



CDC Good Practice



Preventing Fatalities and Serious Accidents

What's this guide for?

CDC Group, London

At CDC we have chosen to focus the impact we seek to achieve on the creation of jobs. This is because of the enormous impact a job has on the life of an individual and their family, especially in lifting themselves out of poverty.

However, although we want to support the creation of as many jobs as possible, especially in places where the private sector is weak and formal employment low, we also care intensely about the conditions of workers and their safety. Any workplace or work-related accident is a tragedy and can have ramifications well beyond the life of the individual affected. And so, helping management teams (either directly or through our partner fund managers) to prevent and reduce accidents is a priority for us. It receives explicit Board attention and this guidance is part of our desire to achieve safer workplaces across Africa and South Asia.

Diana Noble, CEO

This guide details the causes and potential impacts of fatal accidents and provides practical guidance for fund managers and investors to help prevent the occurrence of such accidents.

Section 2 in particular provides detailed and actionable guidelines. We anticipate that sections of the guide will be valuable for those responsible for workplace safety within companies as well.

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Context

A. Introduction

Setting the scene

According to the [International Labour Organisation \(ILO\)](#), there are more than 2.3 million deaths per year globally as a result of accidents at work¹ or work-related diseases. In developed countries, annual workplace fatal accident rates are typically between 0.5 and 3.5 per 100,000 workers. By contrast, the ILO estimates an annual global average rate of around 13 fatalities per 100,000, while rates in the emerging markets of sub-Saharan Africa, South Asia and Latin America are estimated at between 17 and 19 per 100,000².

The numbers above are stark and a reminder of how challenging it is to reduce workplace fatalities and serious accidents in emerging markets. In this context, investors have a great opportunity to address fatal accidents by assisting the creation of a clear, risk-based approach to health and safety management, backed at a senior level within a company. Investors in emerging markets may initially encounter [poor understanding of environmental and social practice in the workplace](#) (including standards of health and safety) and are aware that there is often [limited enforcement](#) by the state or sanctions for companies/contractors whose health and safety performance is poor.

CDC's mission

Our mission is to support the building of businesses throughout [Africa and South Asia](#), to create jobs and make a lasting difference to people's lives in some of the world's poorest places. We believe job creation is essential both in Africa and South Asia, where two thirds of those of working age today are without formal jobs and where demographic growth will hugely exacerbate this challenge over the next decade. At a human level, [employment has a transformative effect on the life](#) of individuals and their families and dependents. So we recognise the [profound implications that any incident involving serious injury or loss of life can have](#) on the person affected as well as on their family and dependents. We are determined to work with our investment partners to reduce these incidents.

2.3m+

According to the International Labour Organisation (ILO), there are more than 2.3 million deaths per year globally as a result of accidents at work¹ or work-related diseases.

¹ An adverse event that results in injury/death/ill health or some other loss or damage.

² Research conducted by Hamalainen, Saarela and Takala in *Journal of Safety Research* (40) 2009 pp. 125-139, suggested that under 5% of accidents estimated to have happened annually are actually formally reported to the ILO.

The cost

Aside from the human tragedy and wider implications, there are also considerable economic and business costs to accidents. The ILO estimates the cost of workplace accidents to be around 4% of global Gross Domestic Product, or put another way, workplace accidents have a significant impact upon company performance. Many of these costs are not covered by insurance.

Addressing accidents (as part of investors' broader focus on workplace health and safety) is therefore a material consideration in the sectors and locations where CDC and its fund managers invest. Through this Good Practice Guide, CDC intends to provide practical guidance and to demonstrate what investors can do to help reduce workplace accidents.

4% GDP

The ILO estimates the cost of workplace accidents to be around 4% of global Gross Domestic Product.

Fig 1.³
Typical annual workplace fatal accident rates per 100,000 workers



17-19

sub-Saharan Africa, South Asia and Latin America²



0.5-3.5

Developed countries

³ Global average of 13 fatalities per 100,000 employees whilst the ILO also believes there is significant underreporting in some markets.

Context

B. CDC's experience and objective for this guidance

Background

CDC asks all investees and fund managers who manage its capital to report fatal workplace accidents, including accidents involving contractors. This exercise has a dual purpose. Of highest priority is to **avoid the repetition of similar accidents through the effective implementation of appropriate corrective and preventive actions** and to ensure that the fund manager/company management is adequately committed to improving workplace conditions. A secondary purpose is to ensure that CDC capital fosters better Occupational Health and Safety (OHS) performance.

Between 2010 and 2013, 161 fatalities were reported to CDC from the portfolio companies in which CDC's capital is invested⁴. The victims of these 161 fatalities were employees and contractors working at a company where CDC's capital is invested. In 2013, there were 62 workplace fatalities suffered by employees and contractors. Between 2010 and 2013, the distribution of fatal accidents by industry sector was as shown opposite in Fig 2.

CDC's portfolio has suffered fatal accidents in industry sectors including **utilities (e.g. construction of power stations and distribution networks), transport and logistics, manufacturing, forestry and fishery**. There is some correlation with findings of the US Bureau of Labor which identifies forestry, transport and mining as particularly high risk industry sectors⁵.

CDC has also analysed the fatalities in its portfolio to assess the types of activity being undertaken when the fatal accident occurred⁶.

Objective of this document

Based on the information and the clustering of fatalities around certain sectors and activities, CDC believes there is value in providing practical and concise guidance to investors and managers on how to help prevent accidents. CDC's aim is to help investors and managers understand how to **minimise risks of fatal/serious incidents, and how to react when they encounter them, to help prevent future accidents**.

CDC's approach is framed against the broader backdrop of integrating Health and Safety (HS) considerations at portfolio companies into the investment process. Key accident-related health and safety principles are outlined in Section 1D, although elsewhere the guide is designed to be non-technical/specialised. Throughout, there will be particular emphasis on preventing the **types of serious accidents identified through information from CDC's portfolio**. The guide will also show how investors and managers can use their influence to impact positively on the causal factors relating to particular types of accidents.

There are other workplace health and safety risks (e.g. exposure to hazardous chemicals, work-related stress, muscular-skeletal disorder risks, and fire and explosion risks) not expressly included in this guide. These are also relevant and if not addressed, may also lead to serious or fatal accidents. The explicit focus here is on preventing the occurrence of fatal and serious accidents which are deemed more frequent in CDC's portfolio based on data reported. Section 3B presents a framework that can be used when encountering HS risks/hazards not explicitly referenced within this guide.

⁴ CDC-backed companies employed around 1,113,000 employees in 2013. All accidents analysed here occurred at investee businesses of CDC's private equity fund portfolio.

⁵ United States Department of Labor, Bureau of Labor Statistics, Fatal Occupational Injuries, total hours worked, and rates of fatal occupational injuries by selected worker characteristics, occupations and industries, civilian workers, 2012. See www.bls.gov/iif/oshcfoi1.htm#charts.

⁶ Since CDC aims to invest in sectors where its job creation focus can have the greatest impact, its investments are skewed towards certain sectors; therefore the breakdown of fatalities by sector would differ from more general trends cited in studies.

Fig 2.
**Fatal accidents by sector in CDC's
 portfolio (%)⁷**
 2010 – 2013



Fig 3.
**Activities resulting in employee/contractor
 fatal accidents in CDC's portfolio (%)⁹**
 2010 – 2013



7 Numbers based on fatal incidents reported to CDC between 2010 and 2013 in relation to fatalities involving employees/contractors. Construction may be included in other sectors.

8 Other includes business services, financial services and public services.

9 Numbers based on fatal incidents reported to CDC between 2010 and 2013.

10 Other types of accident includes entering excavations, confined spaces, drowning, exposure to hazardous substances, etc.

Context

C. Cost and impact of accidents

Business costs

Serious and fatal accidents can be visualised as being the top of a pyramid with a significantly larger number of less-serious accidents (and no-injury accidents) beneath. In the 1950s, Herbert William Heinrich suggested the ratio shown in Fig 5¹¹. Whilst many different versions of these ratios have been developed subsequently, the key point is a simple one – that for every major injury accident, there have typically been around 300 less serious accidents.

Each of these less-serious accidents needs to be viewed as an opportunity to learn and apply a corrective/preventive action approach to manage risk. Applied across an organisation, such an approach can significantly reduce the likelihood of a more serious accident. There is, as one might expect, no predicting when each accident type will occur and of course the nature and type of the minor accident may not directly link to that of a major accident. Thus, tackling the ‘no-injury’ accidents in itself will not eliminate major accidents, but will develop a systematic approach to safety that reduces their likelihood.

The real picture is more complex than this, but from an investor’s perspective, it is clear that the 300 ‘no-injury’ accidents are, when considered together, likely to have a significant detrimental impact (both financial and non-financial) upon an organisation. This illustrates why investors need to understand a company’s approach to all accidents, specifically reporting, investigation and corrective actions, not just those making ‘headline news’.

Human costs

Research shows that in developing economies, a single worker will typically support four or five dependents¹², including their family. If a worker dies or is injured and unable to work, the impact on that person’s dependents may include:

- In the absence of a welfare safety net, loss of wages means no money for food, shelter and clothing;
- Children’s school fees and family medical bills may go unpaid, with implications at health and education levels; and
- Other family members, including children, may be forced to seek paid employment, preventing them from pursuing their studies.

Business implications

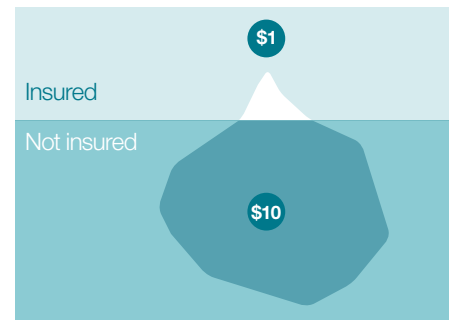
In addition to the human impact, accidents bring a range of other commercial impacts including:

- **Downtime:** serious accidents can lead to and legally require temporary site shut-downs until an external authority gives permission to re-open;
- **Loss of production:** and resulting losses due to issues such as power-down and power-up time;
- **Loss of equipment:** vehicles, facilities, etc;
- **Morale:** lower productivity and higher staff turnover;
- **Loss of business:** buyers changing suppliers, contractors being dropped; and
- **Adverse publicity:** and damaged reputation.

Each of these represents real costs to a company, most of which are not likely to be covered by insurance.

The ILO estimates that around 4% of GDP is lost due to work-related accidents and ill health. Ensuring a company is clearly focused on managing safety in the workplace is therefore not a merely ethical issue, it is a sound commercial one.

Fig 4.
Cost of accidents



The UK Health and Safety Executive (HSE) estimated in 2012 that uninsured losses associated with an accident are at least ten times the value of any insurance premiums paid. An analogy of an iceberg is often used where hidden costs are those below the water and which are not typically covered by insurance.

Insured: injury, loss, damage, ill health.

Not insured: loss of production, power-down, power-up, delays to production, loss of business, reputational damage, investigation time, clean-up/clear-up, claim excess, overtime, impact on morale, impact on recruitment and retention of staff.

It is worth noting that government-backed employment injury insurance coverage in sub-Saharan Africa is estimated by ILO to cover as little as 10% of the workforce.

11 Heinrich, Industrial Accident Prevention, 3rd edition, 1951

12 Bongaarts J. 2011, 'Can family planning programs reduce high desired family size in sub-Saharan Africa?' International Perspectives on Sexual and Reproductive Health. 2011 Dec;37(4):209-16.

Fig 5.
Herbert William Heinrich Ratio

The key to preventing major accidents and fatalities in the workplace is to ensure a systematic approach to investigating all accidents and incorporating the lessons learned into a robust, risk-based approach to safe working across the organisation.



“For every major injury accident within an organisation, there are typically around 300 less serious incidents.”

Context

D. Key principles of applying health and safety theory to accidents

Introduction

Workplace accidents are not an inevitable consequence of economic activity, and as CDC data demonstrates they are not confined to highly complex industry sectors which are acknowledged as being of high risk (e.g. construction) and can occur as a result of everyday activities being undertaken in the workplace.

Investors should be aware that accidents occur for a number of reasons and that it is necessary to look beyond direct level factors (which represent the immediate cause of the accident) to get to environmental and policy failings that can be addressed in order to prevent repetition.

Root cause of accidents

This diagram shows how investors can be more strategic and go beyond identifying the agent of injury in order to consider root cause and thereby use their influence to change company behaviour and culture. See also Section 3A: Investor Response to Accidents.

This guide is primarily focused on accidents, but at macro level, fatal and serious accidents have a range of causal factors.

Hazards and risks

Most accidents can therefore be prevented through the application of simple measures to effectively identify hazards, and properly control risks. A hazard is a source of potential, damage, harm or adverse effect including ill health and injury (e.g. electricity). A risk is the probability and severity of the damage, harm or adverse effect occurring.

If investors understand both terms and think along the lines of the potential causes above, they can prioritise accident prevention measures that really matter.

Investors should have a general understanding of the main hazards and risks present within an organisation. This will be the result of the due diligence work undertaken in advance of the investment decision, and the subsequent application of relevant international standards such as the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability, backed by the EHS Guidelines (particularly, Section 2: OHS or equivalent standards and Section 3: Community Health and Safety).

Fig 6.

Why do accidents happen?

Accidents often have numerous causes, which have developed over a period of time and in such a combination as to have made an accident virtually inevitable.

Causation levels

Root causes

The failure from which all other failings grow. Can be distant in relation to time and space from the accident, and is often linked to how an organisation is managed.



Underlying causes

Unsafe acts (e.g. balancing on a ladder) and unsafe conditions (e.g. working outside in windy weather).



Direct level causes (agent of injury)

E.g. sharp tool/contact with ground.



Investors' role

Investors have most significant influence here (e.g. Board seat/due diligence and specialist access/site visits) in reducing potential root causes of accidents through the promotion and support of initiatives to improve the management of safety within an organisation.

Investors will rarely be on site when an accident occurs although they may observe, or become aware of unsafe acts and conditions which they could challenge. Hence, it is vital that they use their influence to establish a positive HS culture at portfolio companies.

Investors should follow up on the accident (root cause analysis or RCA) and notify their own investors such as CDC via the Template Accident Report.

Fig 7.

Accidents: relevant factors to consider

Socio-economic and regulatory context factors

Social (e.g. low cost of labour), cultural (e.g. poor enforcement/regulation), commercial (e.g. buyer-seller contracts), political, regulatory.



Corporate policy level factors

Contracting strategy, company culture, ownership and control, HS management, labour relations, profitability.



Organisational level factors

Training, procedures, planning, supervision, communication, HS culture, attitude to risk, equipment purchasing, inspection, maintenance, process design, contracting.



Direct level factors

Competence, motivation/morale, team working, situational awareness, risk perception, fatigue, health, information, advice, operational equipment, safety equipment, environmental conditions.



Accidents are caused by each of the above levels



Fig 8.

Prevention principles

Prioritisation

Prioritisation is important when considering the management of workplace risk through the implementation of measures to eliminate and, where not possible, reduce the level of risk to an acceptable level. This level should be consistent with good international

industry practice¹³ as reflected in various internationally recognised sources including the World Bank Group Environmental, Health and Safety Guidelines. **Prioritisation should be done intelligently – avoid prioritising the easiest actions exclusively at the expense of considering materiality.**

Key principles

1. Eliminating or reducing hazards for example by substitution, replacing the dangerous with the less dangerous.

2. Isolating or controlling the hazard at source, for example through engineering controls.

3. Minimising the risk through design and use of safe systems of work.

4. Providing appropriate protective measures (e.g. PPE), prioritising the reduction of risk for the collective over that for the individual.

5. Reinforcing safe behaviours.

Prioritisation

Most likely to be effective at reducing risk of injury occurring, although may not always be technically feasible.

More likely to be effective at reducing risk of injury occurring, provided isolation/control devices are robust and not easily overridden.

Likely to be effective at reducing risk of injury occurring but requires information, training, support and reinforcement.

Should always be implemented when 1. – 3. are not sufficient to reduce the risk but should not be prioritised over 1. – 3.

Most evident in companies with mature risk management regimes, seeking to refine further their HS performance (see Section 1E). Should not be prioritised over 1. – 4.

Crosscutting

Providing safety awareness as well as risk/activity-focused refresher training is necessary at all levels of the HS management hierarchy. Appropriate training is a requirement across all levels of an organisation, and is a fundamental component of developing a credible safety culture.

¹³ Defined as the exercise of professional skill, diligence, and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances, globally or regionally.

Context

E. What investors can do

Purpose

Actions

Tools

Fig 9.

Integrating health and safety

Health and safety/accident prevention within the investment process

1. Site visit



- **Gather information** through a well-conducted site inspection together with interviews with key personnel. This can provide an indication as to the general approach to HS;
- **Observe working practices** and, where possible, speak with workers directly to gather further information. Remember to take effective measures to secure your own health and safety.
- Site visit to portfolio company – **prioritise** what you visit based on where you expect hazards to be located;
- Access **client capacity, commitment and track record** by asking questions with informed follow-up.
- **Section 3B Due diligence guidance** of this document and **Section 2** of this document;
- **CDC Toolkit on ESG for fund managers.**

2. Due diligence: professional support



- **Specialist HS consultants** should be involved in assisting with the making of an informed investment decision where significant hazards and risks are suspected;
- Advise on extent of **operational risk**.

- Expert consultants to spend time understanding the **approach/culture of HS** within the company;
- Expert consultant can provide some indication of the magnitude of the risk, and give an outline of potential **corrective actions** and the implications of these to inform investment decision.

- **Section 1D and 3A/B** for hazard/risk identification;
- **Section 2** to inform consultant Terms of Reference (TOR).

3. Legal terms



- **Communicate clearly** to the company what is expected by way of improvements;
- Use **cost and impacts arguments** to persuade management as necessary.

- Require portfolio company to implement an **agreed clear and time-bound action plan** as part of their investment agreement;
- Consider **accreditation** to a recognised HS management system and/or the appointment of a competent HS professional where none presently exists.

- **Section 1E** of this document;
- **Section 1C** of this document;
- **OSHAS 18001** and **CDC Toolkit on ESG for fund managers** and **HSG 65 2012**.

4. Monitoring



- Follow up to ensure **implementation** of what is agreed;
- Be **efficient** in anticipating/addressing future issues (continuous monitoring);
- Consider **additional review** when accidents occur.

- Use **channels of influence** (Board meetings, investor visits);
- Repeat **site visits** to monitor compliance and note observations via a progress report;
- Consider if **external specialists/** ongoing audits are required – especially when accidents repeat themselves or there is evidence of **system/process failures**.

- **Section 2** of this document for tips on site visits.

Context

E. What investors can do – investor interventions

Investor guidance

The due diligence guide in Section 3B provides investors with a means of assessing a portfolio company's approach to health and safety, specifically in relation to accident prevention. It is structured in terms of assessing client capacity, commitment and track record. Linking to the accident cause hierarchy in Section 1D above, investors can think in terms of:

- **Capacity.** Does the client have the capacity to identify hazards and significant risks and prioritise using an HS hierarchy above?
- **Commitment.** Is senior management aligned and can the company demonstrate processes to avoid accidents on the ground?
- **Track record.** Does the data back up the statements/documentation provided by senior management?

Sector focus

Investors can also consider what workplace risk areas may be particularly prevalent in the industry sector in which they are considering investing. The table in Fig 8. provides some guidance. It is not a definitive view, but rather serves to illustrate, based on analysis of CDC data, areas of potentially greatest risk across each sector. Investors may wish to refer to this table to in order to prioritise their HS approach to specific companies.

Focus on risk areas

Where particular risk areas are identified, investors should consider supplementing general questions in Section 3B with the specific guidance by type of activity in Section 2 below.

Accident prevention post-investment

During the monitoring phase, investors will most likely not be 'on the ground' when accidents occur and may be geographically remote from the scene. Proactive monitoring is key and investors should ensure that they know the hazard 'burden', understand how the company is organised to effectively manage the resultant risks and have obtained sufficient reassurance that this is happening. There are still a range of means through which investors can be both proactive and reactive depending on circumstance. These are outlined on the page opposite.

Proactive interventions

Investors can influence and monitor a company's performance via:

- Use of **Board presence/management contacts** to explain the relevance of adequate occupational health and safety management practices and to ask questions on occupational health and safety strategies, objectives, management measures and performance. Site visits to operational sites allow information gathering at both manager level and if possible at worker level (with a focus on industry sectors/activities that are known to be high risk);
- **Requesting emergency planning and response provisions** (first responder, first aid and evacuation, medical support, critical plant and equipment fail-safe systems, reporting and notification systems, recovery plans);
- **Overseeing accident investigation**, follow-up and corrective action management procedures (root cause approach – see Section 8, access to expertise, linkage to management of operational risk); and
- **Re-enforcing safe behaviour** – Investors and senior management should set the tone when visiting operational facilities (wear PPE, insist on a safety briefing, dedicated discussion time on HS at Board meetings).

Reactive interventions to accidents

Understand what has happened, why, what is planned to avoid recurrence and request evidence and/or provide assistance to ensure that planned actions have been implemented and are working. Investor response should include:

- **Review of key facts**, communicated within a reasonable time frame (what has happened, injuries/fatalities/loss/damage, immediate actions undertaken, current status and schedule of further communication and root causes);
- **Management response** to investigation findings and finalised corrective/preventive action plan (allocated, time-lined and budgeted where necessary), counselling for staff/reassurance that company is acting on the accident and eliminating, or where not possible, addressing/reducing likelihood of future accidents;
- **Confirmation** that plan has been successfully implemented and that the objectives of the plan have been met; and
- **Require additional reassurance**, in the form of a third party review of the effectiveness of risk control measures in the event of recurring accidents, especially when of a similar type.

Fig 10.

Identifying risk areas by industry sector

Risk area leading to serious or fatal accidents¹⁴

Sectors¹⁵

	Utilities	Transport	Mineral	Manufacturing – light	Manufacturing – heavy	Forestry	Construction	Communication
Contractors	●	●	●	●	●	●	●	●
Working at height	●	●	●	●	●	●	●	●
Workplace vehicles	●	●	●	●	●	●	●	●
Moving machinery	●	●	●	●	●	●	●	●
Flying/falling objects	●	●	●	●	●	●	●	●
Occupational road risk	●	●	●	●	●	●	●	●
Electricity	●	●	●	●	●	●	●	●

● Priority area (analysis shows a strong prevalence for this risk area within this sector) – investors should seek reassurance that risk is managed as a priority

● Case-by-case (analysis does not show a strong prevalence for this risk area) – investors should seek reassurance that risk is managed on a case-by-case basis

¹⁴ Only risk areas identified as the most relevant based on data reported to CDC. Other risks may be present and may cause fatal/serious incidents if not properly managed.

¹⁵ The classification of sectors used here relates to those sectors where accidents frequently occur according to CDC data. These are not the same as the sectors used for CDC's development impact grid.

Context

E. What investors can do – certification and ongoing investment

Establishing a safety culture

The establishment of a risk and safety management system, whether certified or not, is a key step towards reducing workplace accidents. However, for such a system to be effective, the organisation needs to ensure safety considerations are fully integrated into the business at every level. For this to happen, everyone working in or for the organisation must understand the importance of safety, the part they play in it, and the importance attached to it by the organisation. In the best organisations, this becomes a set of shared values, frequently referred to as a 'safety culture', and evidenced through understanding, commitment and safe behaviour from the boardroom to the factory floor, construction site, mine or any other workplace.

In the most safety-conscious organisations, there is a heavy emphasis on safety as the number one priority, backed by continuous monitoring, site inspections and consequent improvements reflecting lessons learned and advances in risk management within the sector. Typically, an open approach to risk management, communication and positive reinforcement of safe behaviours serve to support such an approach.

Health and safety certification

CDC strongly encourages investors and its managers to implement a formal approach to managing HS/accident-related issues within their portfolio companies.

One of the most widely adopted initiatives is **OHSAS 18001**: www.bsigroup.co.uk/en-GB/ohsas-18001-occupational-health-and-safety

This is an internationally recognised HS management system, based on a 'Plan, Do, Act, Check, Improve' approach. OHSAS 18001 is expected to become ISO 45001 in 2016, in order to fully align with ISO 9001 and ISO 14001. Other management systems worth considering in relation to health and safety include the recently revised and streamlined UK HSE-developed management tool **HSG 65**.

As previously indicated, while the establishment of a management system (even a certified management system) is a vital first step, it is not sufficient in isolation as it must be accompanied by the **growth and development of a safety culture as outlined above**. The key to reducing accidents is to ensure that this culture creates an environment where individuals know that safety comes first, and consequently understand that safe behaviour in support of this is reinforced.

What does an effective risk assessment look like?

Frequently, the term 'risk assessment' is used as a catch-all term to refer to a document claiming to demonstrate sound HS management for a given activity. However, risk assessment is a process, and any documented output from it should include the following:

- Clear **description of activity and identification of hazards**;
- **Who will do it** and their competencies, where, when, for how long and what resources and equipment will be required;
- **Balanced evaluation** of risks with directly linked control measures;
- **Details/evidence** of involvement of workforce and appropriate professionals/ third-parties; and
- **Evidence of implementation** (including training/translation as needed, insertion into working procedure, provision of equipment), review of effectiveness, and revisions to improve effectiveness.

Excessively wordy documents are unlikely to be followed and may not be fully understood. Those with clear, simple messages work best at controlling risk. Crucially, both workers and managers should be able to explain the provisions of any risk assessment document, and outline their individual responsibilities to ensure that it is followed.



 **Improving safety culture in a South African company**

A South African company has used various tools to improve safety culture and performance including:

- A multi-coloured card system whereby contractors and employees are recognised, rewarded, or stopped, warned, and where necessary, recorded based on their positive or negative safety performance on the job; and
- A contractor safety rating system, which is compiled and shared back with the contractors.

2



Preventing accidents

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Preventing accidents

A. Working at height¹⁶

Background

Globally, falls from height are one of the most common types of fatal accident in the workplace. Where data are available, up to one third of all workplace fatalities can be as a result of falls from height, and of those typically 10% are as a result of a fall from less than three metres where an activity has not been identified as hazardous, or as a result of activities that are not generally perceived as high risk. In many cases, falls occur during construction work, but can also occur as a result of maintenance, manufacturing, mining, agricultural and transport activities.

Key areas of risk include:

- **Construction:** falls from scaffolding and unguarded openings/shafts, work from ladders, falls into excavations;
- **Maintenance:** Falls from ladders/ other access equipment, falls through roofing surfaces;
- **Manufacturing:** falls from elevated plant and machinery/overhead equipment, falls associated with uncontrolled releases of vapour/gas, for example;
- **Mining:** Falls associated with lifting/access equipment failure and unguarded/poorly lit breaks of slope/shafts;
- **Agriculture:** falls from agricultural equipment, elevated storage and processing activities; and
- **Transport:** falls from loading/unloading activities.

Between 2010 and 2013, falls from height across CDC investee companies led to 22 fatalities (14% of the total workplace fatalities in that period). As the examples above show, falls from height can occur across a wide range of activities and working locations.

Key characteristics of companies effectively managing working at height risks

Fatalities often occur when personnel (and others) working at height/encountering fall hazards do so as a 'one-off' activity, often without a formal assessment of the risks involved, and consequently without suitable risk control measures. When encountering working from height, companies (and their investors) need to be reassured that not only is a company's day-to-day approach to working at height robust, but also that there is sufficient provision for the identification of fall hazards across the workplace, including assessment and control of risks associated with 'one-off' and non-routine tasks involving working at height.

A sound approach is one where the entire workforce is aware of the risks associated with work at height, and understands the need for a controlled approach to it. This can be effectively achieved through a variety of approaches (see Ideas box); in the case of maintenance tasks, the key is to ensure a culture exists to prevent 'spur-of-the-moment' working at height. In other activities, there is a need to ensure a clear understanding of the nature and magnitude of the risk, even when working at relatively low heights. This is especially relevant in the transport sector, where vehicle-based loading/unloading activities frequently require a driver to climb to the top of the load, often in a time-constrained and unfamiliar environment, such as a delivery site.

As with any high risk issue, the key to effective management is a proactive approach with practicable control measures strongly skewed towards the 'top' end of the hierarchy outlined in the introduction to this guidance (elimination/reducing hazards at source).

Fatal accidents involving working at height from CDC portfolio

South Asia, 2013, worker died of injuries sustained after falling from a ladder whilst changing a light bulb

Africa, 2012, worker died after falling from a ladder whilst changing an advertising poster

Africa, 2011, two workers died in separate accidents, in each case falling from an electricity pole during maintenance operations

South Asia, 2010, contractor died when the scaffolding he was dismantling collapsed, causing him to fall



Potential accident

This work at height activity took place in a high-profile location adjacent to St. Basil's Cathedral in Moscow. However, it is evident that the approach to safety was poor. There are several workers at high-level, none of whom are using any form of safety harness or securing bolts. Although scaffolding components are being lifted, the use of hard hats is not universal across the workforce. Finally, there is no clear demarcation of the working area, resulting in members of the public inadvertently walking through the working area. The activity has the real potential for a serious accident to occur, and yet it is an activity that, with a relatively small amount of time and effort, could easily be undertaken far more safely and efficiently.

¹⁶ IFC suggests that fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters, into operating machinery, into water or other liquid, into hazardous substances, or through an opening in a work surface.

Provide securing eye bolts and platforms

A logistics company in Brazil needed to tackle the number of falls from height associated with loading and unloading large generator components from trucks. After speaking with the manufacturer, the following actions were undertaken:

- components were fitted with additional securing bolts for use with harnesses and to make securing easier and more effective;
- a dedicated access platform was provided at the point of loading to facilitate access to the top of the load; and
- drivers were trained on the hazards of working at height and, through a workshop, jointly developed an agreed way of safe working for loading, securing and unloading components. Safety harnesses were issued to each driver, and the new approach was shared with the manufacturer and the downstream customer.

Benefits included not only far fewer fall-from-height accidents, but also a marked reduction in the incidence of cargo loss and damage during transit.

Remove ladders from the workplace

A manufacturing company in Ireland decided to remove all ladders from production areas, and securely store them in the maintenance department. At the same time, a streamlined maintenance request system was introduced, with same-day response from the trained maintenance team. Falls from height showed a marked reduction.



Specific questions for investors to ask when concerned about: Falls from height

1. Hazard identification

Does the company have a strong, proactive culture and processes for identifying fall hazards in the workplace (risk assessment process, safety inspections, tours, audits, etc.)? Investors can review company checklists/operating procedures for spotting locations and activities where falls from height could occur.

2. Culture of evaluation of workplace activities

Is there a culture of evaluating routine and non-routine activities (e.g. falls are often associated with locations which have infrequent access such as changing light bulbs, etc.)? Investors can consider company measures to reduce risk (for example, suspended light fittings may be designed to be lowered, or could be fitted at a lower level/fitted with longer-lasting bulbs such as LEDs).

3. Design modifications

Is there a well-developed approach to factoring hazard identification into facility design?

Investors can consider whether company design and specifications for a new-build consider avoiding work at height issues wherever practicable (for example, insistence on anchor points fitted as standard to any plant/equipment/structure over two metres in height, etc.).

4. Where working from height is unavoidable

Are there clear procedures/measures for controlling risk where work at height cannot be eliminated?

Elements to consider include collective and personal protective equipment (e.g. railing and harness, respectively), preparation of site area (consideration of others, weather-related guidance, proximity to power cables) training and authorisation/supervision, and use of visual aids.

Preventing accidents

B. Workplace vehicles

Background

Accidents involving workplace vehicles are also comparatively frequent in global workplaces. More specifically though, workplace vehicles are a particular hazard in businesses whose activity requires facilities which include stockyards/stockrooms, vehicle storage, marshalling yards and distribution centres. Workplace vehicle accidents involving pedestrians are commonly fatal. Industry sectors such as [construction](#), [forestry and agriculture](#), [manufacturing and logistics/warehousing](#) typically show a higher risk of accidents involving workplace vehicles.

Key areas of risk include:

- [Construction](#): a wide range of vehicle types, frequently operated in varying conditions. Some vehicles such as shovels and excavators may move in unexpected directions with no warning;
- [Forestry and agriculture](#): vehicles often have exposed rotating parts and may be operated in difficult conditions by non-trained individuals/owner-operators; and
- [Manufacturing, logistics, warehousing](#): vehicles may be moving very large items which may significantly limit driver field-of-view, often in high-noise environments, limiting pedestrian awareness.

Around one in ten fatalities reported to CDC is linked to accidents involving workplace vehicles.

Aside from the human tragedy and the implications for an individual and their family, accidents involving workplace vehicles also have a high economic cost. Following an accident, vehicles may be unavailable, especially if they require specific modifications for a particular task, and hence are not easily replaced in the short-term. In some cases, there may be no other safe means of undertaking a specific activity when the dedicated vehicle is out of use (for example, due to damage or during a quarantine period following an accident). Many workplace vehicles are large, complex and high value. In addition to fatal injuries, accidents are frequently associated with serious injuries and significant loss or property damage.

Workplace vehicle accidents are

characterised by a number of areas of risk including those connected to environment, vehicle and operator:

- [Size and complexity](#): vehicles may be much larger/higher than conventional vehicles and have poor driver visibility and additional features (e.g. hydraulic grabs) that impact on their operation;
- [Operating environment](#): may be challenging (confined, poorly-lit, excessive gradient, unsurfaced, poor visibility, extreme temperature);
- [Operating behaviours](#): operators may not be wearing seatbelts, or may be operating vehicles under the influence of drugs or alcohol. Access to and use of workplace vehicles may not be confined to those trained and authorised to use them;
- [Vehicle maintenance](#): vehicles and safety equipment may be poorly maintained, e.g. broken seatbelts or broken indicator lights;
- [Distraction](#): vehicle operators are often not looking for pedestrians but are focusing on other tasks (e.g. picking up a container/operating a shovel or crane, removing trees etc.) Operators are rarely able to hear external noise;
- [Unpredictability](#): 'rules of the road' are not necessarily applied and movement/direction is unpredictable and subject to rapid change;
- [Pressure](#): operators may be under significant time pressures (e.g. when offloading a ship/train);
- [Contractors](#): vehicles (especially construction, forestry and agricultural plant) may be owned and operated by contractors;
- [Rest areas](#): operators may decide to rest in or under the vehicle, particularly in the absence of nearby rest/welfare facilities; and
- [Training](#): operators may not be formally trained/accredited. Operators may just have standard driving licences which are not sufficient to operate heavy machinery.

Key characteristics of companies effectively managing risks from workplace vehicles

Generally, when accidents/fatalities occur, they are the [result of falling from vehicles or being struck/crushed by a workplace vehicle](#). Sound risk management therefore requires focus upon the vehicle, the operator and the operating environment.

Like any other item of work equipment, a workplace vehicle must be chosen for a specific activity and environment; selection should be justified and backed by credible risk management, typically involving those who will operate, work with and maintain the vehicle. Procedures will have been developed to ensure that the vehicle is properly inspected and maintained to ensure it is safe and fit for purpose.

Modifications to workplace vehicles should only be [undertaken by the manufacturer or an approved specialist](#) and, where necessary, the required legal/technical approval for their use should be obtained. 'Home-made' modifications may place unacceptable stresses on the vehicle and/or make it unstable and dangerous to control.

Operators [need](#) to be limited to those who have been trained and have demonstrated an appropriate temperament for the activity. Controls need to be put in place to both prevent unauthorised usage of the vehicle by untrained workers (e.g. avoid leaving keys in the ignition of unattended vehicles), and also require a formalised appraisal of a change of use of the vehicle, for example to a task or activity not originally envisaged [during selection](#). [Operators will need refresher training](#), which typically will be provided by the manufacturer.

The design of the working environment is critical to the establishment and maintenance of safe working. Effective segregation of pedestrians from vehicles is required, but this takes thought to properly implement, and workplace-wide awareness training to maintain.

Other actions, such as those aimed at improving drivers and/or pedestrians should be implemented where appropriate. For instance, simple mirrors can be installed, as in the workplace pictured opposite, to tackle blind corners and prevent collisions between workplace vehicles and pedestrians.

Fatal accidents involving workplace vehicles from CDC portfolio

South Asia, 2013, a yard cleaner died after being struck by a container-lifting vehicle in a high-noise dockside area

Africa, 2013, in two separate accidents, workers were sleeping underneath a truck which then started moving and inadvertently drove over them

Latin America, 2011, a cyclist using a road within a mineral production facility was struck by a truck and subsequently died of his injuries



360° excavator

Potential accident

Loading a truck with a 360° excavator. Note the restricted view of the excavator operator – they cannot see into the truck they are loading, or the driver in the truck cab, and are not able to judge whether some loaded material dropped from the bucket may fall onto the ground beyond the truck (an area that they cannot see).

Avoid the need for shortcuts

A logistics company in India provided an additional rest and welfare area for workers nearer to their place of work, after discovering that a number of near-miss pedestrian/container loader incidents were due to workers taking an unauthorised 'short-cut' across a container storage yard. Coupled with enhanced awareness training, incidence levels fell, and both worker satisfaction, and throughput in the yard areas increased.



Specific questions for investors to ask when concerned about:

Workplace vehicles

1. Record keeping

Is there an up-to-date fleet register, with clearly defined usage parameters and specifications?

2. Appointment and training of operators

Is there an up-to-date operator/competency register and related training records? Are there risk-based operating procedures for in-house operators and contractors? Is there a training programme for operators? Is there an awareness programme focused on drug and alcohol abuse?

Investors can look for a clear policy on competency for operators, structured training programmes based on vehicle type and operating environment/activity, secure storage of keys to prevent unauthorised use, limits on operator hours. Alcohol testing can be considered where alcohol abuse is prevalent and where testing is not expressly prevented by law.

3. Maintenance

Is there a planned maintenance schedule? Are there operating requirements for daily pre-start/end-of-shift tasks?

Investors can ask about checklists with operators trained to undertake them and understand their importance.

4. Design modifications

Are there passive features designed for workplace and vehicles? Look for barriers, lighting, beacons/sirens, signage.

5. Third parties

Is there a prioritised approach to segregation of pedestrians and vehicles? Is there awareness training for all staff/contractors potentially at risk/site visitors (induction)? Are there requirements for third parties to wear appropriate PPE and high visibility clothes?

Investors can look for a systematic approach to workplace risk management – e.g. consideration of why pedestrians may be near vehicles (workplace design, short-cuts, etc.)

6. Loading and unloading

Are workers segregated from vehicles which are being loaded or unloaded by machines, where equipment failure or operator error could quickly lead to serious injury? Is there controlled access to the loading area, delegated staff to oversee vehicle loading, lighting or mirrors to aid visibility, and/or an elevated platform for the excavator?

Is there a standard procedure/approach in place which requires workers to be segregated from being on or next to vehicles when they are being loaded and unloaded?

Preventing accidents

C. Moving machinery and flying/falling objects

Background

Objects often fall whilst being moved (e.g. in the process of being lifted) or as a result of becoming detached, usually through some form of disturbance. Accidents linked to machinery are often the result of entrapment in conveyor belts and metal cables, and failure or safety-critical components such as lifting tackles. Moving machinery is a particular hazard in the [manufacturing/processing](#) sector whilst accidents involving falling objects are frequently encountered in the [construction](#), [minerals and forestry](#) sectors.

Key areas of risk include:

- [Manufacturing/processing](#): coming into contact with moving parts due to absent, incomplete and/or over-ridden guarding, and ‘spur-of-the moment’ maintenance/clearance activities whilst machinery is still running, ejection of materials;
- [Construction](#): falling objects due to overhead lifting activities (failure, over-load, loss of control, etc.), falling objects due to poor storage, loss during fixing or as a consequence of another accident;
- [Minerals](#): coming into contact with moving machinery (e.g. conveyors) often in difficult conditions, rock falls/spoil heap collapses; and
- [Forestry](#): crushing by falling trees, collapse of stored timber, coming into contact with moving parts of forestry machinery.

Fatal accidents caused by moving machinery or flying/falling objects comprise around 12% (19 in total) of those recorded by CDC. Within CDC data, the majority of these accidents are concerned with falling objects such as pipes, aggregate, rock, glass sheets, machinery components, and trees. A smaller proportion of these accidents are linked to machinery issues.

Key characteristics of companies effectively managing risks from moving machinery and flying/falling objects

Effective risk control approaches to contact with moving machinery and flying/falling objects will be focused on eliminating or reducing hazard sources or isolating or controlling the hazard at source, for example by using engineering controls. Human contact with any of these hazards frequently leads to serious injury or death, and therefore needs to be eliminated, reduced or isolated at source. At a basic level, [access to areas above which there is significant potential for falling objects](#) (for example a lifting operation) will [routinely be prohibited](#), preferably using a physical barrier.

Evaluation of moving machinery risks can be relatively straightforward, although [subsequent control of the risk can be costly and complex](#) and it can take time to change workplace culture. Whilst the degree and timing of machine movement may vary significantly, the maximum extent of movement in normal operating conditions can be clearly defined and the risks controlled in standard operating procedures. A more complex issue is the evaluation of ‘what if?’ scenarios in the event of machinery failure or some other mal-operation issue. Here, a sound approach can be a [fault-tree type modelling exercise](#), where likely failure scenarios are flagged and evaluated. Those companies undertaking this most effectively combine the expertise from the manufacturer, operations and maintenance personnel.

Fatal accidents involving moving machinery and flying/falling objects

Africa, 2013, worker died of injuries sustained after entrapment in a logging machine

South Asia, 2012, a worker died after being struck by components that fell whilst being lifted by a crane

Africa, 2012, a worker died when a concrete pole being lifted manually dropped onto him

Africa, 2010, a worker died when a tree fell on him during clearance works for an electricity line



Specific questions for investors to ask when concerned about: Moving machinery and flying/falling objects

Moving machinery

1. Identifying risks

Do companies have a clear understanding of the types of machinery that they operate and procedures which evaluate the following: human interface requirements, extent, speed, variability of movement, associated hazards (e.g. energy, noise, hazardous substances, production, and waste) and emergency, mal-operation and maintenance issues?

Investors can ask about these as determined by the specific instance encountered.

2. Controls

Have the following control measures been adopted following the risk mitigation hierarchy described in Section 3?

- Consider appropriateness of
 - Fixed, robust guards to enclose dangerous (moving) parts;
 - Movable guards with interlocks to prevent machine from working unless the guard is secured in place;
 - Provision of jigs/holding devices, push-sticks where guards cannot be used;
 - Information, training, instruction, supervision, personal protective equipment (PPE); and
 - Provision of emergency power off devices which can easily be reached by the operator.

Flying/falling objects

1. Identifying risks

What are the potential sources of disturbance/structural failures (including those potentially arising as a result of a previous incident) which may lead to an object falling? Where is it possible to develop effective preventive measures?

Investors/companies might find the use of fault-tree ('what if?') analysis useful. In many cases, analysis at a basic level will remove a majority of issues, and focus effort upon areas of highest risk.

2. Lifting

What task-specific procedures and training are developed for moving/lifting?

Investors can ask if there are clearly identified lift parameters (dimensions, centre of gravity, weight), task requirements (location, relative height of start and finish point, lifting equipment/lashing, operator competence, additional labour), and if there is (sufficient) consideration given to variable factors (weather, ground conditions, work of others, etc).

3. Manual lifting

Has consideration been given to lifting equipment where manual lifting involves objects of heavy weight, presenting a high risk of serious or fatal injuries if dropped?

Investors should note that work should not take place in areas where bulky/heavy objects could fall (e.g. near cranes).



Potential accident

A company based in the Republic of Karelia, Russia, had previously provided reassurance to investors that all moving machinery had been fitted with guards. However, a subsequent inspection of the production facility identified numerous issues including the above. To be fully effective in controlling risk, guards must prevent contact with moving parts but must also feature interlocks to ensure that if removed, the energy source to the machinery is interrupted and the machine stops in a safe condition. From observation and discussion with operators, it was evident that the guard pictured above not only failed to isolate the moving parts, but was also capable of being opened (to clear blockages – reportedly a frequent occurrence) whilst the machine continued to run. The guard was replaced with one that protected all the moving parts and was fitted with an interlock.

Collaborative approach to machinery

A fatal accident occurred in a European paper manufacturing facility, where a worker entered an operating machine and was crushed. The accident investigation uncovered a culture whereby machinery guarding interlocks were routinely over-ridden to minimise down-time. These practices had continued for months with no serious incident until the fatal accident. Following this, the company implemented an amnesty period to encourage other practices to be shared. This led to the establishment of a new team-based approach, not only to machinery safety, but also to enhanced two-way communication between different departments, increasing understanding of operational and commercial requirements and issues.

Preventing accidents

D. Driving on public roads

Background

The World Health Organisation (WHO) estimates that more than 1.2 million people are killed every year as a result of road accidents. The risk of road accidents spans many industry sectors but is (the risk) particularly prevalent where transport of material is involved, especially in the [logistics](#), [communication and utilities](#) sectors. There are also risks where a business transports employees to a place of work. Key areas of risk include:

- [Logistics](#): a majority of working time is spent driving on public roads, with varying distances and often overnight/early morning, and/or multi-drop, time-sensitive deliveries;
- [Communication](#): road travel may be long-distance and may frequently be to remote locations where road quality and third party driver behaviour may be variable; and
- [Utilities](#): workers may be required to work on, under, over or adjacent to public roadways, often in times of adverse weather conditions when responding to emergency calls.

Fatalities resulting from work-related road traffic accidents are a variable but significant proportion of the total number of fatal accidents reported to CDC. Between 2010 and 2013, road traffic accidents accounted for nearly one third of all employee fatalities (51 in total).

Aside from the possibility of fatalities/serious injury for employees and contracted staff, there is also the possibility of third party, public injury and death. Other associated impacts include;

- Loss and damage costs to vehicles, goods and equipment;
- Loss as a consequence of failed or late deliveries;
- Increased insurance premiums;
- Potential criminal action;
- Civil action relating to compensation; and
- Negative publicity.

WHO has identified five key road traffic accident risk factors: speed, driving under the influence of alcohol/drugs, failure to wear motorcycle helmets and failure to use seat-belts or child restraints. In many emerging markets, additional causal factors are also important and investors should be conscious of the following:

- Poor road conditions (surfacing, signage, lighting), especially in rural areas;
- Poor driving standards/lack of training across all road users;
- Poor vehicle maintenance leading to critical component failure;
- Failure to control driving hours; and
- Seating of passengers other than in fixed seats.

Key characteristics of companies effectively managing working at height risks

Referring to the risk hierarchy, it is rarely feasible to eliminate road travel but there is considerable scope for improving overall performance through the [development of a basic occupational road risk strategy](#). Given the prevalence and magnitude of this issue across many sectors, coupled with very significant opportunities to reduce risk through development of simple control measures focused on safe drivers, safe vehicles and safe journeys, such a strategy can be considered by investors as a key component of a company's HS management approach. Below is an outline of typical questions to use in order to understand more about a company's approach to this issue.

Occupational road risk strategy

A simple strategy should help a company effectively manage risks associated with use of public roads, and is also likely to deliver cost savings (in terms of insurance, vehicle wear and tear, fuel savings, and reduced damage to goods in transit). The strategy should cover;

- **Policy** covering commitment, resourcing, responsibility and accountability;
- Credible **assessment of risk** for routine and non-routine operations (e.g. breakdown recovery) – assessment should include evaluation of the driver (e.g. competency, training, fitness), the vehicle (type, suitability, condition and maintenance, payload, safety systems) and the journey (road conditions, routes, scheduling, distance, weather) and **appropriate control measures**;
- Effective **systems** to manage the risks, for example by making it compulsory for all workers to wear seatbelts, particularly in countries where there is not a culture or legal requirement to do so; and
- Rigorous **monitoring** driving **continuous improvement**.

Fatal accidents involving working at height from CDC portfolio

Africa, 2013, seven workers died and a further 20 were injured when the work bus in which they were travelling was involved in a head-on collision

Latin America, 2013, two workers died and another four were injured when the pick-up truck in which they were travelling was forced off the road by an oncoming truck

South Asia, 2012, a passenger in a frozen food truck was killed when the driver swerved to avoid a parked vehicle (in the hours of darkness) and struck an unlit parked vehicle on the roadside



Potential accident

Kelvin Cold Chain Logistics Pvt. Ltd. is a major cold-chain logistics provider in India. Having suffered a few fatal accidents across the fleet, the recently appointed CEO Mr. Pankaj Joshi, embarked on a major programme to improve HS performance. The company has developed a formalised training programme for all drivers, recently introduced monthly driver feedback sessions to further enhance safety, and is also exploring options for incentivising safe drivers with enhanced retention packages. Commenting on this programme, Mr. Joshi added: "Drivers are integral to our business and we take great pride in having drivers who are associated with us for a decade and more. Our driver training and engagement programmes ensure that they have the appropriate skills and knowledge to handle the product requirements while in transit."

Seatbelt use

A mineral extraction company in Georgia which made not wearing seatbelts a dismissible offence cited this as the single most effective health and safety improvement in terms of reducing accidents.

Proactive training

A UK-based logistics company encountered a significant number of accidents in their daily delivery van fleet, primarily operated by younger, recently qualified drivers. The company implemented an enhanced training programme, utilising online hazard-spotting tools and driver records to provide a risk-based driver profile. This was then used as a basis for further targeted training, which was encouraged through an incentive reward programme. Accident levels fell, and fleet efficiency improved.



Specific questions for investors to ask when concerned about:

Occupational road risk

1. Safe drivers

1.1 Driver selection and monitoring

Is there a formalised approach to driver selection and training? Can the company demonstrate that the performance of drivers is monitored and periodically reviewed?

Investors can consider whether there is provision of training over and above licence requirements (assertive/defensive driving techniques, online hazard-spotting tools, etc.).

1.2 Standard operating procedures

Does the company have a Driver Handbook that provides training back-up and details all relevant company procedures and checklists (including vehicle checks and emergency provisions)?

1.3 Third parties

What safeguards are in place to cover the selection and use of agency/contracted drivers?

2. Safe vehicles

2.1 Vehicle type

Is there a policy specifying the types of vehicles in use/to be acquired in terms of suitability and required safety features? In some developing countries, safety features such as air bags can be optional – companies should be able to demonstrate their safety requirements (e.g. seat belts, air bags where available, GPS trackers, speed limiters). Where vehicles do not have these fitted, is a programme of disposal and/or retro fitting of basic features possible?

Vehicle purchasing might present an opportunity to reduce other workplace risks – e.g. purchasing a truck with an on-board lifting arm will substantially reduce risks associated with manual lifting of loads (and will also make such tasks faster and less labour-intensive).

2.2 Fleet management and maintenance

Is there a formalised approach to the management/maintenance of vehicles?

Investors can look for an up-to-date fleet register with driver/workshop updates with recorded/scheduled maintenance.

2.3 Third parties

What safeguards are in place to cover the use of contracted or rental vehicles?

3. Safe journeys

3.1 Journey planning

What approach is used for journey planning?

Look at whether long journeys are assessed in terms of route/distance as well as time allowed to include adequate rest periods and to reflect real road conditions.

3.2 Monitoring

Does the company track vehicles and monitor progress remotely?

3.3 Vehicle checks

Are operating procedures in use?

Check these covering vehicle selection, pre-start checks, periodic/daily maintenance, safe loading and off-loading, securing load safely, and driver conduct (use of seat belts, communication, emergency procedures, passengers, etc.)?

Preventing accidents

E. Electricity at work

Background

Securing reliable electricity is a key consideration to many companies in emerging markets but is often overlooked from an accident prevention perspective. When used incorrectly or when in direct contact with humans, electricity can cause very severe injuries and fatalities. Even where injury is avoided, electrical faults may lead to fires or explosions where flammable products or/and an explosive atmosphere exists. Safe management of electricity is clearly core to the [utilities sector](#) (especially electrical transmission/distribution) but is also relevant to any sector that requires electricity for their business process.

Key areas of [employee](#) risk include:

- **Utilities: plant and equipment** – contact with live conductors during maintenance and repair work; and
- **Utilities: distribution network** – accidental contact with conductors during engineering/commissioning/installation and repair works to above and below ground network.

Key areas of [public](#) risk include:

- **Utilities: distribution network** – accidental contact with conductors (above and below ground) following failure, poor installation, storm damage, other works, etc. ; and
- **Utilities: supply systems** – exposure to/contact with illegal connections to distribution network.

Employee fatal accidents associated with electricity as recorded by CDC comprise around 8% of the total fatalities reported to CDC. Accidents involving electricity account for the largest overall number of fatalities involving CDC portfolio companies when asset related fatalities involving members of the public are considered.

Key characteristics of companies effectively managing electricity risks

Companies should demonstrate a sound, risk-based management of electricity in the workplace. Key characteristics should include:

- **Installations** need to be safe and fit for their intended purpose; changes to the installation need to be properly planned, evaluated, completed by a competent person and, where necessary, the required approvals need to be obtained before and/or after modification;
- All **employees** should have a **good understanding of the risks associated with electricity**, and should know who to ask in relation to concerns and/or assistance; and
- Companies involved with public utilities need to establish robust systems for the **design, maintenance and monitoring of distribution networks** that are safe. This should be coupled with extensive public information and engagement programmes highlighting the dangers of electricity and involving local communities in the continuous process of identifying and assessing (e.g. by delivering safety courses and setting up a toll-free phone number through which local communities can report issues).

To gain reassurance that risks are properly managed, investors can ask a range of key questions.

Fatal accidents involving electricity within the CDC portfolio

Latin America, 2013, a worker died of injuries sustained after contact with a 33kV supply after starting work before isolation procedures had been completed

South Asia, 2012, a worker died from burn injuries sustained following a large current leakage from an underground cable

South Asia, 2012, a worker died after inadvertently coming into contact with a live overhead cable that had been dislodged in recent storms

Fatal accidents involving members of the public coming into contact with electrical systems operated by investee companies

Africa 2013, a child was fatally injured when he came into contact with an overhead cable downed by a recent storm

Africa, 2012, a woman was electrocuted after direct contact with an illegal, non-insulated connection adjacent to a washing line

Latin America, 2011, a member of the public died whilst clearing vegetation after coming into contact with an illegally connected conductor



A high hazard electrical installation, with exposed conductors



An effectively managed electricity risk. Hazard labels can be seen on the control panel, the floor area is clear, cabling is properly routed and supported and components are clearly labelled

Tracing underground cables

A global ground engineering company frequently encountered live electrical cables when excavating inspection pits and boreholes. Historically, reliance had been placed on site-based drawings or plans provided by utility providers, however both were often limited in coverage and out-of-date. A decision was made to equip and train staff in the use of electronic cable-tracing devices, and a formalised procedure developed to promote safe excavation. Once the procedure was implemented, the incidence of cable strikes reduced markedly.



Specific questions for investors to ask when concerned about: Electrical safety

1. Installation

Can reassurance be provided to demonstrate that the electrical installation and siting points (supply, distribution system, devices, safety devices) are fit for purpose, safe, and that their location is known, understood and taken account of by those managing operations?

Investors can ask for a plan providing appropriate technical information and suitable approval/sign-off.

2. Maintenance and inspection

Have inspections/repairs/maintenance been conducted by a competent person?

3. Equipment

Is there a formalised approach to the selection and use of equipment that uses electricity?

Look for evidence demonstrating that equipment is suitable for tasks and the environment, and is protected with suitable safety devices (RCDs, fuses, emergency power off, hands-off kill switch, etc.). Evidence of reducing hazards through lowering voltage/use of rechargeable power tools, etc. would be further reassurance that the company is effectively managing the risk.

4. Training for safe device use

Workers are trained to understand the hazards and risks associated with electricity, the safety devices in use, and any daily inspections required.

To provide additional reassurance, investors can ask for formalised procedures covering who is authorised to investigate faults, undertake repairs and respond to emergency situations.

Preventing accidents

F. Safety and security

– violent incidents at work

Background in emerging markets

Security might seem an unexpected aspect of workplace health and safety, however security-related threats are prevalent in Africa and Asia (CDC's geographies). As a result, a properly considered approach to safety and security has the potential to make a real difference. This section aims to provide guidance to investors seeking reassurance that a company is effectively managing this issue. Security can be an issue in many industry sectors but especially in companies operating in remote areas, transporting valuable materials and whose facilities contain materials of value to thieves (e.g. fuel).

Key areas of risk include:

- **Workplace:** armed robbery, targeted assault, other deliberate acts such as arson;
- **Travelling employees:** armed robbery and vehicle theft including issues where employees inadvertently become caught up in an unrelated violent incident; and
- **Remote working:** targeted violence against the individual (or the company, but focused on a company representative), kidnapping, inadvertent involvement in a locally-focused violent incident.

Between 2010 and 2013, one out of every ten employee fatal accidents recorded by CDC was attributed to acts of violence that occurred whilst the employee was working, either remotely or at a workplace.

Key characteristics of companies effectively managing security risks

Incidents such as those outlined above can be especially difficult to tackle unless a **formalised security strategy** has been developed and is in use. A typical security strategy can be assessed using the guidance below. Investors may struggle to gain sight of actual security information due to the high level of confidentiality, but companies should be able to share sufficient outline information to provide investors with the necessary reassurance. Often, **specialist organisations are employed** by companies to develop and maintain such strategies. In these cases, investors should seek reassurance as to the competency and track record of the specialist, and also gain an understanding of how the specialist advice is received and acted upon by the company.

There are a number of principles aligned with good international practice¹⁷ that will contribute to a holistic security strategy as part of the company's broader management system. These include ensuring that basic **human rights** are respected at all times by the company's operations (e.g. access to land, water, etc.) and that a company has strong **community engagement** and implements an effective grievance mechanism (for both staff and community). Good relationships are often the most effective means of managing security issues.

Management and use of security staff

Security personnel are frequently deployed to protect employees, business operations and maintain an overall level of security at a company location. Security providers are often contractors (see Section 7), and whilst their use can constitute an extremely effective countermeasure to identified risks, it is essential that only competent security organisations are appointed. Investors should seek reassurance on the following:

- **Policy:** clear policy and instructions, with escalating levels detailing actions that security personnel are authorised to take;
- **Contracts:** formalised agreement on level of protection/level of force to be used in given circumstances, including a clear position in relation to the carrying and use of weapons;
- **Selection:** robust staff selection criteria including criminal record check (where possible);
- **Reputation:** local/regional/national profile of security organisation as well as recognition by local and national bodies and links with local law enforcement agencies;
- **Communication:** clear communication channels to share operational, threat and vulnerability information;
- **Restraint:** security personnel has been instructed to respect human rights and exercise restraint and caution, clearly prioritising prevention of injuries or fatalities and peaceful resolution of disputes; and
- **Training:** security personnel has been and will be continuously trained on the above and has all the necessary accreditations (e.g. use of arms, where applicable).

As above, when dealing with security related threats to a company's operations, the best form of risk mitigation is to maintain a good relationship with staff and local communities. However, in some geographies it will be insufficient to deal with all potential threats.

¹⁷ Including practice consistent with the United Nation's (UN) Code of Conduct for Law Enforcement Officials, UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, UN Guiding Principles on Business and Human Rights and Voluntary Principles on Security and Human Rights.



Typical fatal accidents involving violence at work within the CDC portfolio

Africa, 2013, a service technician and a colleague were responding to an automated fault notification. On entering the area of the fault, they were stabbed by a security guard; the technician died and his colleague was seriously injured

Africa, 2012, a security guard was shot dead during a raid on an operational facility, reportedly conducted by a known terrorist organisation

Africa, 2011, a utility representative was attacked and killed whilst using a motorcycle to travel on company business

Asia, 2010, a security guard was shot dead while working at a communication facility



**Specific questions for investors to ask when concerned about:
 Security considerations**

1. Strategy

Does the company need a security strategy?

Look at frequency of review and whether there are regular updates by a competent person/team, which should cover points 2. – 4. below.

2. Identification of credible threats/hazards

Is there focus on local, regional and, if applicable, national/international intelligence, updated over time that provides a realistic picture of the source, nature and extent of threats to the company's business, employees and assets?

Investors should seek evidence that provisions exist within a company to proactively identify credible threats (for example, items worth stealing, activities at night or requiring access to areas that are known to be unsafe (theft/murder)), and to revisit the identification in light of relevant events on a local, regional, national or international level. Consider risks if there is the need for company to use third party security and implication in terms of communities nearby.

3. Assessment of vulnerability

Based on threat identification, has there been a detailed assessment of vulnerability?

Investors can look for evidence of consideration of:

- Type and location of business activities; relative location of known areas of criminal/terrorist activity;
- Perception of business at local/regional/national level ;
- Profile of company and employees (for example, commercial, ethnic, political and religious allegiances);
- Potential attractiveness of a facility/business as a target (e.g. large fuel storage);
- Potential impact from an attack (for example, loss of life, cessation of operations, etc.); and
- Countermeasures presently in use.

4. Analysis of risk

Has a formal analysis of risk been undertaken?

This builds on threats/vulnerability assessment but is a dynamic process, responding to day-to-day developments and triggering additional countermeasures where necessary.

A company may be able to provide an overall level of risk, but investors may gain more insight by requesting security documentation for a previous incident (whether violence or loss occurred or not).

Preventing accidents

G. Managing contractors

Applicability

In many cases, an investment in a company can be fundamentally impacted by the performance of **key contractors** used by the company. For most organisations working with contractors is an essential component of day-to-day business, but may also be a key area of risk. Contractors provide additional skills and capabilities but are frequently associated with increased OHS risks, including some which may be outside of a company's area of expertise and direct control. Other issues which may add to the complexity of contractor management might include differences of language/nationality as well as experience of working to the standards required by investors.

Investors' role

Investors are unlikely to be in a position to directly influence the selection, appointment and management of contractors. However, assessing that contractors have adequate systems to manage HS conditions is a requirement of IFC Performance Standards on Environmental and Social Sustainability and also an essential component in the overall assessment of HS risk assessment. Investors should request, and companies should be able to demonstrate, a clear approach to the use of contractors, reflecting an understanding and appropriate management of the risks involved. Investors should ask to see evidence of detailed information exchanges between the company and the contractor about the planned work, and resulting risks, whether working remotely or on an operational company facility. An effective approach to reviewing contractor management will typically include those featured in the table opposite in Fig 11.

Generally, companies with a strong safety culture themselves will find it easier to instil the importance of sound HS performance in contractors. In some cases, there may be a shortage of contractors who possess the required competencies and offer sufficient HS reassurance. Where this happens, there may be a need to appoint a contractor and include clear, unambiguous provisions in the appointment contract for specific HS training and other requirements (risk-based working methods, safety equipment, PPE, supervision, inspections and reporting, etc.). The company will also need to allocate time and resource to monitoring the performance of their contracts from the HS perspective.

Incentives

Incentives for sound HS performance can be considered, but it is important to ensure that these are designed to reward positive behaviours in order to avoid potential concealment of accidents. The most effective incentives focus on leading-edge aspects (e.g. proactive safety inspections, risk-based safe working talks, generation of safe-working ideas/corrective actions for improvement) rather than trailing indicators (accident data).

Impact of accidents

Accidents suffered by contractors are likely to have the same or similar impacts to those suffered by the company. Contractor employees will be unfamiliar with company operations, procedures and culture, and these factors serve to increase the level of risk. Empowering company employees to look out for and act on any safety concerns can be a very powerful tool within any organisation, and this can easily be extended to cover the work of contractors also.



Example

A well-established work area. Here, contractors have used barriers, tape and signs to segregate their working area. Space has been provided for plant, equipment and materials within the working area, and workers are wearing PPE, including high-visibility overalls.

Work together to improve HS

A Polish company was faced with a limited choice of contractors for a specialist task in a sparsely populated area of Siberia. None of the contractors fully met with the OHS criteria set down in the selection process.

The company therefore reviewed each contractor and selected the one that demonstrated competency and a willingness to learn and change. The clear 'gap' in OHS provision was detailed and included as an additional item in the appointment contract. The contractor was appointed on the basis that they would work collaboratively with the company's own operations and HS personnel to fill the identified gap, and that they would be paid an additional amount for doing this and maintaining this input through the work period. Information (specifically relating to the correct approach to risk management and the development of safe working methods) was freely shared. The project was completed to time and without accidents. The contractor subsequently went on to use the knowledge they had acquired to gain additional business from other clients.

Fig 11.

Approach to contractor management within companies

Pre-selection/Pre-project	Selection and appointment	Management
Positive approaches		
<ul style="list-style-type: none"> – Demonstrates a deep understanding of the importance of contractor selection for both effective delivery of required objective(s) and sound HS performance; – Ensures that sufficient time is allowed in the programme to deliver sound HS; – Develops a clear task/objective for contractors, ensuring that sufficient information has been shared; – Stresses the importance of HS within the company/project from the outset; – Is clear that selection criteria will include a competency and safety approach and performance; – Develops a pool of ‘preferred’ contractors through the use of pre-qualification to deliver a competence-based shortlist; – Requires all contractor submissions to provide details on how safety will be managed (including interaction with company operations); and – Is willing to spend time helping an otherwise competent contractor meet the company’s safety criteria. 	<ul style="list-style-type: none"> – Properly reviews submissions utilising technical, commercial and HS expertise; – Researches contractor past performance on same/similar tasks and safety; speak with other clients/take up references; – Ensures appointment decision is based on criteria, remembering that being lean on safety generally increases overall cost; and – Requires that the appointment include a contractual commitment to deliver safety performance outlined in invitation/ submission. 	<ul style="list-style-type: none"> – Ensures that demarcation of HS responsibility is clear and understood and that communication is open and transparent; – Establishes programme and planning (covering both contractor work and changes/impacts to company operations) and ensures HS is a key part of this; – Reviews programme, plan and HS performance regularly and shares findings – Conducts periodic joint audits/inspections with contractor; – Ensures effective open communication to provide contractors, client representatives and employees with a clear mechanism for raising HS concerns and, where appropriate, stopping work until they are addressed; and – Develops long-term relationships with contractors who perform well (and publicise this approach).

Pre-selection/Pre-project	Selection and appointment	Management
Negative approaches		
<ul style="list-style-type: none"> – Availability and price are key concerns; – Lack of clear objectives for contractors; – No time allowed to plan safety; and – Poor/no safety message conveyed to contractors. 	<ul style="list-style-type: none"> – Willingness to start immediately/ cost-cutting are key decision factors; – Failure to consider good/poor previous HS performance/HS approach; and – Poor/no HS requirements in contract/ no contract. 	<ul style="list-style-type: none"> – ‘Contractors are not our responsibility’ approaches; – High rate of contractor turnover; and – No provision for day-to-day communication between contractors and in-house operations staff.

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Investor guidance

A. Investor response to accidents

- If accidents happen
- Reporting to key stakeholders
- The ‘5 why’ approach to Root Cause Analysis (RCA)
- What should investors look for in a Root Cause Analysis?

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Investor guidance

A. Investor response to accidents

If accidents happen

Whilst striving to develop and implement improved HS management approaches, accidents may still occur. As has been seen, accident rates in sub-Saharan Africa, South Asia and Latin America are estimated at between 17 and 19 per 100,000 and even this may be an underestimation. As a consequence, when investors encounter serious accidents and fatalities at portfolio companies, the key is **not to apportion blame** on individuals but to encourage the portfolio company to identify all relevant causes, learn from them and ensure effective actions are taken to prevent recurrence.

Alongside Root Cause Analysis as described below, **the human side of accidents** should not be forgotten. Colleagues of the victim will often be traumatised/disillusioned and it will be important for the company to factor this into the immediate **follow up**. Depending on the accident this may include **counselling for employees** if directly affected by the fatality, reassurance that the company is acting on the accident to enhance safety practices, engaging with staff on measures to improve safety (seeking their views), and commemorating the fatality as a mark of respect to the employee.

Root cause: To fully understand why an accident happened, investors can encourage a transparent and robust investigation to identify all immediate, underlying and root causes. This is what is meant by a **Root Cause Analysis (RCA)**. See box opposite.

Prevention: To prevent the accident from happening again, each cause of an accident needs to be addressed with effective risk control measures. Done well, an accident investigation can make a very significant contribution to the way in which a company controls operational risks. Consequently, those companies with well-developed HS approaches view accidents as opportunities to make further improvements, rather than accidents that initiate a knee-jerk response and the allocation of blame.

Reporting to key stakeholders

CDC requires its investors and fund managers to inform it promptly when a fatality, or serious workplace accident, such as loss of limb, has occurred. Consequently, CDC requires completion of its Serious Accident Reporting template (which will request a description of the accident and identification of root causes) and analysis in the form of a follow-up checklist. The purpose is to ensure that the investors or manager is being as active as possible in following up and encouraging a strengthening of HS culture at their portfolio company. CDC's reporting template is in Section 3C.



Example

A fatality occurred when a maintenance worker repairing a pipe in a Russian steel making plant stepped back from his work and fell through a floor opening, landing some 18 metres below. The initial accident investigation identified unsafe behaviour on the part of the victim as the cause; the worker was using a working procedure that required that he make the area safe before starting work, and the presence of the opening indicated that he had not followed the procedure. However, a Root Cause Analysis undertaken subsequently identified that, due to time pressures, maintenance workers routinely worked in unsafe locations, and that in many cases, it was known that a blanket requirement for workers to take responsibility for making an area safe was unrealistic, and indicated a serious failure to properly assess risk at the facility on the part of senior management. The resulting corrective actions included the introduction of weekly departmental safety inspections to raise overall plant safety, provided for a formalised permit system for work at height, and required senior operational managers to undergo additional risk management training and perform random safety audits on maintenance activities.

The ‘5 why’ approach to Root Cause Analysis (RCA)

This simple method will help to identify the root causes of an accident.

Before starting

1. Select **who** is to conduct the analysis. For a simple accident, this could be one impartial individual with the necessary knowledge and skills. For more complex accidents, a team featuring technical, operations, safety and senior management expertise often gives a better result.
2. It is important that as much **factual information** as possible has been gathered in relation to the accident.
3. As the analysis generates **‘why tree’** diagrams, ensure that there is access to large sheets of paper, and/or wall boards.

Starting the analysis

4. Start by **clarifying the accident**. For example, “Employee ABC died when they fell off a ladder they were using in order to change a light bulb in an overhead fitting in the main production hall”.
5. It is now time to start asking **‘Why’**.
6. Write down the answers to this question – it may help to construct a ‘why tree’ diagram to trace causes back from the accident.
7. Note that **evidence is required** for each answer, and that there may be more than one answer to each ‘why’ question.
8. For each answer backed by evidence, ask ‘why’ again, and capture all the answers, referring to evidence. Where an answer is plausible but has no **evidence, record and allocate an action to verify it**.
9. **Continue** with this process until it is clear that a root cause – one from which all others have originated – has been identified. Note that whilst there may be several branches on the tree (leading from the answers to the first ‘why’ question), there may be relatively few root causes.
10. Asking ‘why’ five times is an **estimate** – some simple accidents may take less, others considerably more.
11. As questions are asked and answers **generated**, a tree of causes leading to the accident will be formed. At the top of the tree will be the accident, and at the base will be (probably several) root causes. In the majority of cases, some form of management or organisational failure will form the root cause.

Whilst conducting an RCA frequently requires a specialist team, investors can also perform an important role by asking ‘why’ questions. RCAs benefit from an objective approach, and sometimes it is especially useful to have ‘why’ questions from sources that are not directly linked to operational and/or management functions within the company.

What should investors look for in a Root Cause Analysis?

The root cause for any given accident is the most basic cause that can reasonably be identified and fixed by senior management. There is no set way in which to conduct a Root Cause Analysis – many companies have their own approach, and in addition there are numerous commercially available tools. Irrespective of approach, a comprehensive Root Cause Analysis will feature the following:

- Establishment of a **competent team** (as soon as is sensitive after the accident) to conduct the investigation (technical, management, workforce representative, safety specialist, external specialist where necessary). The team should have a **clear, objective approach**, free from departmental/managerial boundaries, and be **focused on the accident** but with the capacity and authority to take the investigation wherever necessary to establish the root cause;
- **Outline of statement of facts:** personnel/others involved, injuries sustained, loss/damage/other impacts, and list/copies of all relevant documentation/records. Confirmation that other than for facilitating first aid/emergency recovery and making it safe, the accident scene was **secured and inspected** as soon after the accident as possible;
- Summary of immediate actions and ongoing issues;
- **Careful interviewing of victims** and witnesses, if possible, to establish facts on a confidential, no-blame basis. **Critical review of documentation;**
- Establishment of a clear sequence of events, highlighting critical events;
- Identification of **unsafe acts** (behaviours) and **unsafe conditions** at each stage within the sequence;
- Transparent analysis to identify **underlying causes** (actions and conditions identified above that have caused unsafe acts or conditions);
- Critical appraisal and review of findings to establish **root cause**, typically organisational, management or planning failures;
- Development of concise, clearly structured **risk control** measures to address identified causes, linked to specific assessment of risk, with actioned implementation plan to deliver risk control measures, allocating responsibility and specifying clear timelines. (PLAN-DO-CHECK-ACT-IMPROVE); and
- **‘Reality check’** across other areas of the organisation to make sure that any lessons learned are shared.

Fig 12.

B. Due diligence guidance: a focus on accident prevention

Capacity

Key questions

Does the company demonstrate an **understanding of the importance** of health and safety and record, investigate and learn from accidents?

Does the company have a clear **understanding of hazards and risks** integral to all their core and non-core business activities, and is this captured in their management approach?

Are the **risks linked to key activities** known, understood, prioritised and effectively managed at an operational level?

Is there an **accident/emergency response plan**? Does it include support for the victim/family?

What **HS resources** are available to the company?

Tips on verification

- Evidence that any HS policy is being implemented on a day-to-day basis: management meeting minutes; recent/current HS initiatives; policy document/review; and
- Outline of approach to recording, investigating and learning from accidents: evidence from a recent example.

- A risk register may have been produced for HS, lender or insurer purposes; and
- If not, can someone from senior management (operations?) provide an overview?

- Verify documented approach.

- Verify document.

- Internal/external HS resource – competency/availability.

Commitment

Key questions

Senior management commitment and responsibility for HS policy, strategy and performance identified.

Is management response to previous accidents evident and has it informed subsequent business strategy/operations?

Evidence of active **risk management**.

Evidence of **worker consultation** and involvement in HS programme.

Evidence of **workplace HS inspections** and actions/recording of near misses.

Tips on verification

- Meet and ask leading questions on HS and fatal accidents questions such as:
 - How do you demonstrate your commitment to HS?
 - Tell us about the last time you reviewed a specific HS issue within the business? and
 - What is your greatest HS concern within the business and what have you done about it?

- Review documentation/recent case.

- Recent/current assessment of risk/development of safe working procedures detailing risk control measures.

- HS meetings, communications, ideas scheme, culture?

- Reports – check who conducts inspections and how frequently. Evidence of corrective actions implemented/otherwise.

Track record

Key questions

Any **legal action** against company in relation to HS performance or media attention as a result of accidents?

How many **fatalities** in past five years?

How many **lost time accidents** in past year?

Number of **near-miss reports** received in last year?

Number of contractor **HSE inductions** in last year?

Number/type of **HS training sessions** provided in past year?

Number of **safety inspections/tours** undertaken?

Number of **safety initiatives** (talks, walk-throughs, safety meetings etc.) attended by named senior management members?

Tips on verification

– Documentation; and
 – Local/web search plus interview key personnel.

– Evidence that investigation procedure applied. Key findings and actions and follow-up/close-out. Lessons learned and shared.

– Relative to industry and country (factored to 100,000 employees) – ensure comparison is real. Confidence in reporting levels? Evidence of corrective/preventive actions/ recurrence frequencies?

– Verify/check response and follow-up.

– Check content and verify with contractor activity/number.

– Verify – are high risk areas prioritised?

– Verify and sample and review findings/actions/closure.

– Review/ground-truth with worker representatives.

Can due diligence help to prevent accidents?

Underlying the due diligence approach to auditing is a systematic assessment of company capacity, commitment and track record. In the field of health and safety, due diligence often requires professionally qualified safety practitioners.

The questions provided in Fig 12. (opposite), whilst in no way constituting a 'full' HS audit, do provide a useful first step towards evaluating the approach to HS by a given company. Taken together, the responses should provide an initial picture and will be invaluable in forming a first impression and developing a prioritised list for follow-up and additional input to gain further reassurance and understanding.

Investor guidance

C. CDC serious accident reporting template

SHEET A: FATAL INCIDENT REPORTING TEMPLATE

Date of report:	
Fund/contact person:	/
Name of portfolio company involved:	
Date of investment:	
Date and time of accident:	
Date of notification to fund:	
Type of accident:	<p>One of:</p> <ul style="list-style-type: none"> • <u>Work-related</u> (state if construction-related or related to company's primary business operations) • <u>Security-related</u> • <u>Road-related</u> • <u>Asset-related</u> (typically members of public; for instance dying as a result of electrocution)
Victims of damage:	<ul style="list-style-type: none"> • Fatalities (including number deceased and differentiating between employee/contractor fatalities and members of the public) • Number injured (mention hospitalisations/loss of limb) • Loss/damage to company facilities
Immediate response:	
Description of issue:	<p>Include the following:</p> <ul style="list-style-type: none"> • Names of involved • Witnesses • Routine/non-routine activity being undertaken • Factual statement of what happened • Scene inspection photos/notes • Sequence of events pre-dating accident • Immediate cause • Unsafe acts in sequence • Unsafe conditions in sequence • Underlying causes of unsafe acts/conditions (initial view) • Root cause(s) • Corrective/preventive action for EACH cause • Actioned, time-bound plan (can be attached) • Interim preventive measures • Other interim actions required and cross-check to other activities/locations for lessons learned
Concluding statement:	Outline of accident, key causes, corrective/preventative actions, final position, and lessons learned
Follow-up by fund manager:	• Complete Sheet B

SHEET B: FOLLOW-UP CHECKLIST FOR FUND MANAGER

Areas where further clarity is desired based on current information:	<ul style="list-style-type: none"> Based on LP feedback and internal review
Further information awaited (utilising third party expertise where necessary):	
Critical review of accident and investigation status:	
Credibility of causes and corrective/preventive actions identified:	
Outcome based on above:	<ol style="list-style-type: none"> Accept report/findings OR Conditionally accept report/require additional/different corrective actions OR Reject report
Key follow up points:	Schedule to check/verify implementation of corrective and preventive actions. Include dates.
Additional plans for verification/close-out of actions?	Is third party expertise required?
Lessons learned that could be shared with other portfolio companies?	

Investor guidance

D. Useful references

Definitions of common health and safety terms used in this guide

Accident: an event that results in injury, ill health, loss or damage.

Hazard: the potential to cause harm, including ill health, injury, damage to property, plant, products or the environment, production losses or increased liability.

HS (or OHS): health and safety (or occupational health and safety). Acronym commonly used throughout this guide.

Immediate cause: the most obvious reason why an accident occurs.

Near-miss: an event that, while not causing harm, has the potential to.

Risk: a combination of the likelihood of a specific undesired event occurring and the severity of the resulting consequences.

Root cause: an event or failure from which all other causes or failures originate. Root causes are usually management, planning or organisational failings.

Sources of advice and further help

Hazardous substances

The US National Institute for Occupational Safety and Health (NIOSH) produces a free online quick reference guide for a wide range of hazardous substances.
<http://www.cdc.gov/niosh/npg/>

International Labour Organisation (ILO)

The ILO collects and processes HS data globally. The organisation maintains a dedicated database, and a global knowledge base that can be accessed for free:
<http://ilo.org/safework/lang--en/index.htm>

European Agency for Safety and Health at Work

The Agency collates EU data, commissions research and provides access to a range of HS resources, in all EU languages.
<https://osha.europa.eu/en>

US Department of Labor, Occupational Safety and Health Administration (OSHA)

OSHA is the US HS regulator. Aside from enforcement, the Administration holds a considerable database of workplace statistics, and provides free access to a range of HS resources, in English and some additional languages.

UK Health and Safety Executive (UK HSE)

The HSE is the UK HS regulator. The Executive is a reliable source of HS information and resources (in English only) including the HSG65 HS Management tool.
<http://www.hse.gov.uk/>

More information

For further details of CDC's ESG requirements and good practice examples see www.cdcgroup.com

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Specialist technical input from:

Clive Rockingham CMIOSH.

A former European Safety Director, Clive now runs his own specialist safety consultancy, providing independent, international HS expertise and advice to business leaders and senior management teams. With 25 years of professional experience globally, he has helped a wide range of corporate, industrial and commercial organisations to proactively identify hazards and manage their HS risks effectively.

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Disclaimer

The purpose of this guide is to share information and provide general non-technical guidance about private sector approaches to address fatal accidents. The guide provides guidance and examples of good practice that have been used in the area of workplace health and safety. The guide is not a substitute for professional advice or the development and implementation of company/operation – specific OHS programs. CDC has not financed all the companies mentioned in the guide and some information comes from public sources (company websites) and recollections. CDC has not verified the veracity of this information.



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