

Transport Safety Seminars June 2016

Housekeeping



**Please
Turn off Your
Mobile Phones**



VENUES	AGENDA
Thursday 2nd June Cork City Clarion Hotel	09:00 <i>Registration/Tea & Coffee</i>
	09:30 <i>Opening Address – Regional Area Senior Inspector HSA</i>
	09:45 Work Related Vehicle Safety in your business. The main issues of concern. Deirdre Sinnott, Senior Inspector WRVS Unit, HSA
Tuesday 7th June Dublin Green Isle Hotel	10:15 Preventing Vehicle related Slips Trips & Falls Eamonn O’ Sullivan, Inspector, HSA
	10:45 Workplace Transport Risk Management priorities. [Safe Load Securing, forklifts, deliveries and collections, vehicle maintenance] Noel Lacey, Inspector, HSA
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	12:05 <i>Employer Case Study, Vehicle Related Risk Management, what it looks like in practice – TBC</i>
	12:35 <i>Q&A (Close of seminar at approximately 1:00pm)</i>

Transport Safety Priorities An Irish Perspective.....

Deirdre Sinnott
Senior Inspector

Work Related Vehicle Safety Program
Health and Safety Authority



Safety is a mind set



OBLIVIOUS

AWARE

ALERT

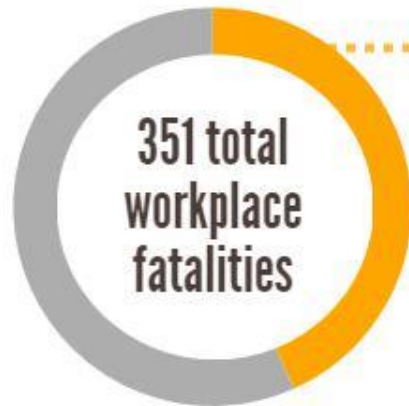
ENGAGED

Transport Safety Seminar objective

- Sharing the 'Big Data'
- Death and injury profile
- Issues of concern
- The cost of accidents to you and your sector
- What compliance looks like
- Preferred practices
- Key resources and guidance available



Work Related Vehicle Deaths 2009-2015



152 Work related
vehicle deaths (43%)

Average of 22 work
related vehicle deaths
each year



July most dangerous
month

Tractors involved in 30 fatalities




The Victims



Most Dangerous Sectors



Main Causes of Death

- 
1. Hit or run over by a vehicle
 2. Crushed or trapped by vehicle
 3. Vehicle overturn
 4. Fall from a vehicle



- Most fatalities happened in:
- Cork (27)
 - Tipperary (9)
 - Dublin (13)
 - Clare (8)
 - Galway (9)

Work Related Vehicle Injuries 2009-2013

Sectors Most Affected



29,121 accidents reported to the HSA



4,944 involved a work related vehicle (12%)



Real figure could be more than 13,000*



Main Accident Triggers

1. Losing control of vehicle or equipment
2. Pushing and pulling
3. Falls

Causes of Injury

1. Collision with object
2. Physical strain
3. Slips, trips and falls



Most accidents happen between 8am and 11am



Items most associated



Vans



HGV



Loads / goods



Back injuries made up 24% of the total



Over 25% of injuries led to more than one month off work

*Estimates suggest that only 37% of work-related accidents are reported to the HSA.

Protecting Workers from Vehicle Risks



Who else needs protecting?



Main Killers



People being struck by vehicles



Work Related Road Collisions



People falling from vehicles



Vehicle impact & overturning



Loads falling from vehicles

Main causes of injury



People struck by vehicle



Physical Strain



Slip, trips and falls



Items falling onto people

Activities most associated with deaths



Fork lift operations

- Forklift condition
- Training of driver
- Workplace arrangements



Loading and Unloading operations

- Loads falling onto people
- Falling from load area of vehicle
- Forklift operations
- Control of loading zones



Driving

- Reversing
- Slow speed manoeuvres
- Coupling/uncoupling of trailers

Why do things go wrong?

- No or inadequate risk assessment
- Poor or non-existent communication
- Lack of understanding
- Unsuitable or defective equipment
- Time pressures
- Culture in the industry

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Work Related Vehicle Safety

"Safe Systems Management Framework"

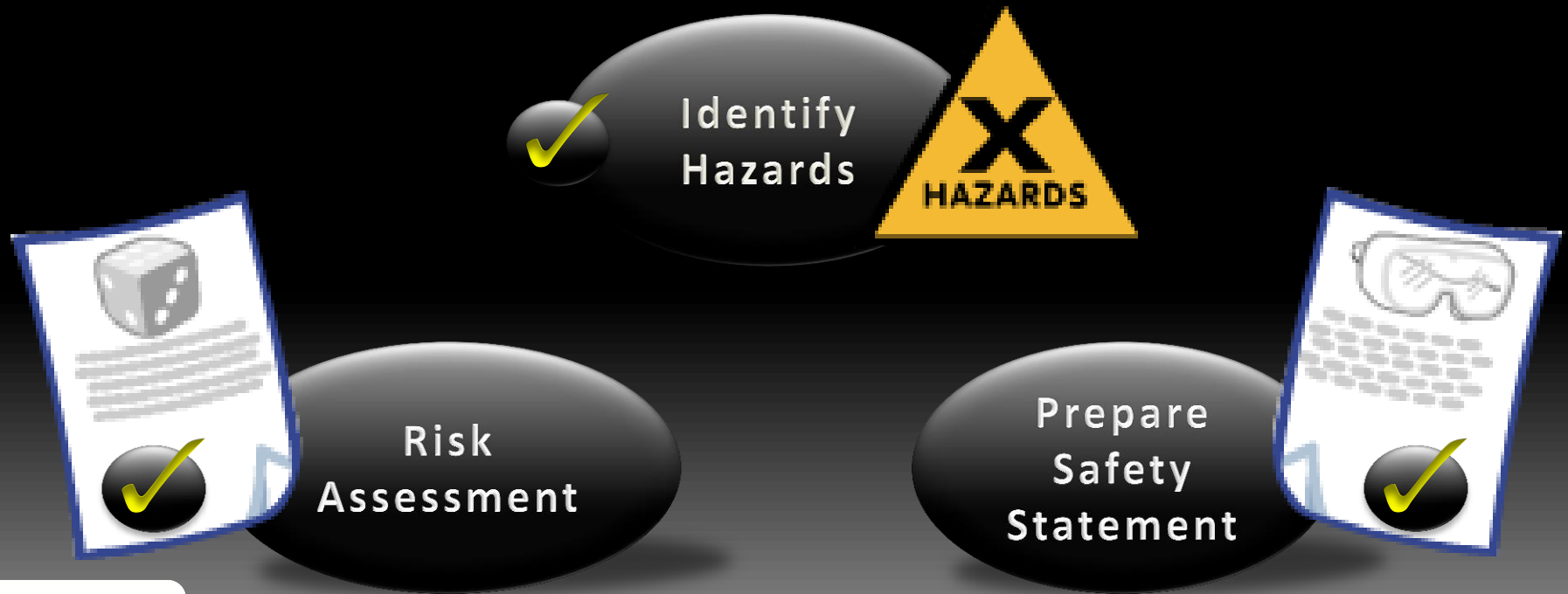


**Workplace
Transport Safety**

**Work Related
Road Safety**



Legal Requirement



BeSMART.ie

Developed by



BeSMART.ie



Online Tool



Free



Easy-to-use

YOU have the power..... to change the Transport harm and cost profile



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Watch Your Step

Preventing Vehicle Slips, Trips & Falls

Eamonn O'Sullivan
June 2016



Vehicle Slips, Trips & Falls Info Sheet

“Watch Your Step” Preventing Vehicle Related Slips, Trips and Falls

MAY 2015

Vehicle related slips, trips and falls (STFs) are a leading cause of worker injury in Ireland. Workers who drive or work with trucks and vans are most affected. Drivers and transport workers climb in and out of their cabs hundreds of times a week, and routinely access the rear and sides of their vehicles using platforms and tail lifts. Transport operators often involve substances that can lead to slippery surfaces. Oil, grease, diesel, rain, snow and ice can make the conditions even more dangerous.

This information sheet will help you understand the causes of vehicle STFs and what you can do to prevent them. It is aimed at employers, the self-employed, employees, suppliers, buyers, fleet managers and anyone who drives or works with vehicles.

According to injury reports to the HSA, trucks, vans and trailers are most commonly associated with vehicle related STFs. 40% happen between the hours of 9am and 1pm. Victims are predominantly male and aged between 25 and 54. Exiting vehicles was a factor in 45% of vehicle STF injuries.

24% of vehicle related slips, trips and falls lead to an absence from work of over one month. This can have a profound impact on the individual concerned and also a negative impact on business operating costs. The average employer liability claim cost for a vehicle related STF is €25,000.

Where do vehicle STFs happen?

HSA analysis shows that the areas most associated with vehicle STFs are:

- entering and exiting vehicles, particularly HGVs and vans,
- load platforms and load area of trucks and vans,
- trailer platforms,
- 5th wheel area of HGVs,
- vehicle steps and ladders,
- vehicle tail lifts,
- road tanker platforms, and
- unseen ground and damaged surfaces where vehicles are parked.



“24 year old driver and father of two jumped from the lowest step of his HGV cab, landed on a small rock and completely blew out his knee. He wore a coat from 1998 to enable for six months, and had a chronic limp after that – all from a 2 foot jump from his cab that landed wrong.”

“EU OSHA

* European Agency for Safety and Health at Work. Extract from a review of accidents and injuries to road transport drivers.



Page 1 of 4

“Watch Your Step” Preventing Vehicle Related Slips, Trips and Falls

What causes vehicle STFs?

Most vehicle STFs are caused by:

- unsafe methods of exiting or entering vehicles and load platforms;
- unsuitable, damaged or missing steps to access vehicle areas;
- poor housekeeping leading to material lying around that is a trip hazard;
- using footwear that does not protect against injury or provide slip-resistance;
- poor vehicle and platform design and materials, in particular unsuitable steps, ladders and walk-on vehicle surfaces.



What does the law say?

Workplace health and safety law¹ says that:

- ✓ a vehicle is a workplace and, like all other workplaces, requires a written risk assessment to identify the relevant hazards and associated controls to achieve safe systems of work. Safe systems of work must include safe ways of entering and exiting a vehicle;
- ✓ designers, manufacturers, importers or suppliers of vehicles, tankers and trailers must make sure they are designed and constructed safely and provide relevant information to customers;
- ✓ suitable instruction and training must be provided to those who work in, on and around vehicles; and
- ✓ where the risk assessment identifies a need for Personal Protective Equipment (PPE) such as safety footwear then it must be provided by the employer.

There are also additional specific legal requirements for certain classes of vehicles, such as specific slip-resistant surfaces for small and large public service vehicles.

Entering and exiting vehicles

“Never jump from a vehicle”

Entering and exiting vehicles and equipment safely is important but often overlooked. When parking you should try to avoid uneven ground, potholes, kerbs, drains, puddles and ice.

Other precautions may include:

- ✓ checking the ground conditions on approach and again before stepping out of the vehicle;
- ✓ reminding passengers to take care on entry and exit;
- ✓ changing footwear if necessary, for example slip-resistant footwear or ice grips;
- ✓ finding a space with adequate lighting, or using a torch where necessary;
- ✓ taking care to make sure you are not snagged on controls or seat belt;
- ✓ avoiding distractions from handheld devices such as phones, data loggers and scanners;
- ✓ if cab steps are not accessible, for example where vehicles have to park in tight spaces, take great care and follow a safe system to safely enter and exit the cab.



¹ Safety Footwear and Vehicle Work Rest 2013 and associated regulations.

Page 2 of 4

Vehicle STF



- Trucks, vans and trailers common
- 40% from **9am to 1pm**
- Victims **male**
- Victims **aged 25 to 54**
- **Exiting vehicles** in 45%
- 24% lead to absence over one month
- Average claim €25,000

Where?

- entering & **exiting** vehicles
- load platforms & areas
- 5th wheel area of HGVs
- vehicle steps and ladders
- vehicle tail lifts
- road tanker platforms
- damaged surfaces where parked



Exiting & entering

45% Vehicle STF - **exiting**

- Never jump from a vehicle
- Find lighting or use torch
- Check not snagged
- Avoid distractions
- If cab steps not accessible, safe system
- Avoid uneven ground
- Check before stepping out













Open the Door, Check the Floor

Vehicle steps

- Should be slip resistant
- Should be clean & good condition
- Allow ball of foot on each step
- Handholds allow proper access & full grip
- Keep both hands free
- Face the vehicle if safer
- Three points of contact







106 dB

Slip Risk

High



Safety footwear

- Oil resistant soles may not be slip-resistant
- $\frac{3}{4}$ transport workplaces need slip-resistance
- Check markings for SRA, SRB, SRC or UK Grip
- Trial before selection
- Inspect soles regularly
- Replace as needed





€50.00



Style -

Material -

Colour -

Specification -

Size -

Leather

Black

S3 W

9

SRA



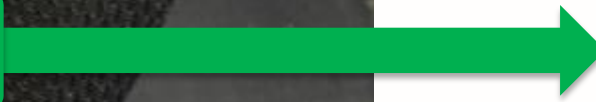
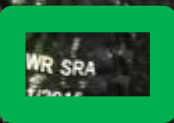
55338 413270



Sterling
Safety Footwear
MODEL Worksite Black
Waterproof Boot
STYLE SS619SM

UK	EUR
10	44

CE
EN ISO 20345:2011
DOM WR SRA
MADE IN CHINA





SRC

(SRA+SRB)

SRA

ceramic
+
detergent
solution

FLAT
 $\geq 0,32$

0,56

HEEL
(contact angle 7°)
 $\geq 0,28$

0,52

SRB

steel
+
glycerol

FLAT
 $\geq 0,18$

0,25

HEEL
(contact angle 7°)
 $\geq 0,13$

0,19

Vehicle walk-on surfaces

- Keep clean & dry
- Provide cleaning equipment
- Use contrasting colours at edges
- Provide proper [lighting](#)
- Check if slippery underfoot when wet
- Slip resistance can be measured
- Aluminium chequerplate
“offers poor slip resistance if wet or contaminated”



A study of the slip characteristics of metal flooring materials

Prepared by the **Health and Safety Laboratory**
for the Health and Safety Executive 2007

RR534
Research Report

A photograph of a truck's metal platform with a yellow hose and a wheel, overlaid with a risk assessment graphic. The graphic consists of a grey rounded rectangle containing the text 'Slip Risk' at the top, followed by three colored circles: a red circle with the word 'High' inside, a yellow circle, and a green circle. The background shows the truck's metal surface, a yellow hose, and a black wheel with a silver hubcap.

Slip Risk

High



Slip Risk

High

**Aluminium
chequerplate “offers
poor slip resistance if
wet or contaminated”**

www.hsa.ie/slips

Watch Your Step



Open the Door, Check the Floor



Check footwear is slip-resistant



Check if surfaces slippery underfoot when wet

Thank you



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Workplace Transport Risk Management Priorities

Noel Lacey
National Policy Inspector
Work Related Vehicle Safety Program
Health and Safety Authority



The Legal Imperative

89/391/EEC

[Safety Health & Welfare at Work Act 2005]

Employer duty of care

Employee
duty of care

Safe
place of
work
[Vehicle]

Safe
systems
of work

Assess and
Control
Risks
[Risk
assessment]

Policy
Procedures

Instruction
Information
Training

Safe
work
equipment

Work
Safely

Enable
Improved
understanding

Simplifying
compliance

Occupational
Health &
Safety Law

Promote
Legal
compliance

**Work
Related
Vehicle
Safety**

Accident
prevention

Road Traffic
Law

Road Safety
Law

HEALTH & SAFETY AUTHORITY



www.garda.ie



Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

www.rsa.ie

Safe Systems approach

Vehicle

- ✓ Safety specifications in procurement
- ✓ Roadworthiness
- ✓ Preventative maintenance program
- ✓ Vehicle pre-use walk around checks
- ✓ Vehicle repair program
- ✓ Detailed records
- ✓ Safe Retrofits
- ✓ Conspicuity/ Retroreflectivity/ warning lights
- ✓ Lighting and guarding of vehicle and attachments
- ✓ Load securing
- ✓ Fall prevention measures
- ✓ In vehicle technology

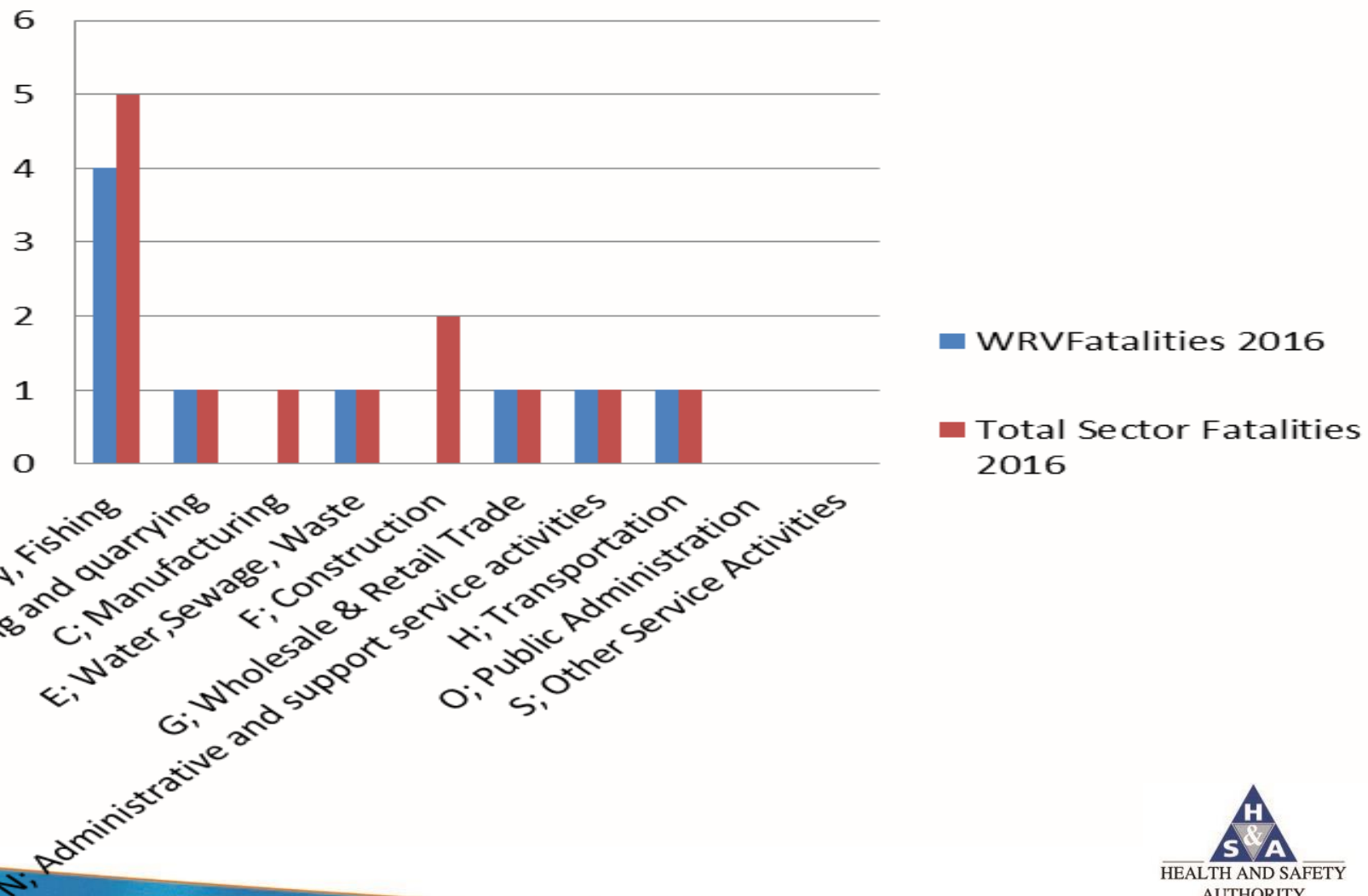
Driver

- ✓ Vetting
- ✓ Induction
- ✓ Authorisation
- ✓ Training
- ✓ ***Clear unequivocal rules for work tasks***
- ✓ Fit to drive on a daily basis
- ✓ No Intoxicants [drugs and alcohol]
- ✓ Collision/incident /near miss reporting
- ✓ Prevent Fatigue
- ✓ Distraction
- ✓ Use Safety equipment
- ✓ Safe driving behaviour

Journey/ Deliveries

- ✓ Planning
- ✓ Route scheduling
- ✓ Delivery Scheduling
- ✓ **Client cooperation**
- ✓ Safe delivering procedure
- ✓ Adequate breaks
- ✓ Safe stopping. Parking and reversing
- ✓ Care entering and exiting premises
- ✓ Keeping safe and suitable distance from other vehicles and VRU's
- ✓ Warning signs for road users and pedestrians
- ✓ Checking load regularly
- ✓ No Distractions
- ✓ Mechanical handling aids

Work Related Vehicle Fatalities by NACE Sector 2016



Work Related Vehicle Fatalities..... So far in 2016

10 [71%] deaths involving Vehicles at work reported to HSA

- 4 in Agriculture (3 overturned, 1 run away)
- 1 in Wholesale & Retail Trade: Fell 2m to the ground in a cage, from elevated position on a Fork Lift Truck. **Cage was not secured to the Forks!!**
Died Sunday 5th June
- 1 in Transport
- 1 in Administration (shed)
- 1 in Waste
- 1 Mining & Quarrying. Buried excavator

Forklift Safety



- In 2014 the average claim awarded for FLT injuries amounted to €28,000, the highest award was €116,000 (Injuries Board data; 2015)

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Forklifts are
supervision and

Safe Operation



- Employers must make sure that drivers are familiar with the vehicle they are driving
- Employees given **appropriate instruction, information and training** to use the vehicle in the correct and safe manner.
- **Training and pre use checks** . The majority of faults can be been found and fixed if the operator carries out a forklift pre-check before use. It only takes a few minutes. Identifies obvious defects that could affect forklift safety and the safety of others

Forklift Safety; Resources & Guidance

[HSA YouTube Channel](#)

www.vehiclesatwork.ie



FORKLIFT SAFETY TIPS

Information Sheet

December, 2013

Forklifts are extremely useful workplace vehicles, as long as they are used safely and appropriately by operators who are appropriately trained and competent to use them.

Forklifts can be dangerous: they account for 25% of injuries at work. Many workplace accidents involve people being hit or run over by forklift trucks (typically when the forklift is reversing) because the driver did not see them. Owing to their size and weight, injuries resulting from forklifts are generally very serious. Accidents involving them are often caused by poor supervision and a lack of training.

The following forklift safety tips will help you and those you work with stay safe around forklifts.

What is a forklift?

A forklift is a powered truck used to carry, lift, stack or tier materials. They include pallet trucks, rider operated forklifts, forktrucks, or lift trucks.

They can be powered by electric battery or combustion engines.

Forklifts are subject to statutory examination by a competent person once every 12 months in accordance with S.I. 299 of 2007 (Safety, Health and Welfare at Work (General Application) Regulations 2007). This period becomes 6 months if the forklift is used to lift persons.

What the law requires

If you own, lease, hire or borrow a vehicle for work purposes, you must make sure that it is safe and without risk to safety and health. Vehicles must be kept safe and fit for purpose and the driver must be able to get in and out of the vehicle safely.

Under health and safety legislation, a vehicle is a place of work. The law requires that workplaces are maintained in a condition that is safe and without risk to safety and health. Workplaces must be kept safe and fit for purpose and the driver must be able to get in and out of the vehicle safely.

Forklifts also are classed as work equipment. Employers must make sure that drivers are familiar with the vehicle they are driving and that they have been given appropriate instruction, information and training to carry out required pre-checks and to use the vehicle in the correct and safe manner, as per the manufacturer's instructions.



Page 1 of 6



Forklifts | OPERATOR PRE-CHECKS

Information Sheet

December, 2013

Forklifts can be dangerous machines. If not maintained properly, there is a risk of injury or death. This information sheet outlines what must be done to keep forklifts safe and fit for purpose.

What the law requires

If you own, lease, hire or borrow a vehicle for work purposes, you must make sure that it is safe for use and fit for the purpose for which it is intended.

Under Health and Safety Legislation, a vehicle is a place of work. The law requires that workplaces are maintained in a condition that is safe and without risk to safety and health. So, vehicles must be kept safe and fit for purpose and the driver must be able to get in and out of the vehicle safely. Employers must make sure that drivers are familiar with the vehicle they are driving and that they have been given appropriate instruction, information and training to carry out required pre-checks and operate the forklift in the correct and safe manner.



Employers must undertake routine preventative maintenance to keep forklifts in safe working condition as per the manufacturer's instructions.

Employers must also make sure that they have a defect reporting system in place so that when defects are found that they are rectified in a timely manner. Drivers should never be required to drive under conditions that are unsafe or that do not comply with the law.


Forklifts are subject to statutory examination by a competent person once in every period of twelve months in accordance with S.I. 299 of 2007 (Safety, Health and Welfare at Work (General Application) Regulations 2007). If the forklift is used to lift persons, a six-monthly check is required.

A system should be established for reporting defects and ensuring that remedial work is carried out. A planned routine maintenance system should include:

- **Daily pre-checks** of tyres, brakes, reversing alarm, flashing beacon etc. by the driver at the beginning of each shift



Page 1 of 6



Keeping Pedestrians Safe

- **Control pedestrians** entering the place of work, for example; by using access gates, barriers or doors.
- **Separate vehicle and pedestrian traffic.**
 - separate vehicle and pedestrian entrances
 - routes directly from the road and throughout the premises.
- **Provide, Signage, warning devices and PPE**

Clear warning of the risks of moving vehicles



DO NOT
Stop or
Stand
Within 20ft of
this Equipment

Pedestrian Safety; Resources & Guidance

[HSA YouTube Channel](#)

www.vehiclesatwork.ie



Pedestrian Safety in the Workplace Information Sheet

November, 2013

This information sheet deals with pedestrian safety in fixed and temporary workplaces. It is aimed at employers, self-employed people and people in control of places of work. It explains the importance of managing pedestrians in workplaces where vehicles, mobile plant or machinery operates.

Pedestrians can be exposed to potential harm in their own workplaces from vehicle movements, falling objects, or slips, trips and falls. Particular attention should be paid to visitors and visiting workers, e.g delivery drivers, who are unfamiliar with workplace operations. It is very important that visitors are supervised and controlled from the time they enter a workplace to the time they leave.

Who is at risk?

On average twenty people a year are killed by being run over, crushed or otherwise injured by vehicles in Irish workplaces. Many others suffer serious injuries.

Pedestrians are people who travel on foot in the workplace. They can be employees, members of the public or visiting workers. Where vehicles operate, people can be particularly vulnerable. This is why proper controls must be put in place to keep them from harm. Visitors especially can create risks for themselves and others because they are not familiar with the premises and the work activities.

What the law requires

By law pedestrians and vehicles must be able to circulate safely both in indoor and outdoor places of work. Pedestrian routes must be clearly identified and be of appropriate dimensions for the number of users and the work activities. Vehicle routes must have sufficient clearance from doors, gates and routes used by pedestrians. Where vehicles and pedestrians share routes, there must be adequate safety clearance between the vehicles and the pedestrians. Where self-propelled work equipment is in use, procedures must be in place to prevent pedestrians from entering the work area. If employees must enter the work area, appropriate procedures must be in place to protect the employees from harm.



Delivering Safely

Consultation, co-operation, co-ordination



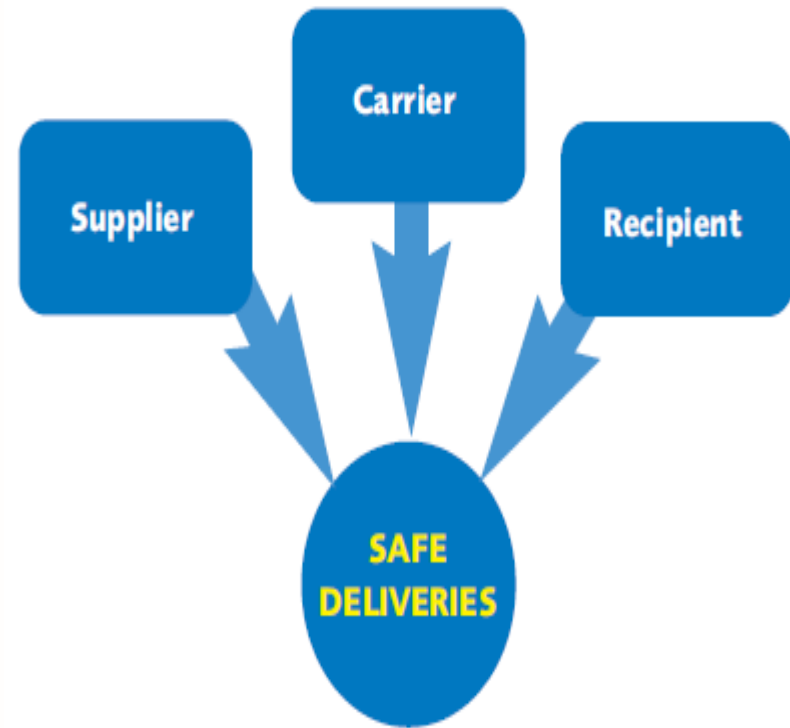
- Deliveries and collections are essential to business, but can be some of the most dangerous activities you and your staff have to deal with.
- Many delivery and collection incidents could be prevented if there was better cooperation between the parties involved.

Joint Responsibility

Individuals (mostly drivers) are often unfairly blamed for accidents which could have been prevented if duty holders had co-operated with one another.

The **three key duty holders** are:

- the **supplier** sending the goods
- the **carrier** - the haulier or other company carrying the goods
- the **recipient** - the person receiving the goods



Delivering Safely; Resources and Guidance

Delivering Safely

Consultation, cooperation and coordination
Information Sheet

December, 2013

Introduction

Do vehicles visit your workplace to deliver or collect goods or materials?

Are your vehicles used for the delivery or collection of goods or materials from other businesses?

Deliveries and collections are essential to business, but can be some of the most dangerous activities you and your staff have to deal with.

Many delivery and collection incidents could be prevented if there was **better cooperation** between the parties involved.

This information sheet describes how people and organisations involved in deliveries and collections can cooperate to prevent delivery-related incidents.



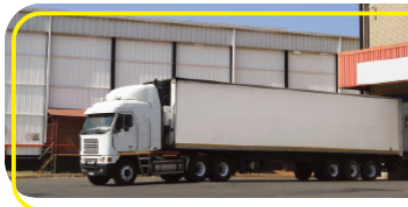
Nature of the problem

Every year, thousands of workers sustain serious and fatal injuries when working around trucks or vans which are collecting or delivering goods.

- being hit by objects falling from vehicles
- injuries from manual handling tasks

Unless vehicle movements and work activities are carefully controlled, people are at risk of:

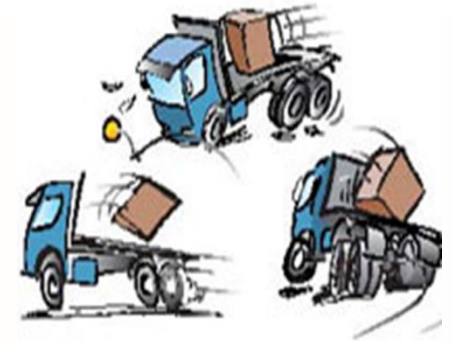
- being hit by moving vehicles, (reversing vehicles in particular)
- slips, trips and falls in the general work area and on or from the vehicle
- injuries caused by vehicles turning over





Always ensure that your load is secure, it's the law.

Load Securing



Who is responsible

Load security is not the sole responsibility of the vehicle driver

Everyone has a role to play in ensuring that loads are loaded, unloaded, secured and transported safely

Duty Holders

Employers

Vehicle Owners

Vehicle Operators

Transport Manager/Supervisor

Driver

Loading & Unloading Staff

Unsecure Loads can; Result in Injury, Damage, Inconvenience, Cost and DEATH!!!

Forestry Timber: Serious Injury (IRL)



Sheet Steel Load @ 8km/hr: Fatality
(UK)



Common Issues

Incorrect use of “Rope Hooks” as Lashing Points



“The Weight will hold it”:
Unsecured Loads on a Flat- Bed



Load Securing: Resources and Guidance

International Guidelines on Safe Load Securing for Road Transport



Load Securing: Resources and Guidance

LOAD SAFETY SERIES

Information Sheet

Safe Load Securing of Plant and Machinery

What the Law requires

Under Health and Safety Legislation, a vehicle is a place of work. The law requires that vehicles are maintained in a condition that is safe and without risk to safety and health. Employers have duties under the Safety, Health and Welfare at Work Act 2005 to ensure, so far as is reasonably practicable, the health and safety of their employees and others who may be affected by their work activities (other road users). This includes providing systems of work that are planned, organised, performed, maintained and revised.

Road Traffic law requires

Every load carried by a vehicle in a public place shall be of such a weight and size and so distributed, packed, adjusted and attached to the vehicle that, so far as can reasonably be foreseen, no danger is liable to be caused and that there is no interference with the stability of the vehicle. In the case of mechanically propelled vehicles and trailers, no load carried shall exceed a reasonable weight, having regard to the engine capacity, brakes, tyres and general construction of the vehicle¹.



Plant and Machinery Load

Due to their size and weight, plant and machinery are considered to be high-risk loads of load shift or load shed can be that are not firmly anchored to the vehicle during transport. This can make the load dangerous:

- The driver, if the load slides forward or shifts sideways and causes the driver to lose control of the vehicle;
- Other road users or pedestrians, if the load slides forward or shifts sideways or slides backwards;
- Unloading personnel, if the load shifts during the journey and may collapse during unloading.

¹ S.I. No. 190/1963: ROAD TRAFFIC (CONSTRUCTION, EQUIPMENT AND USE OF VEHICLES) REGULATIONS, 1963



LOAD SAFETY SERIES

Information Sheet

Safe Load Securing of Precast Concrete Loads

October 2015

What the Law requires

Under Health and Safety Legislation, a vehicle is a place of work. The law requires that workplaces are maintained in a condition that is safe and without risk to safety and health. Employers have duties under the Safety, Health and Welfare at Work Act 2005 to ensure, so far as is reasonably practicable, the health and safety of their employees and others who may be affected by their work activities (other road users). This includes providing systems of work that are planned, organised, performed, maintained and revised.



Road Traffic law requires

Every load carried by a vehicle in a public place shall be of such a weight and size and so distributed, packed, adjusted and attached to the vehicle that, so far as can reasonably be foreseen, no danger is liable to be caused and that there is no interference with the stability of the vehicle. In the case of mechanically propelled vehicles and trailers, no load carried shall exceed a reasonable weight, having regard to the vehicles capability, brakes, tyres and general construction of the vehicle.¹

So, vehicle owners and operators need to ensure compliance with both health and safety and road traffic legislation if they are involved in loading, unloading or transporting loads of any type on their vehicles.

Precast Concrete Loads

Precast Concrete products are high-risk loads and the consequences of load shift can be extremely serious. Loads that are not firmly anchored to the load bed may shift during transport. This can make them unsafe. Movement of the load endangers:

- The driver, if the load slides forward during the journey or shifts sideways and causes the driver to lose control of the vehicle.

¹ S.I. No. 190/1963: ROAD TRAFFIC (CONSTRUCTION, EQUIPMENT AND USE OF VEHICLES) REGULATIONS, 1963, Reg 96



LOAD SAFETY SERIES

Information Sheet

Securing of Structural Steel Loads

October 2015

Under Health and Safety Legislation, a vehicle is a place of work. The law requires that workplaces are maintained in a condition that is safe and without risk to safety and health. Employers have duties under the Safety, Health and Welfare at Work Act 2005 to ensure, so far as is reasonably practicable, the health and safety of their employees and others who may be affected by their work activities (other road users). This includes providing systems of work that are planned, organised, performed, maintained and revised.



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Under Health and Safety Legislation, a vehicle in a public place shall be maintained in a condition that is safe and without risk to safety and health. Loads that are not properly secured can shift during transport, causing serious injury or death. Movement of the load during transport can cause:

• The driver, if the load slides forward during the journey and causes the driver to lose control of the vehicle;

• Other road users including pedestrians, if the load shifts sideways and falls off the vehicle;

• Unloading personnel, if the load has become unstable during the journey and collapses during unloading.

¹ S.I. No. 190/1963: ROAD TRAFFIC (CONSTRUCTION, EQUIPMENT AND USE OF VEHICLES) REGULATIONS, 1963, Reg 96



- Other road users including pedestrians, if the load shifts sideways or slides backwards and falls off the vehicle.
- Unloading personnel, if the load has become unstable during the journey and collapses during unloading.

Load Restraint Methods

Loads can be restrained by two basic methods, either indirectly or directly using 'Tie-down' or 'Direct restraint' methods respectively.

Tie-down is when the load is prevented from moving by friction only, also called a 'frictional lashing'.

Direct restraint is when the load is prevented from moving by containing, blocking or attaching it to the vehicle.



Figure 7. Example of correctly secured Precast Concrete load using chains

Key Maintenance Issues

Never work beneath a vehicle supported only by a jack or jacks;

- the correct jack for the job should be used. It should be capable of taking the load of the vehicle to be lifted and be applied to the correct jacking point of its underside, as identified by the vehicle manufacturer;
- the jack should not be relied upon as the sole support if work is to take place beneath the vehicle or if more than one axle is raised. It should be supplemented with appropriate stands, and the wheels of the vehicle still in contact with the ground should be chocked;
- **Never** work under un supported Trailer tipping bodies or other hydraulically operated machinery; e.g. loading shovels, lifting arms



NEW E-learning resources

new

HSA Online Courses
on Managing Workplace
Transport Safety at

 **hsalearning.ie**
HSA Online Courses

Information leaflet

For Business Owners, Supervisors and
Managers who design, organise and manage
vehicle related activities in the workplace

**H
S
&
A**
HEALTH AND SAFETY
AUTHORITY

**Workplace Transport
Risk Management**

5 FREE courses

**Cross Sectoral
approach**

[Workplace Transport e-
learning courses](#)



Load Securing Factsheets for High Risk Loads

The Health & Safety Authority working in partnership with **An Garda Siochana** and the **Road Safety Authority** has developed this series of Load Safety information sheets

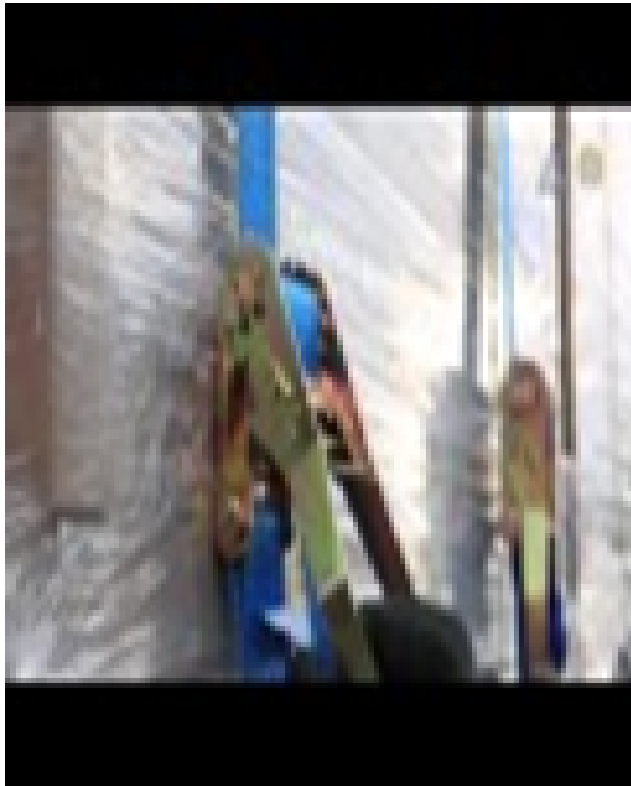


Workplace Transport Risk
Management Courses

Load Securing Videos

Vehicles carrying poorly secured loads pose a clear risk to their drivers, to workers involved in loading and unloading operations and to other road users. The HSA working in partnership with An Garda Siochana has produced this series of 7 information videos on Safe Load Securing for road transport. These video clips provide a general overview on how to achieve safe load securing practices.

[View the Load securing videos here](#)



Montabaur Germany [March]

- Expert report on managing grey fleet risks for employers [May]



*and carried out by University College
Dublin. Due to be published in 2016*

Load Securing fact sheets for high risk loads [timber, palletised goods, site cabins],

A blue and red forklift is parked in a warehouse aisle. The floor is marked with a red and white zig-zag pattern. A yellow hard hat, a blue jacket, and a black safety boot are scattered on the floor. A red and white striped caution tape is stretched across the aisle. The background shows high industrial shelving units filled with boxes.

DON'T LET WORK BE THE REASON YOU WON'T BE IN TOMORROW

Last year almost half of all workplace deaths involved a vehicle. As a business owner or manager, you're responsible. Tomorrow is too late. Develop a vehicle safety programme in your workplace today.

Find out how at vehiclesatwork.ie

Thank you
www.vehiclesatwork.ie
www.loadsafe.ie



Break 11:15 – 11:35

BeSMART.ie

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[eLearning](#)

▶ What is BeSMART.ie?



BeSMART.ie - Business electronic Safety Management And Risk assessment Tool - will help small business owners/managers to prepare risk assessments and a safety statement for their workplace. It is easy to use and it will:

- Reduce the chances of an accident occurring in your workplace
- Save you time and money



Brought to you by the Health and Safety Authority

▶ Why Register?



By registering you gain access to the following benefits:

- It's free
- It's confidential
- You can save, review and edit your completed risk assessment(s) at any time
- You can manage your action list and receive email reminders

▶ [Register Now](#)

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New

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▶ Construction



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VENUES	AGENDA
<p>Thursday 2nd June Cork City Clarion Hotel</p>	<p>09:00 <i>Registration/Tea & Coffee</i></p> <p>09:30 <i>Opening Address – Regional Area Senior Inspector HSA</i></p> <p>09:45 Work Related Vehicle Safety in your business. The main issues of concern. Deirdre Sinnott, Senior Inspector WRVS Unit, HSA</p>
<p>Tuesday 7th June Dublin Green Isle Hotel</p>	<p>10:15 Preventing Vehicle related Slips Trips & Falls Eamonn O’ Sullivan, Inspector, HSA</p> <p>10:45 Workplace Transport Risk Management priorities. [Safe Load Securing, forklifts, deliveries and collections, vehicle maintenance] Noel Lacey, Inspector, HSA</p> <p>11:15 <i>Break - Tea/Coffee</i></p>
<p>Thursday 9th June Athlone Sheraton Hotel</p>	<p>11:35 Ergonomics risk management in Transport Operations Francis Power, Inspector, HSA</p> <p>12:05 <i>Employer Case Study, Vehicle Related Risk Management, what it looks like in practice – TBC</i></p> <p>12:35 <i>Q&A (Close of seminar at approximately 1:00pm)</i></p>

Ergonomics Risk Management in Transport Operations

Frank Power Inspector (Projects Manager)
June 2016



Ergonomics?

Develop better ways of working that consider the people that do the work in order that the workers can work within their capabilities and protect their musculoskeletal health.





Ergonomics Risk management

- Improving the design of work activities
- Planning of work activity to reduce or eliminate risk factors including force, repetition and awkward posture
- Control measures or safe systems of work which focus on engineering or organisational improvements.

What is the law?

The Manual Handling of Loads Regulation in S.I. 299 Of 2007

- **Provide appropriate mechanical equipment** or change the way the work is done to avoid the need for manual handling
- Where manual handling of loads cannot be avoided, **take steps to reduce the risk** involved by using appropriate mechanical equipment or changing the way that work is done
- **Risk Assess the specific work activity**, take account of the risk factors in Schedule 3 of S.I. 299 of 2007 and take steps to avoid or reduce the risk of injury

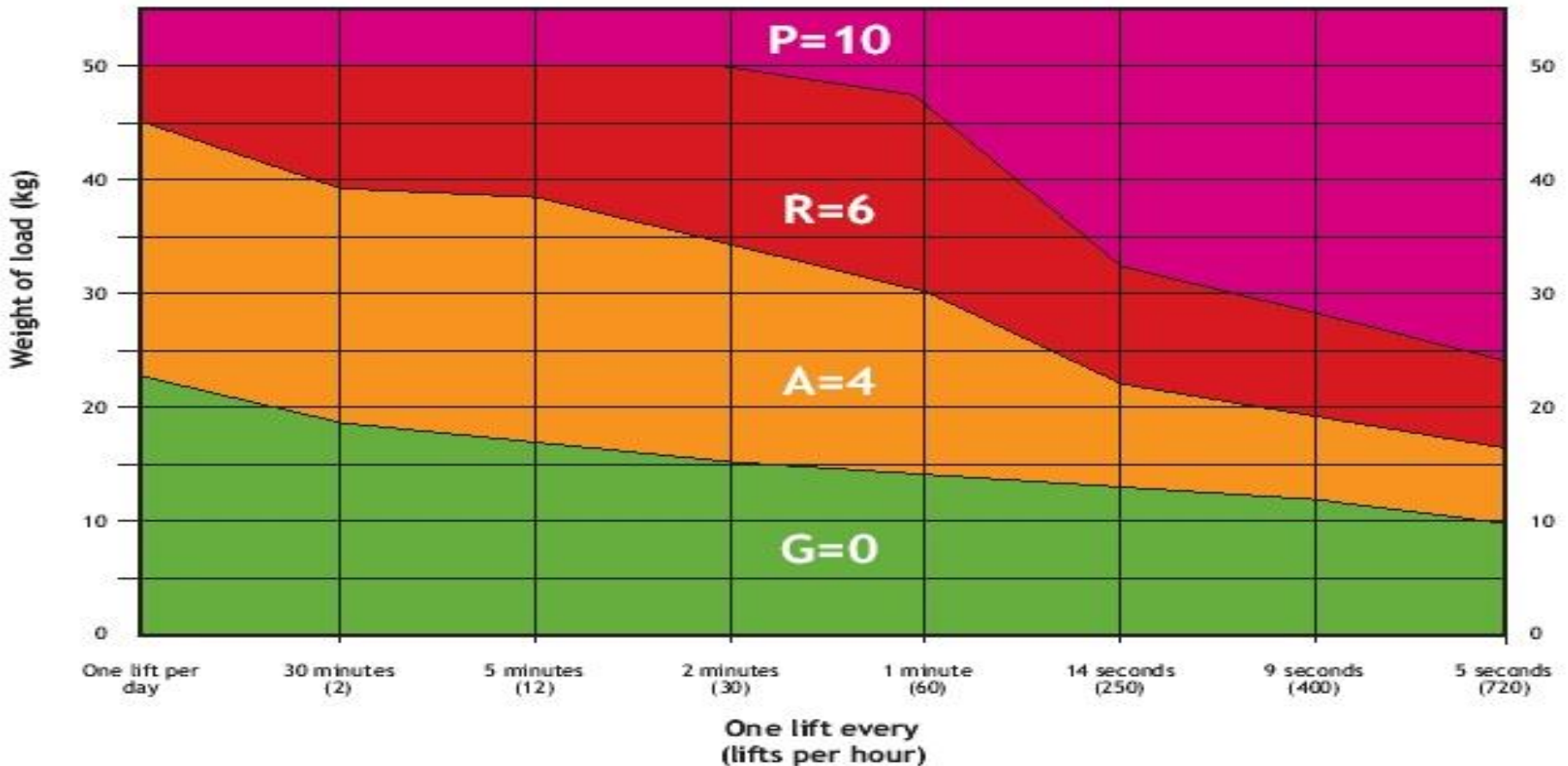
Risk Factors

Force: Carrying a 45kg load over a distance

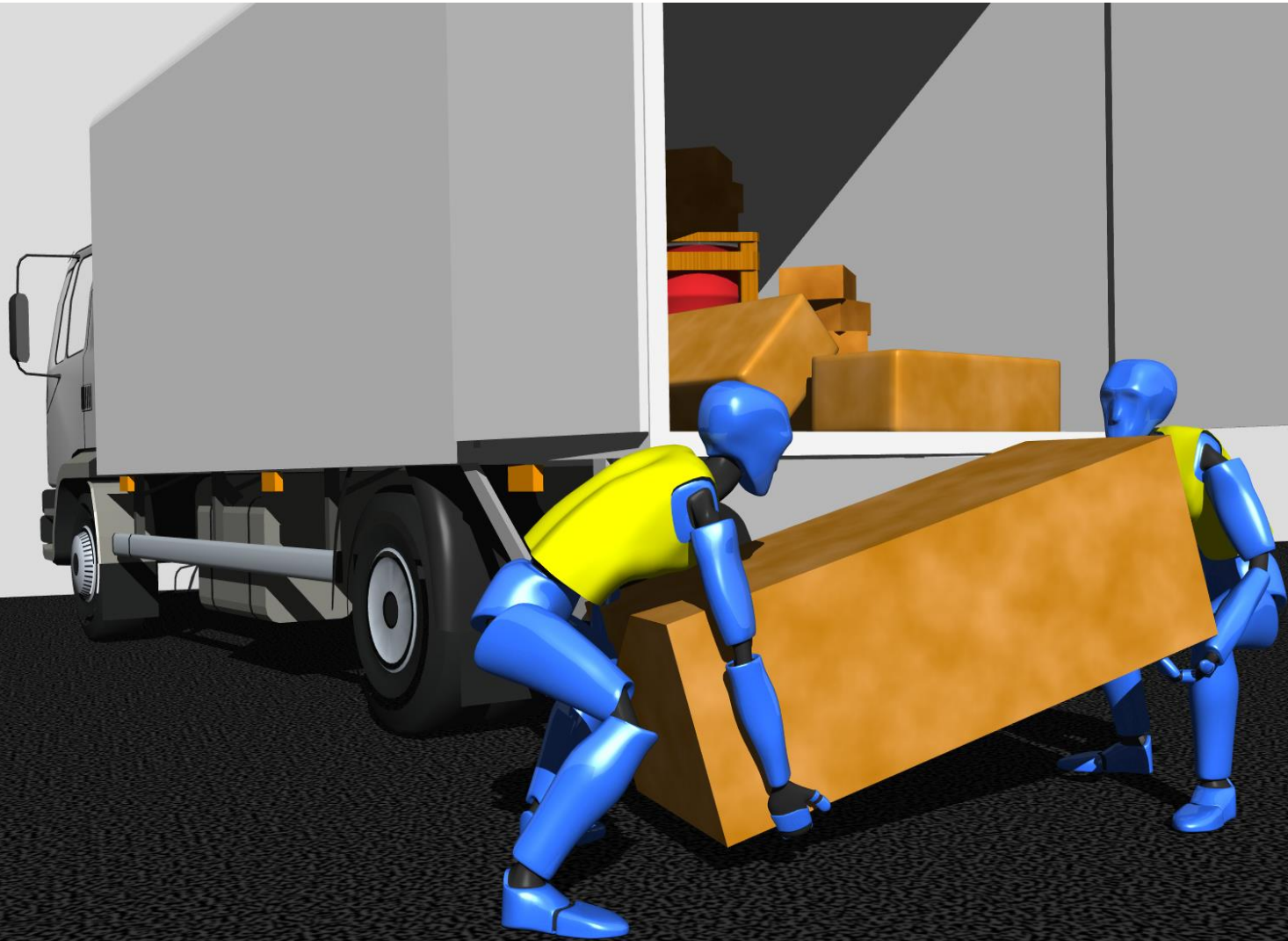


Identifying Risk Factors: Use of the Health and Safety Executive Mac Tool: Load Weight/Frequency

Load weight/frequency graph for lifting operations



Risk Factors: Awkward Posture



Identifying Risk Factors: Use of the Health and Safety Executive Mac Tool: Vertical Lift Region



Statistics

- The **occupational illness rate** increased from **21.7 per 1,000** workers in 2001 to **27.1 per 1,000** workers in 2012. (ESRI 2015)
- **Manual Handling** continues to be the **most common accident trigger** accounting for **33% of all reported non-fatal accidents**

(Health and Safety Authority Summary of Workplace Injury, Illness and Fatality Statistics)

- **28% of over 10,000 occupational injury benefit claims** relate to injuries to the back, with an **average of 57 lost days**

(Occupational Injury Benefit Claims, Department of Social Protection 2015)

Transport & Logistics Sector Statistics

Between 2009 and 2013

- **4,991 work related accidents** in this sector
- **24% resulted in injuries** to the musculoskeletal system including the back.
- **Nearly 50% of the injuries** due to manual manual = **lifting and carrying loads**

Impact of a Musculoskeletal injury

The Individual

- Reduced Mobility
- Absent from work
- Reduced quality of life

The employer

Potential legal costs

- Retraining
- Lost Productivity

How do I reduce the risk?

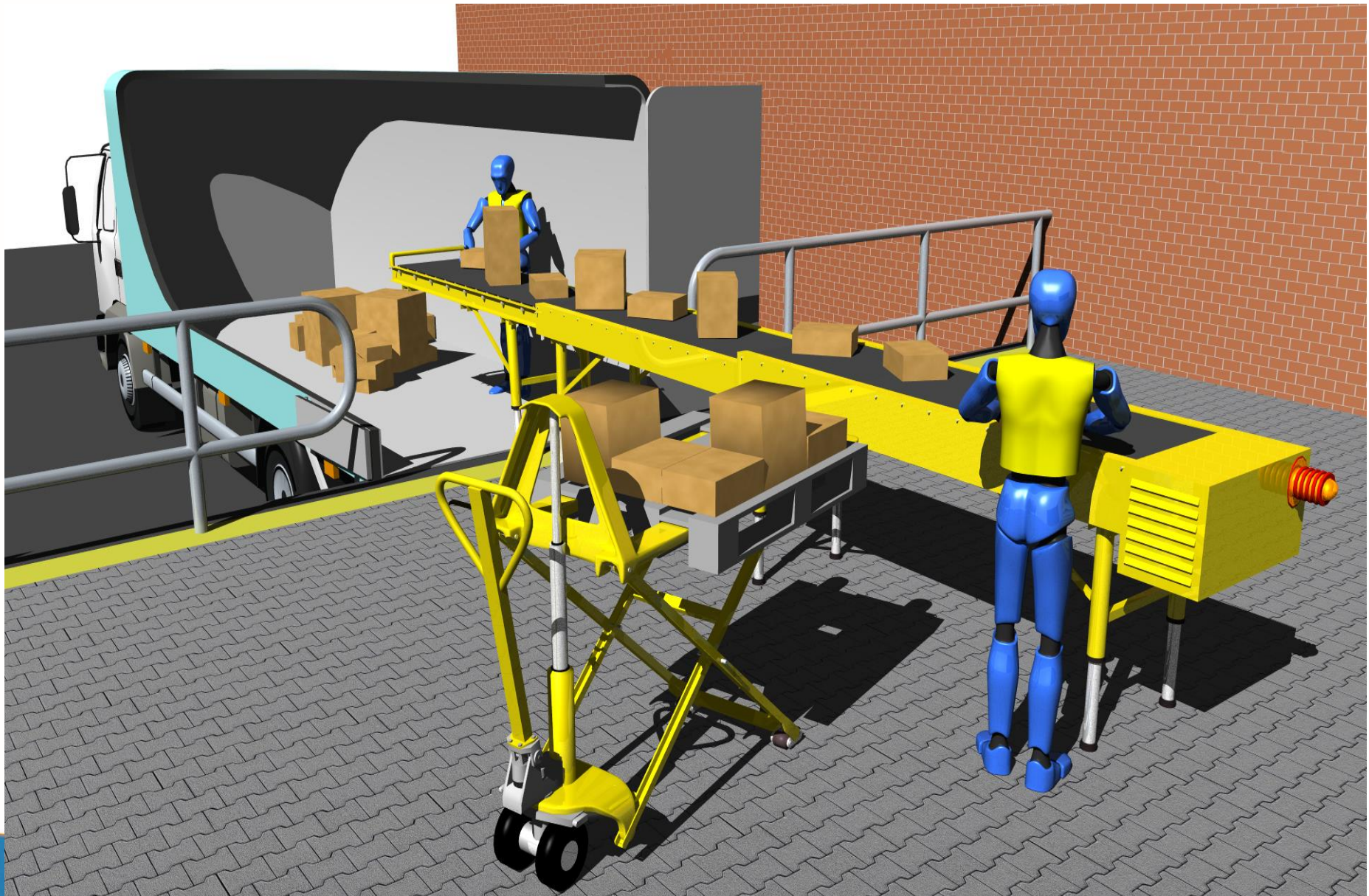
- **Recognise** that manual handling activity is a potential workplace hazard
- **Understand the nature of manual handling work activities** carried out in your workplace
 - be aware of the type of loads that are handled, what do they weigh?
 - how are they handled?
 - do you have good handling systems in place?
 - have you planned how loads will be handled?
- **Risk Assessments need to be completed** for work activities on site.
- **Put solutions or control measures in place** that avoid or reduce the risk of injury

Risk Assessment

The study of work activities where manual handling is a key part of the activity in order to:

- **Understand** how the activity is conducted
- **Collect the information needed** to make informed judgments (e.g. weight of loads, take pictures or video of the activity, work environment issues)
- **Identify the potential risk factors** or potential for harm and provide evidence to support including making reference to risk assessment tools such as the Health and Safety Executive UK Mac Tool
- **Develop appropriate control measures** by using appropriate mechanical handling equipment or changing the way work is done

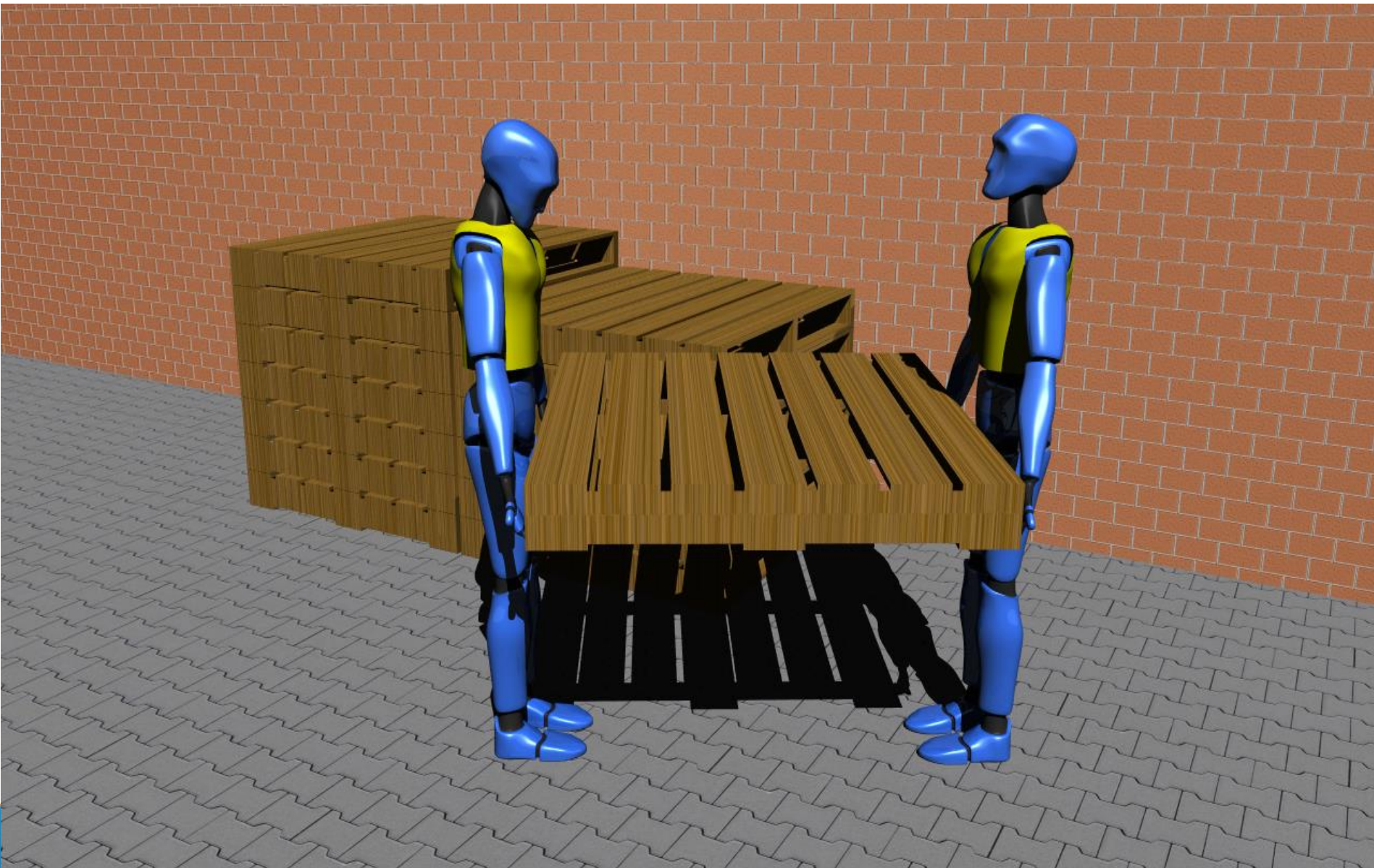
Use of Appropriate Handling Equipment



Use of Appropriate Handling Equipment



Changing the way work is done



Changing the way work is done



Changing the way work is done



Key Questions

- Is there evidence that regulatory requirements are being met?

Precise and clear evidence that risk factors are addressed

If not

- What is needed to meet the requirements of a specific regulation?

Direction on the appropriate measures that need to be taken to address risk factors

Ergonomics Risk Management:

Some important principles

- **Management commitment** to recognise and address Ergonomic risk
- **Knowledge of the nature of work** carried out in the workplace
- **Improved competency and consistency** in the application of Ergonomic or Manual Handling risk assessment tools
- **Development of innovative engineering or organisational interventions** to avoid and reduce risk
- **Effective training and development** processes not just on safe handling but also in safe use of equipment

Useful Guidance Documents



Ergonomics Webpage on HSA Website

http://www.hsa.ie/eng/Workplace_Health/Manual_Handling_Display_Screen_Equipment/

Guidance Documents



- › Manual Handling
- › Display Screen Equipment
- › Ergonomics

Risk Assessment Videos



- › Manual Handling Videos Series 1
- › Manual Handling Videos Series 2
- › BeSMART Videos
- › Miscellaneous Videos

Research and Statistics



- › Infographics
- › Research
- › Statistics

FAQs



- › Display Screen Equipment FAQs
- › Manual Handling FAQs
- › Manual Handling Training System FAQs

Useful Resources



- › Other Links
- › Further Reading and Information

Thank you

http://www.hsa.ie/eng/Workplace_Health/Manual_Handling_Display_Screen_Equipment/



Thank you
www.vehiclesatwork.ie
www.loadsafe.ie
Safe Journey Home

