps me forget my worries -Walking makes me feel more energetic and less fatigued



Stakeholder	Outcomes	Indicator
		<ul style="list-style-type: none"> -I think about going for a walk when I feel stressed -The Cathay Walker campaign relieves work stress
	<p style="text-align: center;">Improved digital application abilities</p>	<ul style="list-style-type: none"> 1. Policyholders replied in questionnaire as to whether outcome occurred 2. Downloaded and used Cathay Life’s app to upload walking records, and at least one of the following changes occurred: <ul style="list-style-type: none"> -Discovered mobile phone functions that I had never used before -Compared with before, I use Cathay Life’s app more frequently to check information on insurance policies -I use the Cathay Life’s app to purchase insurance online
	<p style="text-align: center;">Risk management awareness enhanced</p>	<ul style="list-style-type: none"> 1. Policyholders replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -I pay more attention to insurance information than before -I became aware of the gaps in my insurance -I more actively looked into the types and content of insurance -I actively inquire with sales agents

Stakeholder	Outcomes	Indicator
	Greater convenience in life	<p>1. Policyholders replied in questionnaire as to whether outcome occurred</p> <p>2. Began using a wearable device to record step count for the Cathay Walker campaign, and at least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Use the wearable device to keep an eye on health data -Use the wearable device's built-in EasyCard function -Use the wearable device's calendar and reminder functions -Use the wearable device's GPS function for navigation <p>(Please note that this outcome was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)</p>
Members of the general public	Better physical health	<p>1. The general public replied in questionnaire as to whether outcome occurred</p> <p>2. At least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Helps get into habit of exercise/walking -Feel more energetic and less fatigued -Better cardiovascular function



Stakeholder	Outcomes	Indicator
		<ul style="list-style-type: none"> -Lose weight -Lowered BMI
	<p style="text-align: center;">Stress relief</p>	<ol style="list-style-type: none"> 1. The general public replied in questionnaire as to whether outcome occurred 2. At least one of the following changes occurred: <ul style="list-style-type: none"> -Walking helps me forget my worries -Walking makes me feel more energetic and less fatigued -I think about going for a walk when I feel stressed -The Cathay Walker campaign relieves work stress
	<p style="text-align: center;">Improved interpersonal relationships</p>	<ol style="list-style-type: none"> 1. The general public replied in questionnaire as to whether outcome occurred 2. <ul style="list-style-type: none"> 2-A : At least one of the following changes occurred: <ul style="list-style-type: none"> -Share own walking outcomes with family members -Go on walks with family members -Cathay Walker became a topic of conversation with family members 2-B : -Invite friends to go on walks together <ul style="list-style-type: none"> -Cathay Walker became a topic of conversation with friends -Inspired me to participate in similar



Stakeholder	Outcomes	Indicator
		<p>campaigns, where I made even more friends with shared interests</p> <p>2-C : Both of 2-A and 2-B changes occurred.</p>
	<p>Improved digital application abilities</p>	<p>1. The general public replied in questionnaire as to whether outcome occurred</p> <p>2. Downloaded and used Cathay Life’s app to upload walking records, and at least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Discovered mobile phone functions that I had never used before -I use the Cathay Life’s app to purchase insurance online
	<p>Greater convenience in life</p>	<p>1. The general public replied in questionnaire as to whether outcome occurred</p> <p>2. Began using a wearable device to record step count for the Cathay Walker campaign, and at least one of the following changes occurred:</p> <ul style="list-style-type: none"> -Use the wearable device to keep an eye on health data -Use the wearable device's built-in EasyCard function -Use the wearable device's calendar and reminder functions -Use the wearable device’s GPS function for navigation



Stakeholder	Outcomes	Indicator
		(Please note that this outcome was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)
Gift vendors -7-Eleven	Vendor income enhanced	Whether coupons purchased by Cathay Life increased vendors' profits (Please note that the outcome of "Vendor income enhanced" was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)
Wearable device manufactures	Vendor income enhanced	Office staff, sales agents, policyholders, and members of the general public replied in questionnaire as to whether they began using a wearable device to record their Cathay Walker campaign step counts. (Please note that the outcome of "Vendor income enhanced" was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)

3. The example we provided for illustration:

Using an outcome that occurred for all participants of the campaign, "Better physical health", as an example, we have added an explanation of the logic behind the design of outcome indicator, conditions for determining whether or not an outcome occurred, and standard for calculating outcome occurrence.

(1). Identify indicators for outcomes

Many studies worldwide have proven that using an app to promote walking improves physical health. For example:

- Gualtieri, L., Rosenbluth, S., & Phillips, J. (2016) point out that immediate feedback through true, immediate physical data provided by a tracker can improve the participants' self-efficacy. It reminds them to become more committed to exercise and reach their step target each day, which helps them get into the habit of exercise.
- *Physical Activity Guidelines for Americans* (2018) mentions that regular physical activity is related to many health benefits, including lower blood pressure and blood sugar, stronger bones and muscles, stronger cardiovascular function, and better mood.

After finding evidence in the literature, we further referenced Social Value UK's SROI database. In that database, the report *The Value of Walking* (2016) shows that improvement in physical function can be used to demonstrate that a subject's physical activity has become more regular. In the light of this, we summarized the physical changes described by stakeholders during the interview (e.g., feeling more energetic after walking for a while, better cardiovascular function, and weight loss) into five diverse, objective indicators for stakeholders to choose from. Please see Figure 7.

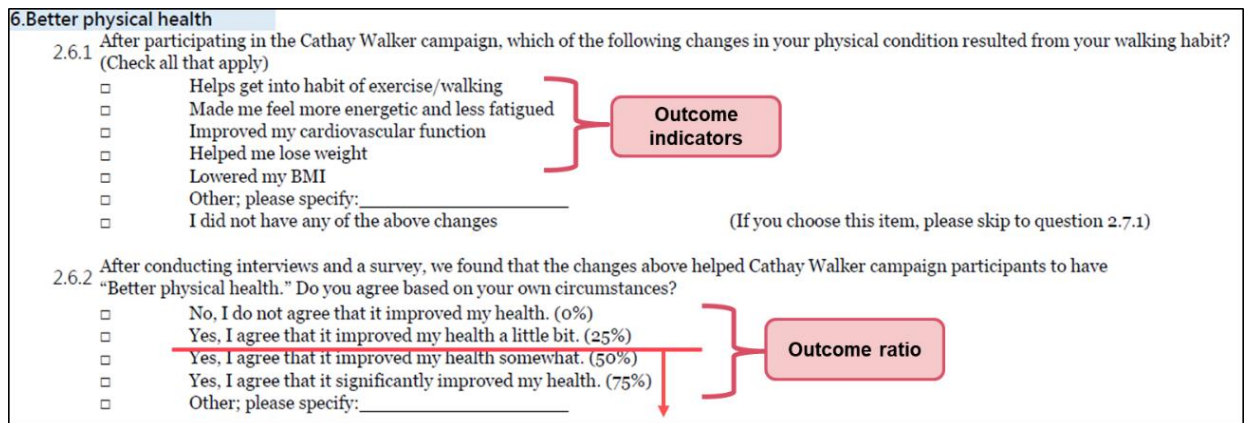


Figure 7: Explanation of outcome indicator and outcome ratio

(2). Prove occurrence of outcomes

The questionnaire first screened stakeholders based on the period when they downloaded the app, making sure that stakeholders' changes indeed occurred during the campaign's assessment period.

If at least one factual indicator was chosen and the percentage of response indicating no changes was not the highest, we determined that the outcome did occur. Taking the outcome of "Better physical health" from general public as example, about 70% responses indicated "Developed habit of exercise or walking more often" and only 11% responses indicated "No changes".

Please see below for more information relating to "Better physical health":

Number of general public valid questionnaire : 434		
Outcome indicators	Number of selection	Response rate
Developed habit of exercise or walking more often	305	70%
Have been more energetic and fatigueless	173	40%
Developed better cardiopulmonary function	121	28%

Reduced weight	85	20%
Reduced BMI	57	13%
Others · please explain_____	1	0%
No changes	49	11%
<p>Note 1 : Response rate is calculated as number of selection / number of valid questionnaire</p> <p>Note 2 : Other than those selected “No changes”, each respondent can select more than one options</p>		

(3). Calculate quantity of outcome (Number of changes)

If the respondent matched any indicator, we further asked if the stakeholder agreed that the preceding indicator was sufficient to prove that the outcome had occurred. If stakeholders agreed, they will need to reply the degree of change.

We divided the degree of change using interquartile range. After discussion with Cathay Life in Phase III of the engagement process, and based on the principle of materiality, only a change of 50% or higher degree was considered significant.

We used this as the basis to calculate the number of people with the outcome more objectively. Please see below for more information:

Number of general public valid questionnaire : : 434		
Degree of changes	Number of response	Response rate
No, I do not agreed health condition was improved (0%)	7	2%
Yes · I agreed health condition was improved to some degree (25%)	197	45%
Yes · I agreed health condition was improved to a medium degree (50%)	142	33%
Yes · I agreed health condition was	39	9%

Number of general public valid questionnaire : : 434		
Degree of changes	Number of response	Response rate
improved to a high degree (75%)		
Others · please explain _____	0	0%
Note : 「 Outcome ratio 」 is calculated as 「 Number of responding 50% or higher (181) / Number of valid questionnaire (434) 」 =42% (after rounding)		

The quantity of outcomes (number of changes) would then be calculated as “Outcome ratio” * Number of stakeholders in this group”. In this example, number of changes for the outcome of “Better physical health” arising from the group of general public would be 5,850 (outcome ratio of 42% * number of stakeholder of 14,028”), which was arrived at when using outcome ratio before rounding for this calculation.

The above calculation showed that the outcome ratio arising from questionnaire result and number of responses was extrapolated to the entire population of related stakeholders’ group. The same model was applied consistently to other outcome considering questionnaire results.

IV. Theory of change analysis

To further elaborate how we followed the “Supplementary Guidance for Principle 2: Understand what changes Part One: Creating well defined outcomes” to define the Project’s outcomes, we referred to this Guidance and used the outcomes of “Company image improved”, “Risk management awareness enhanced” and “Negative impression of Cathay Life” as examples for elaborations.

1. When applying SROI, we tried to identify the ‘well defined outcomes’ through considering “Theory of change is best used as a planning tool, and a set of well-defined outcomes is a way of informing decision making in order to maximize social value”, as mentioned on page 5 of this Supplementary Guidance.¹⁵

What is the relationship between a set of well-defined outcomes and a theory of change?

There are numerous definitions for a theory of change. In the box below there are more definitions and information about this. However, generally it is used as a planning tool which sets out an aspirational pathway for an organisation to achieve its intended objectives. It does this by starting with the ‘intended end goals and working back to identify the required outcomes and enablers / conditions that need to be in place for the goals to occur.’²

In contrast to a theory of change, this approach starts with the activities and considers the changes that result from activities. These changes would include positive and negative, and unintended and intended changes. This will result in a more complete picture of material changes for all stakeholders.

Both approaches are useful but in different situations. Theory of change is best used as a planning tool and a set of well-defined outcomes is a way of informing decision making in order to maximise social value.

2. We further looked up the definition in this Supplementary Guidance to find the elaboration on ‘well define outcome’ as below¹⁶:

¹⁵ Standard on Applying Principle 2: Understand what changes, Cabinet Office, U.K., 2019, P5

¹⁶ Standard on Applying Principle 2: Understand what changes, Cabinet Office, U.K., 2019, P6

What is a well-defined outcome?

A well-defined outcome describes a specific change for someone (or a group of people) that provides the best opportunity to increase or decrease value. Once identified, the well-defined outcomes lead to better resource allocation decisions being made to maximise social value.

3. We also looked into the five types of changes included in this Supplementary Guidance that people can experience below ¹⁷ :

There are lots of different ways in which people can experience change. The taxonomy in this guidance recognises five main types of change that people can experience. These are changes in:

- a) Circumstance
- b) Behaviour
- c) Capacity
- d) Awareness
- e) Attitude

4. From the above five types of changes, we learned that the changes in Awareness and Attitude are also the changes that people can experience and that are recognized in this Supplementary Guidance.
5. Take the outcome of “Improved company image” as example.
 - (1). We interviewed Cathay Life top management, employees and Cathay Walker Project team that we considered sufficiently representing Cathay Life. From these interviews, we identify the outcome of “Improved company image”. However, we also face the challenge relating to how and whether we should go on to next layer of theory of change. There are different views collected from these interview, some mentioning higher stock price and others mentioning increased revenue, that were highly uncertain and that we found difficult to obtain evidence to support. However, there are evidence supporting “improved company image”.
 - (2). We have to make our professional judgement relating the point that changes after it do not need to be measured, evidenced or valued. Therefore, we referred to 4.2c of the Supplementary Guidance as

¹⁷ Standard on Applying Principle 2: Understand what changes, Cabinet Office, U.K., 2019, P6

below: ¹⁸

4.2c Know when you can stop extending the chain

Changes in people's lives are on-going and never-ending and, over time, very different for different people, so it is important to consider when, for your purposes, you can stop extending the chain of events.

One way of doing this is to consider when the outcome is absolute enough. Some positive outcomes can result in

negative outcomes, and some negative outcomes can lead to positive outcomes. The risk of stopping your chain of events too early is that you stop the chain before the 'positive outcome turns to a negative' or the 'negative turns to a positive outcome'. For example an alcoholic stopping drinking could go on to replace drinking with a different addiction and it may be considered that there is a high risk of this. In which case it would be necessary to go further than reducing or stopping drinking to understand what happens next.

If you do stop the chain to value a positive outcome which for a high proportion of stakeholders is followed by a negative outcome, it means that you haven't gone far enough along the chain.

Stakeholder involvement is key to informing this judgement. However you can also draw on third party research and your own experience to judge this risk.

- (3). From all the above, we noted that we have to consider “Stakeholder involvement” and “Informing decision making” as the key factors.
- (4). In addition, in the guidance relating to “materiality”, we have to consider “relevance” when determining the inclusion or exclusion of an outcome.¹⁹ On top of that, “relevance” depends on the perception of stakeholders and management approach adopted by peers to create value.

¹⁸ Standard on Applying Principle 2: Understand what changes, Cabinet Office, U.K., 2019, 14-15

¹⁹ <http://www.socialvalueuk.org/app/uploads/2016/03/Materiality-Standard-2018-DRAFT-v0.1.pdf>, page 7

Relevance

Exclusion of outcomes as not being material in the first two questions is based on qualitative data.

Outcomes are included if they are relevant and are relevant if the activity contributes to the outcome and:

- stakeholders perceive an outcome as important to them;
- peers are already managing the outcome and have demonstrated its value;
- the organisation has a policy to include the outcome;
- there are existing social norms that demand it; or
- there are financial consequences to the organisation for not including this outcome in the analysis.

Stakeholders views are therefore an important consideration but are not the only driver of decisions on relevance.

(5). Based on all the above, we made our judgement that “Improved company image” is an outcome as below:

- A. For Cathay Life, no sufficient evidence to support the “improved company image” leading to increased revenue or higher stock price. It will not decision making useful information if we determined the outcome to be “increased revenue” or “higher stock price”.
- B. From the feedback of all interviewees from Cathay Life, “improved company image” is the most important purpose and it is indeed a benefit to Cathay. Whether “improved company image” would lead to increased revenue or higher stock price is not the consideration for them to launch this Cathay Walker project. In other words, Cathay Life did not plan to increase revenue or escalate stock price from launching this Project. “Improved company image” is the decision making consideration for resource allocation. Cathay Life emphasized the above during interview. Therefore, we consider more reasonable and compliant with the Supplementary Guidance not to determine “increased company image” an outcome.
- C. From materiality point of view, Cathay Life and participants clearly indicated that “improved company image” is the first

priority goal to achieve through the launch of the Project, an outcome. This is the reason they decided to assess the impact of this Project using SROI. From our experience of financial service industry in Taiwan, “improved company image” is also what they manage to achieve through many different events.

- D. The last point we think worth mentioning is the desire to be recognized internationally of all companies and citizens in Taiwan because Taiwan is in a unique and difficult situation. Due to the difficult situation, in addition to our hospitality in nature, Taiwan developed a culture to emphasize the recognition and importance of image. This is also one of the reason SROI and SROI assurance is well accepted in Taiwan compared to other countries (except for UK) as Taiwan companies’ eagerness to be known and recognized internationally. “Improved company image” is definitely one of the most important purpose of launching this Cathay Walker and, considering all the above, should be an outcome where value is being created and expected to be managed to maximize through Cathay Walker, even it does not necessary lead to increased revenue or higher stock price.

(6). We also provided our analysis regarding that “Improved company image” and “Better business performance” are two outcomes as below:

- A. We noted that better impression of Cathay Life might lead more participants buying insurance policy from Cathay.
- B. We determined that “Improved business image” (similar to the effect of Cathay Life’s charity event) and “Better business performance” (actual insurance policy profit increase) are separate outcomes based on the following:

(a.) Please see the elaboration under 5 above.

(b.) The outcome of “Improved company image” are supported by the feedback from stakeholders of participants. Take “General public” stakeholder group as example. The feedback from General public questionnaires indicated 77% of respondents have replied with this change, supported by at least one of the following indicators:

- Feel that Cathay Life is more concerned about society than its competitors, while still pursuing profitability
- Willing to view information of Cathay Life for a longer



period of time

- Became more willing to share information of Cathay Life with others
- Became more willing to receive professional services provided by Cathay Life sales agents

(c.) General public stakeholders group is the participants who did not buy insurance policy from Cathay and still provided feedback of “improved company image”.

(d.) The sale of Walker Whole Life insurance policy is the economic fact, which support the outcome of better business performance.

(e.) From chain of event description for these two outcomes, we also found stakeholders went through different chain of changes to arrive at different outcomes (Please see Table 6 Summary of Cathay Life Outcomes).

C. Based on the above, we determined “Improved company image” and “Better business performance” are two different outcomes.

6. Take “Risk management awareness enhanced” as an example:

(1). First, “Awareness” is also one of five types of changes in the Supplementary Guidance and can be an outcome. We considered “relevance” and “Stakeholders involvement” and “Informing decision making” when determining “Risk management awareness enhanced” to be an outcome. Please see our elaboration below.

(2). From the table below, it indicated, globally, Taiwan ranked number 1 in both 2017 and 2018, in terms of both “Insurance Penetration” and “Life Insurance Penetration”. It also indicated that, globally, in 2018, Taiwan ranked number 4 in terms of “Life Insurance Density” and number 6 in terms of “Insurance Density” (This information is originally from Sigma)²⁰ :

²⁰ <https://ctee.com.tw/news/insurance/115108.html>

近二年台灣保險全球排名概況

項目	2017年	全球排名	2018年	全球排名
保險保費收入	1,175億美元	10	1,219億美元	10
壽險保費收入	986億美元	8	1,020億美元	7
保險密度	4,998美元	6	5,156美元	6
壽險密度	4,195美元	3	4,320美元	4
保險滲透度	21.31%	1	20.88%	1
壽險滲透度	17.89%	1	17.48%	1

資料來源：瑞士再保Sigma 製表：彭禎伶

- (3). The reason of the very high insurance penetration and density is the very high risk awareness of Taiwan arising from the anxiousness and insecurity due to our culture (5000 years of chaotic history) and our difficult political situation internationally (not being recognized by UN) as mentioned previously.
- (4). With the above background that high risk awareness resulted in higher insurance penetration and density, we determined not to go on to next layer of chain of events from the change of “risk management awareness enhanced” based on the following considerations:
- A. Informing decision making in order to maximize social value
 - B. Stakeholders involvement
 - C. Materiality considering “relevance” when determining the inclusion or exclusion of an outcome.²¹ Moreover, “relevance” depends on the perception of stakeholders.
- (5). Regarding informing decision making:
- A. From Cathay Life’s perspective, similar to the discussion for “improved company image”, the decision making point and the purpose of launching this event mainly focused on “if the Project can raise the risk awareness” instead of “how much

²¹ <http://www.socialvalueuk.org/app/uploads/2016/03/Materiality-Standard-2018-DRAFT-v0.1.pdf> , page 7

economic revenue the Project can bring to Cathay Life”.

- B. Cathay Life cannot manage if participants will buy insurance policy after participating the Project, or if participant will buy insurance from Cathay Life or other insurance companies. It is very unpredictable and difficult to be evidenced.
- C. However, Cathay Life can manage, relatively compared to the purchase of insurance policy, if participants would have higher risk management awareness. This is the outcome where value is being created, the value that Cathay Life consider it can manage to create more effectively and the value that Cathay Life focused on creating.

(6). Regarding stakeholders involvement and materiality:

Based on our interview with both policyholders and general public, their feedback is consistent that they have higher her risk management awareness but their behavior change vary and is not certain. They considered the value to them is the rise of risk awareness. The behavior subsequent to the raised risk awareness is the indicator to support such an outcome. The behavior change we listed as options for stakeholders to consider is as following:

- I pay more attention to insurance information than before
- I became aware of the gaps in my insurance
- I more actively looked into the types and content of insurance
- I actively inquire with sales agents

(7). We would like to emphasize the cultural difference to support this Taiwan’s stakeholders’ unique outcome. As mentioned above, with 5000 years of chaotic history and our difficult political situation internationally (not being recognized by UN), the risk awareness is a valuable characteristic. There have been many old sayings in Chinese to remind again and again the importance of risk awareness, such as “Be vigilant in peace time”, “Better safe than sorry”... etc. Believe it is similar in different countries. However, such a risk awareness culture has been reflected on our global number 1 Life Insurance Penetration and Insure Penetration as indicated above. This definitely support there is a culture difference, which contribute to such an outcome feed backed from stakeholders.

- (8). Based on all the above, we made our judgement that “Raised risk management awareness” should be an outcome where value is being created to stakeholders and expected to be managed to maximize through Cathay Walker, even it does not necessary lead to increased purchase of Cathay Life insurance policy.
7. Take “Negative impression on Cathay Life generated” as another example:
- (1). We followed the same analysis of “Theory of Change” for “Negative impression” as we did for “Improved company image” as such a “Negative impression” carried similar importance to and attention from Cathay Life. The negative comments received from questionnaires from stakeholders are the same as negative comments on internet, which would be managed carefully and need decisions to be made to mitigate.
 - (2). In other words, Cathay Life would not sit and wait until stakeholders taking next step (such as a real bad google review or refusal of any Cathay Life insurance policy). Such a “Negative impression” is the change where Cathay Life want to make decisions to “decrease” the “negative value” created.
 - (3). We followed the previous analysis from the perspectives of informing decision making, stakeholders involvement, and materiality:
 - A. Informing decision making: As mentioned previously, one of key purposes of the Project is to create participants’ positive impression on Cathay Life to improve company image. If participants have negative impression after participating the Project but not positive impression, or negative impression over positive impression, Cathay Life would cease the Project. This is a very important decision making point and the “negative impression” reflected on questionnaire is a useful decision making information. Decisions have to be made at this point but not after this point when participants taking action to disparage them from social media or give bad comment on google toward Cathay Life.
 - B. Stakeholders’ involvement: General public participants provided negative impression feedback. Based on our interview with Cathay Life top management, employees and Project implementer, they all considered such a negative impression worthy of serious attention and even being the one that Cathay

Life should care about the most.

- C. Materiality: This native impression mainly relating to the concern about revealing personal data to Cathay Life through participating the Project and using the App. Taiwan enacted “Personal Data Protection Act” in 2014 and data protection is relating to law enforcement now. Personal data protection is also a hot topic globally and in Taiwan. Cathay Life’s parent company, Cathay Financial Holding Co. is an industry leading company and a DJSI World Index company. Breaching Personal Data Protection Law or being accused of breaching this Law would cause significant reputation damage and therefore, managing potential data protection issue or dispute is one of top priority management focuses. In addition to Cathay Life, negative impression relating potential personal data leaking itself before further actions taken by general public is also what all the financial service industry companies have been managing aggressively.
- (4). To summarize, Cathay Life is an insurance company and it helps the public to manage all the risks and take action to prevent damage from happening. The “Negative impression” generated from participating the Project and using the App is the waning message to Cathay Life and for it to make decision to mitigate or manage to stop. So, as indicated on page 7 of “Supplementary Guidance for Principle 2: Understand what changes Part One: Creating well defined outcomes”, this “Negative impression” is the change of attitude where Cathay Life would want to make decisions to “decrease” the “negative value” created.

Section 4 Valuation of Outcomes

I. Financial proxy

Financial proxies serve to convert the changes experienced by various stakeholders into an appropriate monetary value. We use different steps to validate the outcome valuations' reasonableness and representativeness.

A. The procedures we performed to determine financial proxy

1. We looked up the assured SROI report in SVI database with similar activities (sports/exercise) and summarized the valuation methods used in those assured SROI report.
2. In Phase I interviews, we asked stakeholders to value the outcome they experienced or what other similar activities could result in similar outcome based on their experiences. Based on stakeholders' own descriptions and experiences, we have a preliminary understanding of the nature of the outcome value and range of values. We further discussed with stakeholders to conclude appropriate valuation methods.
3. We discussed with stakeholders to come up with 3-7 options with varying frequencies or degrees for each outcome. When we discussed and determined options, we used those items that the stakeholder would easily relate themselves to in their daily life or in the experience of each different stakeholders (take Appendix I as example, such as swimming or going hiking). We also selected options are similar in nature broadly to better reflect the outcome under discussion (take Appendix I as example, the outcome under discussion is “better physical health” arising from participating in this “walking” project, so we used other type of “exercise” that could generally result in better health as well). Based on the above, we can avoid the value for each outcome from fluctuating sharply.
4. We included the above conclusions to Phase II questionnaire while leaving an open-ended option for stakeholders to answer the value that

best represents each outcome based on their personal circumstances.

5. In Phase III engagement process, we used the weighted average of survey results, with consideration to the importance of outcomes, to avoid biasing the result with specific stakeholders' choices. We then asked stakeholders to validate the outcomes, valuation methods, and prices selected.
6. The valuation method used, financial proxies and final valuations for each outcome are as follows:

Method A : What are the other activities that could result in the same outcome (include options of activities in the questionnaire)

Method B : How much are stakeholders willing to pay to achieve the same outcome (include options of range of value in the questionnaire)

Method C : Costs directly caused or saved by outcome

Table 13: Financial proxies

Stakeholder	Outcomes	Financial Proxy	Valuation Method	Calculating SROI (NT\$)/Year
Cathay Life	Company image improved	Average Cathay Charity Foundation expenditure for similar charity activities in 2018	Method A	1,689,848
	Better business performance	Total premium profit from Cathay Walker < “Premium income from Walker Whole Life Insurance Policy signed during the 7 month assessment period” × “Value of	Method C	14,333,316



Stakeholder	Outcomes	Financial Proxy	Valuation Method	Calculating SROI (NT\$)/Year
		new contracts (Profit per dollar of premium income)">		
	Negative impression on Cathay Life generated	Compensation for eliminating same degree of negative impression	Method B	(16,690)
Office staff	Improved interpersonal relationships	Weighted average of budget and activities for achieving same level of outcomes	Method A	3,912
				3,981
				7,893
	Increased stress	Monetary value of gratitude towards others for achieving targets	Method B	(3,912)
	Better physical health	Weighted average of budget and activities for achieving same level of outcomes	Method A	18,304
	Stress relief	Weighted average of budget and activities for achieving same level of outcomes	Method A	7,088
Sales agents	Improved job satisfaction	Equivalent work performance bonus	Method C	16,901
	Improved	Weighted average of	Method A	1,328



Stakeholder	Outcomes	Financial Proxy	Valuation Method	Calculating SROI (NT\$)/Year
	interpersonal relationships	budget and activities for achieving same level of outcomes		2,590
				3,918
	Better physical health	Weighted average of budget and activities for achieving same level of outcomes	Method A	16,191
	Stress relief	Weighted average of budget and activities for achieving same level of outcomes	Method A	6,539
Policyholders	Improved interpersonal relationships	Weighted average of budget and activities for achieving same level of outcomes	Method A	2,055
				2,233
				4,287 ²²
	Better physical health	Weighted average of budget and activities for achieving same level of outcomes	Method A	16,131
	Stress relief	Weighted average of budget and activities for achieving same level of outcomes	Method A	5,075
Improved digital application abilities	Weighted average of budget and activities for achieving same level of outcomes	Method A	488	

²² Rounding 2,054.5+2,232.9=4,287.4 to be 4,287

Stakeholder	Outcomes	Financial Proxy	Valuation Method	Calculating SROI (NT\$)/Year
	Risk management awareness enhanced	Weighted average of budget and activities for achieving same level of outcomes	Method A	6,641
Member of the general public	Better physical health	Weighted average of budget and activities for achieving same level of outcomes	Method A	15,462
	Stress relief	Weighted average of budget and activities for achieving same level of outcomes	Method A	4,925
	Improved interpersonal relationships	Weighted average of budget and activities for achieving same level of outcomes	Method A	1,873
				2,119
				3,992
Improved digital application abilities	Weighted average of budget and activities for achieving same level of outcomes	Method A	435	
Gift vendors -7-ELEVEN	Vendor income enhanced	Coupons sales	Method C	4,865,220
Wearable device manufacturers	Vendor income enhanced	Five vendor's wearable device sales revenues	Method C	96,926,253

Please note the following regarding Table 13: Financial proxies:

- Please note that the outcome of “Vendor income enhanced” and ”

Improved digital application abilities” were excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome)

- Among the above, we provided further information relating to the determination of the “Vendor income enhanced” value for Wearable device manufacturers as below (Please note that the outcome of “Vendor income enhanced” was excluded from the final Impact Map in the Appendix 3 considering the analysis included in Table 14: Materiality of outcome):
 - The reasonableness of using “revenue” instead of “profit” as financial proxy
 - (a). We use purchase price as the inputs value of devices users, which is also the sales price (revenue) of the device vendors. Therefore the total value we included as input and outcome are the same. This is similar to the value transfer between device users and vendors from the whole project SROI perspective. Based on the above, we use revenue but not profit to represent the value to vendor. The rationale is the same for using the revenue of coupon to vendor. The Company’ purchase price is the input value from Cathay Walker, which is the same amount of revue to coupon vendor.
 - (b). The purchase of devices actually benefit Apple (taking Apple as example) and all the Apple’s upstream suppliers. If we include Apple’s profit (revenue minus cost) only, we will also need to include the profit of Apple’s 1st tier suppliers, the profit of 2nd tier suppliers, and so on. Apple’s cost is the revenue of its suppliers. All the upstream suppliers were benefited because of this Project and because certain participants purchased wearable devices for participating this Project. If we included Apple’s profit only, we would underestimated the value created as we ignored the value created to the rest of wearable devices suppliers (either labor or ram material vendors who manufacture wearable devices).

■ The source of “revenue” information

The revenue information referred to above was sourced from Vendors. We extensively enumerated the different models and brands of wearable devices in the Phase II questionnaire. We then used the sales prices listed on each vendor’s official websites for each different model indicated in the questionnaire to conduct calculation. These sales price were used for the input of participants’ devices cost and for the outcome of vendors revenue.

B. The example of “Better physical health” we used for illustration

We take the outcome of “Better physical health”, that is the outcome that all participant stakeholders group has, as example to explain how we determined options for outcome valuation and how we calculated total outcome value.

1. Determination of valuation method

We looked up the assured SROI reports of similar activities relating to exercise and summarized the valuation method often used for the outcome of improved fitness level or improved health condition. We noted that Method A (What are the other activities that could result in the same outcome (include options of activities in the questionnaire)) are used the most. Please see below:

Assured SROI Report	Outcome	Financial Proxy	Valuation Method
Bums off Seats SROI Evaluation Report	Maintaining or not eroding current physical health and fitness levels	Cost of a swimming session as a form of low impact physical activity (taking a 10 week block discounted rate)	Method A

Assured SROI Report	Outcome	Financial Proxy	Valuation Method
Glasgow Health Walks Social Return on Investment Analysis 1st April 2011 to 31st March 2012	Walkers are fitter and have improved physical health as a result of becoming more regularly physically active	Cost of a gym session. Each sessions costs £5.35 which equates to £187.25 per year	Method A
SROI Report of the “Job Design Support by Collaborators for Disabled People in the Open Job Market” project	Improved health and reduced anxiety	Alternative spend on drugs to reduce anxiety for one month	Method A
Visible Changes: A Social Return on Investment evaluation of women's community housing	Improved physical health	The average annual expenditure on health per person in Australia	Method C

2. Design of financial proxies options

Better physical health is an unique outcome in this Project. During our Phase I engagement about financial proxy, many stakeholders commented that, as the Project set up the weekly walking steps target (per week target) to incentivize participants (achieving target for at least 5 days a week), participants developed exercise habit through continuously accumulated week after week exercise.

Therefore, we designed our questionnaires using similar sports activities

that could result in similar better health with similar weekly frequency. We also used open-end questionnaire for stakeholders to provide feedback not included in list of options.

We considered the question of “what activities/exercise on a weekly basis would result in similar change as those resulted from the Project during the assessment period?” would help stakeholders to better express their thought and their changes.

Take the response for the “Better physical health” from general public as an example. The majority of respondents replied that either “Riding bicycle for 3 hours every week” or “Going hiking at a scenic area for 2 hours every week” could result in similar better physical health.

Number of general public stakeholder having “Better physical health “outcome : 378		
Financial proxy options	Number of selection	Response rate
Riding bicycle for 3 hours every week (about NT\$150)	143	38%
Going hiking at a scenic area for 2 hours every week (about NT\$250)	136	36%
Swimming for 3 hours every week (about NT\$350)	32	9%
Aerobic dance for 1 hour every week (about NT\$450)	30	8%
Participating in gym course for 3 hours every week (about NT\$1,000)	22	6%
One-on-one coaching lessons every week (1,800)	10	3%
Others, please fill in the activities and the budget you may need:_____	5	1%

Number of general public stakeholder having “Better physical health” outcome : 378		
Financial proxy options	Number of selection	Response rate
Note : 「 Response rate 」 is 「 Number of selection / Number of general public stakeholders having “Better physical health” outcome 」		

3. Calculation of outcome value

As different stakeholders selected different options of value or activities for the outcome they experienced, we used number of responses of different options to calculate weighted average value for such an outcome. This approach considered all different views from different stakeholders. For example, based on the feedback from three phases of engagement, the outcome of health improvement should be measured and valued on a weekly basis. Therefore, the weekly value of 322 was recalculated to be an annual value of 15,462 based on 4 weeks a month and 12 months a year. As there was only 1% of respondents replied “Others” and we noted similar activities were cited in the response of “Others”, we determined not to adjust the above outcome value result.

Number of general public stakeholders having “Better physical health” outcome : 378		
Financial proxy options	Number of selection	Response rate
Riding a bicycle for 3 hours every week (about NT\$150)	143	38%
Going hiking at a scenic area for 2 hours every week (about NT\$250)	136	36%
Swimming for 3 hours every week (about NT\$350)	32	9%
Aerobic dance for 1 hour every week	30	8%



Number of general public stakeholders having “Better physical health” outcome : 378		
Financial proxy options	Number of selection	Response rate
(about NT\$450)		
Participating in gym course for 3 hours every week (about NT\$1,000)	22	6%
One-on-one coaching lessons every week (NT\$1,800)	10	3%
Others, please fill in the activities and the budget you may need: _____	5	1%
<p>Note : 「 Outcome value 」 is 「 Number of each option respondents*value of each option/Number of respondents for all options 」</p> <p>=$(143*150+136*250+32*350+30*450+22*1000+10*1800)/373$</p> <p>=322 (per week)</p> <p>Note: The weekly value of 322 was recalculated to be an annual value of 15,462 based on 4 weeks a month and 12 months a year.</p>		

II. Duration of outcomes

The duration of each outcome is different. To comply with the principle of Do Not Over-claim and to be consistent with the period of the report's analysis as well as the verifiability of the calculated data, we used the three-phase engagement process to understand each outcome's duration and drop-off for different stakeholders.

The campaign was simple. Different stakeholders had several common outcomes after walking. Due to the individual characteristics of participants and the nature of their work, their subjective estimate of the duration of outcomes varied. In questionnaire, only those replied with the occurrence of such an outcome can proceed to reply the duration of outcome.

To respect every stakeholder's opinions, we calculate the weighted average of responses from the Phase II questionnaire results and we used an example to explain how we calculated duration using the information collected from questionnaire.

A. Take the response for the “Better physical health” from general public as an example:

Number of general public stakeholders having “Better physical health” outcome : 378	
Duration of better physical health	Number of respondents
3 months and below (0.25 year)	73
6 months (0.5 year)	92
1 year	90
2 year	41
3 year	30
4 year	12
5 year	40
Note : 「 Outcome duration 」 is 「 Number of respondents for each option* duration of each	

option/Number of respondents for all options 』

$$=(73*0.25+92*0.5+90*1+41*2+30*3+12*4+40*5)/378$$

$$=1.52 \text{ (year)}$$

After the Phase III engagement process, since the assessment period of the project was only seven months, the weighted average duration of outcomes as stated by the stakeholders was 1-2 years. These results reflect the actual project implementation situation. We validated that the report data was not excessively biased. Finally, in order to make the individual outcome durations more objective, we skip the round-up and use the calculated weighted average duration up to one decimal

B. We provided the following for items that worth noting:

- Regarding the duration of “Better physical health”:
 - During the Phase I interviews, a small number of stakeholders believed that the benefits from walking might be permanent, and thus estimated that outcomes as lasting up to five years. After re-discussion with stakeholders again in Phase III, we found that, for stakeholders with higher health awareness or regular exercise habits, it may be impossible to determine whether an outcome resulted from the Cathay Walker Project or not.
 - In order not to over-claim the outcomes, we considered the survey conducted in 2017 by the Health Promotion Administration, Ministry of Health and Welfare in Taiwan regarding exercise behavior change of white collars, as well as the assured SROI report mentioned in Valuation Method discussion above to review the reasonableness of the duration. The assured SROI report indicated that the duration for improved health usually is 1-2 year. The survey regarding exercise behavior change mentioned that it takes

at least three days a week and six months to develop exercise habit.

- Considering that the assessment period (the period that stakeholder participated in Cathay Walker from August 2018 to February 2019) last for 7 months and the above, we thus determined that a weighted average of 1-2 years for the questionnaire survey was an appropriate value. The stakeholder feedback we obtained from the interviews was included in the sensitivity analysis. Please refer to Chapter 4, Section 1 for the outcome duration for the remaining stakeholders.
- Regarding the duration of “Improved interpersonal relationships” outcome of Office Staff
 - We have considered the literature regarding the duration of improved interpersonal relationships, which indicated to be about 2 years. The questionnaire survey²³ also indicated the duration of 1-2 years. However, considering “Do Not Overclaim” and our professional judgement from experience, we have calculated this outcome value using the duration the same as assessment period of 7 months.
 - To provide better transparency and based on the information from literature and questionnaire survey, we have used 2 years duration to perform sensitivity analysis.

²³ Niall Loble and Karen Carrick (2014) Bums off Seats SROI Evaluation Report。取自 <http://www.socialvalueuk.org/app/uploads/2016/03/BoS%20assured%20version.pdf>、Glasgow Health Walks Social Return on Investment Analysis 1st April 2011 to 31st March 2012。取自 https://www.pollster.com.tw/Aboutlook/lookview_item.aspx?ms_sn=2346

III. Determination of outcome materiality

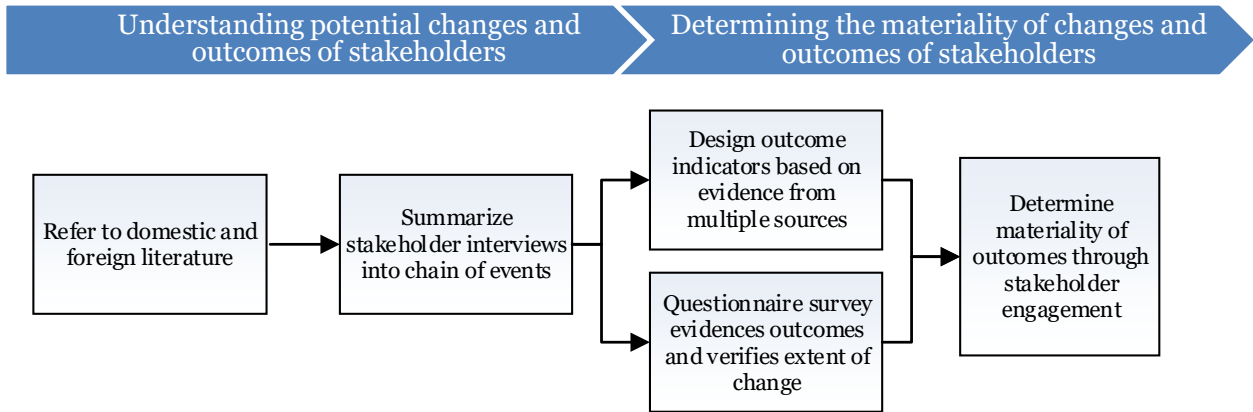


Figure 8: Procedures for determining the materiality of outcomes

Please see below our procedures for the analysis of Materiality and the result of our analysis in Table 14:

- During the initial phase of assessment, we collected domestic and foreign literature on relevant topics to first understand the project’s potential impacts on stakeholders and their potential changes. We then determined the order of changes through stakeholders’ feedback from the interviews, and we asked stakeholders to determine if the outcomes were important, average, or unimportant.
- Next, we referenced the descriptions given by stakeholders during the interviews and relevant domestic and foreign literature to design outcome indicators. Questionnaires were distributed to all stakeholders in Phase II to validate whether the outcomes occurred, and the degree of change. In addition, we also survey the significant level of such an outcome to each stakeholder with a scale of 1-5. We reconfirmed those outcomes that we included in the total outcome value calculation are supported with the significant level of 3 and above.
- In Phase III, we re-discussed questionnaire outcomes that reached the threshold with stakeholders. Based on the occurrence of outcomes, Cathay Life’s extant statistics, and professional judgment, we included material

outcomes into the final calculation.

- Please also read IV Theory of change, Section 3 Understanding Changes, Chapter 3.

Table 14: Materiality of outcomes

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
Cathay Life	Company image improved	Cathay Walker is the only project, being able to simultaneously impact multiple internal and external stakeholders of Cathay Life. This type of project was design to promote the leadership status of Cathay Life in Taiwan and was also the type of philanthropy project correlating with its core business. It not only strengthens employees' favorability with the company, but also gives the general public a good impression of Cathay Life. Therefore, CSR branding is one of the purpose of this walking project. Combined with evidence from the relevant literature, this outcome was determined to be material and was thus included.	Included
	Better business performance	The link between this walking project and the Walker Whole Life Insurance help creating	Included



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>share value between project participants and Cathay Life. From Cathay Life point of view, one of the value come from the increased sale of Walker Whole Life Insurance policy. Therefore, better business performance is one of the purpose of this project. This outcome only calculates the increase in profits from sale of Walker Whole Life insurance policy.</p>	
	<p>Negative impression on Cathay Life generated</p>	<p>According to the interviews in the first phase of engagement, members of the general public did indeed state their concerns and dissatisfaction with the campaign collecting personal information. Even though this was only brought up by a few people, in accordance with the SROI principle of Do Not Over-claim, this negative outcome was included.</p>	<p>Included</p>
<p>Office staff</p>	<p>Improved interpersonal relationships</p>	<ol style="list-style-type: none"> 1. Based on the feedback from interviews, most participants indicated that they would introduce the campaign to family 	<p>Included</p>



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>members. Participants who were not in habit of exercise invited family members to exercise with them more frequently. This outcome was determined to be a concrete fact and was thus included.</p> <p>2. Because of all of Cathay Life's activities, only the Cathay Walker Project organized departmental contests, most employees mentioned that it did indeed increase opportunities for exchange and interaction between colleagues. Combined with evidence from the relevant literature, this outcome was determined to be material this outcome was thus included.</p>	
	<p>Increased stress</p>	<p>According to the interviews in the first phase of engagement, employees clearly expressed that contest performance</p>	<p>Included</p>



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>announcements make them feel uneasy and stressed. Based on questionnaire result, this negative impact would not be offset by the positive impact of stress relief when walking. In accordance with the SROI principle of Do Not Over-claim, this negative outcome was included.</p>	
	<p>Better physical health</p>	<p>The relevant literature corroborates the notion that walking does indeed benefit physical health. This outcome had the greatest impact on most stakeholders after they joined the campaign, and was thus included.</p>	<p>Included</p>
	<p>Stress relief</p>	<p>The relevant literature corroborates the notion that walking does indeed relax the body and mind. This outcome was mentioned by stakeholders numerous times during the interviews, and was thus included.</p>	<p>Included</p>
	<p>Greater convenience in life</p>	<p>The relevant literature shows that individual innovativeness is highly positively correlated with</p>	<p>Excluded</p>



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		willingness to use wearable devices, which shows that users are willing to learn new things and new technologies. However, questionnaire survey results indicate that this outcome was not significant. After discussion with stakeholders, we found that most users purchased wearable devices that primarily feature step counter functions, so the wearable devices did not have more advanced functions; this outcome's occurrence was therefore very low, and it was thus excluded.	
Sales agents	Improved job satisfaction	Due to the nature of their work, the Cathay Walker campaign helped improve sales agents reach their sales targets. This outcome was included due to its uniqueness.	Included
	Improved interpersonal relationships	1. Most sales agents indicated that the Cathay Walker campaign was a good way to close gaps with policyholders. This outcome was included due to its uniqueness.	Included



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>2. Based on the feedback from interviews, most participants indicated that they would introduce the campaign to family members. Participants who were not in habit of exercise invited family members to exercise with them more frequently. This outcome was determined to be a concrete fact and was thus included.</p>	
	<p>Better physical health</p>	<p>The relevant literature corroborates the notion that walking does indeed benefit physical health. This outcome had the greatest impact on most stakeholders after they joined the campaign, and was thus included.</p>	<p>Included</p>
	<p>Stress relief</p>	<p>The relevant literature corroborates the notion that walking does indeed relax the body and mind. This outcome was mentioned by stakeholders numerous times during the interviews, and was thus included.</p>	<p>Included</p>

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
	Greater convenience in life	The relevant literature shows that individual innovativeness is highly positively correlated with willingness to use wearable devices, which shows that users are willing to learn new things and new technologies. However, questionnaire survey results indicate that this outcome was not significant. After discussion with stakeholders, we found that most users purchased wearable devices that primarily feature step counter functions, so the wearable devices did not have more advanced functions; this outcome's occurrence was therefore very low, and it was thus excluded.	Excluded
Policyholders	Improved interpersonal relationships	<ol style="list-style-type: none"> Based on the feedback from interviews, most participants indicated that they would introduce the campaign to family members. Participants who were not in habit of exercise invited family members to exercise with them more frequently. This outcome 	Included



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>was determined to be a concrete fact and was thus included.</p> <p>2. Based on results of the questionnaire survey, 46% of policyholders would invite friends to go on walks together. This helped expand the target group and achieve the goal of one million participants nationwide. Based on Cathay Life’s management purposes, the outcome was determined to be material and thus included.</p>	
	<p>Better physical health</p>	<p>The relevant literature corroborates the notion that walking does indeed benefit physical health. This outcome had the greatest impact on most stakeholders after they joined the campaign, and was thus included.</p>	<p>Included</p>
	<p>Stress relief</p>	<p>The relevant literature corroborates the notion that walking does indeed relax the body and mind. This outcome was mentioned by stakeholders</p>	<p>Included</p>

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>numerous times during the interviews, and was thus included.</p>	
	<p>Improved digital application abilities</p>	<p>Based on the questionnaire survey, 44% of policyholders used Cathay Life’s app more than before to check information on their insurance policies. However, stakeholders did not value this outcome much and this outcome is not part of management purpose of Cathay Walker. Thus, it was excluded.</p>	<p>Excluded</p>
	<p>Risk management awareness enhanced</p>	<p>Based on the questionnaire survey, after joining the campaign, 37% of policyholders actively looked into their insurance policies and filled gaps in their coverage. Based on Cathay Life’s management purposes, the outcome was determined to be material and thus included.</p>	<p>Included</p>
	<p>Greater convenience in life</p>	<p>The relevant literature shows that individual innovativeness is highly positively correlated with willingness to use wearable devices, which shows that users are willing to learn new things</p>	<p>Excluded</p>

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>and new technologies. However, questionnaire survey results indicate that this outcome was not significant. After discussion with stakeholders, we found that most users purchased wearable devices that primarily feature step counter functions, so the wearable devices did not have more advanced functions; this outcome's occurrence was therefore very low, and it was thus excluded.</p>	
Member of the general public	Better physical health	<p>The relevant literature corroborates the notion that walking does indeed benefit physical health. This outcome had the greatest impact on most stakeholders after they joined the campaign, and was thus included.</p>	Included
	Stress relief	<p>The relevant literature corroborates the notion that walking does indeed relax the body and mind. This outcome was mentioned by stakeholders numerous times during the interviews, and was thus included.</p>	Included

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
	Improved interpersonal relationships	<ol style="list-style-type: none"> 1. Based on the feedback from interviews, most participants indicated that they would introduce the campaign to family members. Participants who were not in habit of exercise invited family members to exercise with them more frequently. This outcome was determined to be a concrete fact and was thus included. 2. Based on results of the questionnaire survey, 46% of the general public would invite friends to go on walks together. This helped expand the target group and achieve the goal of one million participants nationwide. Based on Cathay Life’s management purposes, the outcome was determined to be material and thus included. 	Included
	Improved digital application abilities	Based on the questionnaire survey, after the general public downloaded Cathay Life’s app to	Excluded



Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>participate in the campaign, 23% discovered other mobile phone functions they had never used before, and 8% further used the app to check information on their insurance policies and purchase insurance online. However, stakeholders did not value this outcome much and this outcome is not part of management purpose of Cathay Walker. Thus, it was excluded.</p>	
	<p>Greater convenience in life</p>	<p>The relevant literature shows that individual innovativeness is highly positively correlated with willingness to use wearable devices, which shows that users are willing to learn new things and new technologies. However, questionnaire survey results indicate that this outcome was not significant. After discussion with stakeholders, we found that most users purchased wearable devices that primarily feature step counter functions, so the wearable devices did not have more advanced functions; this outcome's occurrence was</p>	<p>Excluded</p>

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		therefore very low, and it was thus excluded.	
Gift vendors -7-Eleven	Vendor income enhanced	One of Cathay Walker's implementation strategies is to use gifts for reaching targets to encourage participants to continue exercising. 7-Eleven's sale of coupons to Cathay Life is a concrete fact. However, during the SROI assessment, we were not able to reach out to the management of this vendor to engage and verify such an outcome and how significant this outcome was to it. Therefore, based on the principle of Stakeholder Engagement and Do not over-claim, we determined to exclude this outcome.	Excluded
Wearable device manufactures	Vendor income enhanced	The results of the questionnaire show that about 50% of users will buy wearable devices because of the need to calculate the number of steps. Even though the sale of wearable devices only accounted for a very small percentage of vendors' annual revenue, in	Excluded

Stakeholder	Outcomes	Reason for Inclusion or Exclusion	Inclusion or not
		<p>terms of 1-5 points, step counter function has an average importance of 4 points for each stakeholder.</p> <p>However, during the SROI assessment, we were not able to reach out to the management of these vendors to engage and verify such an outcome and how significant this outcome was to them. Therefore, based on the principle of Stakeholder Engagement and Do not over-claim, we determined to exclude this outcome.</p>	

IV. Adjusting factors

Based on the SROI standards, before converting an outcome valuation into impact, factors that may affect project outcomes must be identified and excluded. Hence, we followed the principle of Do Not Over-claim and considered the four adjusting factors in each phase of the engagement process. We primarily had stakeholders assess the adjusting factors of each individual outcomes using four equally spaced ratios in the questionnaire. We then calculated the weighted average number and further asked stakeholders to validate outcomes with significant differences.

We used the outcome of “Better physical health” from general public as an example to explain how deadweight is determined and calculated. Following the example, we provided further analysis for each of the adjusting factors, deadweight, attribution, displacement and drop-off, including those adjusting factors not determined through stakeholders’ questionnaire survey and those discussed more with the Cathay Life management.

Number of general public stakeholder having “Better physical health “outcome : 378		
Options	Assigned quantification of deadweight	Number of respondents
I had many ways to gain the same change	100%	115
I had a few opportunities to gain the same change	75%	89
The degree of changes from other methods is only half that of changes from Cathay Walker	50%	95
Other methods would have not been able to achieve the same effect as Cathay Walker	25%	55
The changes from Cathay Walker are irreplaceable.	0%	24

Number of general public stakeholder having “Better physical health “outcome : 378		
Options	Assigned quantification of deadweight	Number of respondents
<p>Note : 「 Deadweight 」 is 「 Assigned quantification*Number of respondents for each assigned quantification/Number of general public stakeholder having “Better physical health “outcome 」</p> <p>=(115*100%+89*75%+95*50%+55*25%+24*0%)/378</p> <p>=64.29%</p>		

1. Deadweight:

This refers to the extent to which an outcome would have occurred regardless of the existence of the project. The deadweight of most outcomes in this assessment was 60-70%, and was validated through the questionnaire and interview. We found that most stakeholders' participation in Cathay Walker was based on their personal like of walking or being a person who already tends to walk a lot. Hence, even without the Cathay Walker Project, the stakeholders would still have had similar outcomes from engaging in related exercise. We provide further information regarding how we determined the deadweight of a few outcomes below:

Stakeholder	Outcomes	Deadweight	Description
Cathay Life	Company image improved	54%	The deadweight of 54% was the weighted average results from questionnaire survey of all the participants from different stakeholders group. We asked



Stakeholder	Outcomes	Deadweight	Description
			<p>stakeholders to select from the followings regarding their higher recognition of and better impression on Cathay Life after participating the walking Project:</p> <ol style="list-style-type: none"> 1. I had many ways to gain the same increase of recognition and good impression 2. I had a few opportunities to gain the same increase of recognition and good impression 3. I could only gain half of the same increase of recognition and good impression from other ways 4. I could possibly not be able to gain the same increase of recognition and good impression from other ways. 5. No way other than Cathay Walkers would cause me to gain the same increase of recognition and good impression <p>We used the assigned quantification (scale) of 100%, 75%, 50%, 25% and 0% to represent the deadweight for each of the selection, respectively, and calculated the result to be 54%.</p>



Stakeholder	Outcomes	Deadweight	Description
			<p>We verified the above result with the top management of Cathay Life and determined this result to be reasonable. The feedback included the followings: (1). Cathay Walker is the only health-awareness campaign that could attract so many participants both inside and outside of Cathay Life, while others were mostly other social or environmental related or launched as part of Cathay Financial Holding or Cathay foundation. (2). As a life insurance industry leader in Taiwan, Cathay Life also emphasized the importance of prevention and health awareness, rather than only focusing on insurance coverage . Cathay Walker is the campaign it specially designed and launch to promote such a company image of health and prevention promoter. (3). Although Cathay Life had launch a health check linked insurance policy in 2016, which also promote the importance of health and prevention, it was different from the effect of Cathay Walker (not just insurance policy), the effect expanded through the use of App, or the attractiveness of easy and relaxing nature (just walking). Therefore, the deadweight of about 50% from</p>



Stakeholder	Outcomes	Deadweight	Description
			questionnaire survey result is not significantly different from their judgement.
	Better business performance	75%	<p>We determined the 75% deadweight based on our discussion with Cathay Life. We discussed with the top management, implementation team and sales agent of Cathay Life using the scale of relatively low (25%), medium (50%) and relatively high (75%) regarding the deadweight of “Better business performance” outcome. They provided feedback that, as there were other insurance policies offered by Cathay Life in the market during the assessment period, based on their experience, practice and business culture, even there were no Cathay Walker Project, it would still be relatively high in possibility that Cathay Life would able to achieve the same amount of business that Cathay Walker and Walker Whole Life had brought to Cathay Life (such as the amount of premium profit arising from sales of other insurance policies). Based on the above, we determined the deadweight to be 75%.</p>

2. Attribution:

This refers to other factors that may also have contributed to the

changes stakeholders experienced resulting from the project. In other words, the contribution of other factors to this outcome must also be considered. The attribution of most outcomes was 50-60% in this assessment. The questionnaire and interviews validated that policyholders and members of the general public participated in the campaign because they purchased Walker Whole Life Insurance for Major Illness, are concerned about health issues, or were solely attracted by the incentives. Employees participate in the campaign because of the company's internal promotion and departmental contests. Hence, if the Cathay Walker Project did not have an incentive system or the company did not have policies pushing the project forward, stakeholders may not have experienced the same degree of change in the participation process. We provide further information regarding how we determined the attribution of a few outcomes below:

Stakeholder	Outcomes	Attribution	Description
Cathay Life	Company image improved	48%	<p>The attribution of 48% was the weighted average results from questionnaire survey of all the participants from different stakeholders groups. We asked stakeholders to select from the followings regarding their higher recognition of and better impression on Cathay Life after participating the walking Project:</p> <ol style="list-style-type: none"> 1. The increase of recognition and



Stakeholder	Outcomes	Attribution	Description
			<p>good impression is all because of Cathay Walker</p> <ol style="list-style-type: none"><li data-bbox="986 421 1326 719">2. Most of the increase of recognition and good impression is because of Cathay Walker.<li data-bbox="986 741 1326 1093">3. Half of the increase of recognition and good impression is because of Cathay Walker. The other half is because of others campaigns.<li data-bbox="986 1115 1326 1518">4. Some of the increase of recognition and good impression is because of Cathay Walker. Mostly is because of other campaigns.<li data-bbox="986 1541 1326 1839">5. The increase of recognition and good impression has nothing to do with of Cathay Walker. <p>We used the assigned quantification (scale) of 0%, 25%, 50%, 75% and</p>



Stakeholder	Outcomes	Attribution	Description
			<p>100% to represent the attribution for each of the selection, respectively, and calculated the result to be 48%.</p> <p>We verified the above result with the top management of Cathay Life and determined this result to be reasonable. The feedback included the followings: (1) Cathay Walker is the only philanthropy campaign that could attract so many participants both inside and outside of Cathay Life due to its relaxing and sporty nature. (2). However, there were also other social or environmental related philanthropy campaign, even though mostly hosted by Cathay Financial Holding or Cathay foundation, could also contribute to the higher recognition or improved company</p>



Stakeholder	Outcomes	Attribution	Description
			<p>image. (3) Nevertheless, considering Cathay Walker is directly related to its core business and were hosted by Cathay Life, the attribution of about 50% from questionnaire survey result is not significantly different from their judgement.</p>
Cathay Life	Better business performance	10%	<p>We considered the outcome of “Better business performance” only relating to the Walker Whole Life insurance policies sold for the principle of Do Not Over-claim, even though downloading the App and participating in the walking Project could lead participants to buy more insurance policies other than/in addition to Walker Whole Life policy. Based on our discussion with Cathay Life top management and sales agents, due to the design of policy clauses, the Walker Whole Life</p>



Stakeholder	Outcomes	Attribution	Description
			<p>insurance policy itself might not be the first choice to potential buyers, and might be difficult to be accepted without Cathay Walker Project.</p> <p>Therefore, there was almost no other factors that could contribute to the sale of Walker Whole Life insurance policy and the attribution could be 0%. However, considering factors such as sales agents' good selling skills that could help as well, and the principle of "Do not over-claim", we applied SROI guidance and used 10% as the attribution to calculate the outcome value.</p>

3. Displacement:

This represents the effects of the project on other stakeholders, both inside and outside of the project. In other words, even though the project achieved the outcome in the target group, it may have displaced problems elsewhere. The Cathay Walker Project encourages the general public to

exercise. A study²⁴ in the U.S. found that exercise not only significantly lowers the probability of becoming ill, but also increases social participation and achieves other goals, such as preventing mental illness caused by modern people's stressful lives, thus helping people improve their lives. Whether in the literature or from stakeholder feedback, there was no significant displacement in terms of society, the environment, or the economy, so displacement is not calculated in the impact map (other than the displacement discussed below), and is only considered in the sensitivity analysis.

We provide further information regarding the rationale for determining the displacement of “Better business performance” outcome of Cathay Life below:

Stakeholder	Outcomes	Displacement	Description
Cathay Life	Better business performance	25%	The displacement of 25% was determined based on the market share information of Walker Whole Life. The promotion of Cathay Walker helped the sale of Walker Whole Life policy and therefore, there could be displacement. We noted that there were 4 similar insurance policies in the market around the assessment period with the support from more recent

²⁴ Gage, D. (2017). Exercise Has a Cascade of Positive Effects, Study Finds. Retrieved August 19, 2019, from <https://www.wsj.com/articles/exercise-has-a-cascade-of-positive-effects-study-finds-1498442941>



Stakeholder	Outcomes	Displacement	Description
			<p>public information. We noted that Taiwan Financial Supervisory Committee mentioned (on the news as linked https://money.udn.com/money/story/5613/4146635) that there were 4 exercise-link insurance policies at the first 9 months of 2018 (Cathay Walker was launched in August 2018). Considering the data availability and the assessment period was back in the period from August 2018 to Feb 2019, assumed that the total exercise-linked insurance policy market did not expand because of the launch of Cathay Walker, we considered that Walker Whole Life took about 25% of policies from other insurance providers, and determined the displacement of 25%. We have included this in the SROI report.</p>

5. Drop-off:

This refers to the effect of an outcome deteriorating over time. It is observed that the effectiveness of an outcome tends to decrease slowly over a period. Therefore, when evaluating the benefits of a future outcome, the drop-off must also be estimated. The drop-off of most outcomes was 10-20% in this assessment. It is clear that the drop-off for members of the general public was slightly higher than other stakeholders. After the interviews, we found that members of the general public were the only stakeholders without specific identifying characteristics, so their participation process was not affected by company policy or preferential insurance policies. Most people stated that they only worked hard to reach targets when there were incentives, and they lacked motivation to go on walks once there were no more incentives, so their drop-off was faster.

In summary, with the rising popularity of exercise, the stakeholders all, to some extent, had awareness of health and exercise habits. Hence, the main cause of the outcome may not be the Cathay Walker Project. More and more similar apps are featuring point collection via walking in exchange for rewards, giving the campaign a high degree of replacement.

We summarized the adjusting factors for all the outcomes included in the Appendix 3 Impact Map below based on the above description of each phase of engagement, discussion with Cathay Life management and questionnaire results. Please note all the adjusting factors are based on questionnaire results other than those for the outcome of “Better business performance” for the stakeholder of Cathay Life:

Table 15: Adjusting factors

Stakeholder	Outcomes	Deadweight	Attribution	Display cement	Drop-off
Cathay Life	Company image improved	54%	48%	0%	18%
	Better business	75%	10%	25%	0%

Stakeholder	Outcomes	Deadweight	Attribution	Display cement	Drop-off
	performance				
	Produces negative impression of Cathay Life	51%	56%	0%	22%
Office staff	Improved interpersonal relationships	66%	56%	0%	16%
	Increased stress	66%	56%	0%	31%
	Better physical health	66%	54%	0%	17%
	Stress relief	67%	55%	0%	16%
Sales agents	Improved job satisfaction	59%	54%	0%	15%
	Improved interpersonal relationships	63%	56%	0%	14%
	Better physical health	61%	52%	0%	17%
	Stress relief	63%	54%	0%	17%
Policyholders	Improved interpersonal relationships	61%	50%	0%	17%
	Better physical health	61%	48%	0%	19%
	Stress relief	61%	50%	0%	19%
	Risk management awareness enhanced	54%	47%	0%	19%
Members of the general public	Better physical health	64%	49%	0%	23%
	Stress relief	64%	50%	0%	22%
	Improved interpersonal relationships	62%	51%	0%	21%

Chapter 4 Building the SROI model

Section 1 Calculating the Values of Outcomes

In the section above, we validated the stakeholders' chain of events and outcomes, and identified the indicators, financial proxies and adjusting factors. We then calculated the values of these outcomes for each of our stakeholders.

The discount rate used in this report is 1.04%, the three-year interest rate for fixed deposits offered by Chunghwa Post, as of March 2019. The project's Social Return on Investment (SROI) is calculated by dividing the outcomes' PV by the total value of inputs:

$$693,730,965/110,180,727= 6.30$$

Please note we have also provided two worked examples of “Improved company image” from Cathay Life and “Improved job satisfaction” from Sales agents for illustration in Appendix 4.

Table 16: Calculation of stakeholders' outcome valuations

Stakeholder		Outcomes	(Outcome ratio) ²⁵	How much change was there	Number of changes ²⁶	Duration ²⁷	Value in proxy (NT\$) ²⁸	Value of outcome after deductions			
Name	Number of the stakeholders							Discount rate (%)=1.04%			
								Year 1 (post-campaign)	Year 2	Year 3	Total (before discount)
Cathay Life	1	Company image improved	100%		1	1.7	1,689,848	401,618	229,358	0.00	630,976
		Better business performance	100%		1	0.6	14,333,316	2,418,727	0.00	0.00	2,418,727
		Negative impression on Cathay Life generated	100%		1	1.2	(16,690)	(3,594)	(540)	0.00	(4,134)

²⁵ Please see p100-102 for more details

²⁶ Number of changes = How much change was there (Outcome ratio) × Number of the stakeholders.

²⁷ The duration of 0.6 years was based on the project period of 7 months from August 2018 to February 2020, which resulted in 0.5833333 years. Please see p121-123 for more details.

²⁸ Please see p110-120 for more details



Stakeholder		Outcomes	(Outcome ratio) ²⁵	How much change was there	Number of changes ²⁶	Duration ²⁷	Value in proxy (NT\$) ²⁸	Value of outcome after deductions			
Name	Number of the stakeholders							Discount rate (%)=1.04%			
								Year 1 (post-campaign)	Year 2	Year 3	Total (before discount)
Office staff	4,924	Improved interpersonal relationships	10%	510	0.6	3,912	299,174	0.00	0.00	2,298,689	
			8%	411		3,981	245,611				
			30%	1,480		7,893	1,753,904				
		Increased stress	36%	1,792	0.6	(3,912)	(1,058,478)	0.00	0.00	(1,058,478)	
		Better physical health	48%	2,362	1.5	18,304	6,767,128	2,721,372	0.00	9,488,501	
		Stress relief	39%	1,914	1.1	7,088	2,036,844	232,598	0.00	2,269,443	
Sales agents	23,168	Improved job satisfaction	46%	10,672	2.0	16,901	33,839,447	27,602,889	0.00	61,442,337	
		Improved interpersonal	11%	2,444	0.6	1,328	531,696	0.00	0.00	6,724,402	
			12%	2,753		2,590	1,168,433				



Stakeholder		Outcomes	(Outcome ratio) ²⁵	How much change was there	Number of changes ²⁶	Duration ²⁷	Value in proxy (NT\$) ²⁸	Value of outcome after deductions			
Name	Number of the stakeholders							Discount rate (%)=1.04%			
								Year 1 (post-campaign)	Year 2	Year 3	Total (before discount)
		relationships	34%		7,826		3,918	5,024,274			
		Better physical health	52%		12,156	2.0	16,191	37,445,863	31,999,584	0.00	69,445,447
		Stress relief	44%		10,146	1.8	6,539	11,475,899	7,208,533	0.00	18,684,433
Policyholders	105,392	Improved interpersonal relationships	12%		12,763	0.6	2,055	5,120,838	31,194,030	0.00	31,194,030
			5%		5,105		2,233	2,226,137			
			27%		28,481		4,287	23,847,055			
		Better physical health	48%		50,446	1.9	16,131	166,645,840	124,109,415	0.00	290,755,255
		Stress relief	47%		49,304	1.8	5,075	47,935,368	30,677,201	0.00	78,612,569
		Risk management	36%		38,153	1.7	6,641	61,562,969	36,098,777	0.00	97,661,746



Stakeholder		Outcomes	(Outcome ratio) ²⁵	How much change was there	Number of changes ²⁶	Duration ²⁷	Value in proxy (NT\$) ²⁸	Value of outcome after deductions			
Name	Number of the stakeholders							Discount rate (%)=1.04%			
								Year 1 (post-campaign)	Year 2	Year 3	Total (before discount)
		awareness enhanced									
Member of the general public	14,028	Better physical health	42%	5,850	1.5	15,462	16,623,044	6,684,984	0.00	23,308,029	
		Stress relief	39%	5,527	1.5	4,925	4,870,915	1,716,696	0.00	6,587,611	
		Improved interpersonal relationships	10%	1,455	0.6	1,873	503,787	0.00	0.00	3,324,844	
			5%	743		2,119	291,405				
			24%	3,426		3,992	2,529,693				
Total Present Value (PV)							693,730,965				
Total inputs							110,180,727				
Social Return on Investment (SROI)							6.30				

Section 2 Sensitivity Analysis

SROI measures the monetary value of qualitative, narrative information. Hence, it will inevitably involve many assumptions and estimates. According to the SROI Guide, each analysis report must include a sensitivity analysis and disclose relevant information to ensure that results are objective and verifiable.

The Cathay Walker Project assessed in this report is simple, and the target groups and the changes they experienced are clear. In general, there were relatively few uncontrollable factors and research limitations, but we still adjusted the SROI scope, duration of outcomes, and adjusting factors based on the principle of Do Not Over-claim, so as to remain strict and objective. We thus arrived at an SROI sensitivity analysis range between 3.90 and 9.22 for this project. The various adjustments are described as follows:

Table 17: Sensitivity Analysis

Adjustment	Adjustment Description	SROI Rate
Financial proxies derived from asking stakeholders	As most of the outcome proxies are obtained using the approach of asking stakeholders to provide their views (the Method A and Method B as described in the “Response Method”) and collected through questionnaire survey, it’s highly likely that the outcome value are overstated. We discounted those proxies from stakeholders’ survey by 10% and 30 %, respectively, for the sensitivity analysis.	5.67
		4.42
SROI	We mitigated sampling error to an acceptable level after the back-and-forth reconfirmation through three phases of engagement, and therefore, considered our sampling number and results are representative of the whole population. To obtain rigorous and objective results, the original SROI result was increased or decreased by 10%, which	6.93
		5.67

Adjustment	Adjustment Description	SROI Rate
	was used as a reasonable interval estimate.	
Duration of “Better physical health”	Based on partial stakeholder feedback from interviews, a small portion of stakeholders believe that the benefits of exercise will last a long period of time. Hence, the duration for the “Better physical health” outcome was reset at 5 years for the analysis.	9.22
All durations over 1 year	Based on partial stakeholder feedback from interviews, since the assessment period was only seven months, the outcomes would last at most one year after campaign ended. Hence, for those durations over 1 year, we reset at 1 year for the analysis.	3.90
Attribution	Reset at 30% if equal to or less than 10%	6.29
	Reset at 52% (average of questionnaire survey results) if equal to or less than 10%	6.29
Drop-off	Reset at 30% if equal to or less than 10%	6.30
	Reset at 19% (average of questionnaire survey results) if equal to or less than 10%	6.30
Displacement	0% adjusted to 10%	5.67
	0% adjusted to 30%	4.42
Duration of improved interpersonal relationships	Based on feedback from a portion of stakeholders and literature, the duration of improved interpersonal relationship could be 2 years. So we used 2 years to perform sensitivity analysis.	6.62

Please note that the SROI ratios are the same for two different reset number for “Attribution” as the related outcome value only accounted for a small portion of the total outcome value. This is the same for “Drop-off”.

Chapter 5 Conclusion

Section 1 Project results analysis

I. Comparison of Specific Outcomes' Impact

This assessment determined 9 outcomes of the Cathay Walker Project. Of these, two outcomes with the highest value were common outcomes among all stakeholder groups, namely “Better physical health” and “Stress relief”. The former, in particular, accounted for 56% of the total value of outcomes.

From the perspective of users, the most significant impact brought by the Cathay Walker Project was on their health. For those who were already in the habit of exercising, they easily gained the positive mindset of wanting to challenge themselves, because their health data is recorded and regularly tracked. As a result, they successively reach higher goals, and their bodies gradually adapt to longer and more intensive walks. As for users who were not in the habit of exercising, they gained greater health awareness due to the incentive mechanism or the impact of passive factors. This caused them to change their lifestyles and gradually get into the habit of exercise. For stakeholders with different exercise frequencies, the Cathay Walker implementation strategy does indeed cause changes, and helps achieve the core focus of the project.

The third highest value outcome was “Risk management awareness enhanced”; this was an outcome exclusive to policyholders, with the outcome accounting for 14% of the project’s overall impact. The main reason is that policyholders are the main participants in the campaign, and they already cared more about insurance planning than others at the beginning. After joining the campaign, they began to use the Cathay Life’s app more frequently, which made them more actively review and assess their insurance policies, and it has important management significance for Cathay Life. Furthermore, users monitor their health data through wearable devices while they are exercising.

Please also note that, for those outcomes with relatively small values compared to total outcomes value, they are either valuable to smaller

population of stakeholders, being one of Cathay Life management purpose or carrying the factual economic value received. We have provided the reasons of including these outcomes in SROI calculation in Table 14: Materiality of outcomes and we have also included our further analysis in IV. Theory of changes analysis in Section 3. Understand Change, Chapter 3.

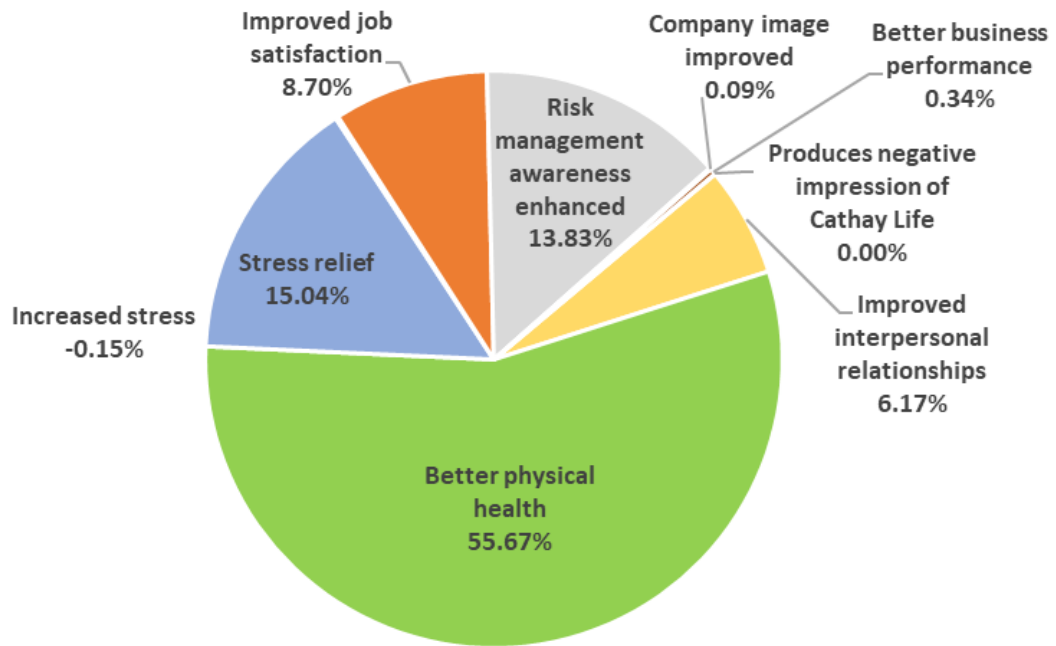


Figure 9 : Overall value of project outcomes

II. Comparison of total and average values of stakeholder outcomes

If we break down each outcome above by stakeholder group, policyholders accounted for the highest percentage of the overall outcome valuation, at 71%. This is primarily due to this group having the largest population, at about 100,000 people. Hence, in terms of common outcomes, even though the value of each policyholder outcome is lower than that for office staff and sales agents, the large number of changes resulted in the high value of outcomes for policyholders, as shown in Figure 11. If Cathay Walker was excluded and the average outcome value per participants' stakeholder group was calculated, then sales agents had the highest outcome value. This is primarily the result of them experiencing more significant changes, and a number of financial proxies that

were higher. Figure 10 shows a comparison.

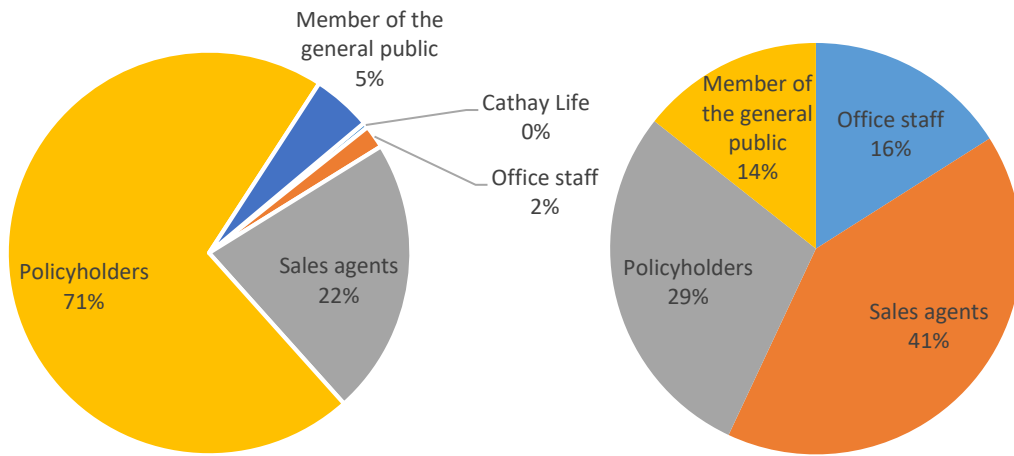


Figure 10: Comparison of total and average values of stakeholder outcomes

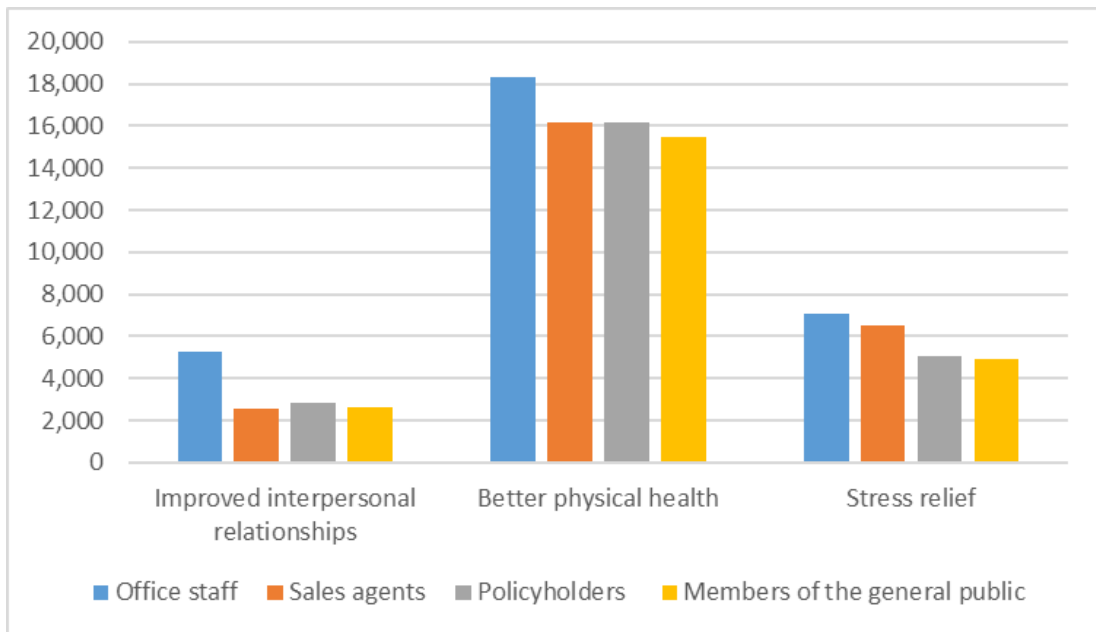


Figure 11: Comparison values of common outcomes



Section 2 Follow-up Project Management

The most important purpose of this project is not to calculate the SROI value, but to provide a basis for continued rolling project adjustment. During the calculation process, we had the following findings and provided the following suggestions for project management follow-up, based on stakeholder feedback and calculation results.

I. Number of people impacted increases outcome value

Policyholders and sales agents accounted for the highest proportion of outcome value. This was primarily due to the large populations of the two groups, totaling about 130,000 people. This shows the large number of people impacted by Cathay Walker in the seven months after the campaign was launched. Policyholders accounted for the highest proportion of outcome value. We suggested using promotion and advertising strategies that focus on attracting the general public, such as irregularly offering limited rewards to maintain their level of participation; and we also suggested optimizing the app's interface and coupons redemption mechanism to prevent losing users due to poor experience. Furthermore, members of the general public had the improved interpersonal relationships outcome as a result of the campaign. If it is possible to increase their trust in Cathay Walker, this will help expand the number of participants to reach the goal of one million participants nationwide.

II. Involuntary participants' outcomes have shorter durations

We found that the duration of all outcomes for office staff was 1 year, but they had the highest valuation in terms of common outcomes. This shows that a higher percentage of office staff actually exercised and reached targets, but their duration was shorter; this may be the result of department contests. Office staff were forced to exercise, so they easily reached the step targets within a short period of time; but once the contest ended and pressure from their supervisors and colleagues



removed, they did not push themselves to continue exercising. Hence, we suggested that the company use encouragement and make participation more interesting for employees to prevent burn-out.

III. Soft topics make it easier to maintain interaction with policyholders

Sales agents stated that Cathay Walker was an easy entry point for discussion with policyholders. Policyholders stated that they wouldn't reject understanding health related issues, and would even tell the sales agent of their walking outcomes since joining the campaign. Through two-way verification with stakeholders, we validated that this model helps draw attention and interest from policyholders. This then allows sales agents to actively share their walking outcomes and similar information on social media. Using recommendation methods that are not excessively pushy increases the channels and frequency with which different stakeholder groups access campaign information. This not only saves advertising expenses in public places, but also allows word-of-mouth to spread further. Furthermore, maintaining good relations with policyholders brings them to voluntarily provide useful feedback, which helps allay concerns about Cathay Life collecting personal health information.

IV. Wearable device vendors become beneficiaries

Although the outcome of wearable devices vendor income enhanced was not included in the final Impact Map in Appendix 3 based on the analysis in Table 14, Materiality of Outcome, according to the questionnaire survey, about 29% of each stakeholder group replied that they had purchased a wearable device due to the need for a step counter. The majority purchased the Xiaomi Mi Band (62%), followed by the Apple watch (28%). One of the rewards for policyholders of Walker Whole Life who reach campaign targets is a discount on Apple watches. However, the relationship between the project organizer and the wearable device vendors is simply that of buyer and seller. Cathay Life could consider this

assessment as a basis for formulating ways to work with wearable device vendors, creating greater value through cross-industry resource integration.

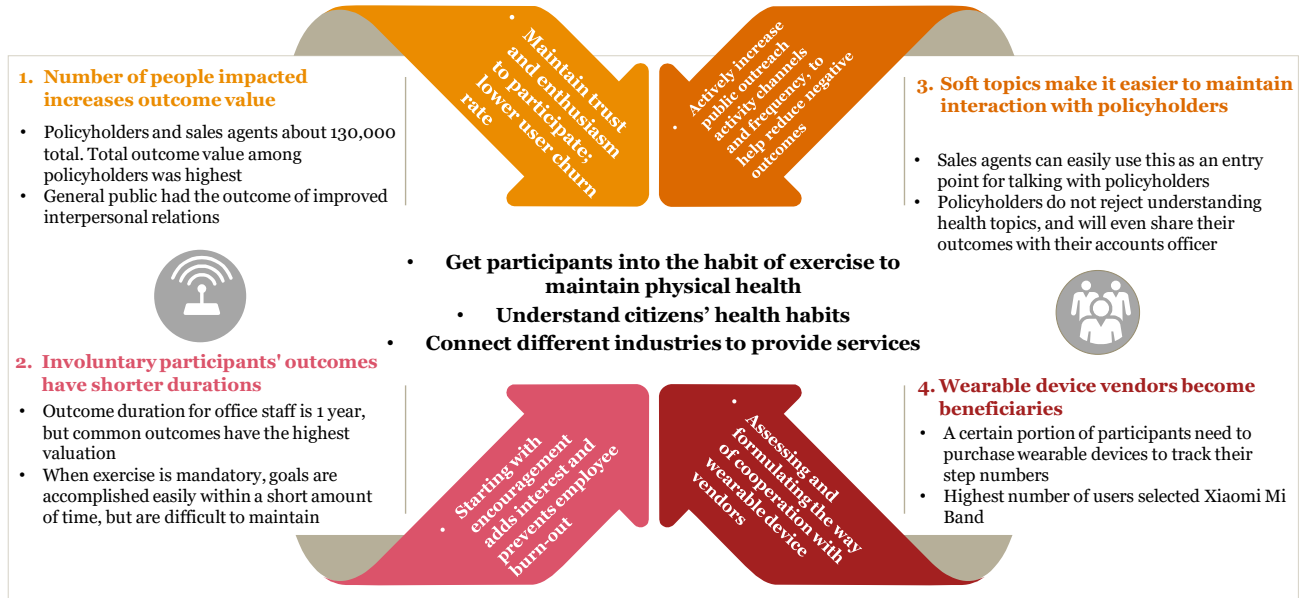


Figure 12: Follow-up Project Management and Analysis

Summarizing the analysis above, the current implementation strategy and content of the Cathay Walker Project correspond to the three goals. Even though the assessment shows that some outcomes are highly replaceable, they impact a large number of people with minimal negative effects that accounting for less than 1% of the overall value of outcomes. More importantly, Cathay Walker is an ongoing project; new activities were organized after the assessment period, which will extend the duration of outcomes. Various optimizations and adjustments will certainly further broaden and deepen the campaign's impact.

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Appendix 1 Stakeholder Engagement Questionnaire

Evaluation period : August 2018 ~ February 2019	
Basic information	<p>Did you begin using the Cathay Walker app before February 2019?</p> <hr/> <p>What is your identity?</p> <hr/> <p>How old are you?</p> <hr/> <p>Why did you participate in the Cathay Walker campaign?</p>
In the case of “better physical health,” an common outcome for various stakeholder groups, we used the following logic to inquire about each outcome:	
Outcome Validation	<p>After participating in the Cathay Walker campaign, which of the following changes in your physical condition resulted from your walking habit? (Check all that apply)</p> <p><input type="checkbox"/> Helps get into habit of exercise/walking</p> <p><input type="checkbox"/> Made me feel more energetic and less fatigued</p> <p><input type="checkbox"/> Improved my cardiovascular function</p> <p><input type="checkbox"/> Helped me lose weight</p> <p><input type="checkbox"/> Lowered my BMI</p> <p><input type="checkbox"/> Other; please specify: _____</p> <p><input type="checkbox"/> I did not have any of the above changes</p>
Degree of change	<p>After conducting interviews and a survey, we found that the changes above helped Cathay Walker campaign participants to have “Better physical health.” Do you agree based on your own circumstances?</p> <p><input type="checkbox"/> No, I do not agree that it improved my health. (Assigned 0%)</p> <p><input type="checkbox"/> Yes, I agree that it improved my health a little bit. (Assigned 25%)</p> <p><input type="checkbox"/> Yes, I agree that it improved my health somewhat. (Assigned 50%)</p> <p><input type="checkbox"/> Yes, I agree that it significantly improved my health. (Assigned 75%)</p> <p><input type="checkbox"/> Other; please specify: _____</p>



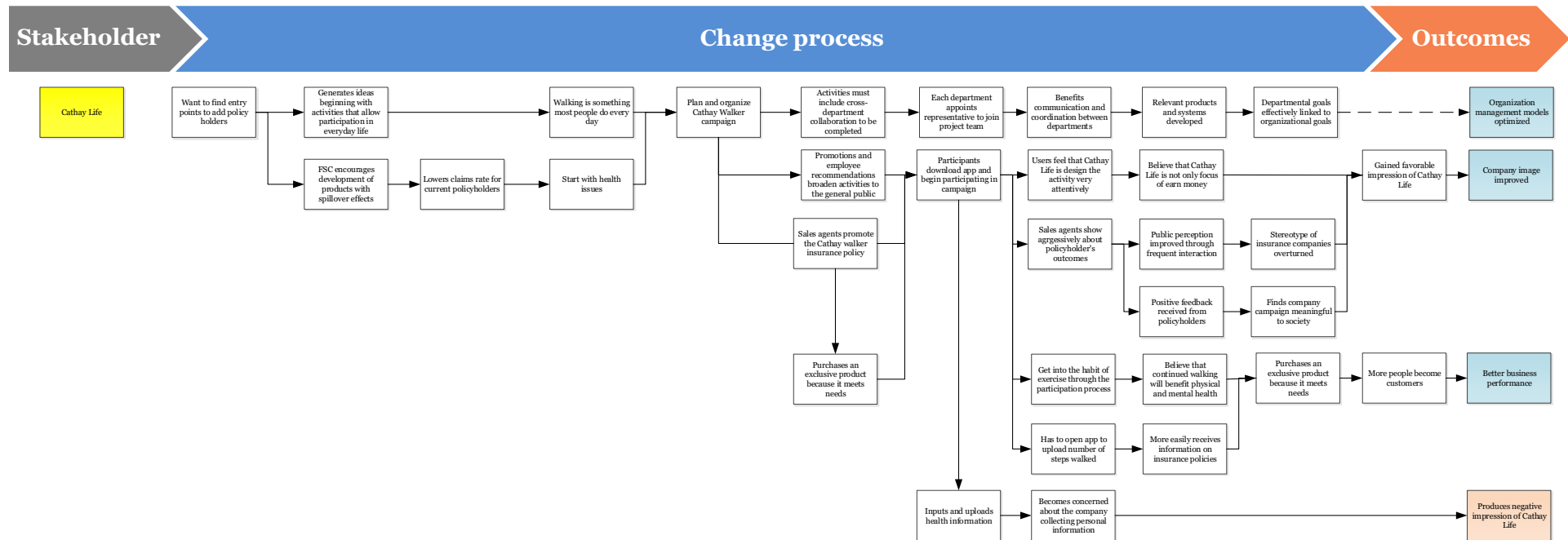
Materiality	Please give this outcome a score based on its importance in your mind							
	1 point	2 points	3 points	4 points	5 points			
	Unimportant		Average			Important		
Valuation of Outcomes	Which of the following activities and budgets do you think could have achieved the same “Better physical health” that you have experienced through Cathay Walker over the period from August 2018 – Feb 2019?							
	<input type="checkbox"/> Riding a bicycle for 3 hours every week (about NT\$150) <input type="checkbox"/> Going hiking at a scenic area for 2 hours every week (about NT\$250) <input type="checkbox"/> Swimming for 3 hours a week (about NT\$350) <input type="checkbox"/> Doing aerobics for 1 hour every week (about NT\$450) <input type="checkbox"/> Group course at a gym for 3 hours a week (NT\$1,000) <input type="checkbox"/> One-on-one trainer course once a week (NT\$1,800) <input type="checkbox"/> Other; please specify the activity and required budget _____							
Duration	If the Cathay Walker campaign ends, how long do you think the changes above will last? (Check one)							
	3 months or less	6 months	1 year	2 years	3 years	4 years	5 years	Other (Please specify)
Drop-off	If the changes brought by Cathay Walker campaign can last for over 1 year, will the effects of the change decrease year by year? (Check one)							
	Will decrease a lot each year (Assigned 75%)	Will decrease by half each year (Assigned 50%)	Will not decrease much each year (Assigned 25%)	Will not decrease at all (Assigned 0%)	Other (Please specify)			



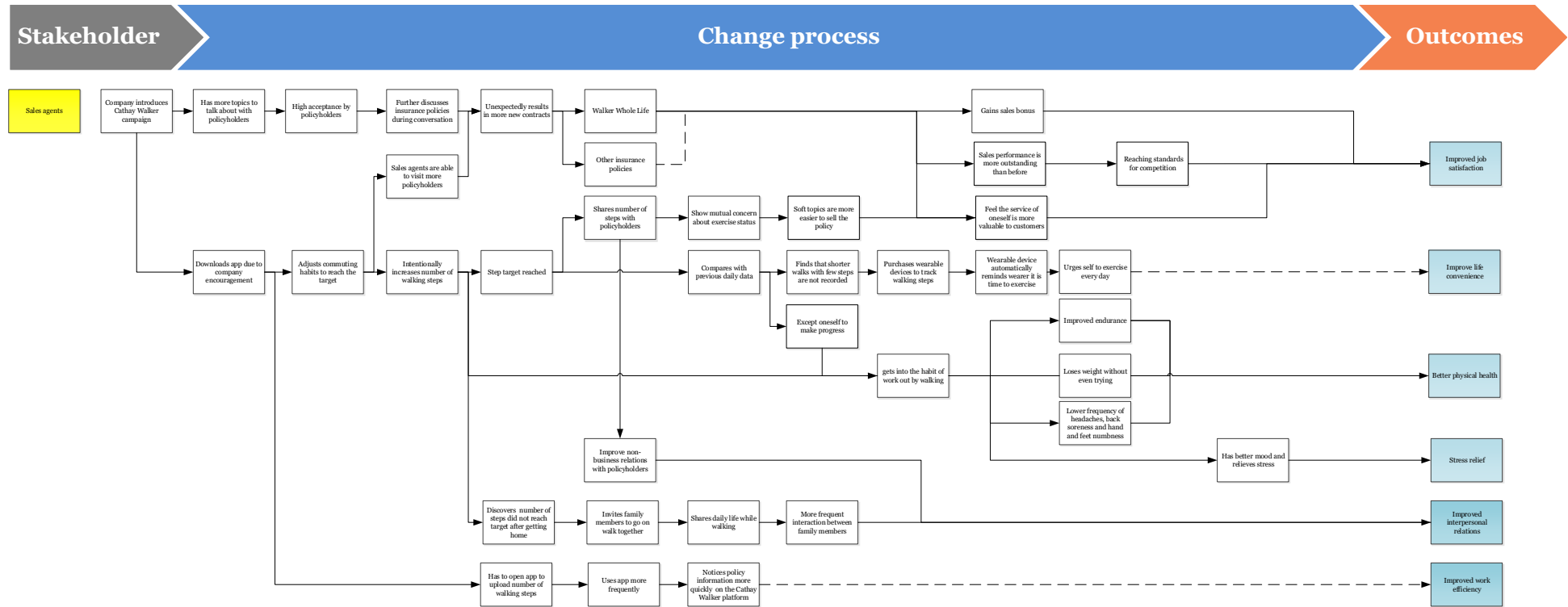
Deadweight	<p>If you hadn't participated in Cathay Walker, how likely do you think it is that you would have experienced the same degree of change through other channels or means? (e.g., even if you hadn't participated in Cathay Walker, family gatherings might also have improved your family relations.)</p>				
<p>I had many ways to gain the same change (Assigned 100%)</p>	<p>I had a few opportunities to gain the same change (Assigned 75%)</p>	<p>The degree of changes from other methods is only half that of changes from Cathay Walker (Assigned 50%)</p>	<p>Other methods would not have been able to achieve the same effect as Cathay Walker (Assigned 25%)</p>	<p>The changes from Cathay Walker are irreplaceable. (Assigned 0%)</p>	
Attribution	<p>Besides Cathay Walker, there may be other channels or methods that could also have helped you gain the following changes. Compared to the other ways, how much did Cathay Walker campaign contribute to the change? (e.g., when participating in Cathay Walker, the company organized other fun contests that also contributed to improving relations between employees.)</p>				
<p>It was entirely because of Cathay Walker (Assigned 0%)</p>	<p>It was mostly because of Cathay Walker (Assigned 25%)</p>	<p>Other factors and Cathay Walker each contributed half (Assigned 50%)</p>	<p>The changes were mostly due to other factors (Assigned 75%)</p>	<p>The changes I experienced have nothing to do with Cathay Walker (Assigned 100%)</p>	

Appendix 2 Outcome chain of events

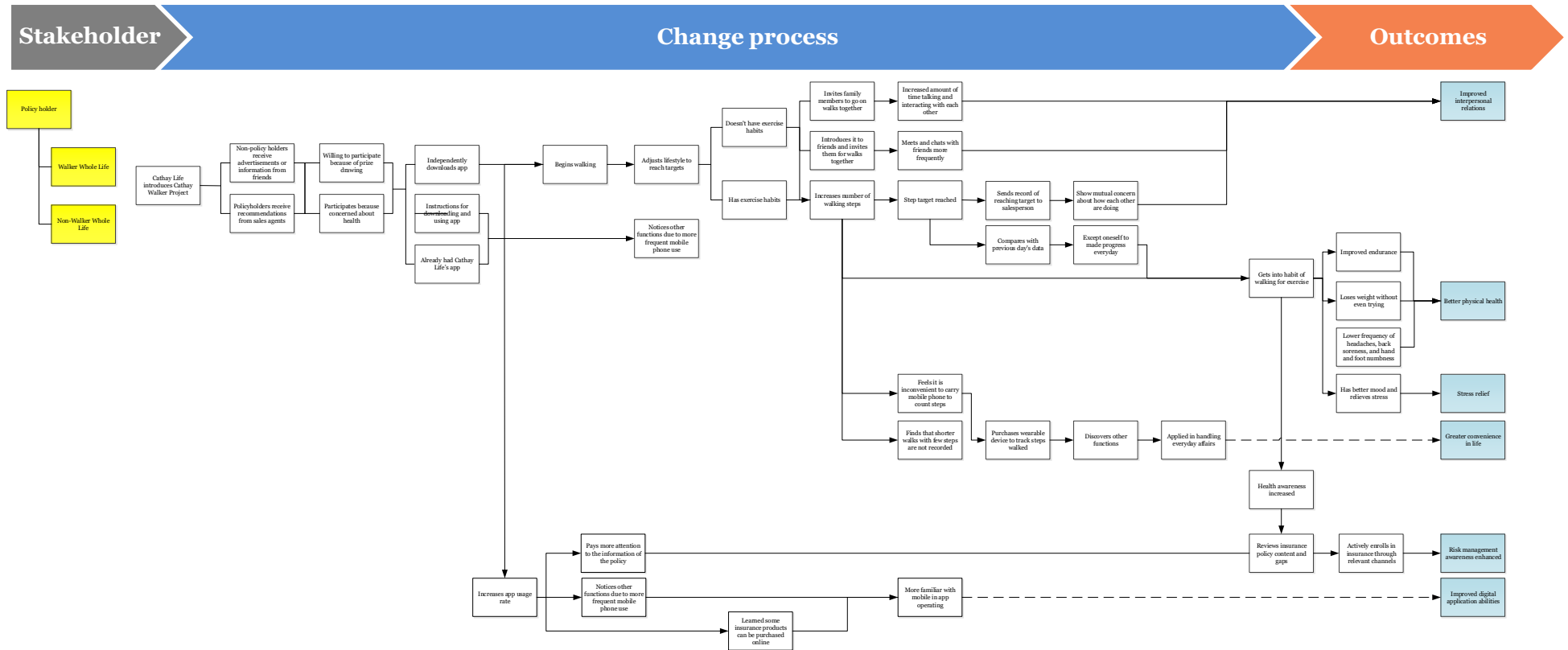
I. Cathay Life



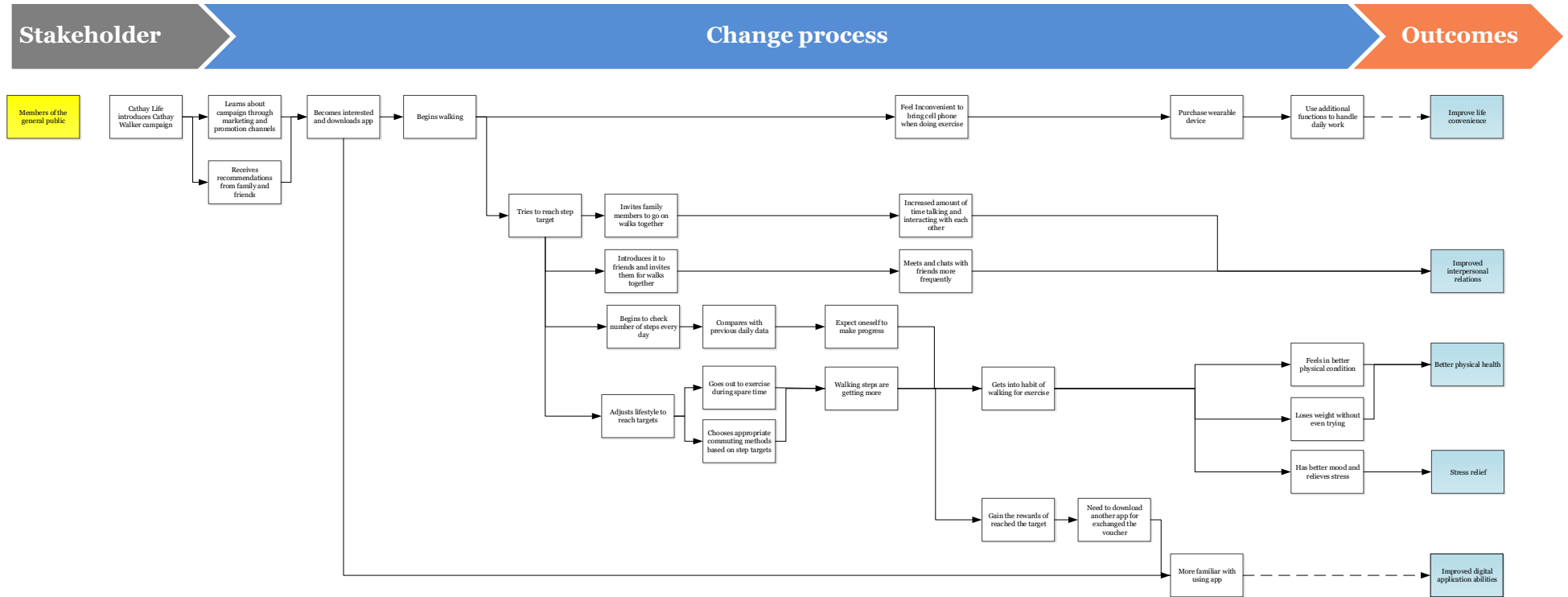
III. Sales agents



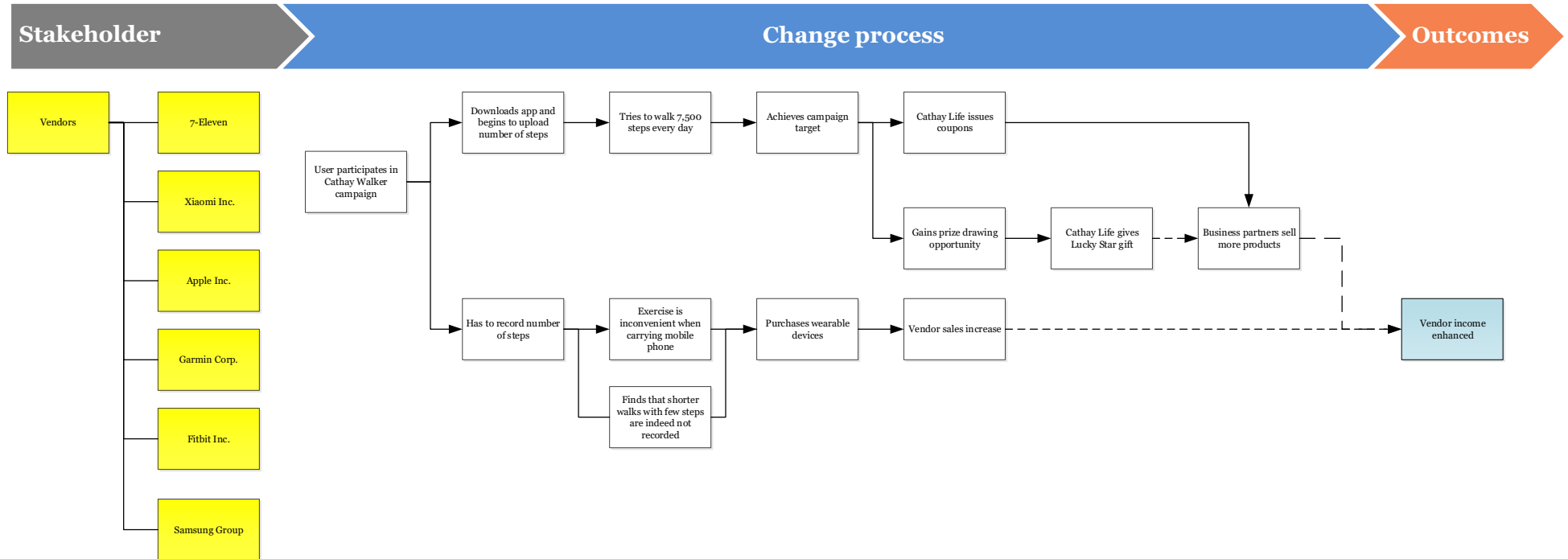
IV. Policyholders



V. Members of the general public



VI. Vendors





Appendix 3 Impact map

Stage 1		Stage 2			Stage 4													Stage 5							
Stakeholder		Inputs			Outputs	Description													Calculating Social Return						
Who do we have an effect on?	Number of the stakeholders	What do they invest?	What is the value of the inputs in currency(NT\$)	Source	Summary of activity in numbers	Description	Indicator	Source	Quantity	Duration	Financial Proxy	Value in proxy	Source	What would have happened without the change?	Who else contributed to the change?	What activity did you displace?	Does the outcome drop off in future years?	Impact (G)	Discount rate%	Year 1(post-campaign)	Year 2	Year 3			
						How would the stakeholder describe the changes?	How would you measure it?	Where did you get the information from?	How much change was there? (Outcome ratio)	number of changes (A)	How long does it last after end of activity?	What proxy would you use to value the change?	What is the value of the change?(B)	Where did you get the information from?	Attribution% (C)	Attribution% (f)	Displacement% (d)	Drop off% (e)	$G=A*B*(1-d)^{(1-f)}$		1.047%				
Cathay Life		Expenses on prize drawings, Lucky Star gifts, rewards and donation	7,251,360	Provided by Cathay Life	App download 116,671 times; 7 prize drawings for Lucky Star gifts	Company image improved	1. Office staff and sales agent	Interview and questionnaire	100%	1	1.7	Average Cathay Charity Foundation budget for similar charity activities in 2018	1,689,848	Information from Cathay Life	54%	48%	0%	18%	401,618		401,618	229,358	0		
		Marketing and promotion expenses.App & website development, system implementation, and data	15,262,303	Provided by Cathay Life	8,566,249 health data records; 105 projects developed	Better business performance	Whether new contracts increase	Interview	100%	1	0.4	Total premium income from Cathay Walker x Value of new contracts	14,333,316	Information from Cathay Life	75%	10%	25%	0%	2,418,747		2,418,747	0	0		
		Project team members' time costs and sales allowance	25,897,416	Provided by Cathay Life	Sold 2,263 Walker Whole Life policies	Produces negative impression of Cathay Life	1. Members of the general public	Interview and questionnaire	100%	1	1.3	Compensation for eliminating same degree of negative impression	(16690)	Questionnaire	51%	56%	0%	22%	(3593.99)		(3593.99)	(539.59)	0		
Office staff	4924	Wearable devices	1,321,412	Questionnaire surveys	Total steps 4,033,477,043; Average number of months each person reached target is 0.81	Improved interpersonal relationships	1. Staffs replied in questionnaire as to whether	Interview and questionnaire	10%	510	1.0	Weighted average of budget and activities	3,912	Questionnaire	66%	56%	0%	16%	299,174		245,611	2,298,689	0	0	
		Mobile phones	355451.25	Questionnaire surveys	Average number of months each person reached target is 0.81	Improved interpersonal relationships	1. Staffs replied in questionnaire as to whether	Interview and questionnaire	8%	411	0.6	Weighted average of budget and activities	3,981	Questionnaire	66%	56%	0%	16%	245,611		2,298,689	0	0		
						Increased stress	1. Staffs replied in questionnaire	Interview and questionnaire	36%	1792	0.4	Monetary value of gratitude towards others for achieving targets	(3,912)	Questionnaire	66%	56%	0%	31%	(1058478.40)		(1058478.40)	0	0		
						Rewards and prizes received	Better physical health	1. Staffs replied in questionnaire	Interview and questionnaire	48%	2362	1.4	Weighted average of budget and activities	18,304	Questionnaire	66%	54%	0%	17%	6,767,128		6,767,128	2,721,372	0	
Sales agents	23,168	Wearable devices	4,630,789	Questionnaire surveys	Total steps 14,864,549,047; Average number of months each person reached target is 0.38	Improved job satisfaction	1. Sales agents replied in questionnaire as to whether	Interview and questionnaire	46%	10672	2.0	Equivalent work performance bonus	16,901	Questionnaire	59%	54%	0%	15%	33,839,447		33,839,447	27,602,889	0		
		Mobile phones	1672440	Questionnaire surveys	Average number of months each person reached target is 0.38	Improved interpersonal relationships	1. Sales agents replied in questionnaire as to whether	Interview and questionnaire	11%	2444	0.6	Weighted average of budget and activities	1,328	Questionnaire	63%	56%	0%	14%	531,696		1,168,433	6,724,402	0	0	
						Rewards and prizes received 1,093,895	Better physical health	1. Policyholders replied in questionnaire as to whether	Interview and questionnaire	34%	7826	2.0	Weighted average of budget and activities	3,918	Questionnaire	61%	52%	0%	17%	5,024,274		37,445,863	31,999,584	0	
						Sales commission 22,558,716	Stress relief	1. Sales agents replied in questionnaire	Interview and questionnaire	44%	10146	1.4	Weighted average of budget and activities	6,539	Questionnaire	63%	54%	0%	17%	11,475,899		11,475,899	7,208,533	0	
Policyholders	105,392	Wearable devices	14,736,115	Questionnaire surveys	Total steps 55,490,740,862; Average number of months each person reached target is 0.42	Improved interpersonal relationships	1. Policyholders replied in questionnaire as to whether	Interview and questionnaire	12%	12763	0.6	Weighted average of budget and activities	2,055	Questionnaire	61%	50%	0%	17%	5,120,838		2,226,137	31,194,030	0	0	
		Mobile phones	7607985	Questionnaire surveys	Average number of months each person reached target is 0.42	Improved interpersonal relationships	1. Policyholders replied in questionnaire as to whether	Interview and questionnaire	5%	5105	0.6	Weighted average of budget and activities	2,233	Questionnaire	61%	50%	0%	17%	2,234,955		23,847,055	0	0		
						Rewards and prizes received 3,908,099	Better physical health	1. Policyholders replied in questionnaire	Interview and questionnaire	48%	50446	1.9	Weighted average of budget and activities	16,131	Questionnaire	61%	48%	0%	19%	166,645,840		166,645,840	124,109,415	0	
						Risk management awareness enhanced	Stress relief	1. Policyholders replied in questionnaire	Interview and questionnaire	47%	49304	1.4	Weighted average of budget and activities	5,076	Questionnaire	61%	50%	0%	19%	47,935,368		47,935,368	30,677,201	0	
Member of the general public	14,026	Wearable devices	1,927,810	Questionnaire surveys	Total steps 6,269,207,505; Average number of months each person reached target is 0.39	Better physical health	1. The general public replied in questionnaire	Interview and questionnaire	42%	5850	1.3	Weighted average of budget and activities	6,641	Questionnaire	54%	47%	0%	19%	61,562,969		61,562,969	36,098,777	0		
		Mobile phones	1012646.25	Questionnaire surveys	Average number of months each person reached target is 0.39	Stress relief	1. The general public replied in questionnaire	Interview and questionnaire	39%	5527	1.5	Weighted average of budget and activities	4,825	Questionnaire	64%	50%	0%	22%	16,623,044		16,623,044	6,684,984	0		
						Rewards and prizes received 923,128	Improved interpersonal relationships	1. The general public replied in questionnaire	Interview and questionnaire	10%	1455	0.6	Weighted average of budget and activities	1,873	questionnaire	62%	51%	0%	21%	503,787		291,405	3,324,884	0	0
							Improved interpersonal relationships	1. The general public replied in questionnaire	Interview and questionnaire	5%	743	0.6	Weighted average of budget and activities able to achieve same	2,119	questionnaire	62%	51%	0%	21%	291,405		3,324,884	0	0	
Cathay Financial Holdings Co., Ltd	1	Advertisement expenses	7,205,000			NA														0	0	0	0		
Cathay United Bank	1	MRT ATM advertising space	21,300,000			NA														0	0	0	0.00		
Total input			110,180,727																	434,503,616	434,503,616.15	269,280,870.04	0.00		
																					Present value of each year	434,503,616	430,001,500	263,729,465	0
																						Total Present Value (PV)	693,730,965	583,550,238	0
																						PV minus the investment	583,550,238	6.30	0
																						SROI	6.30	0	



Please see below for the reference of the above information in the Impact Map to SROI report:

1. Inputs: Please see Table 4 on page 44-47, Section 1 Project Inputs, Chapter 3
2. Outputs: Please see Table 5 on page 50-51, Section 2 Project Outputs, Chapter 3
3. Indicators: Please see Table 12 on page 81-95, Section 3 Understanding Changes, III Prove outcomes, Chapter 3
4. Quantity – How much changes was there (Outcome ratio)? : Please see page 100-103, Section 3 Understanding Changes, III Prove outcomes, Chapter 3
5. Quantity – Number of changes (A): Please see page 98-99, Section 3 Understanding Changes, III Prove outcomes, Chapter 3
6. Duration: Please see page 121-123, Section 4 Valuation of Outcomes, II Duration of outcomes, Chapter 3. Additionally, please note all the durations are determined based on the questionnaire results of stakeholders other than outcome of “Better business performance” of Cathay Life and that of “Improved interpersonal relationships” of all the four stakeholders groups of participants. Please also note that the duration of the outcome of “Improved company image” and “Negative impression on Cathay Life generated” are based on the feedback from Cathay Walker participants’ questionnaire results and verified with Cathay Life. The durations of each outcome are indicated in the Impact Map.
7. Value in proxy (B): Please see Table 13 on page 111-114, Section 4 Valuation of Outcomes, I Financial proxy, Chapter 3
8. Deadweight: Please see page 139-143, Section 4 Valuation of Outcomes, IV Adjusting factors, Chapter 3. Additionally, please note all the deadweights are determined based on the questionnaire results of stakeholders other than outcome of “Better business performance” of Cathay Life. Please also note that the deadweight of the outcome of “Improved company image” and “Negative impression on Cathay Life generated” are based on the feedback from Cathay Walker participants’ questionnaire results and verified with Cathay Life. The deadweight of each outcome are indicated in the Impact Map.
9. Attribution: Please see page 139-140 and 144-148, Section 4 Valuation of Outcomes, IV Adjusting factors, Chapter 3. Additionally, please note all the attribution are determined based on the questionnaire results of stakeholders other than outcome of “Better business performance” of Cathay Life. Please also note that the attribution of the outcome of “Improved company image” and “Negative impression on Cathay Life generated” are based on the feedback from Cathay Walker

participants' questionnaire results and verified with Cathy Life. The attribution of each outcome are indicated in the Impact Map.

10. Displacement: Please see page 139-140 and 148-150, Section 4 Valuation of Outcomes, IV Adjusting factors, Chapter 3.
11. Drop-offs: Please see page 139-140 and 151-152, Section 4 Valuation of Outcomes, IV Adjusting factors, Chapter 3. Additionally, please note all the durations are determined based on the questionnaire results of stakeholders other than outcome of "Better business performance" of Cathay Life. Please also note that the drop-offs of the outcome of "Improved company image" and "Negative impression on Cathay Life generated" are based on the feedback from Cathay Walker participants' questionnaire results and verified with Cathy Life. The drop-offs of each outcome are indicated in the Impact Map.

Appendix 4 Illustrative examples of outcome value calculation

Outcome value=Quantity (A)* Value in proxy (B)*(1-Deadweight(c))*(1-Displacement (d))*(1-Attribution (f))*(1-Drop-off (e))

Example 1 、 Stakeholder : Cathay Life / Outcome: Improved company image – Part I

Stage 1		Stage 2			Stage 3		Stage 4		Stage 5		Stage 6	
Stakeholder		Inputs		Outputs	Description	Indicator	Quantity		Duration	Financial Proxy	Value in proxy	
Who do we have an affect on?	Number of the stakeholders	What do they invest?	What is the value of the inputs in currency(NT\$)	Summary of activity in numbers	How would the stakeholder describe the changes?	How would you measure it?	How much change was there? (Outcome)	number of changes (A)	How long does it last after end of	What proxy would you use to value the change?	What is the value of the change?(B)	
Cathay Life	1	Expenses on prize drawings, Lucky Star gifts, rewards and donation	7,251,360	App download 116,671 times; 7 prize drawings for Lucky Star gifts	Company image improved	1. Office staff an	100%	1	1.7	Average Cathay Charity Foundation budget for similar charity activities in 2018	1,689,848	

Column	Item	Number	Explanations
L	Number of changes (A)	100%	Cathay Life insurance company as a whole
M	Duration	1.7	Based on the questionnaire survey from office staff, sales agent, policyholders, and general public regarding the duration of increased recognition for Cathay Life. The individual duration below can be found in the Working Paper file. Office staff 1.9 、 Sales agents 2.1 、 Policyholders 1.8 、 General public 1.2



Column	Item	Number	Explanations
			<p>The average duration is : $(1.9+2.1+1.8+1.2)/4=1.7$</p> <p>The above is illustrative purpose. The actual duration included in the Impact Map Working Paper calculation up to 4 decimals is 1.6929</p>
O	Value in proxy(B)	1,689,848	<p>Cathay Life top management consider the improved company image effect can be achieved through similar philanthropy activity of charity event of blood donation promotion campaign or environmental protection related charity sale event. The expenditures for these two event were 2,910,155 and 469,540, respectively.</p> <p>The average is $(2,910,155+469,540)/2=1,689,847.5$, rounding to 1,689,848</p>

Example 1 、 Stakeholder : Cathay Life / Outcome: Improved company image – Part II

Stage 1		Stage 4				Stage 5				
Stakeholder		Deadweight % (c)	Attribution% (f)	Displacement% (d)	Drop off% (e)	Impact (G)	Calculating Social Return			
Who do we have an affect on?	Number of the stakeholders	Description	What would have happened without the activity?	Who else contributed to the change?	What activity did you displace?	Does the outcome drop off in future years?	$G=A*B*(1-c)*(1-d)*(1-e)*(1-f)$	Discount rate	1.047%	
		How would the stakeholder describe the changes?						Year 1 (post-campaign)	Year 2	Year 3
Cathay Life	1	Company image improved	54%	48%	0%	18%	401,618	401,618	229,358	0

Column	Item	Number	Explanation
Q	Deadweight% (c)	54%	Based on the questionnaire survey from office staff, sales agent, policyholders, and general public regarding the deadweight of increased recognition for Cathay Life. The individual deadweight below can be found in the Working Paper file. Office staff 57.79% 、 Sales agent 59.67% 、 Policyholders 46.17% 、 General public 48.63% The average is : $(57.79\%+59.67\%+46.17\%+48.63\%)/4=53.07\%$ (The difference from 54% is because the deadweight included in Impact Map



Column	Item	Number	Explanation
			<p>Working Paper calculation are the deadweight with more decimals than two as expressed here. It can be evidenced from the Working Paper file.)</p> <p>The reasonableness assessment can be found from P132-134 in Chapter 3, Section 4, IV, Adjusting factors.</p>
R	Attribution% (f)	48%	<p>Based on the questionnaire survey from office staff, sales agent, policyholders, and general public regarding the attribution of increased recognition for Cathay Life. The individual duration below can be found in the Working Paper file.</p> <p>Office staff 54.09% 、 Sales agent 55.47% 、 Policyholders 42.98% 、 General public 40.48%</p> <p>The average is : $(54.09\%+55.47\%+42.98\%+40.48\%)/4=48.26\%$ (The attribution included in Impact Map Working Paper calculation are the attribution with more decimals than two as expressed here. It can be evidenced from the Working Paper file.)</p>
S	Displacement% (d)	0%	No displacement due to its nature
T	Drop-off% (e)	18%	Based on the questionnaire survey from office staff, sales agent, policyholders, and general public regarding the drop-off of increased



Column	Item	Number	Explanation
			<p>recognition for Cathay Life. The individual drop-off below can be found in the Working Paper file.</p> <p>Office staff 13.04% 、 Sales agent 13.83% 、 Policyholders 18.29% 、 General public 25.64%</p> <p>The average is : $(13.04\%+13.83\%+18.29\%+25.64\%)/4=17.70\%$ (The drop-off included in Impact Map Working Paper calculation are the drop-off with more decimals than two as expressed here. It can be evidenced from the Working Paper file.)</p>
U	Impact (G)	<p>1st year: 401,618</p> <p>2nd year: 229,358</p>	<p>$=A*B*(1-c)*(1-d)*(1-e)*(1-f)$</p> <p>For the 1st year value (no Drop-off (e)): $1*1,689,848*(1-54%)*(1-0%)*(1-48\%)$</p> <p>$=404,212$ (The difference from 401,618 is as explained in each of the deadweight and attribution)</p> <p>For the 2nd year value: $401,618*(1.7 \text{ years} - 1 \text{ year})*(1-18\%)$</p> <p>$=230,529$ (The difference from 229,358 is as explained in each of the deadweight, attribution, drop-off and duration above)</p>

Example 2、 Stakeholder : Sales agent / Outcome: Improved job satisfaction – Part II

Stage 1		Stage 2										
Stakeholder		Inputs		Outputs								
Who do we have an affect on?	Number of the stakeholders	What do they invest?	What is the value of the inputs in currency(NT\$)	Summary of activity in numbers	Description	Indicator	Quantity		Duration	Financial Proxy	Value in proxy	
					How would the stakeholder describe the changes?	How would you measure it?	How much change was there? (Outcome)	number of changes (A)	How long does it last after end of activity?	What proxy would you use to value the change?	What is the value of the change?(B)	
Sales agents	23,168	Wearable devices	4,630,789	Total steps 14,864,549,047; Average number of	Improved job satisfaction	1. Sales agents replied in que	46%	10672	2.0	Equivalent work performance bonus	16,901	

Column	Item	Number	Explanation
K	How much change was there (Outcome ratio)?	46%	There were 749 valid questionnaires. Among these, 345 replied with the change of improved job satisfaction to a medium degree or higher. Therefore, the outcome ratio is 46%. (Please also see the illustration of 「 Outcome ration 」 calculation on page 98-99 in Chapter 3, III Prove outcomes, 3. Calculate quantity of outcome.
L	Number of changes (A)	10,672	The population of Sales agents is 23,168 (Column B). Among these, 46.6% have the change of improved job satisfaction to a medium degree or higher. Therefore, the number of change is $23,168 * 46.06\% = 10,671$ (with rounding differences).



Column	Item	Number	Explanation
M	Duration	2.0	<p>There were 602 questionnaires replied with the outcome of Improved job satisfaction. The weighted average duration from the reply of all these respondents are calculated as “number of respondents” * “duration in unit of year” /”total number of respondents”. Please see below:</p> $(72*0.25+113*0.5+158*1+66*2+59*3+31*4+103*5)/602=1.96 \text{ (year)}$ <p>Please note the calculation included in Impact Map Working Paper calculation are the Impact with more decimals than two as expressed here.</p>
O	Value in proxy (B)	16,901	<p>There were 592 sales agents replied that the monthly bonus can be financial proxy for the outcome of improved job satisfaction. The weighted average financial proxy from the reply of all these respondents are calculated as “number of respondents for each different option” * “monthly bonus” /”total number of respondents”. Please see below:</p> $(95*100+86*300+131*500+153*1,000+75*3,000+33*5,000+19*10,000)/592=1,408.45 \text{ (per month), which is equivalent to } 16,901 \text{ per year.}$

Example 2、 Stakeholder : Sales agent / Outcome: Increased personal income – **Part II**

A		B	G				Q	R	S	T	U	W	X	Y
Stage 1		Stage 4				Stage 5								
Stakeholder						Deadweight % (c)	Attribution% (f)	Displacement% (d)	Drop off% (e)	Impact (G)	Calculating Social Return			
Who do we have an affect on?	Number of the stakeholders	Description How would the stakeholder describe the changes?				What would have happened without the activity?	Who else contributed to the change?	What activity did you displace?	Does the outcome drop off in future years?	$G=A*B*(1-c)*(1-d)*(1-e)*(1-f)$	Discount rate%	1.047%		
									Year 1(post-campaign)		Year 2	Year 3		
Sales agents	23,168	Improved job satisfaction				59%	54%	0%	15%	33,839,447	33,839,447	27,602,889	0	

Column	Item	Number	Explanation
Q	Deadweight% (c)	59%	Based on the questionnaire results and calculated in the way similar to the illustrative example and questions on page 143-144 in Chapter 3 Project Outcomes, Section 4 Valuation of Outcome, IV Adjusting factors. The weighted average deadweight is calculated as “Number of respondents for each response” * “Assigned quantification of each different deadweight response” / “Number of total respondents”. Please see below: $(117*100\%+192*75\%+147*50\%+81*25\%+65*0\%)/602$ $=58.93\%$ Please note the calculation included in Impact Map Working Paper calculation are the Impact with more decimals than two as expressed here.



Column	Item	Number	Explanation
R	Attribution% (f)	54%	<p>It was calculated based on the questionnaire results. The weighted average attribution is calculated as “Number of respondents for each response” * “Assigned quantification of each different attribution response” / “Number of total respondents”. Please see below:</p> $(29*0\%+91*25\%+285*50\%+141*75\%+56*100\%)/602$ $=54.32\%$ <p>Please note the calculation included in Impact Map Working Paper calculation are the Impact with more decimals than two as expressed here. The options of responses for attribution and their assigned quantification are listed below:</p> <ul style="list-style-type: none"> ■ It was entirely because of Cathay Walker, Assigned 0% ■ It was entirely because of Cathay Walker, Assigned 25% ■ Other factors and Cathay Walker each contributed half, Assigned 50% ■ The changes were mostly due to other factors, Assigned 75%. ■ The changes I experienced have nothing to do with Cathay Walker, Assigned 100%
S	Displacement% (d)	0%	No displacement due to the nature of this outcome.



Column	Item	Number	Explanation
T	Drop-off% (e)	15%	<p>It was calculated based on the questionnaire results. The weighted average drop-offs is calculated as “Number of respondents for each response” * “Assigned quantification of each different drop-off response” / “Number of total respondents”. Please see below: $(0*75\%+26*50\%+104*25\%+128*0\%)/258=15.12\%$</p> <p>Please note the calculation included in Impact Map Working Paper calculation are the Impact with more decimals than two as expressed here. The options of responses for attribution and their assigned quantification are listed below:</p> <ul style="list-style-type: none"> ■ Will decrease a lot each year, Assigned 75% ■ Will decrease by half each year, Assigned 50% ■ Will not decrease much each year, Assigned 25% ■ Will not decrease at all, Assigned 0%
U	Impact (G)	33,839,447	<p>$=A*B*(1-c)*(1-d)*(1-e)*(1-f)$</p> <p>For the 1st year value (no Drop-off (e)): $10,672*16,901*(1-59%)*(1-54%)*(1-0\%)$</p>

Column	Item	Number	Explanation
			<p>=34,017,305 (The difference from 33,839,447 is because the Impact included in Impact Map Working Paper calculation are the Impact with more decimals than expressed here.)</p> <p>For the 2nd year value: $33,839,447 * (2 \text{ years} - 1 \text{ year}) * (1 - 15\%)$</p> <p>=28,763,530 (The difference from 27,602,889 in the Impact Map is as explained for each of the items above)</p>