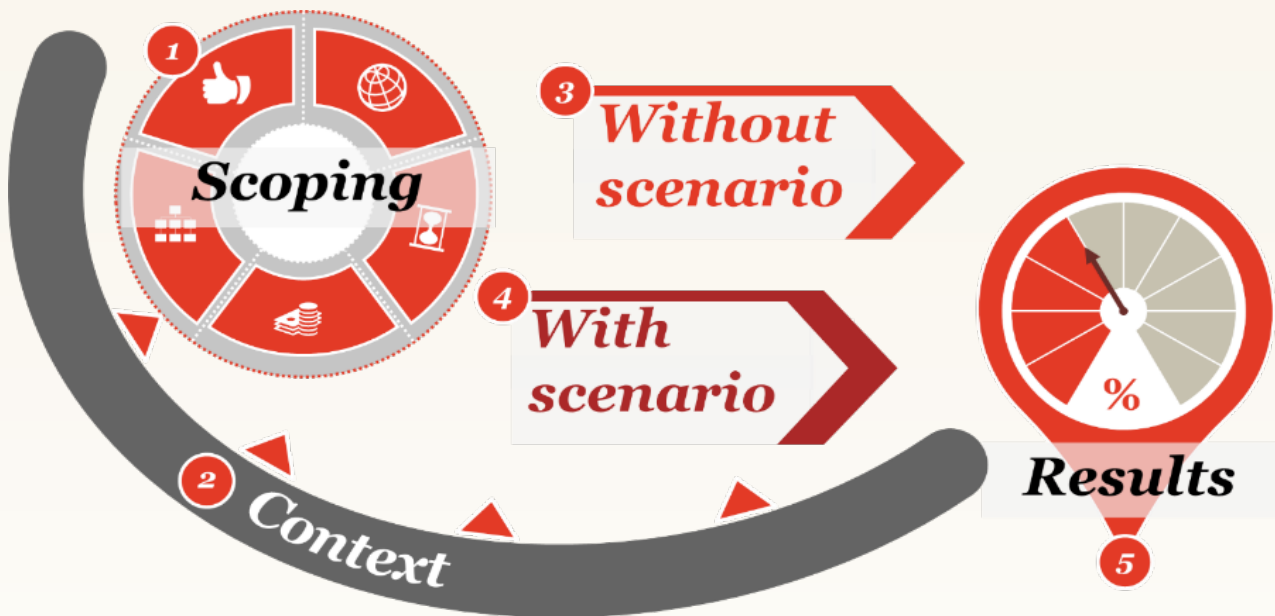


# DEPP RETURN ON INVESTMENT STUDY

## FINAL REPORT



27th July 2018



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## GLOSSARY

**Capacity development** – The process through which individuals, organisations, and societies obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time (UNDP definition).

**Capacity Return on investment (Capacity ROI)** – A set of metrics that measure the improvement in the quality of humanitarian response at an individual, organisational, network, and system level.

**Cash flow** – The net amount of cash and cash-equivalents being transferred into and out of a business activity. In the humanitarian context, a business activity can mean any activity directly or indirectly related to humanitarian response.

**Discount rate** – The interest rate at which the streams of cash inflows and outflows associated with an investment are discounted to allow for the timing of these cash flows. In the private sector, the discount rate is frequently based on the weighted-average cost of capital to the firm.

**Emergency Preparedness** – The knowledge and capacity developed by governments, recovery organisations, communities, and individuals, to anticipate, respond to, and recover from the impact of potential, imminent or current hazard events, or emergency situations that call for a humanitarian response (UN definition).

**Emergency risk** – Hazards in a given country and/or region, expressed in terms of probability and impact.

**Financial return on investment (Financial ROI)** – Measure of the financial savings achieved through an emergency preparedness investment.

**Internal rate of return (IRR)** – The constant annual interest rate that a financial investment would need in order to fund all emergency responses foreseen throughout its time horizon. The higher its IRR, the more desirable an investment is. This is also known as the equivalent rate of return (ERR).

**Investment** – Any humanitarian preparedness project, or a component of such a project, that aims to improve the time, cost, and quality of humanitarian interventions.

**Payback period** – The amount of time expected to pass before an investment is recouped.

**Present value (PV) of total savings** – The actualised amount saved over the course of an investment's time horizon.

**Quality/qualitative improvements to humanitarian response** – Increased capacity of the humanitarian system to respond to humanitarian crises effectively and appropriately.

**Resilience** – The ability of an individual, a community, or a country to cope with, adapt to, and quickly recover from, stress and shocks caused by a disaster, violence, or conflict.

**Risk scenario** – An emergency for which an investment is likely to be used.

**ROI Ratio** – The difference between cash flows expended during emergencies without the investment in place and those with the investment in place, divided by the initial cost of the investment.

**Time horizon** – The period over which the user is assessing the return on an investment.

**Time return on investment (Time ROI)** – Changes in emergency response lead times, i.e. the number of days between an emergency being declared and humanitarian relief reaching beneficiaries. If Time ROI varies by risk scenarios, an average is computed, weighted by each emergency's frequency.

**With Scenario** – A narrative describing how the response to an emergency would occur if an investment were made.

**Without Scenario** – A narrative describing how the response to an emergency would occur if an investment were not made.

## ABBREVIATIONS

AAH – Action Against Hunger UK, an INGO

AFD – Action for Development, an Ethiopian NGO

APDS – Affected-Person-Days-Saved, an indicator

AWD – Acute watery disease

BCG - Boston Consulting Group

CCRDA – The Ethiopian Consortium of Christian Relief & Development Associations

CDAC – Communicating with Disaster Affected Communities

CoP – Community of practice

DFID – UK Department for International Development

DEPP – Disasters and Emergencies Preparedness Programme

EP – Emergency preparedness

EWS – Early warning system

FIs – Food items

GDP - Gross Domestic Product

GBV – Gender-based violence

GHG – Greenhouse gas

ICT – Information and communications technology

INGO – International non-governmental organisation

IOM – International Organization for Migration

IRR – Internal rate of return

MPA – Minimum Preparedness Actions

M&E – Monitoring and evaluation

NGO – Non-governmental organisation

NFIs – Non-food items

PIP – Protection In Practice

PV – Present value

PwC – PricewaterhouseCoopers

RICCA – Rapid Information Communication Accountability Assessment

ROI – Return on Investment

STP – Shift the Power

TSC – Transform Surge Capacity

VfM - Value for Money

## EXECUTIVE SUMMARY

This study shows that emergency preparedness facilitates a more relevant, timely, effective, and efficient humanitarian response, which in turn improves how affected communities' needs are met during emergencies. Creating an evidence base for these potential benefits is vital to making the case for investment in humanitarian preparedness. Furthermore, planning with scarce resources requires that decision-makers understand the trade-offs between different opportunities. Building an optimal preparedness portfolio therefore requires robust investment logic. Indeed, emergency preparedness expenditure should be thought of as an investment because it occurs in a context of uncertainty and yields a return<sup>1</sup>, either financial or outcome-related. This study, like others carried out before it, helps qualify and quantify the benefits of preparedness.

The ROI Methodology used in this study is a tool for humanitarian practitioners to make the case for their investments in a way that helps decision-makers understand the trade-offs involved. This framework was first developed by BCG for the UN in 2015<sup>2</sup> and refined by PwC<sup>3</sup> for a broader audience of UN agencies in 2017. It relies on carefully analysing and comparing how a humanitarian response in different risk scenarios would occur with and without the investment having been made. This methodology enables the development of business cases. Indicators derived from this comparison are defined as ROI indicators.

Using this methodology, a joint Learn More and PwC team appraised 11 capacity development investments collectively valued at £3,874,424 in Ethiopia and the Philippines, funded through the DEPP programme. For 6 of these investments, it was possible to compute expectations of financial returns, with a Financial ROI ratio ranging between 0 and 5.88, averaging £2.84 per £1 invested<sup>4</sup>. This portfolio is forecast to generate £3,358,508 in savings over ten years<sup>5</sup>, with an average payback period of 4.4 years. These results are in line with the previous BCG and PwC studies which mainly covered logistics investments, which tend to be more easily appraised as there is a more direct link between investments and desired effects. It also opens avenues for further research into the financial savings obtainable through capacity development.

These investments are also expected to yield improvements in the surrounding humanitarian ecosystem's capacity to respond, a finding captured by the Capacity ROI forecasts developed as an addition to the ROI Methodology. Specifically, investments that empower local communities as humanitarian actors, those that fill humanitarian skills gaps and those that enable faster and more appropriate responses through enhanced data gathering seem to offer the most potential, particularly at the individual capacity level. Also, this investment portfolio shows significant potential for time savings. Once an outlier<sup>6</sup> is excluded, 10 of these investments are estimated to save 35.4 days in lead times on average per emergency, a figure that could result in many lives being saved. While this number is higher than averages in the BCG and PwC studies, it is similar to that seen in the past for investments that are similar in scope. This is an indication that capacity development investments, though at times hard to appraise, are among the most promising in terms of humanitarian results.

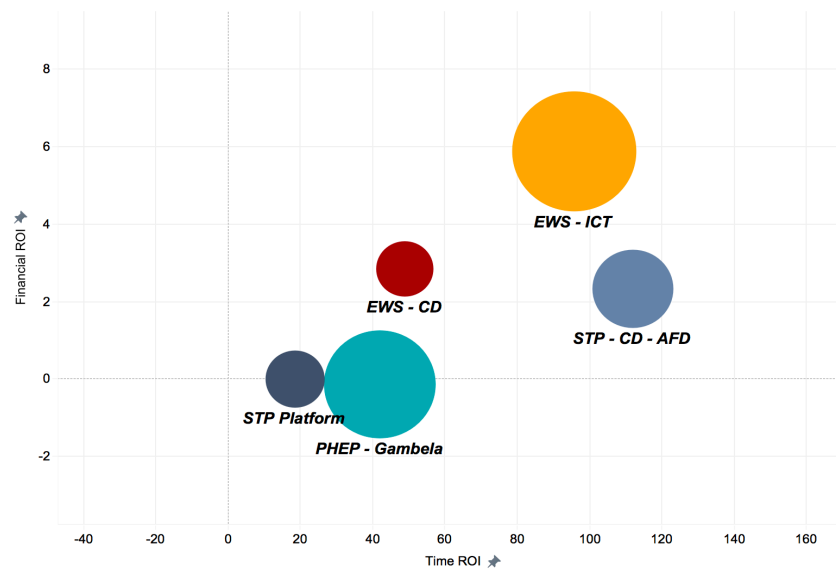
- 1 Returns represent foreseen improvements in emergency response. Specifically, Time ROI equals the number of days saved when responding and Financial ROI equals the ratio between the amount saved over the amount invested. Capacity ROI reflects the improved local competences and capabilities to address the emergency.
- 2 BCG, (2015). Return on Investment for Emergency Preparedness Study Methodology, London, available [here](#).
- 3 PwC, (2017). Emergency Preparedness: Return on Investment Model, Result trend analysis, London, available [here](#).
- 4 Other investments were projected to yield financial returns but could not be modelled due to data availability issues.
- 5 This was the maximum applicable time horizon for investments analysed. In some cases, the time horizon was shorter.
- 6 One of the Philippines investments, PIP GBV, has a particularly high Time ROI due to the unique nature of the project. As a result, it was not considered in calculations of overall averages.

The fact that this figure was far lower in the Philippines than in Ethiopia points to the importance of country context as an enabler of high-potential investments.

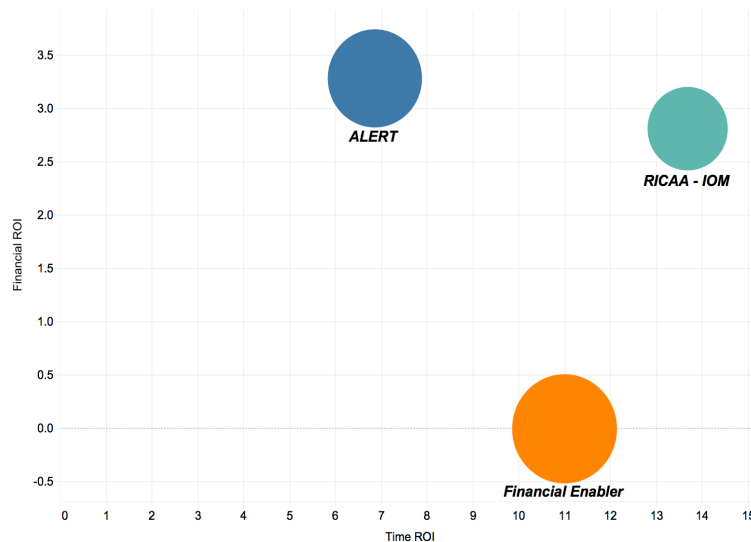
In Ethiopia, the team developed five investment business cases, mapped in figure 1. Time ROI is on the horizontal axis, Financial ROI on the vertical axis. The size of each bubble is directly proportionate to overall Capacity ROI.

Investments are mapped in terms of total financial, time, and capacity returns. Figure 2 maps 3 of 6 investments appraised in the Philippines for which it was possible to compute Time and Capacity ROI indicators at least. Three additional investments, for which other indicators were not computed, yielded Time ROIs of 12, 13 and 179 days saved respectively.

**FIGURE 1 - ETHIOPIA INVESTMENTS ROI RESULTS. SOURCE: PWC STUDY 2018**



**FIGURE 2 - PHILIPPINES INVESTMENTS ROI RESULTS. SOURCE: PWC STUDY 2018**



Equally interesting are findings around the process of applying the ROI Methodology itself. In order to appraise DEPP's projects, the methodology was further tailored to include capacity development investments and the team developed Capacity ROI indicators. This framework could potentially be adopted by other humanitarian actors interested in standardizing how humanitarian outcomes are appraised. The field visits that informed these appraisals were also used as an opportunity to test a more participative approach to

investment analysis, by engaging project officers in workshops that aimed to help them truly understand the model, rather than merely provide data.

As the ROI Methodology continues to be developed and used within the humanitarian system, the need for adoption models is making itself felt. Starting from the lessons learned through this study, this report suggests some ways in which its adoption could occur in a bottom-up manner, by creating communities of practice that adopt an investment logic proactively. The challenge ahead lies in enabling humanitarian practitioners to adopt the ROI Methodology's foundational business case logic.

## INTRODUCTION

Preparedness is at the core of today's humanitarian agenda. As a result, humanitarian actors progressively are thinking more carefully about the resources needed for emergency preparedness (EP) actions that enable and anticipate elements of humanitarian response. In 2014, the UK Department for International Development (DFID) launched the Disasters and Emergencies Preparedness Programme (DEPP), a three-year, £40m programme aimed at significantly improving the quality and speed of humanitarian response in countries at risk of natural disasters or conflict-related emergencies.

PricewaterhouseCoopers (PwC) and Learn More were commissioned by Action Against Hunger UK (AAH) to undertake a Return on Investment (ROI) analysis of DEPP's Capacity Development investments in Ethiopia and the Philippines. This study was undertaken from October 2017 to May 2018. The DEPP ROI study also aimed to review, test, and improve the current ROI Methodology so that it would be applicable to EP investments that focus on building humanitarian capacity at multiple levels: Individual; Organisational; Network; and Systems.

This study focuses on the £30M of this programme's funding that goes primarily towards building the capacity of national humanitarian staff, governments, preparedness systems, and early warning systems. This is composed of £27 million managed through the Start Network, and £3 million managed through the Communicating with Disaster Affected Communities (CDAC) Network. This study focused specifically on projects implemented in Ethiopia and the Philippines, and is funded through the Start Network managed DEPP portfolio. The remaining £10M supports the development of innovative solutions and learning.

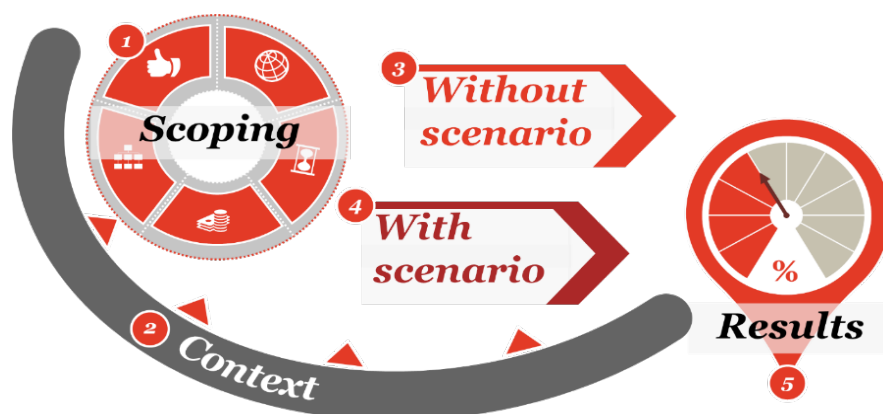
### APPLYING ROI TO DEPP

The ROI Methodology was used to appraise DEPP projects in the Philippines and Ethiopia in order to explore their investment logic, as well as to review, test, and improve the current ROI methodology so that it is applicable to EP investments that focus on building humanitarian capacity at multiple levels, covering individuals, organisations, networks, and systems. Unlike an evaluation, which is typically carried out *ex-post* (after an event), the ROI model takes an *ex-ante* approach in which results are forecast in advance of an event occurring in order to produce a business case. This is the most common approach used in investment analysis and decision-making to determine the expected return and therefore the long-term benefits of a given investment.

The ROI Methodology achieves this by providing a structured way to establish the specific context and emergency risk profiles in which an investment is made, and then to test and compare emergency response scenarios as they would occur *with* and *without* the investment. The comparison between the two scenarios yields indicators for qualitative improvements in humanitarian responses, as well as potential financial and time savings. At the highest level, the ROI Methodology involves the following steps:



FIGURE 3 - THE ROI METHODOLOGY, SOURCE: PWC STUDY 2017



1. Scoping an investment: Understanding its goal, geographical focus, time horizon, and cost. Users also group investments under one or more investment categories.
2. Analysing its context: Specifically, the emergency risk scenarios for which the investment enables an improved humanitarian response. Users should also consider risks to the investment itself.
3. *Without Scenario*: Examining how emergency operations take place without the investment.
4. *With Scenario*: Examining how emergency operations take place with the investment.
5. Results: Calculating ROI results indicators by comparing the *with* and *without* scenarios.

Narrating each of these five components for an investment constitutes an investment business case. A full description of this framework is available in the original PwC ROI Methodology drafted for the UN in 2017<sup>7</sup>.

## THIS REPORT

This report describes the following work carried out by the study team (hereafter ‘the team’):

Section one discusses the changes made to the methodology to tailor it to DEPP’s needs.

Section two discusses the lessons learned during this study, including key trends in preparedness.

Section three features guidelines for practitioners on the use of the ROI methodology.

Section four suggests recommendations to further develop the methodology, focusing on how it can be used to guide decision-making processes in humanitarian preparedness.

Section five provides an overview of the investments analysed, with specific explanations of ROI values per investment.

7 PwC (2017). *Emergency Preparedness: Return on Investment Model*, The ROI Methodology, London available [here](#).

# 1. METHODOLOGY

## 1.1 INTRODUCTION TO THE METHODOLOGY

The ROI Methodology was developed to apply private sector investment logic to humanitarian emergency preparedness planning. Users apply the methodology to produce or assess an **investment business case**. In doing so, they also produce indicators that attempt to quantify the humanitarian returns. There are three sets of ROI indicators:

- **Financial ROI** – Metrics for financial savings achieved from the investment. The key metric here is the ROI ratio, which generally equals the difference between cash flows expended during emergencies without the investment in place and with the investment in place, divided by the initial cost of the investment. An ROI ratio greater than one indicates an investment with a positive return<sup>8</sup>. Other metrics include:
  - **Payback period** – The amount of time expected to pass before an investment is recouped.
  - **Present value (PV) of total savings** – The actualised amount saved over the course of the investment’s time horizon.
  - **Internal rate of return (IRR)<sup>9</sup>** – The constant annual interest rate that a financial investment would need to fund all emergency responses foreseen throughout its time horizon. The higher an IRR, the more desirable an investment is.
- **Time ROI** – Changes in response lead times attributable to the investment having been made. For investments where response lead times vary by risk scenario, Time ROIs for each are averaged and weighted by risk scenario frequency.
- **Capacity ROI** – Changes in the quality of humanitarian response at an individual, organisational, network, and system level. Network analysis was not undertaken.

These are explained in depth in Annex 2.

The Return on Investment (ROI) methodology presented in this study is a further development of a pilot methodology first developed by Boston Consulting Group (BCG) for the United Nations Children’s Fund (UNICEF) and the World Food Programme (WFP) in 2015. The BCG methodology was tested on 49 investments in three countries and focused on time savings and financial savings. In 2016, PwC was contracted by UNICEF and WFP to review and expand the methodology to include Greenhouse Gas (GHG) emission savings, measure qualitative benefits, and to account for conflict scenarios. This was tested on 48 investments in three new countries, with the Office of the United Nations High Commissioner for Refugees (UNHCR) and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) joining UNICEF and WFP in the study. This version included a draft framework for measuring qualitative improvements in humanitarian response.

While Financial and Time ROI have always been part of the methodology, Capacity ROI was developed by the team for DEPP. Capacity ROI partially substitutes a previous set of indicators PwC had developed for the 2017 iteration of the methodology, which have not been used in this study:

- **Contribution to Response** – A variety of metrics measuring improvements in the quality of humanitarian response efforts, including Affected-Person-Days-Saved (APDS).
- **Greenhouse gas (GHG) savings** – Changes in GHG emissions attributable to the investment<sup>10</sup>.

8 WFP uses the ROI – 1 ratio in order to reflect the cost of the initial investment.

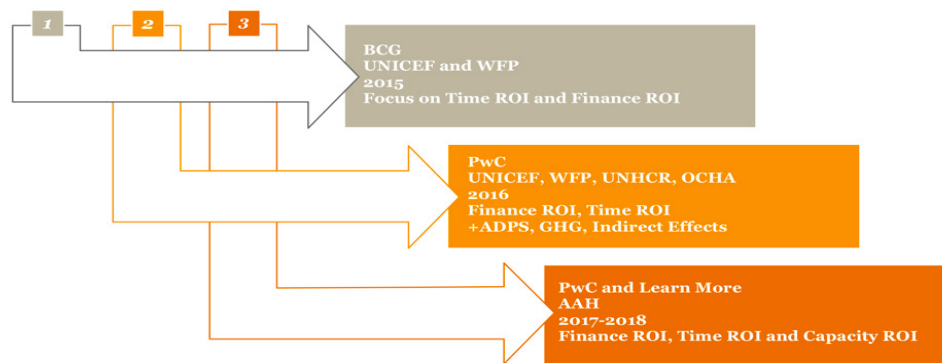
9 WFP refers to this as the “equivalent rate of return”.

10 The 2017 iteration of the ROI Methodology assessed GHG savings even for investments that were not focused on climate change-related risk mitigation.

- **Indirect effects** – Any ripple effects attributable to the investment.

The history of the development of the ROI methodology is summarised in the figure below.

**FIGURE 4 - THE ROI METHODOLOGY - A HISTORY. SOURCE: PWC STUDY 2018**



Note that the ROI Methodology is modular, meaning that different metrics may or may not be used depending on what users intend to achieve and what is measurable.

## 1.2 CHANGES TO THE METHODOLOGY

The DEPP ROI study, commissioned by Action Against Hunger UK (AAH), aims to review, test, and improve the current ROI Methodology to apply it to EP investments that focus on building humanitarian capacity at multiple levels: Individual, Organisational, Network and Systems.

In the first months of this study, the team worked alongside AAH to tailor the methodology, and carry out the changes summarised in the following paragraphs. The team also identified areas of improvement through dialogue with DEPP stakeholders as well as through a literature review of humanitarian capacity development interventions. The team reviewed three aspects of the methodology:

- How investments are classified.
- Results indicators.
- How business cases are developed.

How the changes were made, and why, is explained in more detail in the inception report. Presented here are the agreed changes.

How investments are classified

The ROI methodology requires users to classify each investment by type. The DEPP study confirmed this approach but renamed three of the eight existing investment categories in order to reflect DEPP's goals and theory of change:

**Coordination** was renamed **Collaboration** to broaden the scope and to emphasise the extent to which humanitarian players work together to maximise their results.

**Data Systems** was renamed **Information** to emphasise the role of DEPP projects in collecting strong evidence to develop effective learning and knowledge management systems.

**Skills** was renamed **Capabilities** to recognise the role of DEPP projects in developing local professionals.

## Indicators

Contribution to Response, GHG Savings and Indirect effects indicators were not applied in this iteration of the methodology for a variety of reasons explored in the Inception Report. GHG savings were recognised as not being quantifiable in the context of most capacity development investments, whereas the Contribution to Response and the Indirect effects indicators were considered too specific to capture all the benefits of DEPP's capacity development work. Thus, a new set of metrics named **Capacity ROI** were developed. These indicators measure changes in the quality of local humanitarian response at an individual, organisational, network, and system level. They are described in full in Annex 2.

## How business cases are developed

A key goal in this study, and with ROI work in general, is for humanitarian practitioners to be able to adopt the methodology without external support. As a result, the team invested time in revising the process through which business cases are developed. New interview guidelines were designed to improve the engagement of field staff during interviews and data collection. These guidelines, which are provided in Annex 1, support field experts by providing high-level frameworks and an explanation of how interviews should be carried out.

The guidelines aim to help practitioners adopt the methodology for future use (see Section 3). This is important because the ROI Methodology relies on the interview process to develop the hypothetical response scenarios *with* and *without* the investment being made. Section 3 of this report also features a practical checklist for humanitarian practitioners interested in developing their own business cases.

## LIMITATIONS

Before discussing the results of the study, it is important to understand what the ROI Methodology *cannot* or *did not* measure:

*Business cases* – The final output of the ROI Methodology is a business case, which is an argument for a proposed undertaking based on its expected benefits.

*ROI was not used as an evaluation tool* – The ROI Methodology was applied to DEPP investments as an *ex-ante* appraisal and not as an *ex-post* evaluation. The Methodology can indeed be used to measure *actual* returns if applied several years after an investment is made.

*ROI is not an exhaustive framework* – The study does not take into account the feedback of the communities affected by emergencies. The appraisal is performed using first-hand information that comes from the direct beneficiaries of the capacity development interventions: field staff and programme managers.

*ROI relies on assumptions* – *With* and *without* scenario-building relies on data that is not always available. When this occurs, informed assumptions are made by experts and, when possible, confirmed by whatever historical data is available for each project. Historical data ideally refers to the programme's lifetime, but timeframes vary considerably depending on data availability. Depending on the type of assumption needed, experts consulted were either project officers, financial specialists, or risk experts with knowledge of the investment. For instance, budget officers were consulted to make budget forecasts.

*Appropriateness* – Some investments may be harder to analyse with this methodology. This is the case with investments that are not clearly scoped or that do not have a log-frame or a clear breakdown of intended outputs. This was not the case for any of the investments appraised as part of this project.

*Financial ROI* – These results should be interpreted with caution for the following reasons: a) the model's sensitivity to risk scenarios; b) reliance on expert assumptions for a significant portion

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of cash flow data; c) a very high discount rate; d) frequently changing operational conditions in many countries. At the same time, it is important to point out that many of these limitations apply in business modelling in more traditional, private-sector contexts.

*Sensitivity* – The Financial ROI quantitative model, while generally robust, is sensitive to risk scenarios. These risk scenarios were built with careful consideration of historical data and were similar across projects, but were nonetheless based on expert assumptions, which therefore significantly affect results.

*Modular* – The methodology is modular, meaning not all indicators need to be applied for each investment. Similarly, not all measures are calculated for all investments, depending on robustness of the data and data availability.

*Capacity ROI* – These indicators are not absolute but rather comparative metrics. They simply indicate the extent to which an investment aims to improve various aspects of capacity, relative to the scope for improvement, as estimated by a self-assessment questionnaire.

## 2. KEY FINDINGS

This section summarises key lessons learned through this study in terms of ROI trends, ROI drivers, methodological robustness, and adoption challenges.

### 2.1 ROI TRENDS

**This study confirms past studies' findings that investments in preparedness generally yield positive returns<sup>11</sup>. Averaged across all investments analysed in this study, for each £1 spent, there is a saving of £2.84.** This figure is higher than, but in the same order of magnitude as, Financial ROI ratios seen in previous ROI studies. For example, the 2015 BCG study indicated a mean Financial ROI ratio of 2.10<sup>12</sup>. The 2017 PwC study found a ratio of 2.5<sup>13</sup>. However, it is worth noting that investments appraised in those studies were different in nature, primarily because they were all implemented by the country offices of UN agencies whereas these were implemented by various national and international NGOs and civil society organisations. Furthermore, there were no capacity development investments in the 2015 study. The skills and data systems investments appraised in the 2017 study are those most comparable to the DEPP portfolio and yielded average Financial ROI ratios of 21.5 and 3.5 respectively<sup>14</sup>. In short, on average the investments appraised in this study look promising from a financial standpoint compared to investments analysed in the past, though less so than a subset of more comparable investments. This suggests a need for more appraisals of capacity development investments.

**On average, investments in capacity development for preparedness start yielding a positive Financial ROI after 4.4 years.** It implies that decision-makers can only make the case for preparedness as a source of financial savings by taking a long-term view. This may have ramifications for humanitarian planning processes that may not always encourage such foresight, particularly donor-funded programmes that are of shorter duration and expected to produce results within these shorter timeframes.

**The preparedness investments that were analysed were found to enable time savings that are likely to save lives.** Across the investments analysed, an average of 35.4 days was saved<sup>15</sup>. This average is significantly higher than the 7 and 14 days saved on average across the investments featured in the 2015 and 2017 studies respectively. This demonstrates the enormous potential gains achievable through simplified funding and approval processes, which are a significantly greater challenge to the NGOs analysed in this study than the UN Country Offices whose investments were appraised in previous studies. UN investments typically benefitted from a stronger relationship with governments.

This study's higher average is also largely driven by the Ethiopia average – 59 days saved. This may be due to the Ethiopian humanitarian ecosystem arguably being less aligned with government processes than in countries analysed in previous ROI studies. The four capabilities investments averaged 88 days saved, significantly more than the 25.9 days saved across the remaining investment categories. This points to the key role of organisation-wide capacity in reaching beneficiaries faster, rather than any difference in investments' effectiveness.

**Investments focused at the organisational level provided the highest score at an individual level. This indicates the need to develop professional skills on the**

11 For calculations of these and other figures quoted in this Section, please refer to Annex 3.

12 This figure only factors in the first risk to materialise over the course of an investment's time horizon and is likely an underestimation.

13 Recorded as 1.5 in this study using a variation of the ROI formula.

14 BCG (2015) *Return on Investment for Emergency Preparedness Study Methodology*, London, available [here](#); PwC, (2017), *Emergency Preparedness: Return on Investment Model, Result trend analysis*, London, available [here](#).

15 This figure excludes an outlier, the Protection in Practice (PIP) investment, whose Time ROI equals 179, and with which average Financial ROI would equal 48.5. This investment was excluded due to the projects' unique nature, which is explored in section 5.5.

**ground, a theme that emerged during most interviews.** The newly developed Capacity ROI indicator<sup>16</sup> was computed for 8 out of 11 investments analysed. Two process investments averaged a score of 61%, significantly higher than the 46% average for the other 9 investments. This may suggest that project officers interviewed during the drafting of these business cases emphasise the importance of increasing the efficiency and effectiveness of operational processes, systems, and standards.

## 2.2. ROI DRIVERS

While it is not advisable to design investments with the purpose of maximising ROI for its own sake, decision-makers may wish to know what the drivers of a high-ROI investment are most likely to be. The table below achieves this by identifying recurring key drivers of humanitarian return across multiple investments and highlighting which ROI result categories are most affected. Across a small sample of investments, the greatest financial returns are obtained by investing in local staff and organisational efficiency. Community empowerment yields the highest Time ROI, whereas improvements in funding processes and local professionalisation yield the greatest returns in terms of Capacity ROI,

### Legend

X = A driver that has a small influence on ROI results.

XX = A driver that has a medium influence on ROI results.

XXX = A driver that has a strong influence on ROI results.

TABLE 1 - ROI DRIVERS. SOURCE: PWC STUDY 2018

DRIVERS	SPECIFIC DRIVERS	FINANCIAL ROI	TIME ROI	CAPACITY ROI
<b>FUNDING PROCESS</b>	<ul style="list-style-type: none"> <li>Coordinated proposal-drafting</li> <li>Greater understanding of funding mechanisms</li> <li>Funding backstopping</li> <li>Preferential funding channels</li> </ul>	X	XX	XXX
<b>STAFF</b>	<ul style="list-style-type: none"> <li>Use of local staff</li> <li>Use of fewer, more professionalised staff</li> <li>Less staff duplication</li> <li>Avoidance of international staff</li> </ul>	XXX	X	-
<b>PROCUREMENT</b>	<ul style="list-style-type: none"> <li>Increased collaboration between organisations</li> <li>Local procurement</li> </ul>	XX	-	X
<b>EFFICIENCY</b>	<ul style="list-style-type: none"> <li>Greater coordination avoids duplication</li> <li>Better emergency targeting reduces wastage</li> </ul>	XXX	XX	X
<b>MARKET STABILITY</b>	<ul style="list-style-type: none"> <li>More accurate and available data</li> <li>Disaster risk reduction</li> </ul>	XX	XX	XX

DRIVERS	SPECIFIC DRIVERS	FINANCIAL ROI	TIME ROI	CAPACITY ROI
<b>LOCAL PROFESSIONALISATION</b>	<ul style="list-style-type: none"> <li>Better understanding of humanitarian principles</li> <li>Faster activation of emergency response</li> <li>Local empowerment</li> </ul>	X	XX	XXX
<b>COMMUNITY EMPOWERMENT</b>	<ul style="list-style-type: none"> <li>Crowd-sourced data collection</li> <li>Integrated system to communicate with community's</li> <li>Faster and more effective needs assessments</li> </ul>	XX	XXX	XX

### 3. ROI GUIDANCE FOR PRACTITIONERS

This section provides high-level guidance and practical instructions for building a preparedness investment business case using the ROI Methodology.

#### 3.1 HOW TO ADOPT THE METHODOLOGY

The ROI Methodology can provide insights into an investment before, during, or after it has been carried out. In the first two cases, it should be considered an *ex-ante* appraisal tool to help direct decision-makers maximise returns. Conversely, as an *ex-post* evaluation tool, the ROI Methodology can be used to measure *actual* returns. This should only occur at least three years after an investment has been made in order to allow for the forecasted risk scenarios to materialise.

The ROI Methodology requires the following conditions to be met in order to be used appropriately:

- Access to well-defined risk scenarios.
- Access to humanitarian field experts with strong knowledge of the response dynamics, and willing to participate in two to three hour-long interviews or workshops to provide data.
- If used for *ex-post* assessment, access to other relevant stakeholders to interview/survey to collect data.
- Resources (staff time and possibly ROI specialists) to collect data and carry out analyses.

The most effective application of the ROI Methodology involves strong field participation. Participative processes are an excellent way for field experts and communities to converge around shared narratives for *with* and *without* scenarios based on their strong understanding of local context and a preparedness investment's theory of change. Engaging in these consultations allows local professionals to increase their ownership of the methodology and to collectively shift their mind-set towards an investment logic.

#### 3.2 ADOPTION CHALLENGES

Potential users of the methodology may not be used to measuring or even quantifying aspects such as the maturity level of the Capacity ROI indicators, risk scenarios, and various cost items.



Practitioners are not always trained to make the assumptions required to quantify these and other elements. This might discourage adoption of the methodology. It is therefore important to emphasise to potential adopters that quantifying these aspects is not intended to be scientifically rigorous and that it is necessary for modelling purposes only. This is customary practice in business case development in the private sector.

Some investments require that emergency preparedness activities be planned in a participative manner with other stakeholders. For instance, the Financial Enabler investment featured an initial phase where partner consortia discussed with Oxfam how best to spend funds allocated to them through the investment. This type of investment may have extremely powerful systemic effects, which are, however, hard to model *ex-ante* as practitioners cannot foresee which emergency preparedness actions will be carried out.

Finally, there is a very open question around whether the adoption of this methodology should occur in a bottom-up or in a top-down manner. The former approach foresees humanitarian practitioners being trained in the basic principles of the methodology and how a business case is different to a more traditional proposal or concept note. Trained practitioners produce business cases spontaneously, proactively calling on outside consultants for financial ROI calculations when necessary. Conversely, a top-down approach assumes that larger humanitarian organisations and INGOs make funding contingent on business cases and ROI indicators, taking on a more hands-on role in producing these and integrating them into their organisational processes.

The benefit of a bottom-up approach is that it is voluntary, and practitioners take ownership of thinking about preparedness as an investment. The benefit of a top-down approach is that investment logic becomes ingrained in organisational mechanisms. However, without a cultural shift within the humanitarian sector, this risks being ineffective.

### 3.3 GUIDELINES

The ROI Methodology is a five-step approach to producing business cases. To apply it correctly, practitioners should ask themselves hard questions about how, when, and why they are using the methodology. Gathering and analysing data also pose unique challenges. Based on the experience of carrying out interviews for this study, the team proposes that practitioners apply the methodology by following the guidelines outlined below:

1. **Understand the methodology** – Users should read the methodology and understand its core principles. If possible, they should participate in workshops or presentations that introduce the methodology<sup>17</sup>. It is important that first-time users do not focus their attention on the mechanics of indicator calculation but rather seek to understand the methodology's underlying logic, specifically the importance of developing risk scenarios and *with* and *without* scenarios. Beginners may not always be familiar with ordinary private sector investment logic and should be open to the uncertainty and assumptions that this approach implies.
2. **Choose investments** – Users may wish to analyse one investment in detail or analyse multiple investments together, treating them as an investment portfolio. In both cases, investment choices will depend on the goal of the business case. Most business cases aim to persuade a funder. Others, particularly ex-post analyses, aim to analyse an investment case for lessons on how to improve future programmes. Investment portfolios can be composed in various ways. One option is for investments to be grouped by similarity or potential synergies. Another option is to build a differentiated portfolio, which mixes relatively high and low ROI investments, which typically have corresponding levels of risk.
3. **Define the goal of your business case(s)** – Users should define the aim of their study and select those elements of the methodology that can be applied to the investment(s) being

examined. Users may wish to analyse and compare a set of investments. In this case, extra attention should be paid to ensuring that risk scenarios, time horizons, and costing data are coherent across investments. Users should also decide whether the ROI Methodology is being used to carry out an *ex-ante* or an *ex-post* analysis. This will affect where assumptions need to be made and where historical data can be used.

4. **Identify the people to involve** – Analysing an investment is a collaborative effort. Users should identify at least two people to interview for each investment. These people should ideally be the context expert and the investment manager. This means that the business case is informed by both an understanding of where and why the investment is implemented, and the mechanics of the investment itself. This will generate sound *with* and *without* scenarios. For *ex-post* analyses, users should also consult investment beneficiaries so that Capacity ROI indicators reflect actual impact rather than forecasts.
5. **Share interview guidelines** – Users should share the interview guidelines (Annex 1) at least one week before all interviews. This is vital to ensuring that interviewees understand the methodology's core principles ahead of time.
6. **Understand the risk scenarios** – Users should map the risk scenarios that apply to the investment(s) being analysed. This can be done via literature review and/or interviews with local experts. It will provide some in-depth knowledge of the context and will empower users to question *with* and *without* scenarios. Furthermore, when analysing a portfolio of investments, it is helpful if risk scenarios are coherent across investments, thus ensuring greater comparability.
7. **Conduct the interviews** – Users should schedule and conduct the interviews with the identified people to develop *with* and *without* scenarios and to agree follow-up actions for data collection. Ideally, two interviewees should be present at once to help reach consensus on potentially differing ideas of an investment's intended effect and cash flow implications. Please note that the interviews typically last at least two hours. It is important to allow time to explain the methodology to interviewees and check their understanding before posing questions. For *ex-ante* analyses, it is vital to explain that interviews are not for evaluation purposes. Users should not aim to gather all data during interviews. The purpose of these interviews is to develop *with* and *without* narratives for each applicable risk scenario.
8. **Draft and verify a write-up** – Starting from interview notes, users should draft a preliminary write-up that should then be shared with interviewees in order to help gain a shared understanding.
9. **Gather data** – With the support of interviewees, users should collect all data necessary to compute ROI results indicators. Specifically, this may mean sharing a Capacity ROI survey (see Annex 2), or asking specific questions about lead times and cash flows in the *with* and *without* scenarios. This can be done via email correspondence on the condition that data requests are linked explicitly to the narratives established during the interviews. For instance, if an investment has different sets of *with* and *without* scenarios depending on which risk materialises, data requests for cash flows should be clear about which risk scenario they refer to.
10. **Analyse data** – Users should compute all ROI results indicators that are relevant to each investment. Calculation methods for Capacity ROI, Time ROI, and Financial ROI indicators are all available in Annex 2 of this report. More detailed instructions for Financial ROI, as well as other indicators, can be found in the 2017 methodology. For business cases requiring complex financial modelling, users should request support from an ROI specialist.
11. **Finalise the business case** – Users should report all results in a complete investment business case that backs up ROI indicators with clear *with* and *without* narratives. Users should remember that the core narrative detailed in the business case is more important

than the indicators themselves.

**12. Verify your results** – Users should share a draft business case with interviewees and the project lead.

### **ADDITIONAL TIPS**

If possible, users should set up an additional interview with one or more risk experts to quality assure and confirm risk data and assumptions.

Users should explain the methodology to interviewees with an example that speaks to them. The concept of *with* and *without* scenarios can be abstract and this will help make it concrete.

During interviews, users should focus on the narrative; indicators come later. The ideal outcome of an interview is agreement on the specific type of data to be asked for when following up shared scenarios.

Users must maintain a clear distinction between the *ex-ante* with *ex-post* application of the ROI Methodology. The former is an appraisal of an investment that has yet to be made (or has not been completed). The latter is an evaluation, which can only be made once the investment is completed. The investments analysed in this study are all *ex-ante* appraisals.

Users should remember to always check assumptions with as wide a range of stakeholders as possible.

Not all ROI indicators are applicable or relevant to each investment. For instance, an investment in training may yield a Financial ROI but no Time ROI. Financial ROI may not be relevant to users seeking to underline the humanitarian impact of a proposed investment. Conversely, users aiming to pay for their investment with innovative financing mechanisms may prefer to focus their attention on ensuring that Financial ROI is computed as robustly as possible. Ideally, users would measure all applicable indicators, but this may not always be time-efficient or reasonable. The crucial element is that the investment's business case is complete and adequately describes the investment's intended effects, regardless of whether it has been possible to summarise them with indicators.

## 4. RECOMMENDATIONS

This section provides recommendations both in terms of process – i.e. future use of the methodology – and in terms of content – actionable proposals on preparedness, capacity development, and DEPP derived from the study’s findings.

### 4.1 PROCESS RECOMMENDATIONS

#### How to use the ROI Methodology in decision-making processes

The ROI Methodology can be used at a design stage to develop investment business cases for each investment. Business cases provide detailed information about potential Financial, Time, and Capacity ROI that can support the decision-making process.

The ROI Methodology can improve the design of an intervention. An ROI analysis can show how the focus given to specific elements of investments can affect their potential ROI. This information can be used to adjust the initial design. For instance, through ROI analysis, project officers may notice that a capabilities investment’s cost efficiencies are obtained mainly through decreased transport costs in the with scenario, rather than through improved coordination as they may have assumed. This may also prompt a change in how an investment is pitched to potential funders.

Furthermore, whilst the sample of the evidence base is currently small, the growing number of business cases from ROI studies will gradually enable trend analyses of what works and what does not in a given context. Time ROIs computed in this study are consistently higher in the Ethiopia context than they are in the Philippines, signalling that there may be less room for improvements in lead times in the latter country. Practitioners interested in developing projects that reduce lead times may wish to explore investment opportunities in countries that, like Ethiopia, may have poorer baseline humanitarian coordination.

ROI appraisal and/or evaluation can generate a strong evidence base to identify what drivers need to be leveraged in a humanitarian context to support a better use of resources and sustainable development. This in turn is a strong advocacy tool and may eventually enable innovative financing solutions that leverage ROI metrics. For instance, when discussing the need for information investments with potential funders, humanitarian practitioners may wish to cite previous investment business cases that point to high Financial, Time and Capacity ROI.

#### How to leverage the ROI Methodology

Developing an investment business case allows for the development of compelling arguments that field staff can use to access new funding for development and humanitarian intervention. Regardless of whether field staff are able to compute relevant quantitative indicators, adopting the narrative logic of the business case may lead to the design of projects with a sounder, more investment-like, scenario-based logic.

Adopting shared risk frameworks as a pre-condition to ROI measurement is an incentive for local government and local NGOs to plan long-term preparedness as a function of expected emergencies. Stronger and more centralised risk analysis processes could greatly improve coordination and alignment of investment strategy.

The ROI Methodology also shows potential for innovative financing solutions such as humanitarian impact bonds. Bonds would likely be built on a number of underlying investments with Financial ROI indicators. These would only be credible to institutional investors to the extent to which they are similar to previous investments. Fortunately, the growing ROI evidence base offers a benchmark of the expected financial returns for different investment types in different country contexts. The 2015 and 2017 studies show that infrastructure and pre-positioning investments yield low but highly consistent results, a Financial ROI ratio of 1.8 in the 2015 BCG study and 2.2 in the 2017 PwC study; potentially enough to justify a bond, especially if ex-post analyses confirm these appraisals.

This study suggests that Financial ROI for capacity development investments may be higher than that for logistics investments appraised in previous studies. However, results reported in this study refer to a small sample and vary greatly. Humanitarian impact bonds for capacity development investments would require the development of more business cases in order to first consolidate the evidence base to the point where there are benchmark ROI figures.

### How to continue to develop the ROI Methodology

The quality of data collection is at the core of a successful ROI analysis. As some data needs to be assumption-based, data collection should entail a strong participatory approach. One way to achieve this could be to run a 3-day co-creation workshop with field staff, rather than carrying out interviews. During the workshop, staff would have the chance to develop scenarios in collaboration with their colleagues, ensuring stronger data coherence and consistent peer review. Moreover, a workshop could be turned into a training experience, as described in the table below:

**TABLE 2 - A POTENTIAL ROI WORKSHOP FORMAT**

Workshop Name:	<i>Develop your business case – Train the Trainers</i>
Duration:	3 days, 9am-5pm
Outcome:	Participants understand the ROI Methodology and develop 2-5 full business cases collaboratively.
Participants:	Between 10 and 25 participants.  Programme managers and coordinators, risk experts and other relevant staff. An ROI specialist is on-hand to compute quantitative indicators in real time.
Agenda:	<i>Day 1 – Introduction to the methodology, principles of risk analysis, group work on with and without scenarios</i>  <i>Day 2 – Data gathering for with and without scenarios</i>  <i>Day 3 – Analysis of ROI results, discussion and final changes to business cases</i>
Variations:	Ad hoc workshops for staff interested in understanding how business case logic can be applied to humanitarian planning; condensed 1 or 2-day workshops, 4-day ex-post investment analysis workshops involving beneficiaries.

During this study, the ROI Methodology was received with great interest by the field staff and local experts. Participants agreed that analysing and comparing *with* and *without* scenarios gave them a fresh perspective for measuring the validity of their investments. For this reason, the team sees a strong opportunity in using the ROI Methodology as a training exercise for local humanitarian professionals.

The ROI Methodology is increasingly being used by policy specialists within the UN system and some INGOs. As the methodology develops and the evidence base for preparedness grows, there is a growing opportunity for collaboration and coordination. A global ROI Community of Practice could empower both practitioners and specialists to share resources, best practices, and findings, and to iterate the development of the methodology by learning from one another’s experiences. Achieving this could help the adoption of the ROI Methodology with enthusiasm and in alignment with humanitarian practitioners’ needs.

Re-thinking a taxonomy of emergency preparedness capacity development investments requires profound reflection on what those investments are. Capacity development has long been used in international development and humanitarian practice to describe a variety of activities. Different organisations may therefore have different definitions or understanding of capacity development even within development programmes. While the ROI Methodology assumes a strong distinction between resilience and preparedness investments, many other frameworks do not. Any new taxonomy of investment categories must be both tailored to meet these needs and allow comparisons with analyses carried out with the ROI Methodology in the past or in the future.

## 4.2 CONTENT RECOMMENDATIONS

### What the results tell us about preparedness<sup>18</sup>

Investments are effective and likely to provide high levels of return, if localised. Most business cases presented here emphasise how preparedness activities are linked to the specific needs of local humanitarian actors and how preparedness investments need to be strongly tailored to the specific context they will operate in. Specifically, most interviewees described the benefits to coordination and beneficiary targeting of increased local empowerment. Many investments featured stakeholder mapping components so that capacity development actions are geared towards those local NGOs that were most in need of support.

Preparedness benefits greatly from capacity development investments that support coordination. In countries such as the Philippines and Ethiopia, humanitarian actors are often unaligned and unable to intervene during medium- to small-scale emergencies. Coordination investments often allow humanitarian interventions to occur in the first place.

### What the results tell us about capacity development

Investments in capacity development for humanitarian preparedness need to be long-term. This is because most of the investments appraised involved many different humanitarian actors. Broad involvement can yield strong returns, specifically in terms of Capacity ROI, but requires time for true collaboration to occur. As a result, achieving meaningful returns takes, on average, a minimum of two years from a programme's start date.

Capacity development investment tends to generate stronger Capacity ROI and Financial ROI when focused at a system level. However, Financial ROI for this type of investment will often be difficult, if not impossible, to calculate through an *ex-ante* appraisal exercise due to difficulties in forecasting how the investment will concretely affect cash flows.

### What the results tell us about DEPP

DEPP investments have varying timeframes. Of those analysed, the best results came from those that could stay active for at least 2 years from the beginning of their implementation. This poses the interesting question of whether common timeframes and time horizons for humanitarian planning are always appropriate.

DEPP projects show strong potential to connect with local government and NGOs, and to generate national empowerment and up-skilling of the local humanitarian ecosystem. This could be an important differentiator of the programme.

### What the results tell us about Ethiopia

The Ethiopian government is making efforts to localise responses and improve the quality and recognition of the humanitarian sector. Greater availability of data on risks and their impact is needed so that all humanitarian organisations and professionals can access relevant information and collaborate effectively.

At this stage of centralisation of humanitarian interventions, capacity development is particularly needed in Ethiopia. Staff on the ground recognise the value of the DEPP programme to their organisations, specifically by aligning them with international best practices, standards and procedures. The very high Time ROI scores are both an indication of the potential of these investments as well as an indication of the vast room for improvement in the Ethiopian humanitarian ecosystem.

### What the results tell us about the Philippines

Fewer ROI indicators were computed for the Philippines investments, due to data availability challenges. It was possible to observe how the humanitarian ecosystem is becoming more centralised and effective, also as a result of DEPP's projects. The UN and INGOs accelerate this

process due to their facilitating role. For instance, UNOCHA is helping to form a consensus around risk scenarios, which in turn enables more ambitious coordination investments such as ALERT.

Time savings tend to be similar across all investments, regardless of the investment cost. The lower Time ROI results seen in the Philippines are an indication that baseline lead times are already lower than in other disaster-affected regions.

Conversely, below-average Capacity ROI figures, particularly at the individual and organisation level, suggest that there is scope for more system-level programming in the years ahead, such as the Financial Enabler investment.

## 5. INVESTMENT ANALYSIS

### 5.1 INTRODUCTION TO INVESTMENT ANALYSIS

#### Investments

The DEPP programme operates across 11 high-risk countries (prone to disasters), where it has carried out 14 projects, 11 of which are active in more than one country<sup>19</sup>.

The team was commissioned to focus on 10-15 investments in two countries, ensuring that those selected represent the variety of DEPP capacity development initiatives at all levels. Investments are generally stand-alone components of DEPP projects.

#### Investment selection

This study was carried out in Ethiopia and the Philippines. These countries were selected according to the following criteria:

- *Geography* – Ensuring one African and one Asian country.
- *Staff availability* – Ensuring collaboration for interviews and data collection.
- *Variety of programmes* – Ensuring selected countries featured projects reflective of the DEPP programme in its entirety.

For each country, the team developed a matrix to map each investment against its objectives, level of focus (individual, organisation, network, and system), and investment category. The team then selected the investments that respected the following criteria:

*Relevance* – The ROI Methodology focuses on preparedness. The team did not select investments with a focus on resilience, as these are outside the scope of the ROI Methodology.

*Data availability* – Some DEPP projects had already ended, and relevant staff were no longer under contract and available to take part in interviews. These projects were not selected.

As a result, the team selected a total of 16 investments, seven in Ethiopia and nine in the Philippines, with the aim of appraising at least 10 of them across at least 5 DEPP projects. Ultimately, 11 investments were appraised, across 8 projects. An overview of this breakdown is provided in Annex 4.

#### Caveats:

In addition to the ROI Methodology's limitations, outlined in Section 1, the following caveats apply to the results presented here.

19 Research was conducted while DEPP projects were in their final implementation stage. At the time of writing, DEPP projects had all been completed. However, this research was undertaken as an appraisal exercise.

- *Timeframe* – The team started the field research when the DEPP programme was coming to the end and field staff were particularly busy with final reporting and various M&E commitments. As a result, the study’s data requests were not always met, and staff often confused our appraisal study with a final evaluation. For example, during our study visit in the Philippines, DEPP project staff were due to complete final M&E reporting and were not always available.
- *Risk scenarios* – Within the same country, the team could not always develop risk scenarios that all project officers could agree on. This was the case in Ethiopia, where the central government was in the process of developing a shared risk analysis framework. In some cases, this means some risk scenarios may not have been accounted for in financial modelling, potentially leading to an underestimation of Financial ROI results. Furthermore, no formal approval was sought for risk scenarios, neither from national governments or international organisations.
- *Interconnectedness* – Most investments could not be analysed without considering other components of the DEPP project they were part of. As a result, the final number of 11 appraised investments is lower than the 16 originally anticipated. This was also due to lack of staff availability during field interviews, as the DEPP project was nearing its end.
- *Inflation* – These appraisals do not account directly for inflation. Inflation is factored into the analysis indirectly due to the 10% discount rate applied to each investment, which is significantly higher than usual for an ROI analysis in the private sector.
- *Investment cost* – The cost of each investment is a forecast, made at the time of the interview, even when the investment had already been completed and actual budget expenditure figures were available. This is because the investment business cases are *ex-ante* appraisals. Investment cost forecasts made in this analysis do not always coincide with those seen in DEPP project budgets for three main possible reasons: they include costs associated with an investment that were not funded through DEPP (such as staff time); an investment is only a part of a DEPP project; forecasts have changed since the most recent budgeting exercise.

## 5.2 ETHIOPIA SUMMARY

This section describes the context in which investments in the Ethiopia investments were made and presents some key findings.

### Context

Historically, Ethiopia has suffered from frequent humanitarian emergencies, most notably long droughts. Various regions within Ethiopia also see localised conflicts, mud slides, flash floods, and disease outbreaks linked to these hazards. Ethiopia also borders various conflict-affected countries, making it prone to refugee influxes.

In addition to driving an ambitious development agenda, the government is also seeking to improve the country’s humanitarian capacity. To date, this has not yet led to the dissemination of widely shared risk monitoring. As a result, humanitarian actors at times struggle to describe risk scenarios within a shared framework. For the purposes of this analysis, the study team relied heavily on individual interviewees’ interpretation of risks relevant to their investment, many of which were local in scope.

### Key findings, from the analysis of the Ethiopia investments, include:

- Generally, time savings tend to correlate with financial savings. This points to the fact that investments were designed with cost-effectiveness in mind. There is no significant relationship between Time and/or Financial ROI and Capacity ROI.



- The Shifting the Power project in Ethiopia<sup>20</sup> yields positive results, although Financial ROI was not computed for the platform investment component and appears as zero (see the business case on page 30).
- The Gambela Public Health Project is the only investment with a negative Financial ROI forecast, but it is the strongest in terms of Capacity ROI (see the business case on page 32).
- Interviewees expressed that there is a need for professionalisation of the local humanitarian sector. DEPP has the potential to fill this gap. All stakeholders interviewed agreed that strong coordination of humanitarian actors helps empower the local humanitarian sector.
- The team observed a great benefit from the localisation of emergency risk data entry, either in terms of cost savings or through risk reduction. This is in line with findings from previous studies on the high ROI figures obtainable through investment in data systems.
- Among the ROI Methodology’s investment categories, Capabilities investments do not necessarily yield the highest Capacity ROI. This may point to the importance of diversifying investment portfolios by investment type.
- The EWS ICT investment yielded the highest Financial and Time ROI figures, a finding in line with PwC’s 2017 analysis of data systems, which had found an average Financial ROI of 5.9.
- The humanitarian ecosystem would benefit from greater alignment around a shared understanding of risk scenarios. This enables joint planning around shared assumptions around which emergencies are mostly likely to occur and at what scale.

These and other findings are explored in greater depth in the business cases provided in Section 5.3. The table below summarises the investments analysed in Ethiopia, comparing them by ROI figures:

**TABLE 3 - ETHIOPIA ROI TRENDS**

INVESTMENT	INVESTMENT CATEGORY	LEVEL OF FOCUS	MAIN GOAL	TIME ROI	FINANCIAL ROI RATIO	INVESTMENT COST	PV OF TOTAL SAVINGS	PAY-BACK PERIOD	IRR	CAPACITY ROI
Early Warning System – ICT	Process	System	Timely data collection and local empowerment.	96 days	5.88	£391,571	£1,910,830	2.1 years	53%	64%
Early Warning System – Capacity Development	Capabilities	Organisation	Professionalisation of local organisations.	49 days	2.83	£269,930	£493,907	5.5 years	34%	45%
Shift The Power – Capacity Development	Capabilities	Organisation	Professionalisation of local organisations.	112 days	2.33	£36,289	£48,157	7.5 years	48%	50%
Shift The Power-Platform	Coordination	Organisation	Alignment of local organisations and generation of strong advocacy.	19 days	NA	£52,727	NA	NA	NA	45%
Gambela Public Health Investment	Information	System and individual	Timely collection of data and professionalisation of local people.	21 days	-0.10	£467,946	NA	NA	NA	59%

Indicators are explained in full in the business cases that follow. Underlying calculations are available in Annex 3. Excel models used to compute Financial ROI indicators are available on request.

20 This assessment cannot be extended to other Shift the Power projects in other countries as these were not analysed.

### 5.3 ETHIOPIA APPRAISALS

To better understand the ROI results, it is important to look closely at each investment individually and the narratives upon which these ROI results were forecast. The following business cases present this information. Underlying Financial ROI calculations are provided in Annex 3.

#### **BUSINESS CASE 1 - EARLY WARNING SYSTEM PROJECT - INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) INVESTMENT**

This ICT Early Warning System (EWS) automates day-to-day risk data gathering for flooding and drought risks. As a result, this investment's financial savings are produced on an on-going basis rather than every time an emergency occurs, as is more often the case.

#### **Investment scoping**

**TABLE 4 - BUSINESS CASE 1 - SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT</b>	Early Warning System in Ethiopia
<b>INVESTMENT NAME</b>	EWS - ICT
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Process, system level.
<b>GOAL</b>	Support the strengthening of EWS and demonstrate active participation and ownership from the community to support well-informed early actions.
<b>ACTIVITIES</b>	Creation of an ICT-based, area-specific, multi-sector and multi-hazard Early Warning system, leading to early actions being taken.  The ICT systems allow communities to gather and disseminate information. This generates a downscaling of EW information to a local context.
<b>GEOGRAPHIC SCOPE</b>	6 Woredas <sup>21</sup> : Raya Alamata, Endamehoni, Zuway Dugda, Moyale, Gambela Zuria and Gog.
<b>TIME HORIZON</b>	10 years. ICT systems are not likely to be replaced quickly. In some communities, internet connections still need to be activated.

#### **Context**

The table below summarises the key emergency risk scenarios that affect the region in which the investment is being piloted.

**TABLE 5 - BUSINESS CASE 1 - CONTEXT. SOURCE: PWC STUDY 2018**

	<b>RISK 1: FLASH FLOOD</b>	<b>RISK 2: DROUGHT</b>
<b>PROBABILITY (% PER ANNUM)</b>	100%	100%
<b>IMPACT</b>	20,000 people	50,000 people
<b>LOCATION</b>	N and NE Ethiopia (6 Woredas outlined above)	N and NE Ethiopia (6 Woredas outlined above)
<b>ONSET TYPE</b>	Sudden Onset	Slow onset
<b>DURATION</b>	3 months	6 months

#### **With scenario**

On a day-to-day basis, data is gathered and shared using ICT tools. A new ICT system automatically produces forecasts and recommendations covering demographics, health, climate, agriculture, and other areas, whereas the previous EWS only covered climate. Local community organisations can access the EWS directly, both to input demographic and agricultural data, and to disseminate reports and forecasts produced by the system. Woreda-level contingency plans are in place and aligned with risk profile management at a Woreda level. Data is accessed and communicated faster and is more credible.

When emergencies occur, responses are faster and cheaper, as there is no need to send a team into the field to collect additional monitoring data. During flash flood emergencies, humanitarian responses can be planned within a few days due to the available data. During droughts, humanitarian responses can be arranged almost immediately.

**Without scenario**

An offline early warning system is in place, but lack of capacity development means it is not aligned with contingency plans and not linked with risk profile management at a Woreda level. Monitoring must be done in person at great cost. Experts at the Woreda level who send data in hard copy to the federal government carry out monthly early warning data collection. Not all sectors are doing their part. Data is often incomplete, potentially leading to poor beneficiary targeting.

During droughts, the government relies on seasonal assessments to identify food gaps, as the monthly data collection is not reliable. A team will be sent into the field for monitoring purposes. This involves time and high costs. When flash floods occur, additional monitoring activities must be undertaken in person and, as a result, at greater cost. This involves sending teams out into the field.

**ROI Results**

**Time ROI**

Overall, Time ROI equals 96 days. This means that, on average, the region that is receiving this investment will receive emergency relief 96 days sooner *with* the investment than *without* it.

**FIGURE 5 - BUSINESS CASE 1 - TIME ROI. SOURCE: PWC STUDY 2018**

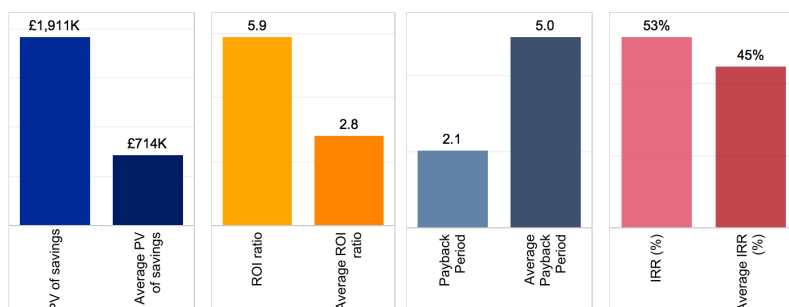


This is an average across the risk scenarios in which the investment is used, weighted by their frequency. As can be seen in the figure to the left, this is mainly due to time savings in the drought (slow onset) scenario.

In fact, without an ICT-EWS in place, monitoring of slow onset risks occurs through biannual seasonal assessments, meaning reaction times are longer. With the system in place, monitoring data is constantly updated and permits a faster response. In the flash flood (sudden onset) scenario, there are still some time savings, but only due to the fact that there will be no need to send out a field team for monitoring purposes.

**Financial ROI**

**FIGURE 6 - BUSINESS CASE 1 - FINANCIAL ROI. SOURCE: PWC STUDY 2018**

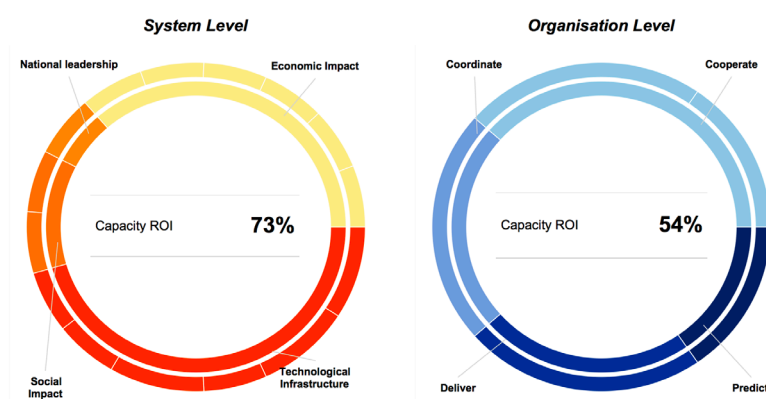


The total cost of this investment is £391,575. As shown in the figure above, the Financial ROI is

£5.90 per £1 invested, and the payback period<sup>22</sup> is 2 years. The investment's internal rate of return (IRR) is 53%, slightly higher than the average. As a result, the investment provides a present value (PV) of total saving of £1.9m over a 10-year period. These savings are mainly due to the relatively low cost of the investment and the decrease in staff costs it produces, as teams no longer need to be present in the field to collect data. The investment produces additional maintenance costs that are low, relative to those of the field teams deployed in the *without* scenario.

### Capacity ROI

**FIGURE 7 - BUSINESS CASE 1 - CAPACITY ROI. SOURCE: PWC STUDY 2018**



Capacity ROI<sup>23</sup> is 64% on average, with improvements occurring at the system level and at the organisational level. At a system level, this is one of the few investments that have an impact both directly on the humanitarian system and indirectly on the entire region.

The ICT system increases the humanitarian system's efficiency by providing access to data that increases other NGOs' ability to respond appropriately. It also has the potential to improve economic output and tax receipts, as the climate and agricultural reports create transparency on agricultural output and, as a result, improve market stability.

Similarly, the investment provides the Woredas with better access to technology and an increase in technological literacy, both for the people who work in the humanitarian system and for those who do not.

At an organisational level, there is improvement across very specific metrics that touch on all four sub-indicators: better communication, tighter internal and external collaboration, higher quality of data, and overall efficiency. This is due to the ICT-EWS system itself, which is designed to receive input from local communities and to better connect them with the regional and federal governments. The individual level was not analysed, as it was the focus of the following investment, which sits under the same project.

### **BUSINESS CASE 2 - EARLY WARNING SYSTEM PROJECT - CAPACITY DEVELOPMENT INVESTMENT**

This investment focuses on generating the skills needed to adopt the new EWS at a regional and community level. The investment's aim is to train all stakeholders to input relevant data into the system. Capacity development activities described here cover the use of the previously described EWS ICT system. This means that, while ROI values for this investment are high overall, they are dependent on the ICT system described actually being in place. Both investments should therefore be appraised as part of the same portfolio.

<sup>22</sup> Definitions of all financial terms are provided in section 1.1, and in the glossary.

<sup>23</sup> Refer to Annex 3 for methodology and to Annex 4 for calculations for each investment. Full excel models used for Financial ROI calculations are available on request.

## Investment scoping

**TABLE 6 - BUSINESS CASE 2 - SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT NAME</b>	EARLY WARNING SYSTEM - ETHIOPIA
<b>INVESTMENT NAME</b>	EWS - Capacity Development
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Capabilities, organisation level.
<b>GOAL</b>	Enhancing the coordination between different stakeholders by filling in gaps in EWS skills at the village, community, and Woreda level.
<b>ACTIVITIES</b>	Staff from the EWS go on secondment to villages to provide training and workshops on data collection via the EWS and to run contingency planning workshops. The investment also focuses on activating and improving early warning committees at a local level.
<b>GEOGRAPHIC SCOPE</b>	6 Woredas: Raya Alamata, Endamehoni, Zuway Dugda, Moyale, Gambela Zuria and Gog.
<b>TIME HORIZON</b>	10 years +. The large number of people trained and significant written outputs mitigate the consequences of staff turnovers.

## Context

The table below summarises the key emergency risk scenarios that affect the region in which the investment is being piloted.

**TABLE 7 - BUSINESS CASE 2 - CONTEXT. SOURCE: PWC STUDY 2018**

	<b>RISK 1: FLASH FLOOD</b>	<b>RISK 2: DROUGHT</b>
<b>PROBABILITY (% PER ANNUM)</b>	100%	100%
<b>IMPACT</b>	20,000 people	50,000 people
<b>LOCATION</b>	N and NE Ethiopia (6 Woredas outlined above)	N and NE Ethiopia (6 Woredas outlined above)
<b>ONSET TYPE</b>	Sudden Onset	Slow onset
<b>DURATION</b>	3 months	6 months

### With scenario

On a day-to-day basis, local communities leverage the EWS, gathering and disseminating data faster and more effectively. Woreda-level contingency plans are in place. Data is accessed and communicated faster and is more complete due to the involvement of personnel specialised in all humanitarian sectors. The training improves communities' ability to interpret the data, making these forecasts more credible to them. Due to direct access to monitoring data, local NGOs respond faster in cases of emergency. More reliable data means local NGOs can target beneficiaries more accurately. As a result, NGOs can deliver more appropriate relief.

When emergencies occur, relief efforts can start faster and are carried out by regional/federal government staff. This is cheaper than a frequent alternative: INGO interventions involving more highly paid staff. During droughts, there is a response time saving, and better quality data leads to more accurate distribution of food items (FIs) and non-food items (NFIs) to beneficiaries. All field travel is carried out in government-owned vehicles, which are cheaper than other options. During flash floods, time savings also occur, as does much better targeting of the necessary response, which leads to overall cost savings.

### Without scenario

On a day-to-day basis, collection of data relevant to emergencies is carried out informally because local community leaders have never been trained in the skills necessary to leverage the EWS. During emergencies, local non-governmental organisations (NGOs) and village authorities try to alert the federal government, but often with little success due to a lack of evidence.

When emergencies occur, international non-governmental organisations (INGOs) will often be involved in relief efforts, resulting in greater costs. Lack of accurate data means that beneficiary needs are poorly assessed, leading to poor targeting and frequent wastage of FIs and NFIs.

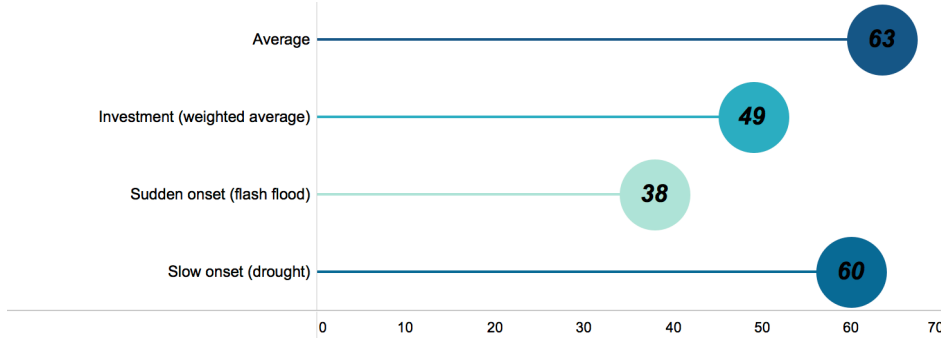
During both sudden and slow onset emergencies, responses may be delayed by several weeks.

**ROI Results**

**Time ROI**

Time savings average 49 days when considering both slow and sudden onset emergencies. This is because the savings are obtained through decreases in the time required to access funding and obtain approval for a humanitarian response.

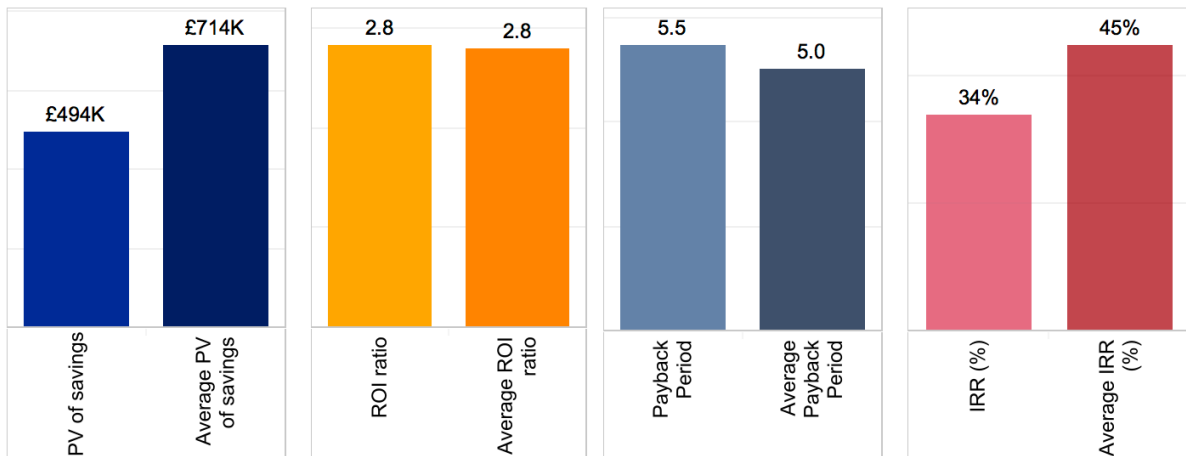
**FIGURE 8 - BUSINESS CASE 2 - TIME ROI. SOURCE: PWC STUDY 2018**



In the flash-flood (sudden onset) case, the government has in place a faster funding procedure, which explains why the savings are slightly lower.

**Financial ROI**

**FIGURE 9 - BUSINESS CASE 2 - FINANCIAL ROI. SOURCE: PWC STUDY 2018**

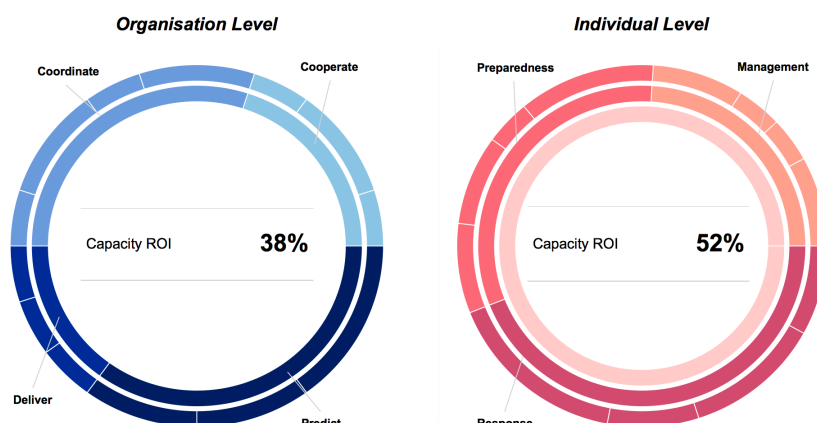


The total cost of the investment is £269,930. ROI equals £2.80 per £1 invested. The payback period is 5.5 years. As a result, the investment generates £493,907 in savings over a 10-year period. The IRR equals 34%. Savings are mainly due to fuel, transport, and procurement efficiencies obtained through more accurate targeting and reliance on government vehicles.

**Capacity ROI**

Overall, Capacity ROI equals 45%, and although the project focuses on the organisational level, the greatest capacity returns occur at the individual level. The project develops assessment and teamwork skills, which improves the quality of humanitarian responses.

**FIGURE 10 - BUSINESS CASE 2 - CAPACITY ROI. SOURCE: PWC STUDY 2018**



Similarly, training provides local staff with a stronger understanding of humanitarian principles and planning, which improves preparedness. Also, the overall management of the response benefits from self-management and relationship management skills.

At an organisational level, the qualitative improvement is due to greater engagement with local NGOs, who benefit from a shared understanding of risk scenarios. This leads to better coordination, cooperation, and, most importantly, more frequent and accurate data collection.

The system-level Capacity ROI of this investment was not measured, as it was calculated within the ICT investment component discussed above.

**BUSINESS CASE 3 - SHIFTING THE POWER (STP) PROJECT IN ETHIOPIA - CAPACITY DEVELOPMENT INVESTMENT**

Shifting the Power Ethiopia has worked with 10 national NGOs to improve their capabilities and humanitarian technical skills. The business case developed below focuses on the ROI for one of these NGOs, Action for Development (AFD), as a representative case study.

All ROI indicators are positive. This is due to this investment’s capacity to facilitate a high level of coordination between local organisations, as well as its focus on developing local technical skills.

**Investment scoping**

**TABLE 8 - BUSINESS CASE 3 - SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT</b>	Shift the Power (STP) - Ethiopia
<b>INVESTMENT NAME</b>	STP - Capacity Development (AFD NGO case study)
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Coordination, organisation level.
<b>GOAL</b>	Introducing mainstreamed global humanitarian standards and procedures to improve humanitarian response.
<b>ACTIVITIES</b>	This investment foresees carrying out training activities for 10 national NGOs. Each NGO was assessed against the STP framework to identify areas for improvement. Skills development areas include: Improving financial procurement procedures, writing coordinated emergency preparedness plans, and setting up a specific humanitarian unit.
<b>GEOGRAPHIC SCOPE</b>	Southern Ethiopia
<b>TIME HORIZON</b>	10 years. Due to low staff turnover (<10%), and strong re-training and induction practices within the NGOs, there is no immediate limit to the investment’s time horizon.

## Context

The table below summarises the main emergency risk scenario affecting regions in which this investment is implemented.

**TABLE 9 - BUSINESS CASE 3 - CONTEXT. SOURCE: PWC STUDY 2018**

	<b>RISK 1: DROUGHT</b>	<b>RISK 2: FLOOD</b>
<b>PROBABILITY (% PER ANNUM)</b>	50%	50%
<b>IMPACT</b>	45,000 people	20,000 people
<b>LOCATION</b>	Southern Ethiopia	Southern Ethiopia
<b>ONSET TYPE</b>	Slow onset	Sudden Onset
<b>DURATION</b>	6 Months	3 months

## With scenario

Local NGOs are trained to establish 10-person Emergency Response Teams (ERTs) to be deployed in the event of an emergency. AFD establishes emergency focal points that can activate these teams on short notice. On a day-to-day basis, AFD's development initiatives progress as usual.

When emergencies occur, AFD emergency teams are on-call, leading to faster, more effective responses. The response is then facilitated by the presence of an emergency plan shared with other local organisations, which helps better collaboration and reduces costs such as transport and procurement. When a drought emergency occurs, funding times are shorter due to coordinated response planning with the central government.

## Without scenario

On a day-to-day basis, NGOs operate in their region with no coordinated emergency plan and few staff specialised in humanitarian response.

When emergencies occur, the lack of ERTs means that NGO interventions are less effective. NGOs such as AFD nonetheless send 10-member teams to the emergency location, but with the risk of additional coordinators being involved due to staff's lack of specific skills. When drought emergencies occur, the response can be delayed for months, as NGOs often struggle to overcome bureaucratic hurdles to secure funding from government.

## ROI Results

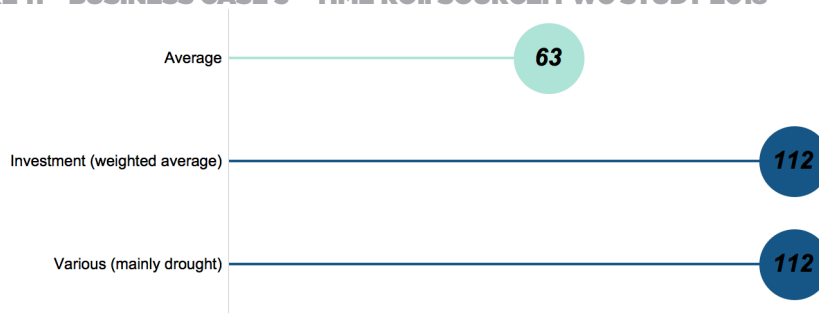
ROI results for STP Capacity Development were calculated based on a single organisation. It is understood that similar results are to be expected from the other nine organisations that are taking part in the project.

## Time ROI

Time savings for this investment are high, averaging 112 days<sup>24</sup>. This is due to easier access to funding in the event of an emergency. Local NGOs have pre-approved individual or shared emergency plans, which allows them to work in closer coordination with one another.



FIGURE 11 - BUSINESS CASE 3 - TIME ROI. SOURCE: PWC STUDY 2018

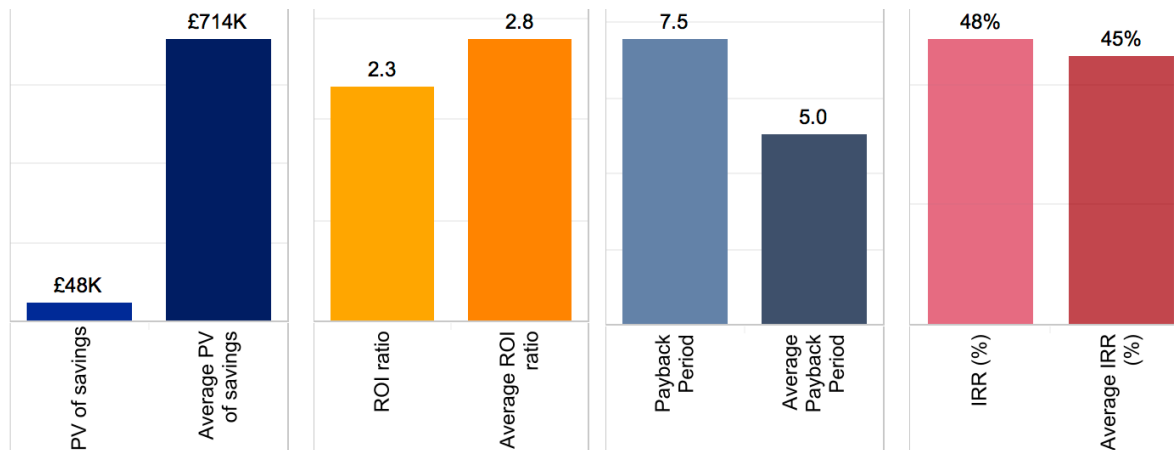


The existence of these plans facilitates processes whereby the central government approves funding for relief efforts much faster than it would otherwise.

### Financial ROI

The total cost of STP investment for AFD is £36,290, and the financial ROI ratio is £2.30 per £1 invested. The payback period is 7.5 years, and the investment yields £48k in savings over the 10-year period, due to improved response times and procurement savings achieved through better coordination. The IRR equals 48%, slightly above average.

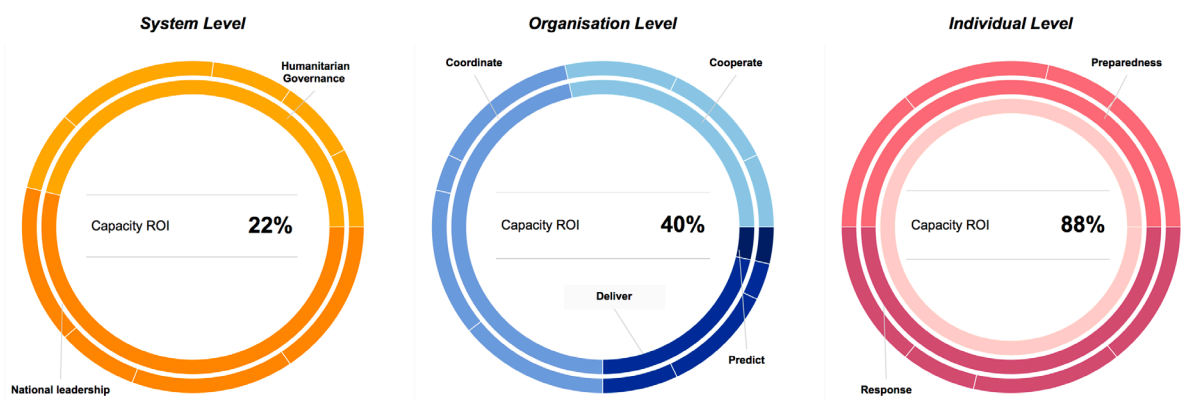
FIGURE 12 - BUSINESS CASE 3 - FINANCIAL ROI. SOURCE: PWC STUDY 2018

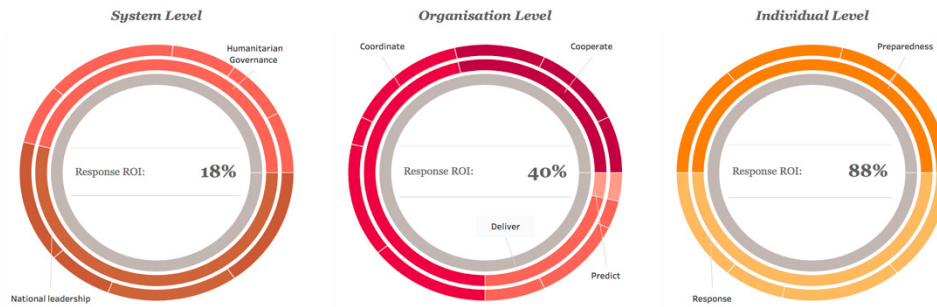


### Capacity ROI

The overall Capacity ROI for this investment is 50%. In this case, although the focus of the investment is on the organisational level, the highest returns are at the individual level. Due to the investment, response and preparedness skills develop from almost non-existent to full maturity, so much so that previously development-focused organisations are able to deploy fully-trained humanitarian ERTs during emergencies.

FIGURE 13 - BUSINESS CASE 3 - CAPACITY ROI. SOURCE: PWC STUDY 2018





At the organisational level, the main return is greater coordination with other local and national NGOs, which stems from the exercise of developing a coordinated emergency plan. This leads to better external collaboration and better access to funding, which ultimately improves the delivery of the response and its accountability.

Due to the investment's more limited scope, system-level ROI is lower. Interestingly, however, the focus on coordination and planning at an organisational level leads to greater participation in system-wide humanitarian governance. A newly gained understanding of humanitarian standards and processes allows participating NGOs to become fully active members of the humanitarian ecosystem, potentially influencing policy. The increased professionalism of individuals and organisations indirectly causes greater government accountability for humanitarian issues, as well as local and community leadership in humanitarian response.

#### **BUSINESS CASE 4 - SHIFTING THE POWER IN ETHIOPIA - PLATFORM COORDINATION INVESTMENT**

The platform component of Shifting the Power in Ethiopia enables the emergence of a centralised national network of humanitarian organisations and professionals. The platform aims to align national efforts and advocate for a more efficient response in cases of emergency. This investment is highly systemic in its reach, as it has the potential to generate savings in multiple ways, such as efficient beneficiary targeting, by decreasing the need for staff during emergency responses and by facilitating access to humanitarian financing. It also strongly alters network dynamics within the humanitarian ecosystem by centralising the role of the Consortium of Christian Relief & Development Associations (CCRDA). Financial ROI and network improvements are likely to be very high but could not be computed credibly due to the number of sources of savings and other data availability issues.

#### **Investment scoping**

**TABLE 10 - BUSINESS CASE 4 - SCOPE. SOURCE: PWC STUDY 2018**

<b>INVESTMENT NAME</b>	STP - COORDINATION PLATFORM
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Coordination, organisational and system level.
<b>GOAL</b>	To create a powerful shared voice demanding change in the criteria required for the declaration of an emergency, and to interact in a streamlined coordinated fashion with INGOs and other humanitarian players when carrying out the appeal process.
<b>ACTIVITIES</b>	Research mapping of humanitarian NGOs in Ethiopia. This research is managed by the CCRDA in order to develop a humanitarian platform. To empower the platform, CCRDA runs consultative meetings and training courses for humanitarian programme management. This has been made possible by the DEPP.
<b>GEOGRAPHIC SCOPE</b>	Ethiopia
<b>TIME HORIZON</b>	5 Years. Turnover typically involves moving between similar organisations. If funding stops, the programme would likely be folded into another existing programme.

**Context**

This investment likely causes improved humanitarian results in most risk scenarios applicable to Ethiopia, including flash floods, political crises, and diseases. The team focused on the most common risk scenario: drought.

**TABLE 11 - BUSINESS CASE 4 - CONTEXT. SOURCE: PWC STUDY 2018**

	<b>RISK 1: DROUGHT</b>
<b>PROBABILITY (% PER ANNUM)</b>	50%
<b>IMPACT</b>	45,000 people
<b>LOCATION</b>	Ethiopia
<b>ONSET TYPE</b>	Slow onset
<b>DURATION</b>	6 Months

**With scenario**

On a day-to-day basis, humanitarian NGOs have access to a centralised advocacy platform that allows them to make the case for their work and to access national stakeholders. The platform can also pool resources to be made available immediately in the event of an emergency, which helps decrease response times.

When emergencies occur, national NGOs can respond immediately to emergencies by using readily available staff. This is because they can coordinate with one another due to connections made through the platform. They are also able to access local financing together.

**Without scenario**

NGOs working on emergencies lack basic coordination as information is channelled only through OCHA and the National Disaster Risk Commission, causing significant duplication. Standards are not used for service delivery and procurement, causing wastage and inappropriate relief.

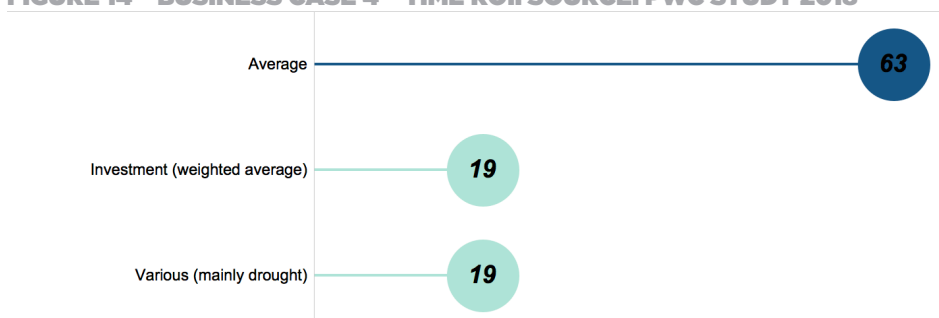
When emergencies occur, national NGOs do not always carry out relief efforts themselves because they simply cannot access local financing. Standards are not used for service delivery and procurement. INGOs will have to fly in experts, which further delays humanitarian interventions and increases transport costs. Duplication occurs because INGOs deliver goods and services that national NGOs might already be providing.

**ROI Results**

**Time ROI**

Time savings for this investment equal 19 days. These time savings are due to local NGOs not having to write proposals and wait for grants in order to deliver humanitarian intervention. Note that in the *with* scenario, NGOs generally do not need to access new funding.

**FIGURE 14 - BUSINESS CASE 4 - TIME ROI. SOURCE: PWC STUDY 2018**



Due to the advocacy work of the platform, they benefit from a financing backstop to be used when an emergency occurs.

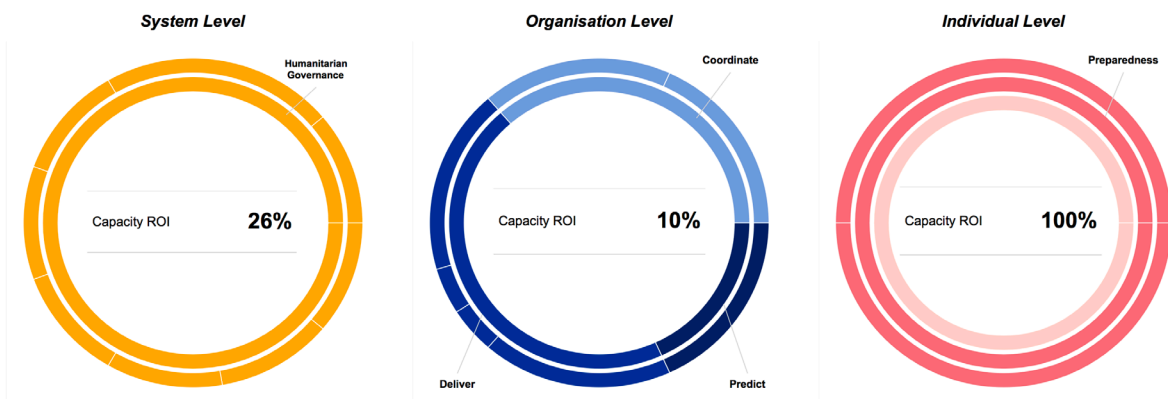
## Financial ROI

The cost of the investment is £55,000. It is highly systemic and affects a large number of NGOs in very different ways. As a result, it is hard to generalise cash flow calculations for emergency response scenarios for more than one beneficiary NGO. For this reason, Financial ROI has not been calculated.

## Capacity ROI

The capacity return of this investment is 45%, which is above average, and occurs primarily at the individual and the organisational levels of Capacity ROI. At an individual level, professionals gain awareness of the humanitarian landscape and relationship-management skills that they otherwise would not have had at all, thus yielding a 100% improvement. This empowers their organisation to better deliver responses when an emergency occurs.

FIGURE 15 - BUSINESS CASE 4 - CAPACITY ROI. SOURCE: PWC STUDY 2018



The organisations benefit from skilled professionals, as well as from stronger national coordination, which guarantees more efficient communication and stakeholder engagement. This triggers transparency and accountability mechanisms that improve outcomes at the system level, particularly in terms of humanitarian governance.

At the network level, CCRDA's coordinating role increases its centrality and improves the network's overall efficiency. These gains could not be computed quantitatively due to a lack of data mapping the humanitarian network before and after the investment.

## BUSINESS CASE 5 - GAMBELA PUBLIC HEALTH INVESTMENT

Among the investments analysed, the public health investment in Gambela is one of the most impactful in terms of overall humanitarian results as it has a direct impact on risk reduction strategies. The investment is intended to prevent diseases, with significant resulting benefits for socio-economic development. Unfortunately, these could not be captured by Financial ROI calculations as some disease-related risks could not be estimated and had to be excluded from the analysis<sup>25</sup>.

## Investment scoping

TABLE 12 - BUSINESS CASE 5 - SCOPE. SOURCE: PWC STUDY 2018

<b>INVESTMENT NAME</b>	GAMBELA PUBLIC HEALTH
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Information, system and individual level.

25 It is important to note that risk scenarios for this investment were developed with interviewees but without Ministry of Health involvement, as these interviewees had suggested.

<b>GOAL</b>	To build a resilient health system with the capacity to anticipate, prevent, detect, and respond to public health emergencies.
<b>ACTIVITIES</b>	The investment provides health facilities to staff on the ground and regional laboratories to allow quick detection of disease. It also foresees health staff and community health leader training for a high level local response.
<b>GEOGRAPHIC SCOPE</b>	Gambela pilot Woredas.
<b>TIME HORIZON</b>	5 Years. Health facilities themselves are used for over 10 years but staff turnover is very high, at 2 years on average.

### Context

The table below summarises the key emergency risk scenarios that affect the Gambela region. It should be noted that Malaria and Acute Water Disease (AWD) scenarios are repeated twice, for corresponding *with* and *without* scenarios respectively. This is because, in the *with* scenario, the investment reduces the probability and impact of these scenarios.

TABLE 13 - BUSINESS CASE 5 - CONTEXT

	<b>RISK 1: MALARIA WITH</b>	<b>RISK 2: MALARIA WITHOUT</b>	<b>RISK 3: ACUTE WATER DISEASE (AWD) WITH</b>	<b>RISK 4: AWD WITHOUT</b>
<b>PROBABILITY (% PER ANNUM)</b>	0%	200%	20%	20%
<b>IMPACT</b>	0 people	35,000 people	300 people	60,000 people
<b>LOCATION</b>	Gambela	Gambela	Gambela	Gambela
<b>ONSET TYPE</b>	Slow onset	Slow onset	Sudden onset	Sudden onset
<b>DURATION</b>	NA	0.5 month	1.5 months	1.5 months
<b>NOTES</b>	Data provided in this table has not been confirmed by the Ethiopian Ministry of Health.			

### With scenario

On a day-to-day basis, local people are aware of how to deal with public health issues. Rapid response teams gather every week and respond immediately, even to rumours. Supply chain management is managed soundly. Community-level volunteers treat people and prevent outbreaks. District-level focal points are trained to understand how different climate-related elements affect public health. Pharmaceuticals are procured at the optimal level.

As a result, anticipation and prevention occur, and the number and impact of emergencies thus diminish. Most slow onset diseases such as Malaria, for which outbreaks are much easier to anticipate, no longer occur. For sudden onset diseases, such as Acute Water Disease (AWD), the faster information system and local capacity allow for faster emergency responses to occur. This stops emergencies from becoming major outbreaks and killing thousands.

### Without scenario

On a day-to-day basis, there is no monitoring and no immediate response to public health issues. This is mainly because when there is a suspected sample, it needs to be sent to the central laboratory. This lack of prevention means outbreaks occur more frequently and at a larger scale.

When emergencies occur, poor staff capacity and information usage (learning and decision-making) mean that diseases escalate before a response can be initiated. Some additional costs may occur due to the lack of proper storage, which often causes pharmaceuticals to expire.

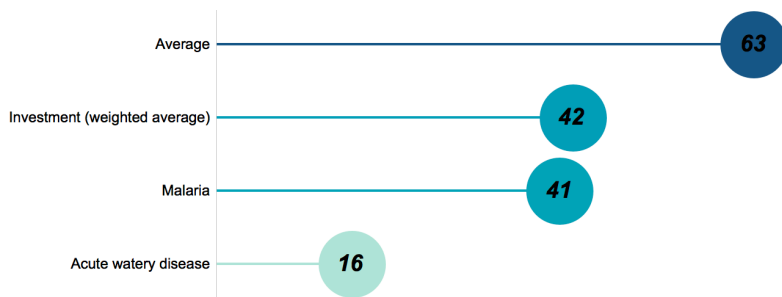
During slow onset emergencies such as Malaria, by the time the problem has been detected, it has already affected many people. Significant outbreaks can happen more than once a year. During sudden onset emergencies such as AWD, which is highly contagious, the lack of quick detection and response results in very high fatality rates.

**ROI Results**

**Time ROI**

The average time saving is 21 days. While not particularly high, it is very impactful in the context of transmittable diseases. For both AWD and Malaria, the time savings occur due to the decreased time required to detect the disease. In the case of Malaria, the time savings allow health experts to intervene before the parasite can spread from one site to another. This avoids an outbreak event.

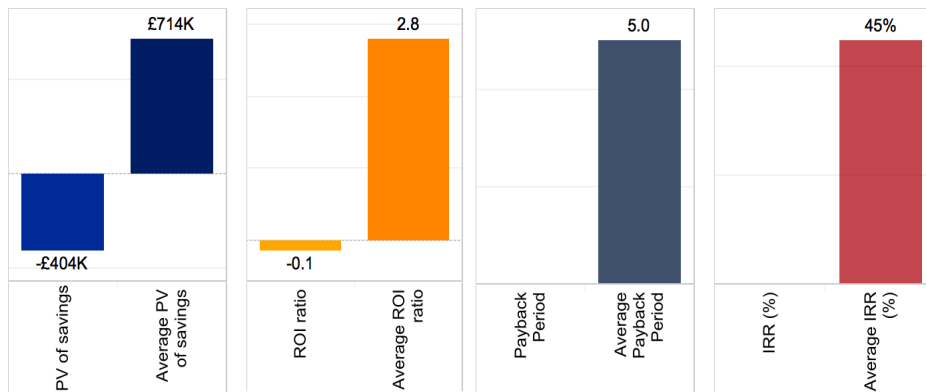
**FIGURE 16 - BUSINESS CASE 5 - TIME ROI. SOURCE: PWC STUDY 2018**



Time savings are lower for AWD than for Malaria because the central government’s response, which occurs in the *without* scenario, is faster for sudden emergency scenarios. But each day saved can prevent hundreds or even thousands of deaths.

**Financial ROI**

**FIGURE 17 - BUSINESS CASE 5 - FINANCIAL ROI. SOURCE: PWC STUDY 2018**

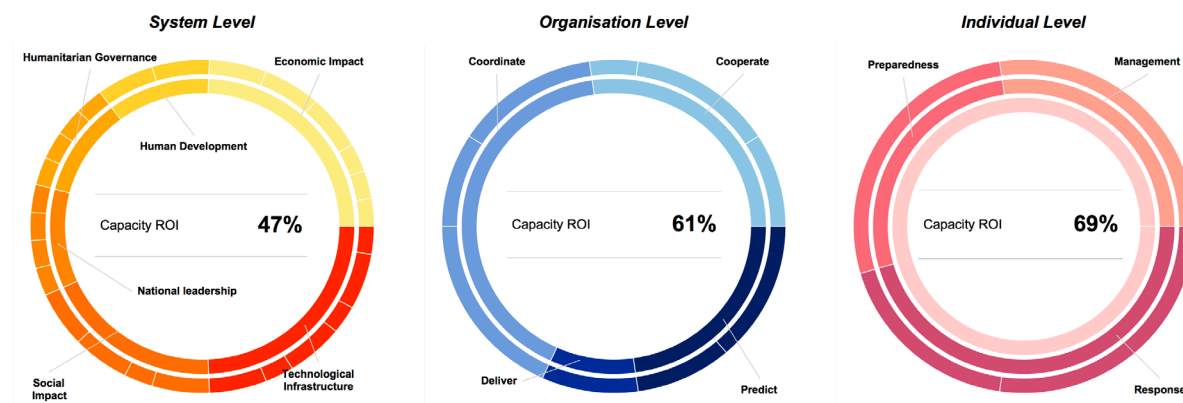


The cost of the intervention is £467,946 and Financial ROI ratio is slightly negative. This is likely due to the fact that the financial model used to compute this result could not account for day-to-day savings obtained through anticipation of minor health issues outside of the established risk scenarios. Staff turnover is high in Gambela. This means data collected was not robust enough to generate informed assumptions for minor risk scenarios. Regardless of whether Financial ROI is in fact positive or negative, it is important to emphasise that this is a development project as much as it is a humanitarian investment, with enormous benefits for local populations. This type of public health project would in any case not normally be conceived with the intention of producing savings. Lack of savings are also partly due to the high cost of laboratory equipment and treatments, which are similar in the with and without scenarios.

### Capacity ROI

Capacity ROI averages 59%, remaining consistent at the system, organisational, and individual levels.

**FIGURE 18 – BUSINESS CASE 5 – CAPACITY ROI. SOURCE: PWC STUDY 2018**



At an individual level, awareness, teamwork, technical, and execution skills are greatly improved due to the investment. At an organisational level, the key improvement is that of better collection of quality and timely data, which generates more coordinated and agile responses. In particular, the investment allows local organisations to develop preparedness planning that would not have otherwise been developed. As a consequence, internal and external cooperation grows considerably.

At a system level, improved health outcomes can lead to greater productivity and, as a result, tax receipts. The improvement in health conditions has a direct impact on Gambela’s economic, social, and human development. Similarly, the investment generates a high technological impact due to better access to IT equipment and skills. The generally low level of IT infrastructure in the Gambela context means that equipment provided through this investment is unlikely to become obsolete in the near future.

### 5.4 PHILIPPINES SUMMARY

This section describes the context in which investments in the Philippines were made and presents some key findings.

#### Context

The Philippines is one of the world’s most disaster-stricken regions. Relevant hazards include volcano eruptions, typhoons, earthquakes, tsunamis, and various internal conflicts.

In order to simplify and standardise the appraisals of these investments, two of the most significant risk scenarios, which reoccurred across interviews, were chosen for modelling purposes. These are summarised in the table below.

**TABLE 14 – SIMPLIFIED PHILIPPINES RISK SCENARIOS. SOURCE: PWC STUDY 2018**

	<b>RISK 1: TYPHOONS (SMALL-MEDIUM SCALE)</b>	<b>RISK 2: CONFLICTS (LARGE SCALE)</b>
<b>PROBABILITY (% PER ANNUM)</b>	500%	25%
<b>IMPACT</b>	15-18,000	400,000
<b>LOCATION</b>	Philippines	Philippines
<b>ONSET TYPE</b>	Sudden onset	Slow onset
<b>DURATION</b>	1 month	1 month

Other scenarios were excluded from quantitative analysis, in order to help obtain greater comparability and simplify the scope of analysis.

**Key findings, from the analysis of Philippines investments, include:**

Generally, it was significantly harder to produce robust Capacity ROI and Financial ROI scores for the Philippines investments. This is largely due to data collection challenges caused by limited interviewee availability, as the ROI study coincided with data collection for other studies.

Time savings are similar across all investments, regardless of the investment cost. The only outlier is Protection in Practice (PIP) - Gender-Based Violence (GBV) (see the business case on page 41 for more information).

The humanitarian ecosystem benefits from alignment around a shared understanding of risk scenarios. It is thanks to an underlying shared understanding of risk scenarios that the ALERT and Financial Enabler investments allow diverse humanitarian organisations to plan emergency responses well in advance.

DEPP projects focus heavily on the empowerment of communities and regional actors to address emergencies. Both components of the Transform Surge Capital (TSC) project aim to empower local respondents. The ALERT investment involves community stakeholders making humanitarian actors more accountable.

Of the DEPP projects examined, even those with smaller budgets, were all national in their reach. This, in itself, is indicative of their ambition. Many also involved a large variety of humanitarian actors, which further suggests project officers' drive to change the country's humanitarian ecosystem is likely producing results.

These findings are explored in greater depth in the business cases provided in Section 5.5. The table overleaf summarises the investments analysed in the Philippines, comparing them by ROI figures and the cost of the investments.



TABLE 15 – PHILIPPINES ROI TRENDS. SOURCE: PWC STUDY 2018

INVESTMENT	INVESTMENT CATEGORY	LEVEL OF FOCUS	MAIN GOAL	TIME ROI	FINANCIAL ROI RATIO	INVESTMENT COST	PV OF TOTAL SAVINGS	PAYBACK PERIOD	IRR	CAPACITY ROI
Train Surge Capital – Training	Capabilities	Individual	Building the skills and capacity of humanitarian workers at both regional and national levels.	12 days	NA	£366,500	NA	NA	NA	NA
Train Surge Capital – Platform	Coordination	Organisation	Creating a central hub for piloting new approaches.	13 days	NA	£441,500	NA	NA	NA	NA
Protection in Practice – Gender Based Violence	Capabilities	Individual	Strengthening the practices of humanitarian organisations to respond to the protection needs of crisis-affected people, with a focus on women, girls, and marginalised groups, and supporting these individuals to report and ask for specific help.	179 days	NA	£20,000	NA	NA	NA	NA
Financial Enabler	Process	Organisation	Funding to support national programmes on capacity development.	11 days	NA		NA	NA	NA	57%
Alert	Information	Organisation	Developing a new emergency alert platform that is easy to use and to integrate into various organisations.	14 days	3.29	£334,520	£766,164	3.1 Years	54%	46%
Rapid Information Communication Accountability Assessment - IOM	Information	Organisation, system	Improving communication with communities through the use of a Rapid Information Communication Accountability Assessment (RICAA) Tool.	7 days	2.81	£76,895	£139,450	3.9 Years	44%	33%

Indicators are explained in full in the business cases that follow. Underlying calculations are available in Annex 4. Excel models used to compute Financial ROI indicators are available on request.

## 5.5 PHILIPPINES APPRAISALS

To better understand the ROI results, it is important to look at each investment individually, including the narratives upon which these ROI results were forecast. The following business cases present this information. Underlying ROI calculations are provided in Annex 4.

### BUSINESS CASE 1 - TRANSFORM SURGE CAPITAL - TRAINING

This investment aims at training local staff in order to improve the capabilities of local NGOs, reduce staff transfers to INGOs or elsewhere, and increase the capacities of skilled local surge personnel.

#### Investment scoping

TABLE 16 - BUSINESS CASE 1 - SCOPE

<b>PROJECT</b>	Transform Surge Capital (TSC) Philippines
<b>INVESTMENT NAME</b>	TSC - Training
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Capabilities, individual level.
<b>GOAL</b>	To increase the capacity of skilled surge personnel for civil society at the international, national, and regional level.
<b>ACTIVITIES</b>	Design of multi-agency surge capacity training. This investment runs learning needs assessments and learning events through the platform. It also manages shared rosters.
<b>GEOGRAPHIC SCOPE</b>	Philippines
<b>TIME HORIZON</b>	2 years. It is estimated that trained people retain the knowledge for 2 years before needing new training.

#### With scenario

When emergencies occur, organisations spend less time and resources recruiting responders, as there is an availability of trained personnel. Humanitarian responders are fully trained and better able to meet beneficiaries' needs.

#### Without scenario

When emergencies occur, humanitarian actors spend substantial time and resources in recruiting responders, who may not be suited for the task. Longlisting and shortlisting occur in order to select people for surge response. Time and cost for recruitment increase due to the need to advertise responders' roles and to spend money on recruitment services. The identified responders may be less trained to deal with the emergency due to a lack of appropriate training.

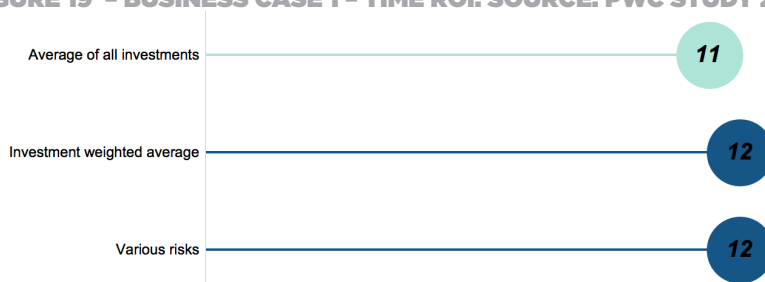
#### ROI Results

ROI results for this investment only feature time returns. This is due to the fact that the research team was not able to obtain the complete finance and capacity data needed to assess other dimensions of ROI.

#### Time ROI

Overall, Time ROI is 12 days and time savings are the same for both risk scenarios. This means that local NGOs save around 12 days in the case of an emergency occurring.

**FIGURE 19 – BUSINESS CASE 1 – TIME ROI. SOURCE: PWC STUDY 2018**



This is due to direct access to skilled personnel who are ready for the response, as opposed to waiting for the recruitment of ad hoc responders.

**BUSINESS CASE 2 – TRANSFORM SURGE CAPITAL – PLATFORM**

This investment focuses on building a platform at the national, regional, and international levels that can develop trust and collaboration modalities for shared activities in the surge sector.

**Investment scoping**

**TABLE 17 – BUSINESS CASE 2 – SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT NAME</b>	Transform Surge Capital (TSC)
<b>INVESTMENT NAME</b>	TSC- Platform
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Coordination, organisation level.
<b>GOAL</b>	To develop effective collaborative platforms at the national, regional, and international levels that implement pilots and/or shared rosters to improve organisational surge capacity and systems for civil society.
<b>ACTIVITIES</b>	Develop a surge humanitarian platform. The investment aims to develop a web-based platform for respondent’s roster, run networking events, conduct quarterly meetings, and provide roster management training and coordination.
<b>GEOGRAPHIC SCOPE</b>	Philippines
<b>TIME HORIZON</b>	10 years.

**With scenario**

On a day to day basis, the existence of a platform allows for fast identification and mobilisation of response teams.

When emergencies occur, and in general, INGOs and national NGOs are able to coordinate and share information with local civil society and volunteer organisations. These synergies lead to additional savings, such as in cases where local church-based organisations may allow the use of their facilities for storing humanitarian relief items. Respondents are mobilised directly, as their availability is shown on the shared online platform. During an emergency, the chief source of financial savings is the fact that volunteer organisations are brought in to contribute to humanitarian relief with the knowledge of other platform members, meaning that fewer national NGO staff need to participate in first-hand relief efforts.

**Without scenario**

On a day-to day basis, the absence of a shared platform means that there is no effective coordination and information sharing between INGOs and among national NGOs. When emergencies occur, respondents have to be identified and mobilised via word of mouth, leading to both significant delays and duplications between different organisations. During an emergency, additional costs are incurred because volunteer organisations are unable to contribute to humanitarian relief in a coordinated fashion, meaning national NGO staff need to stay heavily involved even when this would otherwise not be necessary. INGOs and the UN have a strong presence in large humanitarian responses.

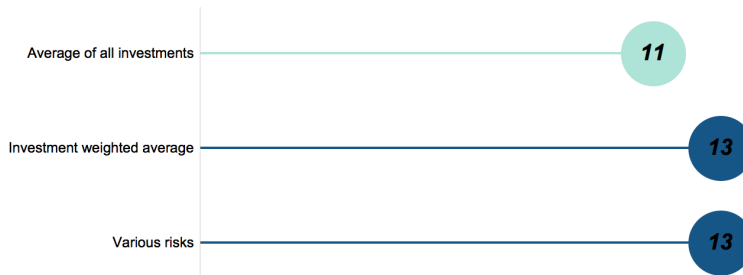
## ROI Results

ROI results for this investment feature only time returns. This is due to the fact that the research team was not able to obtain finance and capacity data needed to assess the ROI.

### Time ROI

Overall Time ROI is 13 days. This means that local NGOs respond 13 days earlier in the case of an emergency occurring.

**FIGURE 20 – BUSINESS CASE 2 – TIME ROI. SOURCE: PWC STUDY 2018**



This is due to the direct access to skilled personnel who are ready for the response, as opposed to waiting for the recruitment of ad hoc respondents. The time savings are the same for both risk scenarios.

## BUSINESS CASE 3 – PROTECTION IN PRACTICE (PIP) – GENDER BASED VIOLENCE (GBV)

### Investment scoping

**TABLE 18 – BUSINESS CASE 3 – SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT</b>	Protection in Practice (PIP), Philippines
<b>INVESTMENT NAME</b>	PIP – GBV
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Capabilities, individual level.
<b>GOAL</b>	To strengthen the practices of humanitarian organisations to respond to the protection needs of crisis-affected people.
<b>ACTIVITIES</b>	Training of organisation staff. The investment conducts community discussions, facilitates dialogue with regional government, and conducts national NGO meetings.
<b>GEOGRAPHIC SCOPE</b>	Philippines
<b>TIME HORIZON</b>	2.5 years. Due to the need to reinforce knowledge, training would need to be repeated every 2-3 years.

### With scenario

A support network for women who have experienced gender-based violence (GBV) is in place. When emergencies occur, female victims of GBV know whom to report to and how to get support. Specifically, women receive awareness training on women's rights, and self-protection training in case of emergencies. Similarly, women learn how to relate to each other and to report episodes of violence to the appropriate services. Appropriate services carry out their legal obligations to address rights violations with standard reporting, escalation, action, and feedback loops. Some of these will lead to criminal proceedings.

### Without scenario

GBV is a widespread and well-recognised threat to the lives of women and girls world-wide. The risks and realities of GBV are greatly exacerbated when a conflict and/or disaster strikes. When emergencies occur, women experiencing GBV (or know of someone who has) do not know where to go and/or what to do. Therefore, they remain silent. The GBV incident continues and, because of it, the women in question have a limited ability to get food and relief.

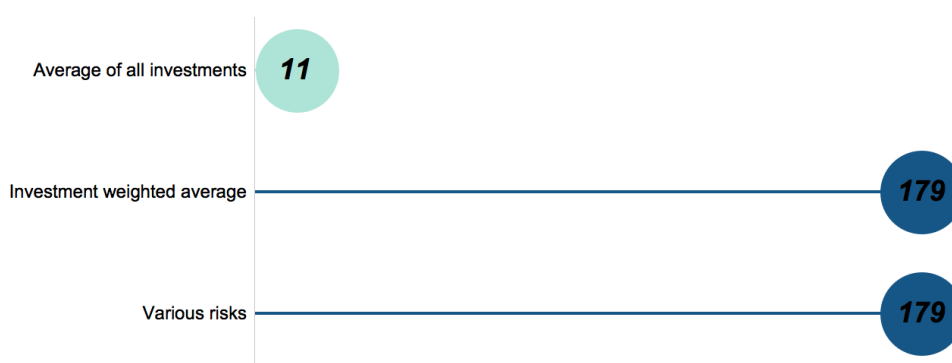
**ROI Results**

This investment does not yield Financial ROI because it is dependent on volunteer work. It does generate a high Time ROI, as explained below, and it probably generates high individual and systemic Capacity ROI, which couldn't be assessed due to a lack of data.

**Time ROI**

The overall Time ROI is 179 days, the highest of all the investments appraised in this study. Without the investment, women and vulnerable people do not know where and how to report incidents, with GBV therefore not being reported for several months. With the investment, when emergencies occur, GBV victims benefit from a response as much as 179 days earlier than they would otherwise.

**FIGURE 21 - BUSINESS CASE 3 - TIME ROI. SOURCE: PWC STUDY 2018**



**BUSINESS CASE 4 - FINANCIAL ENABLER**

This investment establishes a fund to support national programmes on humanitarian capacity development for preparedness and response.

**Investment scoping**

**TABLE 19 - BUSINESS CASE 4 - SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT NAME</b>	Financial Enabler
<b>INVESTMENT NAME</b>	Financial Enabler
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Process, organisation level.
<b>GOAL</b>	To establish a fund to support national programmes on capacity development.
<b>ACTIVITIES</b>	The investment launches a call and receives applications and due diligence reports. It foresees the formation of seven consortia, which submit capacity development plans. The investment assesses capacity development plans, promotes inter-consortia learning events, and supports the implementation of capacity development plans.
<b>GEOGRAPHIC SCOPE</b>	Philippines
<b>TIME HORIZON</b>	3 years. Consortia have committed to collaborate for three years.

**With scenario**

Generally, when emergencies occur, locally led responses are carried out autonomously. The availability of an enhanced tool for rapid needs assessment allows for greater effectiveness and efficiency.

In a large-scale emergency risk scenario, consortia share knowledge of how to channel funds to local partners, leading to less waste and duplication of work. Consortia have pre-positioned stock and have the capacity to distribute FIs and NFIs during the rapid needs assessment.

When medium risk scenarios materialise, consortia are well-equipped to distribute FIs and NFIs as they carry out rapid needs assessments. In the interim, they present resourcing requirements

to other parties. Consortia are able to access more people due to the greater reach provided by their networks.

### Without scenario

Local NGOs lack coordination and often rely on INGOs to coordinate them.

When emergencies occur, local NGOs often do not respond autonomously and are not aligned and coordinated. This leads to waste and duplication. Each individual NGO has an increased presence in the field due to a lack of knowledge of how to channel funds to local partners. Yet only some organisations intervene due to lack of resources.

In the case of larger conflict and slow onset scenarios, NGO consortia have not pre-positioned stock and are not able to distribute FIs and NFIs during the rapid needs assessment.

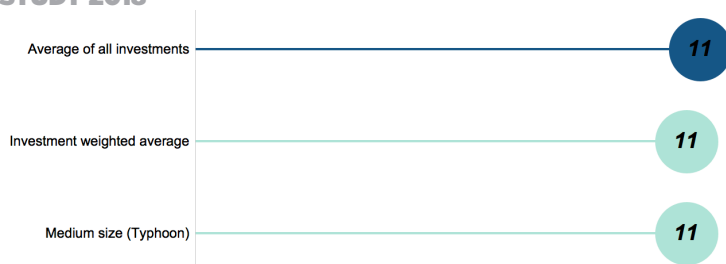
In fast onset scenarios, individual NGOs take time to identify which ones should respond.

### ROI Results

#### Time ROI

This investment generates 11 days of time savings when small-medium scale emergencies occur. This means that when a small or medium typhoon occurs, the response is 11 days faster.

**FIGURE 21 – BUSINESS CASE 4 – TIME ROI. SOURCE: PWC STUDY 2018**



This is because, by collaborating within consortia, NGOs are able to carry out stronger needs assessments and therefore have quicker access to funding. Time savings for large emergencies were not calculated because of a lack of data.

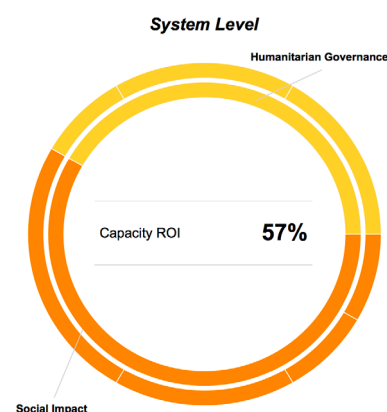
#### Financial ROI

This investment is likely to generate large, systemic savings due to the significant synergies developed between the NGOs. However, the many sources of savings (pre-positioning, decreased waste due to rapid needs assessments, less staff duplication) mean that an accurate estimate cannot be modelled robustly.

#### Capacity ROI

This investment yields high Capacity ROI of 57% at the system level for very specific sub-indicators. By enabling the formation of consortia, this investment develops forms of coordination, partnership, and empowerment that would not be in place otherwise.

**FIGURE 22 – BUSINESS CASE 4 – CAPACITY ROI. SOURCE: PWC STUDY 2018**



### BUSINESS CASE 5 – ALERT

This investment focuses on the development of an online platform that informs different organisations, predominantly NGOs, about how each is prepared to respond to different emergency scenarios, thus improving coordination and generating substantial financial savings.

## Investment scoping

TABLE 20 - BUSINESS CASE 5 - SCOPE. SOURCE: PWC STUDY 2018

<b>PROJECT NAME</b>	ALERT, Philippines
<b>INVESTMENT NAME</b>	ALERT
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Information, organisation level.
<b>GOAL</b>	To develop a new emergency alert platform that is easy to use and to integrate across various organisations, mainly NGOs.
<b>ACTIVITIES</b>	Design and develop software, manage agreements, co-creation with end-users. The investment trains the trainers and rolls out of the system across 35 organisations. It aims to set up a help desk and promote coordination.
<b>GEOGRAPHIC SCOPE</b>	Philippines
<b>TIME HORIZON</b>	5 years. The ALERT platform is under continuous development, indicating that it will continue to be useful and appropriate for the foreseeable future.

### With scenario

On a day-to-day basis, ALERT improves the quality of humanitarian governance, as participating organisations have easy access to the data required to prepare scenario-based risk plans and minimum preparedness actions (MPAs). The presence of an online platform means they are also more accountable due to online monitoring of responses.

Organisations know in advance who will intervene when emergencies occur due to triggering threshold values published on the ALERT portal. This allows for more coordinated responses involving fewer humanitarian actors, each operating within assigned areas and with a faster response time.

For large scale emergencies, UN and other multilateral partner involvement is briefer than it would be without the investment, due to the greater clarity about the role of national NGOs that has been established as a result of ALERT's establishment.

### Without scenario

On a day-to-day basis, humanitarian governance suffers from a lack of transparency and accountability, as organisations share information on their capacity to respond using paper-based systems.

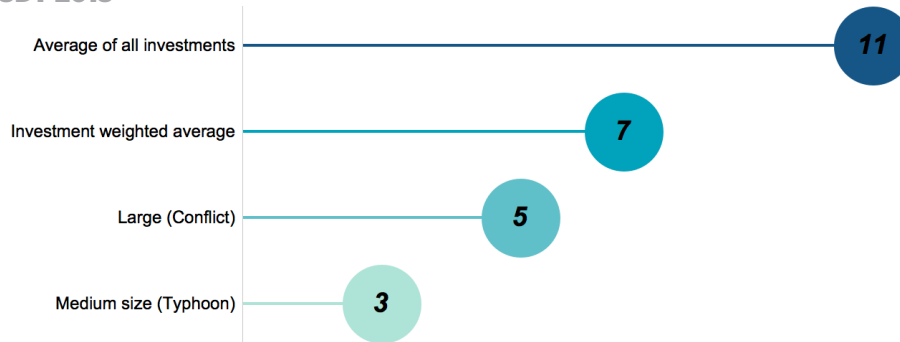
When emergencies occur, organisations lack a clear understanding of how each will respond, leading to waste, duplication, and increased response times. Responses are less effective and appropriate due to a lack of a shared understanding of each organisation's role in the emergency response. In both emergency risk scenarios, and depending on the region, either too many or too few NGOs participate in the response as a result of the lack of coordination.

## ROI Results

### Time ROI

Overall, Time ROI is 7 days. This means that when emergencies occur, the response is 7 days quicker. This is due to the platform that allows organisations to coordinate a quicker response. In particular, without the platform, the lack of coordination means that needs assessments can take up to a week. Additionally, for large emergencies, a lack of scenario-based risk plans means that the appeals process can be quite long.

**FIGURE 23 – BUSINESS CASE 5 – TIME ROI. SOURCE: PWC STUDY 2018**

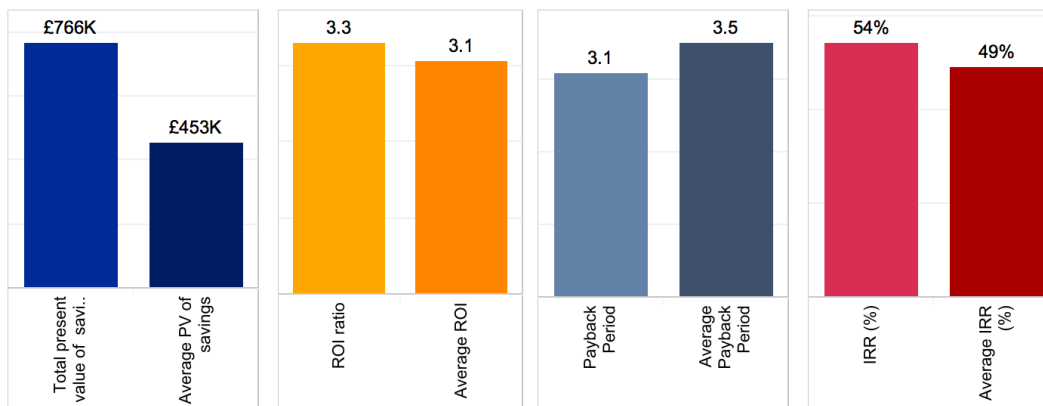


### Financial ROI

The total cost of this investment is £334,520. As shown in the figure below, the investment's Financial ROI ratio is £3.29 per £1 invested, and the payback period is 3.1 years. The investment's internal rate of return (IRR) is 54%, slightly more than average. As a result, the investment provides a present value (PV) of total savings of £766,164 over a 5-year period.

Overall, emergency responses that take place under the *with* scenario are cheaper, as only the necessary number of NGOs participate due to the coordination enabled by the platform. The platform also helps optimise staff allocation, with resulting lower transport costs. Through greater coordination, respondents improve beneficiary targeting, avoid waste, and, as a result, contain procurement costs. Unfortunately, these benefits could not be factored into the Financial ROI analysis due to a lack of data, leading to a potential underestimation<sup>26</sup>.

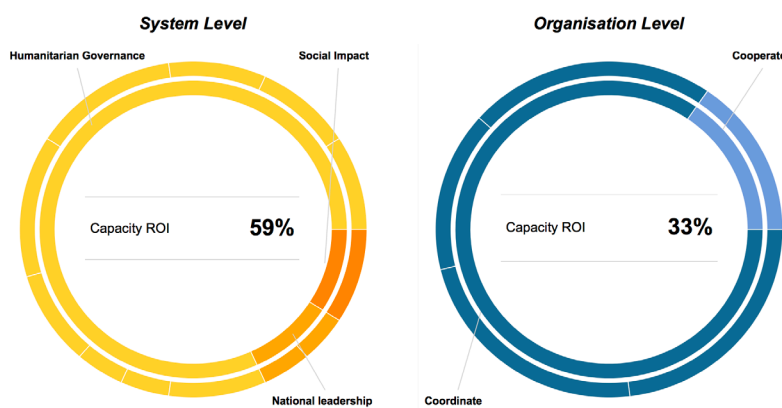
**FIGURE 24 – BUSINESS CASE 5 – FINANCIAL ROI. SOURCE: PWC STUDY 2018**





## Capacity ROI

**FIGURE 25 - BUSINESS CASE 5 - CAPACITY ROI. SOURCE: PWC STUDY 2018**



The Capacity ROI is 46%, largely due to the investments systemic effect on humanitarian governance. Improvements at the organisational level are also significant, with the greatest returns due to better communication, preparedness planning, and increased agility in the response.

As a result of this investment, key staff members within Community of Practice (CoP) organisations are trained and involved in the development of the preparedness plan, and organisations themselves adjust their management process to effectively gather and collate data during emergencies. This greatly facilitates inter-organisational collaboration.

Due to these improvements at the organisational level, the greatest return at the system level is in the improvement of the humanitarian governance, due to improved coordination, partnerships, and aligned emergency plans. The project contributes to strengthening the relationships among humanitarian actors. Through the project, the organisation has identified and prioritised key hazards. Some minor effects of this investment in terms of social cohesion and better networking have also been noted.

## BUSINESS CASE 6 - RAPID INFORMATION COMMUNICATION ACCOUNTABILITY ASSESSMENT (RICAA) - IOM

This investment contributes to the improved effectiveness of humanitarian assistance to disaster-affected communities through predictable, coordinated, and resourced two-way communication.

### Investment scoping

**TABLE 21 - BUSINESS CASE 6 - SCOPE. SOURCE: PWC STUDY 2018**

<b>PROJECT NAME</b>	Communicating with Disaster-Affected Communities (CDAC)
<b>INVESTMENT NAME</b>	RICAA - IOM
<b>INVESTMENT CATEGORY &amp; FOCUS</b>	Information, organisation and system level.
<b>GOAL</b>	To improve communication with communities through the use of a Rapid Information Communication Accountability Assessment (RICAA) tool.
<b>ACTIVITIES</b>	Conducting meetings and workshops promoting the integration of the RICAA tool and supporting its integration with other tools, such as IOM's displacement tracking matrix and UNHCR online tools. The investment foresees the development and maintenance of additional mobile platforms.
<b>GEOGRAPHIC SCOPE</b>	Philippines
<b>TIME HORIZON</b>	5 years. While the tool is self-sustaining and can be easily integrated into any organisation, it is likely that in a few years the technical elements of the tool will need updates.

### With scenario

RICAA is used by CoP members. Situational reports are conducted with few people collating data and questions are simple closed questions. As a result, the datasets produced can be visualised and turned into a report more easily.

The tool is integrated with official government communications plans for emergencies. RICAA reports are included in official UN situation reports submitted to government.

When emergencies happen, savings occur due to the fact that CoP members spend less effort on data gathering. More accurate, on-site data collection causes less duplication and waste due to more accurate beneficiary targeting. In addition to this, beneficiaries who participate in the RICAA survey are reassured that emergency responses are more targeted to their needs. Because of this transparency mechanism, humanitarian actors are under more pressure to be efficient. This is because the platform makes it possible to understand more clearly whether any humanitarian actors are not delivering appropriately.

### Without scenario

The CoP members report and communicate using different languages and standards. Consequently, datasets are produced by multiple humanitarian actors and are often inconsistent and harder to both visualise and turn into a report.

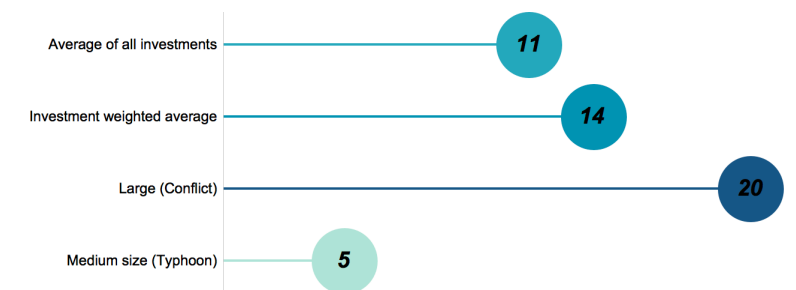
When emergencies occur, there are additional costs due to time spent by each individual organisation gathering and collating data. This leads to greater duplication, waste, and higher costs. However, some money is saved as less is spent on items identified through the needs analysis. There is also a risk of decreased relevance and appropriateness of the services provided to emergency beneficiaries. In general, there are fewer opportunities to make timely and efficient decisions based on evidence, which in turn risks pushing humanitarian practitioners to rely on previous emergency experience that may not be relevant.

## ROI Results

### Time ROI

On average, Time ROI equals 14 days. When a small-scale emergency such as a drought occurs, the emergency response is 5 days faster than it would be without the investment. When a large-scale emergency occurs, an emergency response is, on average, 20 days faster due to the investment.

**FIGURE 26 - BUSINESS CASE 6 - TIME ROI. SOURCE: PWC STUDY 2018**



The time savings in both emergency scenarios are due to the fact that the RICAA tool enables much faster data gathering and needs assessments, which in turn facilitate the approval of emergency responses.

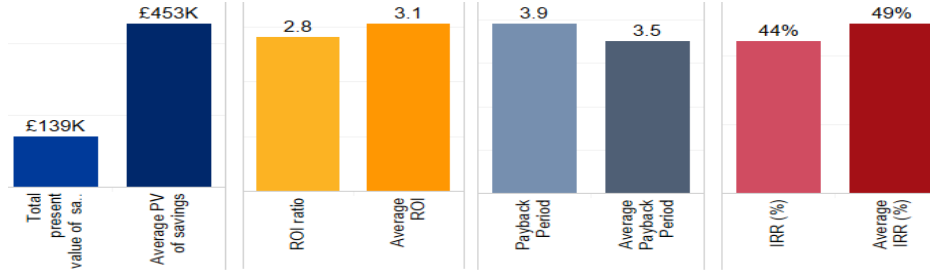
### Financial ROI

The total cost of the investment is £76,895. As shown in the figure overleaf, the investment ROI is £2.81 per £1 invested, and the payback period is 3.9 years. The investment IRR is 44%. As a result, the investment yields a PV of total savings of £139,450 over 5-year period.

Through greater coordination, respondents improve beneficiary targeting, avoid waste, and, as a result, contain procurement costs. Unfortunately, these benefits could not be factored into the

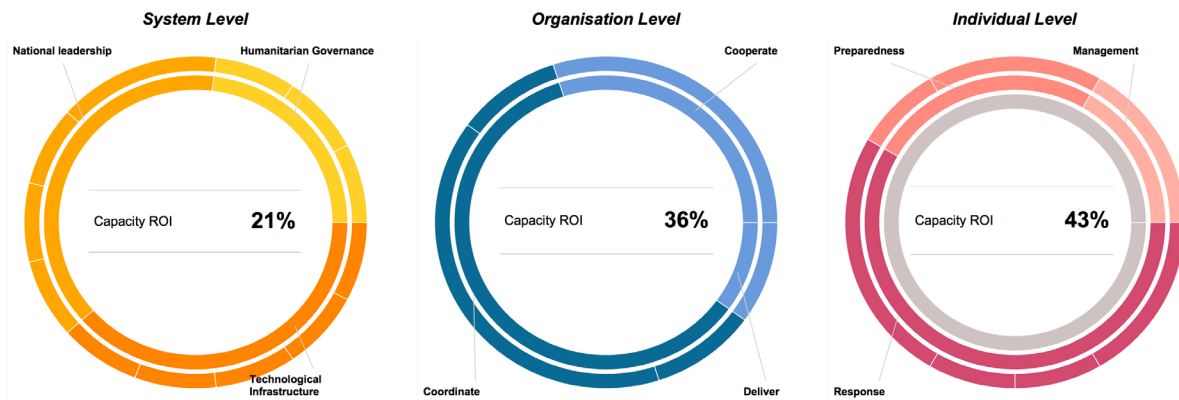
Financial ROI analysis due to lack of data, leading to a potential underestimation<sup>27</sup>.

**FIGURE 27 - BUSINESS CASE 6 - FINANCIAL ROI. SOURCE: PWC STUDY 2018**



**Capacity ROI**

**FIGURE 28 - BUSINESS CASE 6 - CAPACITY ROI. SOURCE: PWC STUDY 2018**



Capacity ROI is 33% on average and occurs at all levels. At the individual level, there are significant improvements in staff members’ capacity to prepare for, manage and especially respond to emergencies. This is due to a better understanding and awareness of context-specific needs. The tool emphasises a community-centred approach, which entails prioritising an understanding of the local context prior to any intervention.

At an organisational level, there are gains in coordination, collaboration, and the delivery of the response. By facilitating data gathering, the tool supports information sharing and learning. Organisations also become more accountable and efficient as a result of the tool’s transparency mechanism.

This has a direct effect at a system level. Humanitarian governance improves due to the imposition of accountability upon agencies. In the long run, the investment paves the way for collaboration between organisations.

In addition, RICAA improves the national leadership because all information generated by RICAA feeds into official UN situation reports, which puts the government under pressure to perform better.

Finally, there are improvements to the technological infrastructure because they are necessary for RICAA to work.

27 Maintenance costs, thought to be negligible relative to this investment’s cashflows, were not computed either, which could marginally boost Financial ROI figures.

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## REFERENCES

ALNAP (2012). *Core Humanitarian Competencies Framework*, available [here](#)

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## ANNEX 1: INTERVIEW GUIDELINES

### DEPP ROI STUDY - BRIEFING DOCUMENT FOR INTERVIEWEES

Purpose and how to use this briefing document

*This document is intended for DEPP ROI Study interview participants, providing a high-level introduction to the Return on Investment (ROI) methodology and the data needed to analyse investments using it. It also provides further guidance and information on the interview and on the questions that will be asked during interview. Not all of the questions outlined below will be asked during every interview.*

*Interviewees are next expected to complete this document in advance or respond to the questions outlined in advance. Please read the document in advance of the interview in order to familiarise yourself with the methodology and the framework that will be used for the interview. If you don't understand everything, don't worry! The interviewers will answer any questions you have.*

#### **CONTENTS:**

1. **The DEPP ROI study**
  - a. The purpose of the ROI study
  - b. Introduction to the ROI Methodology
2. **The Interview**
  - a. Participant information
  - b. Investment scoping questions (steps 1 & 2)
  - c. With and without scenarios (steps 3 & 4)
  - d. Contribution to response framework (step 5)

*Annex: Example business case*

## 1. THE DEPP ROI STUDY

### A. THE PURPOSE OF THE DEPP ROI STUDY

The Disasters and Emergency Preparedness Programme (DEPP) has commissioned a team to undertake a Return on Investment study to analyse DEPP project capacity development investments and their 'projected returns' - both quantitative returns (e.g. time saved, money saved) and qualitative returns (e.g. knowledge gained).

The ROI Methodology will be applied to DEPP investments that focus on building local humanitarian capacity at the individual, organisational, system and network levels. The study will lead to:

- A stronger and compelling evidence-base for increased and early investment in humanitarian preparedness by potential donors and governments
- The ability to build clear business cases for increased investment in humanitarian preparedness over multi-year periods
- A tool to support humanitarian preparedness investment decision making by taking a portfolio view incorporating multi-year planning e.g. weighing up trade-offs of one investment over another and where the greatest returns could be achieved through investments

### B. INTRODUCTION TO THE ROI METHODOLOGY

The 'Return on Investment' (ROI) methodology is a way of thinking about emergency preparedness interventions. It emphasises detailed investment logic in order to inform decision-making of humanitarian preparedness investments in high-risk contexts.

**The ROI Methodology's key principle** is that **improved humanitarian results** should be **calculated by comparing scenarios**. Specifically, users should first ask how humanitarian response occurs under different emergency risk scenarios *without* having put in place the investment. They should then repeat this exercise asking how operations occur *with* the investment in place. ROI results – meaning improvements in the quality of humanitarian response, its financial costs, and time required to provide assistance to beneficiaries – are then computed by comparing the scenarios *with* and *without* the investment.

An emergency preparedness investment gives the highest “returns” when emergencies occur. Therefore, a second key principle is that **ROI results depend on emergency risk scenarios**. For instance, ROI results typically increase in contexts where emergencies are more frequent or for investments that can be used for multiple emergency risks. For this reason, **users should carefully identify relevant risk scenarios** and specify their expected frequency and other determining factors.

#### **How do we define a humanitarian preparedness investment?**

*An investment can be any humanitarian preparedness project, or a component of such a project, which aims to improve the time, cost and quality of humanitarian interventions. Normally, these are not known as investments. By adopting this term, we can push ourselves to adopt a more forward-thinking mindset.*

## ROI METHODOLOGICAL STEPS

The ROI Methodology involves the 5 steps outlined below.



### Step 1: Scoping the investment

*Defining the parameters of the investment.*

Define the:

- Financials (total cost);
- Time horizon;
- Geographic scope;
- Emergency preparedness goal;
- Investment category.



### Step 2: Contextual analysis

*Analysing the context of the investment, specifically, the emergency risk scenarios where the investment is used.*

Analyse:

- Risk scenarios – i.e. which emergencies it is likely to be used for
- Investment risk – i.e. factors which increase the uncertainty around the return on the investment



### Step 3: Without scenario analysis

*Examining how emergency operations take place without the investment*

In the identified risk scenarios, how would the emergency response take place if the emergency preparedness investment was not made?



### Step 4: With scenario analysis

*Examining how emergency operations take place with the investment*

In the identified risk scenarios, how would the emergency response take place if the emergency preparedness investment was made?



### Step 5: Results

*Computing or describing ROI results by comparing the with and without scenarios.*

What is the difference in outcomes between the two scenarios?

Depending on the availability of data, the following indicators may be used:

- Time savings – changes in the time between an emergency being declared and the start of emergency response efforts;
- Financial savings – metrics for financial savings achieved as a result of making the investment;
- Contribution to response – a qualitative framework to measure increases in the quality of humanitarian preparedness and response capacity, including indirect / spillover effects at the individual, organisational, network and system levels.

## 2. THE INTERVIEW

### A. PARTICIPANT INFORMATION

#### What is the purpose of the research?

This research forms part of a study commissioned by Action Against Hunger UK on behalf of the Disasters and Emergency Preparedness Programme (DEPP), undertaken by PwC UK LLP and Learn More SRLS.

#### Who are we interviewing and why?

We are analysing DEPP project investments in Ethiopia and the Philippines. The investments have been broken down project by project and have been sent to relevant project staff to provide basic information on the investments.

Interviews are being undertaken with relevant project staff for every investment, so it is possible that interviewees may be asked to participate in more than one interview should they hold important information on more than one investment.

#### What will the format of interviews be?

The interview format will be semi-structured and will take around two hours. It is informal – think of it as more of a conversation / discussion than an interview. Following best practice, participants will be asked to sign a consent form prior to the interview being undertaken.

Participants will be asked questions and should answer as they feel most appropriate. We are interested in participants' opinions and there are no right or wrong answers. Should participants be unclear on what the question is, clarity should be sought. Please be honest – opinions are deemed as the participant's and not that of the organisation they are presenting. Should we seek to record the interview, permission will be requested. Participants can ask to stop the interview at any point.

Interview participants will be sent a write up of the interview to review (if they would like). It will be assumed that the content of the write-up is approved by interviewees should no response be obtained or no suggested changes requested.

#### Will what I say in this study be kept confidential?

The study is intended, eventually, to be available publically as a report. Interview participants will not be named and information you provide will not be traceable back to you. The focus of the final report will be on the results and analysis linked to the data you provide.

All information collected about you will be kept strictly confidential (subject to legal limitations) by the DEPP ROI study team (PwC UK LLP and Learn More SRLS).

#### Contact for further information

For further information, please contact Eleonora Corsini at: [e.corsini@learn-more.eu](mailto:e.corsini@learn-more.eu).

#### The interview questions

This section lays out a set of questions that have been developed to provide background on the type of information we will discuss during the interview.

Please note that the following questions and tables will help frame the conversation, but participants are not expected to respond to every question in detail during the interview.



## B. SCOPING QUESTIONS (STEPS 1 & 2)

The following section presents a set of investment questions to gather information on the scope of the investment. Please note that some of this information (as indicated) will be pre-filled for each specific investment, according to what we have already gathered from concept notes and project logical frameworks. The interview will aim to validate this pre-gathered information.

### Investment Information

1. PROJECT: please complete the following table

<b>Name of the project</b>	(pre-filled)
<b>Lead Agency</b>	(pre-filled)
<b>Type of project</b>	(pre-filled)
<b>Capacity Development focus</b>	(pre-filled)
<b>Level of focus</b>	(pre-filled)

2. INVESTMENT: please complete the following table

<b>Name of investment</b>	(pre-filled)
<b>Implementing agency</b>	(pre-filled)
<b>Aim of investment</b>	(pre-filled)
<b>Output</b>	(pre-filled)
<b>Activities</b>	(pre-filled)

### Cost of the Investment

1. Please complete the following table according to the forecast budget

<b>Specific project overall cost in Ethiopia?</b>	(pre-filled)
<b>Of which: Total investment cost?</b>	
<b>(please break down by activity below)</b>	
Activity 1	
Activity 2	
Activity 3	
Activity 4	

### Investment Staff

1. How many staff members were working on the investment?

2. Please complete the following table to the extent possible

<b>Activities</b>	<b>Number of staff allocated</b>	<b>Of which full-time and seniority?</b>	<b>Part-time and seniority?</b>
Activity 1			
Activity 2			
Activity 3			
Activity 4			

### Investment time horizon

When are the activities described above going to start and end?

How long do you think the investment will be used for?

Please complete the table below by choosing the most appropriate column option for each question.

Question	In the next 6 months	In the next 7-12 months	In the next 13-18 months	In 2+ years	N/A
When do you think there will be new technology or a new method for this investment?					
Do you expect any changing conditions at country level, which would make the investment redundant?					
Will there be a new investment in this activity or these set of activities, sometime soon?					
How often do you experience turnover of 50% of all staff?					

### Risk Assessment

To which humanitarian emergencies does this investment apply?

For each humanitarian emergency listed, please complete the following table to the best extent possible.

Question	Example	Emergency 1	Emergency 2	Emergency n
What type of emergency is it?	<i>Drought</i>			
Where does the emergency take place?	<i>Gambela (Ethiopia)</i>			
What is the time profile of the emergency: slow or quick onset?	<i>Slow onset</i>			
How many people are estimated to be affected by the emergency?	<i>100,000</i>			
Margin of error for the number stated above?	<i>(±50%)</i>			
Frequency - How often does the emergency return - in months?	<i>Every 8 months</i>			
Is the emergency cyclical or not cyclical?	<i>Cyclical</i>			
What is the 'usual' emergency duration in months? (or length of the most recent emergency)	<i>3 months</i>			

### C. WITH/WITHOUT SCENARIO QUESTIONS (STEPS 3 & 4)

This section proposes high-level questions for all investments in order to assess whether they generate time and cost savings, either directly or indirectly (qualitative improvements to humanitarian response are assessed separately).

Part I examines potential sources of improvement which may occur regardless of whether humanitarian emergencies occur. Part II looks at how humanitarian responses to each emergency risk scenario play out both *with* and *without* the investment in place.

#### PART I – THE INVESTMENT’S EFFECTS REGARDLESS OF HUMANITARIAN EMERGENCIES

1. Can you think of any way in which this investment operationally might change your work on a day-to-day basis, irrespective of any humanitarian emergencies? (e.g. trained staff carry out routine work more efficiently) (Yes/No).

In many cases, the answer to this question is *no*. If so, skip straight to Part II, on the following page.

2. If yes:

- a. List activities requiring less effort and why:
- b. List activities requiring less procurement and why:
- c. List activities requiring less expenditure and why:
- d. List activities requiring less travel and why:
- e. List activities requiring reduced external support from partners:
- f. List activities which may be discontinued because of this investment:

3. In light of the above considerations, if possible, attempt to fill in the table below:

		DAY-TO-DAY ACTIVITY 1	DAY-TO-DAY ACTIVITY 2	DAY-TO-DAY ACTIVITY 3
		<i>E.g. warehouse stock IT system</i>		
WITHOUT SCENARIO	Effort (FTEs <sup>28</sup> broken down by pay grade)	<i>0.8 FTEs per annum, junior professionals</i>		
	Procurement costs	<i>£50k per annum in IT systems</i>		
	Other expenditure	<i>NA</i>		
	Travel	<i>2 field trips per annum costing £10k each</i>		
	External support from partners	<i>NA</i>		
WITH SCENARIO	Effort (FTEs broken down by pay grade)	<i>0.1 FTEs per annum, senior professionals</i>		
	Procurement costs	<i>£60k per annum in IT systems</i>		
	Other expenditure	<i>NA</i>		
	Travel	<i>NA</i>		
	External support from partners	<i>NA</i>		

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FTE is full-time equivalent i.e. 1.0 FTE is one full-time member of staff; 0.5 FTE is a part-time member of staff or a full-time member of staff working for 6 months only.

## PART II – THE INVESTMENT’S EFFECTS ON HUMANITARIAN EMERGENCY RESPONSE

1. To what extent does the investment change humanitarian response from an operational perspective? Please feel free to be hypothetical with your answers.
  - a. Information (data gathering/early warning system): improved beneficiary targeting, faster forecasting enables operational improvements to emergency response (Yes/No)
  - b. Collaboration: clearer roles and responsibilities mean emergency response operations are carried out differently to how they would be otherwise (Yes/No)
  - c. Capabilities (staff and response skills): availability of skillsets changes the composition of emergency response teams, with consequent operational changes to emergency response (Yes/No)
  - d. Processes: Improved organisational processes mean emergency response is carried out differently (Yes/No)
2. If you answered yes at any point in question 1:
  - a. List activities requiring less effort and why:
  - b. List activities requiring less procurement and why:
  - c. List activities requiring less expenditure and why:
  - d. List activities requiring less travel and why:
  - e. List activities requiring reduced external support:
  - f. List activities which may be discontinued as a result of this investment:
3. If you answered yes to question 1, does the investment change humanitarian response from an operational perspective for all risk scenarios or only for some, and if so, how do these *changes* (i.e. differences between *with* and *without* scenarios) differ from one risk scenario to another? Please fill in the table below.

		RESPONSE ACTIVITY 1	RESPONSE ACTIVITY 2	RESPONSE ACTIVITY 3	RESPONSE ACTIVITY 4
		<i>E.g. Respondent surge</i>	<i>E.g. Partner funding support</i>		
<b>RISK SCENARIOS</b>	Earthquake	No change	No change	No change	Change 1
	Floods	No change	No change	No change	Change 1 (same as for Earthquake response)
	Conflict	Change 2	Change 4	No change	No change
	Famine	Change 3 (response is improved but not in the same way as for conflict scenario)	Change 5 (response is improved but not in the same way as for conflict scenario)	No change	No change
	IDPs	No change	No change	No change	No change

4. For each risk scenario, in light of the above considerations, if possible, attempt to fill in the table below (note that this table is similar to that in Part I, but also asks respondents to consider changes in *time required*):

		RESPONSE ACTIVITY 1	RESPONSE ACTIVITY 2
		<i>E.g. Respondent surge</i>	
<b>WITHOUT SCENARIO</b>	Effort (FTEs broken down by pay grade)	<i>10 junior FTEs per emergency. 5.5 contractor FTEs per emergency</i>	
	Procurement costs	<i>£10k in transport</i>	
	Other expenditure	<i>NA</i>	
	Travel	<i>10 return car trips to emergency location + travel for contractors</i>	
	External support from partners	<i>NA</i>	
	Time required	<i>4 days in total</i>	
	<b>WITH SCENARIO</b>	Effort (FTEs broken down by pay grade)	<i>15 junior FTEs per emergency.</i>
Procurement costs		<i>£15k in transport</i>	
Other expenditure		<i>NA</i>	
Travel		<i>15 return car trips to emergency location</i>	
External support from partners		<i>NA</i>	
Time required		<i>3 days in total</i>	

5. As explained in question 3, these with/without changes to emergency response activities might vary from one emergency to another. If this is the case, please fill in the table in question 4 separately for each applicable risk scenario.

## D. CONTRIBUTION TO RESPONSE: QUALITATIVE FRAMEWORK (STEP 5)

Contribution to response (qualitative improvements) is the third element of ROI results. This part of the 'returns' attempts to quantify the increase in the quality of humanitarian preparedness and response capacity, at the individual, organisational, network and system levels.

To run this analysis, we have developed a preparedness qualitative framework, which is based on the assumption that building preparedness capacity requires actions and results at different levels, namely:

- **Individual** – anybody working in humanitarian response. At this level, improved preparedness usually means individuals' ability to respond to an emergency.
- **Organisational** – any organisation working in humanitarian response. This may include international NGOs, national and local NGOs, UN agencies, government entities and any implementing partners. At this level, improved preparedness means an organisation's ability to respond operationally within the given context.
- **Network** – formally or informally interconnected organisations, as defined above. At this level, improved humanitarian preparedness usually equates to a network structure that is optimised in terms of its ability to react and respond to humanitarian emergencies.
- **System** – the broader ecosystem of humanitarian actors at the national level that can enable improved preparedness or whose interactions and overall function can be shaped by improved humanitarian preparedness. At this level, systems change may mean a shift in humanitarian policy, or spill over effects at the macro-economic or social level.

The interview with DEPP project staff will use the qualitative framework that has been created to discuss and explore:

1. What impact level/s is the investment focusing on: individual, organisational, network and/or system?
2. For each level indicated, what type of outcomes is the investment achieving?
3. For each outcome selected, what level of maturity and/or improvement will be achieved within each outcome?
4. How and why will each outcome level be achieved?
5. What would be the level achieved in each outcome discussed, *without* the investment?

## ANNEX 2: CAPACITY, TIME AND FINANCIAL ROI CALCULATION APPROACH

### CAPACITY ROI CALCULATION APPROACH

Capacity ROI relies on a theoretical re-thinking of what is meant by improved preparedness. It assumes that building preparedness requires developing skills and capacity at multiple levels, as laid out in DEPP reports. Capacity ROI was developed specifically for this project, in order to quantify returns from a qualitative point of view in a structured way, ensuring each level was considered. It builds on capacity frameworks used in DEPP, such as the Core Humanitarian Competencies Framework<sup>29</sup> and Shifting the Power Capacity SHAPE framework<sup>30</sup>. It also considers the core Humanitarian Standards and the IASC Common Framework for Preparedness<sup>31</sup>.

Capacity ROI is a four-tier maturity model measuring the following dimensions of humanitarian response:

- **Individual** – anybody working in humanitarian response. At this level, improved preparedness usually means individuals' ability to respond to an emergency;
- **Organisational** – any organisation working in humanitarian response. This may include international NGOs, national and local NGOs, UN agencies, government entities and any implementing partners. At this level, improved preparedness means an organisation's ability to respond operationally, alone.
- **Network** – formally or informally interconnected organisations, as defined above. At this level, improved humanitarian preparedness usually equates to a network structure that is optimised in terms of its ability to react and respond to humanitarian emergencies;
- **System** – the broader ecosystem of humanitarian actors at the national level that can enable improved preparedness or whose interactions and overall function can be shaped by improved humanitarian preparedness. At this level, systemic results can be *direct* - when they interest the humanitarian ecosystem - and *indirect* - when their spill-over effect goes beyond the humanitarian ecosystem.

It is important to note that these indicators are not absolute but rather comparative metrics. They simply indicate the extent to which an investment aims to improve various aspects of capacity, relative to the scope for improvement, as estimated by a self-assessment questionnaire.

The following paragraphs explore how each dimension is measured.

#### Individual and Organisational Framework

Both individual and organisational levels are defined by sets of indicators and sub-indicators, which work as metrics to measure the level of maturity of capacity development achieved, with and without, the investment. The full list of indicators and sub-indicators and their definitions can be seen in the tables at the end of this Annex. For each sub-indicator, the team developed a scale describing the specific improvement from a worst-case to a best-case scenario. The description under each level of maturity describes a specific scenario. Levels are cumulative:

29 ALNAP, (2012) Core Humanitarian Competencies Framework, available at <https://www.alnap.org/help-library/core-humanitarian-competencies-framework>, last accessed on 30-04-2018

30 Shift the Power, (2016), Introduction to the humanitarian capacity self-assessment, Start Network: London

31 Inter-Agency Standing Committee (2013), Common Framework of Preparedness, available at [https://interagencystandingcommittee.org/system/files/common\\_framework\\_for\\_preparedness.pdf](https://interagencystandingcommittee.org/system/files/common_framework_for_preparedness.pdf) last accessed on 30-04-2018

they assume that to reach grade three, grade two is in place. The table below exemplifies this approach.

**TABLE 22 – CAPACITY ROI – INDIVIDUAL AND ORGANISATION LEVEL MATURITY MODEL FRAMEWORK**

Maturity	0	1	2	3	4
Individual	No consequences	Capacity is taught in theory	Capacity is taught through practice	Capacity is implemented	Capacity is or can be taught to others
Organisation	No consequences	Staff are trained (mandatory programme)	Capacity is tested/ piloted in the organisation	Organisation has the policy to implement capacity	Organisation is a champion of that capacity and/or influences others to have it

### Network Framework

Networks of humanitarian actors can take various forms. Depending on context, optimal networks may be either highly diffused, with information and resources spreading horizontally, or centralised, with one or more key players governing flows.

As there is no one-size-fits-all metric, the approach developed for DEPP’s network-level projects has been to undertake quantitative network analysis by carrying out the following steps for each investment:

- Gather and encode data on all network actors and relationships between them *with* the investment
- Gather and encode data on all network actors and relationships between them *without* the investment
- Depending on desired network outcome, compute one or more of the following network indicators for both the *with* and *without* network data:
  - Centrality – a given humanitarian actor’s importance within the network
  - Clustering coefficient – the degree to which humanitarian actors cluster together
  - Efficiency – the average number of humanitarian actors that need to be involved for information and resources to circulate
  - Other indicators, as applicable
- Compute % change for each indicator by subtracting its *without* score from its *with* score and dividing by the *without* score.

### System Framework

This framework features specific indicators for each area of systemic impact. It helps quantify forecasts of direct results - impact within the humanitarian ecosystem - as well as indirect results - impact beyond the humanitarian ecosystem. The full framework of indicators and sub-indicators is listed at the end of this Annex.

System-level effects were measured on a scale to assess improvement, as presented in the following table:

0 – no improvement in outcomes
1 – emerging, ad hoc or modest improvement in outcomes
2 – developing or some improvement in outcomes
3 – significant improvement in outcomes



### Calculation approach

An overall Capacity ROI score is produced by averaging across Individual, Organisation and System ROI scores. Network scores were originally intended to be part of this average but this approach could not be tested due to data availability issues.

Individual, Organisational and System ROI scores are percentages describing the maturity achieved at each level. They are computed by dividing the total uplift (the sum of increments on the four-point scale achieved across each level's sub-indicators) over the total potential uplift achievable (the number of sub-indicators applicable to the investment multiplied by four). Each level is made up of indicators, which in turn have their own scores. These are computed applying the above-described calculation only to those sub-indicators that compose the indicator.

### How to use it

The field interviews were used to identify the levels each investment was operating on, as well as the specific indicators and sub-indicators that were relevant to it. Following each interview, the team sent a survey to the interviewee, see the end of this annex, asking to indicate values *with* and *without* investments, accompanied by written rationales.

The team analysed results, provided with and without scoring, and then computed weighted percentage averages to allow comparison between different investments.

### Design principles

The Capacity ROI framework was developed in accordance with the following principles:

- **Interconnectedness** - each level of focus has an impact on the others.
- **Level of results** - considering DEPP's focus is on developing the capacity of local organisations, it was assumed that individual and organisational levels would have represented the core of each intervention and results. As such, the team developed their framework at a higher level of detail than network and system.
- **Collective exhaustiveness** – ensuring that indicators and sub-indicators covered all aspects of a capacity development intervention in a humanitarian setting.
- **Mutual exclusivity** – ensuring the concept and definition were not replicated to avoid double counting.
- **Relevance** – ensuring that each definition was relevant to humanitarian preparedness, and relevant with the great diversity of interventions under DEPP.
- **Clarity** – ensuring simple and clear definitions are used so that respondents from different cultures, languages and backgrounds, can understand in a similar way.
- **Flexibility** – keeping the framework and its definitions open to changes until they have been tested during the interviews for this study.

The tables that follow feature questionnaires which cover all sets of indicators and sub-indicators at the Individual, Organisation and System level. Interviewees only received the components of the survey that were relevant to them, based on a discussion, during the preceding interview, of which sub-indicators were relevant to their investment.

**INDIVIDUAL LEVEL****TABLE 23 – CAPACITY ROI – INDIVIDUAL LEVEL MATURITY MODEL INDICATORS AND SUB-INDICATORS QUESTIONNAIRE**

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<b>Response</b>						
<i>Develop technical skills and knowledge needed for emergency response</i>	<b>Humanitarian Principles</b>					
	<i>Learn how to operate in line with humanitarian principles and approaches</i>	No consequences	Understand the theory of humanitarian principles, values and the evolution of the international humanitarian system	Learn how to operate appropriately in the specific context of the emergency	Implement humanitarian principles and gender / conflict sensitive approaches in daily activities	Influence others or teach others to operate in line with humanitarian principles and appropriate approaches
	<b>Technical Skills</b>					
	<i>Learn technical skills needed in emergencies</i>	No consequences	Understand and be trained on basic technical skills needed in emergencies	Use technical skills in practice in a simulation of an emergency	Implement technical skills in daily work according to sector of expertise (health, food security, NFI, shelter etc)	Capability to teach others the technical skills needed to respond to an emergency
	<b>Assessment</b>					
<i>Learn beneficiary needs assessment techniques</i>	No consequences	Learn humanitarian needs assessment process for effective and appropriate response	Use needs assessment in emergency simulation	Ability to participate in needs assessment as part of emergency response	Capability to teach others how to undertake needs assessments relevant to the context of the emergency	
<b>Team Work</b>						
<i>Learn how to more effectively work in a team in an emergency situation</i>	No consequences	Understand the benefits and basics of effective team work including understanding of strengths, limitations and how skills complement others.	Participate in team building activities, and/or team problem-solving simulation to practice and implement effective team working	Strong self-awareness and clarity on individual contribution in team to support the achievement of programme objectives.	Capability to teach how to act and communicate within a team to make it more effective in an emergency situation	
<b>Preparedness</b>						
<i>Develop preparedness planning skills to respond to future emergencies</i>	<b>Awareness</b>					
	<i>Increase understanding of local context and situation</i>	No consequences	Learn about the political and cultural context of the emergency, its history, drivers and actors	Experience operating in the context, working with different societal sub-groups and understanding gender and diversity dimensions	Implement with political astuteness, in line with the 'do no harm' approach taking local skills, capacities and experience into account	Capability to influence or teach others on the theory and practice of operating in a politically astute and locally led way

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<i>Develop preparedness planning skills to respond to future emergencies</i>	<b>Planning</b>					
	<i>Learn how to design a robust contingency plan</i>	No consequences	Learn the phases of emergency response, and how to develop a contingency plan based on a template	Develop a contingency plan for a specific emergency situation	Implement the contingency plan, understanding individual and organisational roles	Capability to teach others how to develop a contingency plan
	<b>Financial Resourcing</b>					
	<i>Learn how to manage and leverage resources for emergency situations</i>	No consequences	Learn how to develop and manage a budget, write proposals requesting additional funds and report on funds received.	Use templates to develop an example budget, example proposal seeking additional funds or example donor report.	Actively develop a budget, manage a budget for an emergency and / or write and submit a proposal requesting additional funds and report on funds.	Capability to teach budget design and management and proposal writing and donor reporting.
	<b>Relationship Management</b>					
	<i>Learn how to build and manage relationships across key stakeholders</i>	No consequences	Learn theory of stakeholder engagement and management – mapping, analysis, communications plans and monitoring	Undertake an example stakeholder mapping exercise based on an emergency scenario	Implement stakeholder management in practice on the ground in an emergency context	Capability to teach stakeholder engagement and management skills with real life examples
<b>Management</b>						
<i>Develop capabilities to influence, inspire and motivate others to improve emergency response</i>	<b>Self-management</b>					
	<i>Learn personal resilience techniques for adapting, coping and reducing stress in high pressure emergency situations</i>	No consequences	Learn personal resilience techniques for adapting to and coping in challenging environments.	Identify triggers of personal stress and identify ways to reduce it	Remain constructive and positive under stress and focused on objectives and goals while operating in a crisis situation.	Teach, support and inspire others to manage themselves well and their wellbeing in emergencies
	<b>Leadership</b>					
	<i>Learn how to lead people effectively in an emergency situation</i>	No consequences	Learn the theory of leadership - skills and behaviours	Mentoring or coaching schemes to develop leadership skills in practice	Implement leadership skills during an emergency, acting with personal integrity while using leadership position in a responsible and fair way	Capability to positively influence, lead or teach leadership skills to others

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<b>Management</b>						
<i>Develop capabilities to influence, inspire and motivate others to improve emergency response</i>	<b>Execute</b>					
	<i>Learn how to make timely decisions effectively in an emergency situation</i>	No consequences	Learn the importance of taking informed and calculated decisions to improve effectiveness of response	Learn how to act effectively and adapt plans quickly to respond to emerging situations and changing environments (including gaining access to the right information)	Implement executive skills, with a demonstrated capability to analyse and exercise judgment of when a decision can be taken and when to involve others	Capability to teach timely, effective and informed decision-making to others
	<b>Operational Effectiveness</b>					
	<i>Learn personal behaviours that support effective operations and achieve results</i>	No consequences	Understand the importance of behaviours such as a positive attitude, tenacity, taking initiative and active listening to increase operational effectiveness and results	Regularly reflect on your performance and learn to seek feedback from others to improve your performance and the teams'	Demonstrate initiative in practice, and utilise critical judgement to suggest creative improvements and better ways of working	Teach others positive behaviours in order to achieve programmatic results

## ORGANISATION LEVEL

TABLE 24 – CAPACITY ROI – ORGANISATION LEVEL MATURITY MODEL INDICATORS AND SUB-INDICATORS QUESTIONNAIRE

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<b>Predict</b>						
<i>Changes in the use of information and knowledge to better target interventions appropriately to beneficiaries</i>	<b>Stakeholder engagement</b>					
	<i>Organisation knows how and who to engage with appropriate to the emergency context to support contingency planning</i>	No consequences	Staff learn techniques for stakeholder engagement in emergency context including participatory approaches and diplomacy	Initial engagement with key stakeholders (national / local government, communities and beneficiaries) for contingency planning	Established, clear and ongoing dialogue with communities, government and other relevant stakeholders	Organisation teaches others how to engage effectively with stakeholders and use participatory methods in preparedness planning
	<b>Migration</b>					
	<i>Organisation understands the emergency context with a particular focus on the potential movement(s) of people affected by crisis</i>	No consequences	Training on emergency context and theoretical understanding of migration in emergencies / community disaster risk reduction planning	The organisation has a good understanding of local needs, specific local disaster risk reduction plans and/or potential migratory movements in emergency context	The organisation is implementing a contingency plan and actions based on the understanding and mapping of people movements in the emergency	The organisation can teach others about migration in emergencies, how to map movements and how to build migration into contingency planning
	<b>Quality and Timely Data</b>					
	<i>Organisation has improved their capability in collecting quality data for better targeting and early warning</i>	No consequences	Training on data systems and understanding the value quality and timely data can provide to better predict and target response	Testing / piloting a data system to gather more accurate data about timing of emergency and / or beneficiaries' needs	Established data system embedded that provides accurate data about timing of emergency and / or beneficiaries' needs	The organisation can train others on timely and quality data gathering and its use to improve response
<b>Coordinate</b>						
<i>The extent to which different actors' interventions are harmonised, promote synergies, and avoid gaps, duplication, and resource conflict</i>	<b>Communication</b>					
	<i>Organisation understands the value of communicating with the right stakeholders at the right time for effective coordinated response</i>	No consequences	The organisation understands the value of communication with relevant stakeholders: staff members, other organisations and crisis-affected people	Test methods and tools to embed strong, effective and timely communication system in the organisation. Methods are tested with all key stakeholders	Established communication processes through which information from different sources is passed on in a timely and effective way	Champion methods and tools for more effective communication with all relevant stakeholders

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<i>The extent to which different actors' interventions are harmonised, promote synergies, and avoid gaps, duplication, and resource conflict</i>	<b>Preparedness planning</b>					
	<i>Organisation trains staff on strategic preparedness planning e.g. contingency planning and updating plans regularly</i>	No consequences	The organisation invests in training staff in preparedness, response and management skills to be capable to undertake preparedness planning	Organisation has templates for contingency planning and a regular cycle of developing and updating plans as well as developing multi year strategies	All relevant parts of the organisation are involved in designing, developing and reviewing emergency preparedness plans in a regular systematised process	Champion emergency preparedness planning across organisations, with a particular focus on supporting coordinated planning and multi-year approach
	<b>Agility</b>					
	<i>Organisation learns how to be flexible to respond and quickly adapt to local changes throughout all stages of an emergency</i>	No consequences	Staff are trained on organisational agility, being able to quickly adapt to changes, needs and unforeseen scenarios (including adapting according to feedback)	Staff undertake simulations to increase 'readiness' for different types of emergency response and have targets for speed of response	Organisation has internal structures in place to be able to rapidly adapt plans and mobilise funding, in coordination with other organisations, to meet goals and respond most effectively to emergencies	Champion how to plan while maintaining a level of agility that can adapt as needed to the external environment, needs and response, in coordination with others
<b>External Coordination</b>						
<i>Organisation is committed to alignment and harmonisation of interventions with other actors</i>	No consequences	Staff are trained on importance of coordination and in-country coordination mechanisms	Organisation is part of national and sector coordination mechanisms	Demonstrated sustained commitment to coordination and collaboration with other actors, e.g. involvement in joint preparedness planning, gap assessments and pooled funding mechanisms	Lead coordination among organisations and institutions, at a state / regional / provincial level	
<b>Cooperate</b>						
<i>The extent to which organisations work together to achieve shared goals</i>	<b>Internal Cooperation</b>					
	<i>Team works well together with roles and responsibilities clearly defined and synergies identified to achieve common goal(s)</i>	No consequences	Staff understand team roles and responsibilities and how they fit together to achieve team goals	Team members create a supportive environment which respects diversity and builds trust	High performing team – inspirational leadership, all team members are committed to deliver team goals and share responsibility for each others' learning and team performance	Teach how and what is required to support high performing teams in challenging environments within own or other organisations

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<i>The extent to which organisations work together to achieve shared goals</i>	<b>External Cooperation</b>					
	<i>Organisation collaborates with other stakeholders to achieve common goal(s) and avoid duplication of resources</i>	No consequences	Staff are trained on the importance of cooperation with other humanitarian actors and its benefits to effective and efficient emergency response	Organisation agrees informal cooperation with other humanitarian actors within sector / response planning to support effective and efficient emergency response	Organisation establishes formal cooperation / partnership agreements with other entities or humanitarian actors to support effective and efficient emergency response	Organisation champions cooperation with relevant stakeholders, organisations, local suppliers and decision makers to support effective and efficient emergency response
	<b>Sharing results</b>					
	<i>Organisation shares results, data, information and learning to improve theirs and others performance</i>	No consequences	Organisation has training in place for their staff to learn the importance of monitoring, evaluation and sharing learning to improve planning and response	Management information system in place to gather, record and update data and translate it into useful or actionable information	Visibly applied learning through active feedback loops and systematic monitoring, reporting and learning recorded and shared internally and externally	Organisation champions the sharing of information, learning and results (positive or negative) to support cross-sector learning and strengthen performance
<b>Deliver</b>						
<i>Organisational ability and agility in anticipating and responding to change</i>	<b>Organisational Leadership</b>					
	<i>Organisational leadership inspires, engages and empowers teams to deliver effectively embedding humanitarian values and principles</i>	No consequences	Leaders in organisation / senior management demonstrate integrity, tenacity, humility, competency and good communication skills	Role models exist that junior staff can look up to and learn from. Leaders support positive disagreement and challenge	Leadership in organisation is inspirational, engaging and shared. Leadership demonstrates flexibility to support organisational agility	The organisation inspires others by clearly articulating and demonstrating the values, core purpose and principles that underpin humanitarian work
	<b>Efficiency</b>					
	<i>Efficient and effective use of organisational resources to</i>	No consequences	All staff are trained in budget and resource management, organisational expenses policy and donor compliance	The organisation regularly measures and reports on its progress against budget and programme plans and targets	The organisation complies with donor reporting requirements seeking VfM and efficient use of human and financial resources	The organisation can teach others how to manage and deliver efficiently using available resources
	<b>Funding</b>					
	<i>The organisation has the capability to access donor funds to meet short- and long-term needs</i>	No consequences	The organisation is trained on humanitarian funding mechanisms and is aware of the need for coordination and prioritisation of funds according to sector needs	The organisation is aware of upcoming central funding processes and their timing and has the capability to submit requests for funding based on expected needs	The organisation secures funding to work in their area of expertise / meet expected humanitarian need	The organisation can lead and teach others to develop funding proposals and secure funds, short term and longer term

Indicator	Sub-Indicator	Maturity level				
		0	1	2	3	4
<i>Organisational ability and agility in anticipating and responding to change</i>	<b>Human Resource Management</b>					
	<i>The organisation has policies in place to manage staff recruitment, security, conduct and performance</i>	No consequences	Staff are recruited against a competency framework and are inducted on all HR procedures including the staff code of conduct, security protocol, fraud and bribery, child protection, annual leave and grievances	All critical skills and experience are in place to achieve organisational goals (no staff gaps). The organisation implements robust security protocol appropriate to the context and monitors staff compliance with HR policies	The organisation has a performance management system in place and actively tackles underperformance and / or breach of HR policy by staff at all levels	The organisation supports the capacity building of other organisations' HR policies, protocol and recruitment processes
	<b>Accountability</b>					
	<i>The organisation is transparent and accountable in its decisions, resourcing and results</i>	No consequences	Staff are trained on the importance of upwards and downwards accountability across all areas of the organisation, in line with humanitarian standards and principles	Organisation has clear standards on accountability, transparency, fraud and bribery and whistleblowing	Organisation actively monitors and manages risks related to accountability and mitigates these where possible	The organisation supports the capacity building of other organisations' operational procedures to enhance accountability and transparency



## SYSTEM LEVEL

System-level scales were assessed on a four-point model based on level of improvement. Maturity levels were not defined for each sub-indicator.

**TABLE 25 – CAPACITY ROI – SYSTEM LEVEL MATURITY MODEL INDICATORS AND SUB-INDICATORS**

Indicator	Sub-Indicator	
	Direct (within the Humanitarian ecosystem)	Indirect (beyond the Humanitarian ecosystem)
<b>Humanitarian Governance</b>		
<i>An improvement in the use of institutions, structures of authority and collaboration among stakeholders to allocate resources and coordinate or control delivery of humanitarian preparedness and response.</i>	<b>Coordination (direct)</b> <i>Under leadership at the national level all local, national and international organisations and actors involved in humanitarian preparedness are coordinated, including developing joint national contingency plans.</i>	<b>Coordination (indirect)</b> <i>Stronger national and international coordination beyond the humanitarian sector due to improved relationships between agencies.</i>
	<b>Partnerships (direct)</b> <i>A number of strong formal or informal partnerships can be called upon to provide support on capacity building for disaster risk reduction and preparedness.</i>	<b>Partnerships (indirect)</b> <i>Partnerships within government and between national / international organisations are strengthened beyond the humanitarian sector.</i>
	<b>Emergency planning (direct)</b> <i>Comprehensive approach to national disaster risk management and preparedness across organisations.</i>	<b>Emergency planning (indirect)</b> <i>Planning skills are applied beyond the humanitarian sector.</i>
	<b>Transparency of aid (direct)</b> <i>Local, national and international organisations and actors involved in humanitarian preparedness are transparent in the use of resources for aid (this applies only to organisations beyond those directly involved in the investment).</i>	<b>Transparency of aid (indirect)</b> <i>Transparency enhancing systems, processes and policies are adopted beyond the humanitarian sector.</i>
	<b>Emergency forecasting (direct)</b> <i>Strong emergency forecasting systems are in place, allowing international, national and local organisations to optimise emergency response.</i>	<b>Emergency forecasting (indirect)</b> <i>Forecasting systems benefit the economy more broadly, for instance by making the agricultural sector more resilient.</i>
	<b>Financing / financial management (direct)</b> <i>Financial sustainability, impact on long-term development and the exit strategy of the international humanitarian community are defined and planned.</i>	<b>Financing / financial management (indirect)</b> <i>Financial sustainability learned in humanitarian response is applied in other areas e.g. managing a small business.</i>

Indicator	Sub-Indicator	
	Direct (within the Humanitarian ecosystem)	Indirect (beyond the Humanitarian ecosystem)
<b>National leadership</b>		
<p><i>Capacity development of national, regional and / or local government. Capacity development is defined as a process focussed on empowering and strengthening indigenous capabilities.</i></p>	<p><b>Government accountability (direct)</b></p> <p><i>In humanitarian leadership and coordination, government functions or activities are subject to oversight and accountability internally and by civil society, providing information on, justification for and sanctions according to actions.</i></p>	<p><b>Government accountability (indirect)</b></p> <p><i>Accountability is applied in other areas beyond emergency preparedness and response.</i></p>
	<p><b>Government transparency (direct)</b></p> <p><i>Government is transparent about the use of resources and actions being undertaken in humanitarian preparedness and response.</i></p>	<p><b>Government transparency (indirect)</b></p> <p><i>Transparency is applied in other areas beyond emergency preparedness and response.</i></p>
	<p><b>National communication (direct)</b></p> <p><i>Policies and regulation are in place for equal access to information (e.g. via the internet) relevant to humanitarian preparedness.</i></p>	<p><b>National communication (indirect)</b></p> <p><i>Communication policies affect other sectors beyond humanitarian preparedness and response.</i></p>
	<p><b>Government legitimacy (direct)</b></p> <p><i>Civil society gains more confidence in the ability of the government to lead and manage emergencies appropriately and fairly.</i></p>	<p><b>Government legitimacy (indirect)</b></p> <p><i>Increased legitimacy of government resulting in greater participation of civil society in policymaking / consultation.</i></p>
	<p><b>National / local ownership (direct)</b></p> <p><i>The national humanitarian ecosystem develops capabilities and ownership of the leadership and management of humanitarian preparedness requiring less dependency on international aid / actors. This could be, for example, developing a pool of local experts.</i></p>	<p><b>National / local ownership (indirect)</b></p> <p><i>Ownership of interventions, preparedness planning and management applied to other sectors beyond emergencies e.g. infrastructure.</i></p>
	<b>Social Impact</b>	
<p><i>An improvement in the social conditions that enable the development of both individuals and communities.</i></p>	<p><b>Empowerment (direct)</b></p> <p><i>Community / civil society actively participates in designing and implementing emergency preparedness activities.</i></p>	<p><b>Empowerment (indirect)</b></p> <p><i>The empowerment of communities and civil society leads to them becoming more active and vocal in other sectors beyond the humanitarian response (growth of active civil society).</i></p>
	<p><b>Inclusiveness (direct)</b></p> <p><i>Inclusive representation, participation and engagement of people and communities at all stages of humanitarian preparedness.</i></p>	<p><b>Inclusiveness (indirect)</b></p> <p><i>Increased inclusiveness in other development programmes or society beyond the humanitarian sector.</i></p>
	<p><b>Basic needs (direct)</b></p> <p><i>Greater access to basic services (food, shelter, water and sanitation, healthcare and education) by affected population.</i></p>	<p><b>Basic needs (indirect)</b></p> <p><i>More basic services delivered or made accessible beyond the affected population.</i></p>
	<p><b>Health and wellbeing (direct)</b></p> <p><i>Improved preparedness boosts health and / or wellbeing of affected communities.</i></p>	<p><b>Health and wellbeing (indirect)</b></p> <p><i>People unaffected by the disaster also have increased wellbeing through, for example, greater access to health services.</i></p>

Indicator	Sub-Indicator	
	Direct (within the Humanitarian ecosystem)	Indirect (beyond the Humanitarian ecosystem)
An improvement in the social conditions that enable the development of both individuals and communities.	<b>Social cohesion (direct)</b> <i>Stronger coordination and networking.</i>	NA
	<b>Future aspirations (direct)</b> <i>Planning of policies and/or programmes to increase the future aspirations of the affected population.</i>	NA
<b>Technological Infrastructure</b>		
An improvement in access to and the use of technology.	<b>Technological literacy (direct)</b> <i>Improvement in technological literacy of stakeholders and beneficiaries who are part of humanitarian preparedness and response.</i>	<b>Technological literacy (indirect)</b> <i>Improvement in technological literacy beyond humanitarian stakeholders and beneficiaries.</i>
	<b>Access to technology (direct)</b> <i>Improvement in access to internet and mobile networks in emergency areas.</i>	<b>Access to technology (indirect)</b> <i>Improvement in access to internet and mobile networks outside of emergency areas / beyond affected population.</i>
	<b>Quality of data gathered (direct)</b> <i>System is better equipped to gather/ analyse relevant data (weather, demographics etc.) for humanitarian response.</i>	<b>Quality of data gathered (indirect)</b> <i>Improvement in data gathering impacts other policies and sectors beyond the humanitarian sector.</i>
<b>Economic Impact</b>		
An improvement in economic conditions for individuals, markets or national revenue.	<b>Income / cost savings (direct)</b> <i>Potential savings made directly due to the investment.</i>	<b>Income / cost savings (indirect)</b> <i>Increase in average salary and/ or GDP per capita.</i>
	<b>Employability (direct)</b> <i>Generation of new job opportunities or increased access to humanitarian jobs for local people due to increased literacy, skills and capabilities.</i>	<b>Employability (indirect)</b> <i>New employment opportunities beyond the humanitarian sector due to increased literacy, skills and capabilities.</i>
	<b>GDP and tax contributions (direct)</b> <i>Contribution of programme to national GDP and tax revenue.</i>	<b>GDP and tax contributions (indirect)</b> <i>Improved humanitarian preparedness and response allows the economy to return to normal faster following a disaster.</i>
	<b>Market stability (direct)</b> <i>Policies to support stability of market prices (including basic commodities, rentals etc.) as part of contingency plans / response.</i>	<b>Market stability (indirect)</b> <i>Reduced knock-on effects in other markets due to shortages.</i>

## TIME ROI CALCULATION APPROACH

An emergency preparedness investment often yields a more timely humanitarian response. To assess this, users should compute the expected lead time between the request for humanitarian aid and the delivery of the good or service, assessment, or other asset enabled by the investment. Users should do this for both the *with* and *without* scenarios, differentiating by risk scenario if applicable.

Time savings are simply expressed as the difference between the lead time in the *with* and *without* scenarios, as shown in the formula below:

$$\text{Time ROI} = \text{Lead time}_{\text{without}} - \text{Lead time}_{\text{with}}$$

In both the *with* and *without* scenarios, users should make sure that they account for every operational step involved in deploying the investment asset. For instance, *without* scenarios often involve transporting goods from overseas. Practitioners should factor in any procurement, customs, and other bureaucratic times necessary from the moment the emergency occurs.

In some cases, a *with* or *without* scenario may have multiple lead times. For instance, a training investment may enable the deployment of two separate categories of emergency respondents, one local and one international. The local respondents can be deployed within 2 days of an emergency being declared; the international ones after 4 days. In these cases, users should carry out distinct lead time analyses and report separate lead time results in the emergency preparedness investment Business Case.

As with financial analysis, users calculate Time ROI separately for each risk scenario. They can then compute a weighted average time ROI across all risks where the weight is the probability assigned to each risk scenario.

## FINANCIAL ROI CALCULATION APPROACH

Financial ROI can be measured through various indicators, each of which highlights various aspects of financial savings obtained through a preparedness investment. The most frequently used indicators include:

1. Present value of total savings
2. The Financial ROI ratio itself
3. Payback Period
4. Internal rate of return (IRR)

Note: The formulae described in these paragraphs describe simplified calculations so as to facilitate an understanding of the reasoning of the calculation<sup>32</sup>.

### Present value of total savings

One of the most easily comparable measures of ROI is the dollar amount saved over the course of the investment's time horizon. Donors and agencies can re-invest these savings in additional humanitarian intervention and/or preparedness actions.

The present value of total savings is expressed using the following formula (overleaf):

32 Actual formulas, used in the Excel workbooks, are more complex and include proper consideration of:

- Discount rate (=i), to be applied from year 1 until the last year of the investment time horizon – this implies that cash in year y is divided by (1+i)<sup>y</sup>; the initial investment is not discounted;
- The number of emergencies happening in each year, for each type of emergency – since some emergencies (e.g. conflict related emergencies) are not cyclical, this number may change year by year;
- Investment time horizon – the cost of maintaining the initial investment (e.g. warehousing costs).

$$\begin{aligned} & \text{Present value of total savings} \\ &= \sum \text{cashflows}_{\text{without, year, risk scenarios}} \\ & - \sum \text{cashflows}_{\text{with, year, risk scenarios}} - \text{Investment} \end{aligned}$$

Savings may vary according to risk scenarios and are actualized. In this case, average indicators are computed as the probability-weighted averages across all risks.

Savings vary significantly depending on whose point of view the user is taking. Users should specify whether savings are achieved by the investing agency, the humanitarian system more broadly or both.

### Financial ROI ratio

The Return on Investment ratio (ROI) is the most commonly used indicator of the financial return of an investment.

ROI is expressed, as a ratio, with the following simplified formula:

$$ROI = \frac{\sum \text{cashflows}_{\text{without, year, risk scenarios}} - \sum \text{cashflows}_{\text{with, year, risk scenarios}}}{\text{Investment}}$$

- An investment with an ROI > 1 yields cash savings that are higher than the value of the initial investment
- An investment within a 0 < ROI < 1 leads to a saving that is lower than the value of the initial investment
- An investment with ROI < 0 leads to a loss in the case of an emergency

ROI figures are calculated to account for multiple risk scenarios and for possible use of the investment to cope with an ongoing need for humanitarian response. The underlying principle is that ROI is an *expected value*. This means that it is a risk-weighted average of outcomes that can occur in the *with* and *without* scenarios for each risk scenario.

WFP applies a ROI -1 ratio so as to subtract the initial cost of the investment.

### Payback period (PBP)

Decision-makers interested in an emergency preparedness investment's financials will likely want to know when the investment pays itself back through accumulated cash savings. The Payback Period (PBP) metric measures how much time is expected to pass before an investment is recouped.

Payback period is expressed with the following simplified formula:

$$PBP = \frac{\text{Investment}}{\text{Annual Saving}}$$

While this is generally best assessed when adding cashflows at each emergency, it also applies for risks that are protracted across an investment time horizon.

### Internal rate of return (IRR)

The internal rate of return is a commonly used financial metric for assessing profitability. It is the constant annual interest rate that a financial investment would need to fund all emergency responses foreseen throughout its time horizon. The higher an IRR, the more desirable an investment is.

IRR is computed by solving for the discount rate that makes the present value of total savings equal to zero.

# ANNEX 3: CAPACITY AND TIME AND FINANCIAL ROI CALCULATIONS

## CAPACITY ROI CALCULATIONS

### INDIVIDUAL LEVEL

TABLE 26 – CAPACITY ROI CALCULATIONS – INDIVIDUAL LEVEL

		Ethiopia								Philippines	
		STP - CD		STP - Platform		PHEP Gambela		EWS - CD		RICAA - IOM	
Indicator	Sub-Indicator	W	O	W	O	W	O	W	O	W	O
Response		16	2	0	0	7	2	11	0	12	5
Develop technical skills and knowledge needed for emergency response											
	Humanitarian Principles	4	2	NA	NA	NA	NA	2	0	2	1
	Technical Skills	4	0	NA	NA	4	1	2	0	3	1
	Assessment	4	0	NA	NA	NA	NA	4	0	4	1
	Team Work	4	0	NA	NA	3	1	3	0	3	2
Preparedness		16	2	8	0	4	1	8	0	6	3
Develop preparedness planning skills to respond to future emergencies											
	Awareness	4	0	4	0	4	1	3	0	4	2
	Planning	4	0	NA	NA	NA	NA	2	0	2	1
	Financial Resourcing	4	2	NA	NA	NA	NA	1	0	NA	NA
	Relationship Management	4	0	4	0	NA	NA	2	0	NA	NA
Management		0	0	0	0	3	0	6	0	3	1
Develop capabilities to influence, inspire and motivate others to improve emergency response											
	Self-management	NA	NA	NA	NA	NA	NA	2	0	NA	NA
	Leadership	NA	NA	NA	NA	NA	NA	1	0	NA	NA
	Execute	NA	NA	NA	NA	3	0	2	0	3	1
	Operational Effectiveness	NA	NA	NA	NA	NA	NA	1	0	NA	NA
Sum		32	4	8	0	14	3	25	0	21	9
Uplift		28		8		11		25		12	
Total possible uplift		32		8		16		48		28	
Total Capacity ROI Score %		88%				69%		52%		43%	



**SYSTEM LEVEL - ETHIOPIA****TABLE 28 - CAPACITY ROI CALCULATIONS - SYSTEM LEVEL - ETHIOPIA**

Indicator		Sub-Indicator		Ethiopia							
				STP - CD		STP - Platform		PHEP - Gambela		EWS - ICT	
				W	O	W	O	W	O	W	O
Humanitarian Governance		6	5	15	8	7	3	0	0		
	Coordination (direct)	1	0	2	1	2	1	NA	NA		
	Coordination (indirect)	1	0	2	0	NA	NA	NA	NA		
	Partnerships (direct)	2	0	2	1	NA	NA	NA	NA		
	Partnerships (indirect)	0	2	0	2	NA	NA	NA	NA		
	Emergency planning (direct)	0	2	2	1	2	1	NA	NA		
	Emergency planning (indirect)	1	0	2	1	NA	NA	NA	NA		
	Transparency of aid (direct)	1	0	2	1	1	0	NA	NA		
	Transparency of aid (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
	Emergency forecasting (direct)	0	1	2	1	2	1	NA	NA		
	Emergency forecasting (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
	Financing / financial management (direct)	NA	NA	1	0	NA	NA	NA	NA		
	Financing / financial management (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
National leadership		7	0	0	0	6	2	3	1		
	Government accountability (direct)	2	0	NA	NA	NA	NA	NA	NA		
	Government accountability (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
	Government transparency (direct)	1	0	NA	NA	NA	NA	NA	NA		
	Government transparency (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
	National communication (direct)	NA	NA	NA	NA	2	1	NA	NA		
	National communication (indirect)	2	0	NA	NA	NA	NA	NA	NA		
	Government legitimacy (direct)	NA	NA	NA	NA	2	1	3	1		
	Government legitimacy (indirect)	NA	NA	NA	NA	1	0	NA	NA		
	National / local ownership (direct)	2	0	NA	NA	1	0	NA	NA		
	National / local ownership (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
Social Impact		0	0	0	0	12	1	6	2		
An improvement in the social conditions that enable the development of both individuals and communities.											
	Empowerment (direct)	NA	NA	NA	NA	2	0	3	1		
	Empowerment (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
	Inclusiveness (direct)	NA	NA	NA	NA	2	0	3	1		
	Inclusiveness (indirect)	NA	NA	NA	NA	NA	NA	NA	NA		
	Basic needs (direct)	NA	NA	NA	NA	3	1	NA	NA		
	Basic needs (indirect)	NA	NA	NA	NA	2	0	NA	NA		
	Health and wellbeing (direct)	NA	NA	NA	NA	2	0	NA	NA		
	Health and wellbeing (indirect)	NA	NA	NA	NA	1	0	NA	NA		
	Social cohesion (direct)	NA	NA	NA	NA	NA	NA	NA	NA		
	Future aspirations (direct)	NA	NA	NA	NA	NA	NA	NA	NA		
Technological Infrastructure		0	0	0	0	9	0	18	3		
An improvement in access to and the use of technology.											
	Technological literacy (direct)	NA	NA	NA	NA	2	0	3	0		



		Ethiopia							
		STP - CD		STP - Platform		PHEP - Gambela		EWS - ICT	
Indicator	Sub-Indicator	W	O	W	O	W	O	W	O
	Technological literacy (indirect)	NA	NA	NA	NA	1	0	3	0
	Access to technology (direct)	NA	NA	NA	NA	2	0	3	1
	Access to technology (indirect)	NA	NA	NA	NA	1	0	3	1
	Quality of data gathered (direct)	NA	NA	NA	NA	2	0	3	0
	Quality of data gathered (indirect)	NA	NA	NA	NA	1	0	3	1
<b>Economic Impact</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>18</b>	<b>6</b>
An improvement in economic conditions for individuals, markets or national revenue.									
	Income / cost savings (direct)	NA	NA	NA	NA	2	0	3	1
	Income / cost savings (indirect)	NA	NA	NA	NA	2	0	3	1
	Employability (direct)	NA	NA	NA	NA	1	0	NA	NA
	Employability (indirect)	NA	NA	NA	NA	1	0	NA	NA
	GDP and tax contributions (direct)	NA	NA	NA	NA	1	0	3	1
	GDP and tax contributions (indirect)	NA	NA	NA	NA	2	0	3	1
	Market stability (direct)	NA	NA	NA	NA	NA	NA	3	1
	Market stability (indirect)	NA	NA	NA	NA	NA	NA	3	1
	<b>Sum</b>	<b>13</b>	<b>5</b>	<b>15</b>	<b>8</b>	<b>43</b>	<b>6</b>	<b>45</b>	<b>12</b>
	<b>Uplift</b>	<b>8</b>		<b>7</b>		<b>37</b>		<b>33</b>	
	<b>Total possible uplift</b>	<b>36</b>		<b>27</b>		<b>78</b>		<b>45</b>	
	<b>Total Capacity ROI Score %</b>	<b>22%</b>		<b>26%</b>		<b>47%</b>		<b>73%</b>	

## SYSTEM LEVEL - THE PHILIPPINES

TABLE 29 - CAPACITY ROI CALCULATIONS - SYSTEM LEVEL - THE PHILIPPINES

		Philippines					
		Alert		RICAA - IOM		Financial Enabler	
Indicator	Sub-Indicator	W	O	W	O	W	O
<b>Humanitarian Governance</b>		<b>18</b>	<b>0</b>	<b>23</b>	<b>20</b>	<b>5</b>	<b>0</b>
An improvement in the use of institutions, structures of authority and collaboration among stakeholders to allocate resources and coordinate or control delivery of humanitarian preparedness and response.							
	Coordination (direct)	2	0	3	2	NA	NA
	Coordination (indirect)	2	0	3	2	NA	NA
	Partnerships (direct)	2	0	3	3	2	0
	Partnerships (indirect)	1	0	NA	NA	2	0
	Emergency planning (direct)	3	0	NA	NA	NA	NA
	Emergency planning (indirect)	3	0	NA	NA	NA	NA
	Transparency of aid (direct)	1	0	3	2	1	0
	Transparency of aid (indirect)	2	0	2	2	NA	NA
	Emergency forecasting (direct)	2	0	3	3	NA	NA
	Emergency forecasting (indirect)	NA	NA	3	3	NA	NA
	Financing / financial management (direct)	NA	NA	3	3	NA	NA
	Financing / financial management (indirect)	NA	NA	NA	NA	NA	NA
<b>National leadership</b>		<b>2</b>	<b>0</b>	<b>12</b>	<b>7</b>	<b>0</b>	<b>0</b>

		Philippines					
		Alert		RICAA - IOM		Financial Enabler	
Indicator	Sub-Indicator	W	O	W	O	W	O
	Government accountability (direct)	NA	NA	1	1	NA	NA
	Government accountability (indirect)	NA	NA	3	1	NA	NA
	Government transparency (direct)	NA	NA	1	1	NA	NA
	Government transparency (indirect)	NA	NA	1	1	NA	NA
	National communication (direct)	1	0	2	1	NA	NA
	National communication (indirect)	NA	NA	NA	NA	NA	NA
	Government legitimacy (direct)	NA	NA	NA	NA	NA	NA
	Government legitimacy (indirect)	NA	NA	NA	NA	NA	NA
	National / local ownership (direct)	1	0	2	1	NA	NA
	National / local ownership (indirect)	NA	NA	2	1	NA	NA
<b>Social Impact</b>		<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>2</b>
An improvement in the social conditions that enable the development of both individuals and communities.							
	Empowerment (direct)	NA	NA	NA	NA	3	0
	Empowerment (indirect)	NA	NA	NA	NA	2	0
	Inclusiveness (direct)	NA	NA	NA	NA	2	1
	Inclusiveness (indirect)	NA	NA	NA	NA	2	1
	Basic needs (direct)	NA	NA	NA	NA	NA	NA
	Basic needs (indirect)	NA	NA	NA	NA	NA	NA
	Health and wellbeing (direct)	NA	NA	NA	NA	NA	NA
	Health and wellbeing (indirect)	NA	NA	NA	NA	NA	NA
	Social cohesion (direct)	2	0	NA	NA	NA	NA
	Future aspirations (direct)	1	0	NA	NA	NA	NA
<b>Technological Infrastructure</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
An improvement in access to and the use of technology.							
	Technological literacy (direct)	NA	NA	2	1	NA	NA
	Technological literacy (indirect)	NA	NA	2	1	NA	NA
	Access to technology (direct)	NA	NA	2	1	NA	NA
	Access to technology (indirect)	NA	NA	1	1	NA	NA
	Quality of data gathered (direct)	NA	NA	2	1	NA	NA
	Quality of data gathered (indirect)	NA	NA	2	1	NA	NA
<b>Economic Impact</b>		<b>0</b>	<b>0</b>	<b>11</b>	<b>6</b>	<b>0</b>	<b>0</b>
An improvement in economic conditions for individuals, markets or national revenue.							
	Income / cost savings (direct)	NA	NA	NA	NA	NA	NA
	Income / cost savings (indirect)	NA	NA	NA	NA	NA	NA
	Employability (direct)	NA	NA	NA	NA	NA	NA
	Employability (indirect)	NA	NA	NA	NA	NA	NA
	GDP and tax contributions (direct)	NA	NA	NA	NA	NA	NA
	GDP and tax contributions (indirect)	NA	NA	NA	NA	NA	NA
	Market stability (direct)	NA	NA	NA	NA	NA	NA
	Market stability (indirect)	NA	NA	NA	NA	NA	NA
	Sum	23	0	46	33	14	2
	Uplift	23		13		12	
	Total possible uplift	39		63		21	
	Total Capacity ROI Score %	59%		21%		57%	

## TIME ROI CALCULATIONS

### ETHIOPIA

TABLE 30 – TIME ROI CALCULATIONS – ETHIOPIA

Investment	Risk scenario	Risk annual frequency	Without lead time	With lead time	Time ROI (per risk)	Time ROI (risk/weighted average)
PHEP - Gambela	Malaria	200%	44	3.5	81	42 days saved
	Acute Watery Disease	20%	17.5	1.5	3.2	
STP Platform	Various - mainly droughts	100%	30	11.5	18.5	19 days saved
STP Capacity Development	Various - mainly droughts	100%	123	11	112	112 days saved
EWS - ICT	Drought	100%	191	8	183	96 days saved
	Flash flood	100%	10	1.5	8.5	
EWS - Capacity Building	Drought	100%	90	30	60	49 days saved
	Flash flood	100%	45	7	38	

### THE PHILIPPINES

TABLE 31 – TIME ROI CALCULATIONS – THE PHILIPPINES

Investment	Risk scenario	Risk annual frequency	Without lead time	With lead time	Time ROI (per risk)	Time ROI (risk/weighted average)
RICAA – IOM	Small typhoon	500%	5	0.5	4.5	14 days saved
	Large-scale conflict	25%	20	0.5	19.5	
PIP – GBV	Various	NA	180	1	179	179 days saved
ALERT	Small typhoon	500%	4.5	2	2.5	7 days saved
	Large-scale conflict	25%	9.5	4.5	5	
Financial Enabler	Small typhoon	NA	14	3	11	11 days saved
TSC Training	Various	NA	14	2	12	12 days saved
TSC Platform	Various	NA	14	1	13	13 days saved

⋮

## FINANCIAL ROI CALCULATIONS

The tables below are samples of excel sheets used to model Financial ROI indicators. Complete calculations for all investments are available upon request.

### ETHIOPIA BUSINESS CASE 1 - EARLY WARNING SYSTEM (EWS) - INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

TABLE 32 - FINANCIAL ROI CALCULATIONS - ETHIOPIA - BUSINESS CASE 1 - EWS - ICT -ROI CALCULATIONS

ROI Indicators			
	Parameters		Unit
	Time Horizon (H)	13	years
	Discount Rate (r)	10.0%	yearly discount rate
	Investment	H-ROI over entire time horizon (H)	Unit
$I_0$	Initial investment (year 0)	£ -	GBP
$I = I_0 + C + D + E$	Total actualized investment	£ 391,575.09	GBP
	ROI Indicators	H-ROI over entire time horizon (H)	Unit
	Cost saving		
$(C_{without} - R_{without}) - (C_{with} + I - R_{with})$	Total present value of saving	£ 1,910,830.68	GBP
$ROI = [(C_{without} - R_{without}) - (C_{with} + I - R_{with})] / I$	ROI ratio	£ 5.88	GBP per GBP invested
$ROI - 1 = [(C_{without} - R_{without}) - (C_{with} + I - R_{with})] / I$	Net ROI ratio	£ 4.88	GBP per GBP invested
	IRR	53%	Annual interest rate
Calculations			
$E_j$	Average number of emergencies in each year		
$P_{1j}$	Probability of having the first event in year j		
$1/(1+r)^j$	Discount factor in each year		
$X = \sum P_{1j} / (1+r)^j$	Average of the Discount factors in the year of the first	-	
<b>Cost</b>			
<i>Cost variables (from Cashflow Sheet)</i>			<i>steady state values</i>
<b>WITH</b>			
$I_0$	"With" Initial investment	-	GBP
$I_{1j}$	"With" further total investments to complete the investment in year j		GBP
$I_e$	"With" Investment after each emergency		GBP per emergency
$E_y$	"With" Enabling cost per year	680	GBP/year
$U_e$	"With" Use cost per emergency		GBP per emergency
$U_y$	"With" Use cost per year	18,836	GBP/year
$R$	"With" Residual value	-	GBP
<b>WITHOUT</b>			
$I_0^o$	"Without" Initial investment		GBP
$I_{1j}^o$	"Without" further total investments to complete the investment in year j		GBP
$I_e^o$	"Without" Investment after each emergency		GBP per emergency
$E_y^o$	"Without" Enabling cost per year		GBP/year
$U_e^o$	"Without" Use cost per emergency		GBP per emergency
$U_y^o$	"Without" Use cost per year	517,570	GBP/year
$R^o$	"Without" Residual value		GBP
<i>Intermediate Cost calculations for ROI</i>			<i>actualized, total over entire time horizon (H)</i>
<b>WITH</b>			
$A = \sum U_e^j * E_j / (1+r)^j$	Total actualized use cost of all emergencies	-	GBP
$B = \sum U_y^j * (1+r)^j$	Total actualized yearly cost using the investment	1374075.464	GBP
$C = \sum I_{1j}^j / (1+r)^j$	Actualized investment after the initial one	388435.8661	GBP
$D = \sum I_e^j * E_j / (1+r)^j$	Actualized Investment after each emergency costs	-	GBP
$E = \sum E_y^j / (1+r)^j$	Actualized yearly enabling cost	3,139	GBP
$R_{with} = R / (1+r)^H$	Actualized residual value	-	GBP
$C_{with} = A + B$	Total actualized use cost	1,374,075	GBP
$I = I_0 + C + D + E$	Total actualized investment		<b>391,575</b>
<b>WITHOUT</b>			
$A^o = \sum U_e^j * E_j / (1+r)^j$	Total actualized use cost of all emergencies	-	GBP
$B^o = \sum U_y^j * (1+r)^j$	Total actualized yearly cost using the investment	3,676,481	GBP
$C^o = \sum I_{1j}^j / (1+r)^j$	Actualized investment after the initial one	-	GBP
$D^o = \sum I_e^j * E_j / (1+r)^j$	Actualized Investment after each emergency costs	-	GBP
$E^o = \sum E_y^j / (1+r)^j$	Actualized yearly enabling cost	-	GBP
$R_{without} = R^o / (1+r)^H$	Actualized residual value	-	GBP
$C_{without} = I_0^o + A^o + B^o + C^o + D^o + E^o$	Total actualized use cost	3,676,481	GBP

**TABLE 33 - FINANCIAL ROI CALCULATIONS - ETHIOPIA - BUSINESS CASE 1 - EWS - ICT - CASHFLOWS**

Financial-With		Unit	Item	Value
Io	"With" Initial investment	GBP		
Iyj	"With" further investments to complete the investment in year j			£ 462,710.65
ie	"With" Investment after each emergency			
ey	"With" Enabling cost per year	GBP per year	ICT Maintenance	£ 680.00
ue	"With" Use cost per emergency	GBP per emergency		
uy	"With" Use cost per year	GBP per year	EWS operation + Connectivity	£ 18,836.00
R	"With" Residual value			
Financial-Without				
Io°	"Without" Initial investment			
Iyj°	"Without" further investments to complete the investment in year j			
ie°	"Without" Investment after each emergency			
ey°	"Without" Enabling cost per year			
ue°	"Without" Use cost per emergency			
uy°	"Without" Use cost per year	GBP per year		£ 517,569.60
R°	"Without" Residual value	GBP per year		

**TABLE 34 - FINANCIAL ROI CALCULATIONS - ETHIOPIA - BUSINESS CASE 1 - EWS - ICT - WITH AND WITHOUT DATA**

Personnel costs	With (per Wareda, per annum - 12 months)			Without (per Wareda, per annum 2 round assessment)								
	Number of staff	Number of staff days	Daily salary (ETB)	Number of staff	Number of staff days	Daily salary (GBP)	Total salary staff (GBP)	Number of Travel days	Daily travel per diem (GBP)	Days travelled	Total per diem per year	
INGO staffs	42	120	ETB 100.00	30	42	£ 82.00	£ 103,320.00	8	£ 82.00	240	£ 19,680.00	
National Employee staffs				12	42	£ 20.40	£ 10,281.60	8	£ 20.40	96	£ 1,958.40	
Regional Employee staffs				48	42	£ 20.40	£ 41,126.40	6	£ 20.40	288	£ 5,875.20	
Regional INGO staffs				24	42	£ 82.00	£ 82,656.00	6	£ 82.00	144	£ 11,808.00	
Wareda Employee staffs				120	20	£ 82.00	£ 196,800.00	0	£ -	0	£ -	
	total in GBP										total per diem in GBP	£ 39,321.60
	£ 17,136.00										total salary in GBP	£ 434,184.00

Travel costs	With (per Wareda, per annum)-		Without (per Wareda, per annum)			
	Number of trips per annum (include to and from destination)	Origin	Destination	Vehicle cost (including fuel) GBP	Number of travel/vehicle	Totals
Trip	No trip is required	Addis Ababa	the 6 pilot woredas	£ 102.00	N. vehicle-days per year	432
	Total in GBP		£ -		Total in GBP	#####

Maintenance costs	With (total ETB)	Without (total)
Connectivity	ETB 50,000.00	No connectivity
ICT Maintenance	ETB 20,000.00	
Total in GBP	£ 1,700,680.00	£ -

**TABLE 35 - FINANCIAL ROI CALCULATIONS - ETHIOPIA - BUSINESS CASE 1 - EWS - ICT - INVESTMENT COST**

Income / Expenditure Type	Total Project Budgeted Cost (GBP)	EWS ICT Investment			Total ICT Investment Cost
		Y1	Y2	Y3	
<b>Indirect Costs</b>					
Indirect Salaries	£ 89,907.00	£ 20,445.05	£ 26,434.07	£ 6,166.02	£ 53,045.13
<b>Direct Costs</b>					
Direct Salaries	£ 67,020.00	£ 15,127.60	£ 19,342.56	£ 5,071.64	£ 39,541.80
Operational	£ 126,082.50	£ 2,303.36	£ 59,622.16	£ 12,463.16	£ 74,388.68
Monitoring & Evaluation	£ 53,303.00	£ 4,118.20	£ 17,017.37	£ 10,313.20	£ 31,448.77
	£ -				
Communications	£ 30,936.00	£ 4,929.45	£ 8,755.01	£ 4,567.78	£ 18,252.24
	£ -				
Capacity Development	£ 331,817.94	£ 58,329.09	£ 133,030.29	£ 4,413.20	£ 195,772.58
Subtotal	£ 699,066.44	£ 105,252.75	£ 264,201.45	£ 42,995.00	£ 412,449.20
NPAC	£ 83,188.91	£ 12,525.08	£ 31,439.97	£ 5,116.40	£ 49,081.45
Audit Costs	£ 2,000.00	£ -	£ -	£ 1,180.00	£ 1,180.00
<b>Grand Total</b>	<b>£ 784,255.34</b>	<b>£ 117,777.83</b>	<b>£ 295,641.42</b>	<b>£ 49,291.40</b>	<b>£ 462,710.65</b>

## ANNEX 4: DEPP PROJECTS AND INVESTMENTS ANALYSED

The tables below break the DEPP projects analysed down into the specific investments appraised in this study.

### ETHIOPIA PROJECTS AND INVESTMENTS

TABLE 36 - ETHIOPIA PROJECTS AND INVESTMENTS

Project Name	Project Description	Investment Name	Investment Description	Level of Focus	Type of Investment
Early Warning System	Working with the Ethiopian government to develop a context-specific early warning system to facilitate well-informed early action at the community level.	EWS - ICT	Developing context-specific multi-hazard multi-sector EWS ICT system	System	Process
		EWS - Capacity Development	Improving the capacity of community institutions and government structure (at all levels) to effectively manage EWs information, disseminate alerts	Organisation	Capacity
Shift the Power	Strengthening local and national organisational capacity for decision-making and leadership in humanitarian response.	STP - Capacity Development	Increasing capacity to determine and deliver emergency preparedness and response by Local and National NGOs using the SHAPE framework	Organisation	Capacity
		STP - Platform	Improving the influence and inter-connectedness of Local and National NGOs through the establishment of a platform-based governance body.	Organisation	Coordination
Public Health Emergencies Preparedness in Gambela	Developing a resilient health system that has the capacity to anticipate and respond to health emergencies.	PHEP - Gambela	Improving local capacity and health laboratories, to develop a resilient health system to anticipate, prevent, detect and respond to public health emergencies.	System, Individual	Information

## PHILIPPINES PROJECTS AND INVESTMENTS

TABLE 37 - PHILIPPINES PROJECTS AND INVESTMENTS

PROJECT NAME	PROJECT DESCRIPTION	INVESTMENT NAME	INVESTMENT DESCRIPTION	LEVEL OF FOCUS	TYPE OF INVESTMENT
Transform Surge Capital	Working to understand how to deliver more effective surge capacity through surge platforms, shared rosters, piloting projects on collaborative engagement, embedding training, and disseminating learning and resources.	TSC Training	To build the skills and capacity of humanitarian workers based at regional/ national levels.	Individual	Capabilities
		TSC Platform	To create a central hub for piloting new delivery approaches.	Organisation	Coordination
Protection in Practice	Building the capacity of national and international organisations and local partners to integrate protection principles into their responses.	PIP – Gender-Based Violence	To strengthen the practices of humanitarian organisations to respond to the protection needs of crisis-affected people, with a focus on women, girls and marginalised groups, in supporting how they can report and ask for assistance.	Individual	Capabilities
Financial Enabler	Addressing the capacity gap at the national level by investing in collaborative capacity-strengthening agendas for national NGOs and CSOs.	Financial Enabler	To fund and support national programmes on capacity development.	Organisation	Process
ALERT	Developing an emergency preparedness process (systems, software, tools and manuals) for humanitarian organisations that are easy to use, appropriate and adaptable.	ALERT	To develop a new emergency management platform, that is easy to use and integrate in various organisations.	Organisation	Information
CDAC	Contribute to the improved effectiveness of humanitarian assistance to disaster-affected communities, through predictable, coordinated and resourced two-way communication.	RICAA – IOM	To improve communication with communities using a Rapid Information Communication Accountability Assessment (RICAA) Tool. This investment focuses on further developing RICAA and enabling its integration with individual organisations' tools.	Organisation, System	Information





