



Salient Points of CP 101 : 2004

“Code of Practice for Safe Use of Powered Counterbalanced Forklifts”

&

“Forklift Traffic Management”



22 Mar 2007

CP 101 : 2004

The Code of Practice for safe use of powered counterbalanced forklifts:

- Approved on 6 Feb 2004
- First published in 2005
- Launched on 3 Mar 2006



Purpose of CP 101:2004



Reduce accidents at workplace

Provides important safety information for:

- Safety Professionals
- Owners
- Operators



Purpose of CP 101:2004



- A guide to design training courses for forklift operators and other operational staff

However.....

- Cannot be used as a substitute for Basic Forklift Driver Training
- Forklift operators are required to attend an approved course



Training requirements for forklift operators



Must attend and pass “Forklift Driver’s Training Course”
conducted by an MOM Approved Course Provider

- One day classroom Theory
- Two / four days Practical



Course for forklift operators

Theory

1. Introduction to the forklift
2. Daily checks
3. Capabilities and limitations of the forklift
4. Forklift stability
5. Operational do's and don'ts
6. Cargo handling symbols and instructions



Course for forklift operators

Practical

- Familiarisation with controls and gauges
- Daily checks
- Travelling
- Picking and placing empty pallets
- Picking and placing loaded pallets
- Stacking and de-stacking dummy cargo
- Practical driving test



Benefits

The Proper use of the CP can help increase:

- Safety & productivity of forklift operators & operational staff
- Safety and efficiency of forklifts



Benefits

Leading to:

- Lower accident rates
- Lower accident costs
- Lower insurance premium



Benefits

Leading to:

- Higher productivity
- Higher profits
- Higher employee morale
- Higher customer satisfaction



Overview of CP 101:2004

Clauses:

1. Scope
2. Classification and definitions
3. Operating safety rules for the user and operator
4. Maintenance practices

Annex A: Components of a counterbalanced forklift

Annex B: Example of a checklist

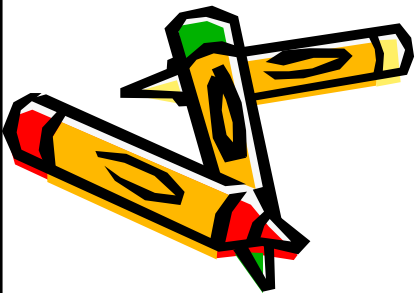


Clause 1 - Scope

Specifies the safety requirements for:

- Manufacture
- Application
- Operations
- Maintenance

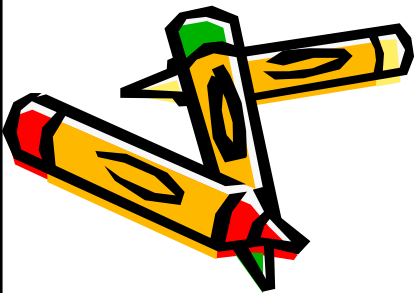
Lays down responsibilities of various parties involved



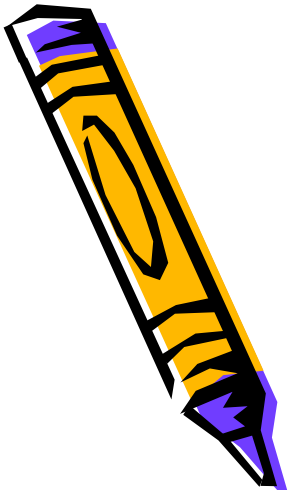
Clause 1 - Scope

Does not apply to forklifts that do not:

- Use forks for lifting
- Use counterweight for balance



Typical Powered Counterbalanced Forklift



Counterweight

Forks



Two areas of concern

- Overturning of forklifts : clause 3.2.1
- Pedestrian safety : clause 3.3.3



Most Vulnerable

- Overturning poses the most danger to forklift drivers in the workplace
- Pedestrians account for the highest percentage of forklift injuries and fatalities



CP 101 : 2004 Clause 3.2.1

Forklifts are most vulnerable to tipping over when working on:

- » Slopes
- » Ramps
- » Mobile ramps
- » Docking boards
- » High stacks
- » Poor ground conditions



CP 101 : 2004 Clause 3.2.1

In the event a forklift tips over, the operator shall:

- Hold on tight to the overhead guard
- Brace his feet and keep all body parts within the confines of the forklift
- Lean away from the side that is lowest during the tip



Forklift Tipped Over When Descending Mobile Ramp



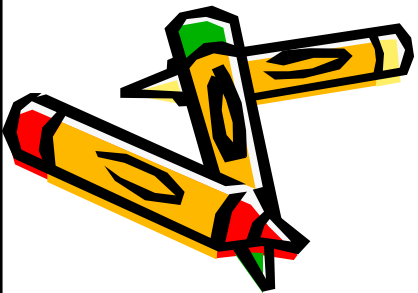




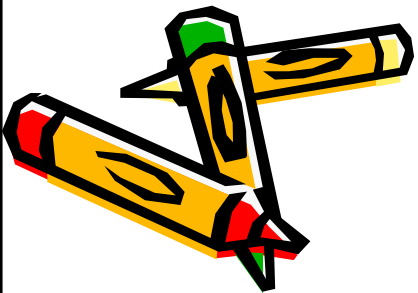
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What happened?

- Did the operator follow the guidelines for tipping forklifts?
- Did he try to jump off the truck?
- Was he thrown off the truck?
- What could have prevented his death?



Seat Belt ??



Did you know that.....

The forklift can be one of the most dangerous piece of equipment in the workplace ?



A medium sized forklift.....

Weighs about the same as 4 saloon cars & can cause extensive damage and injury when traveling around the workplace

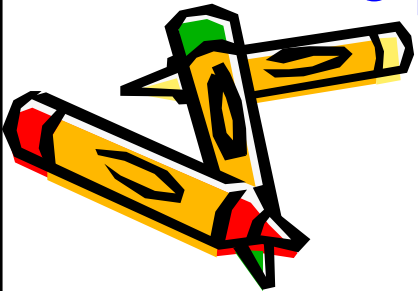
- Mass
- Speed
- Brakes

To be effective, a forklift must be manoeuvrable so they are designed to be compact, making them less stable and susceptible to tipping over

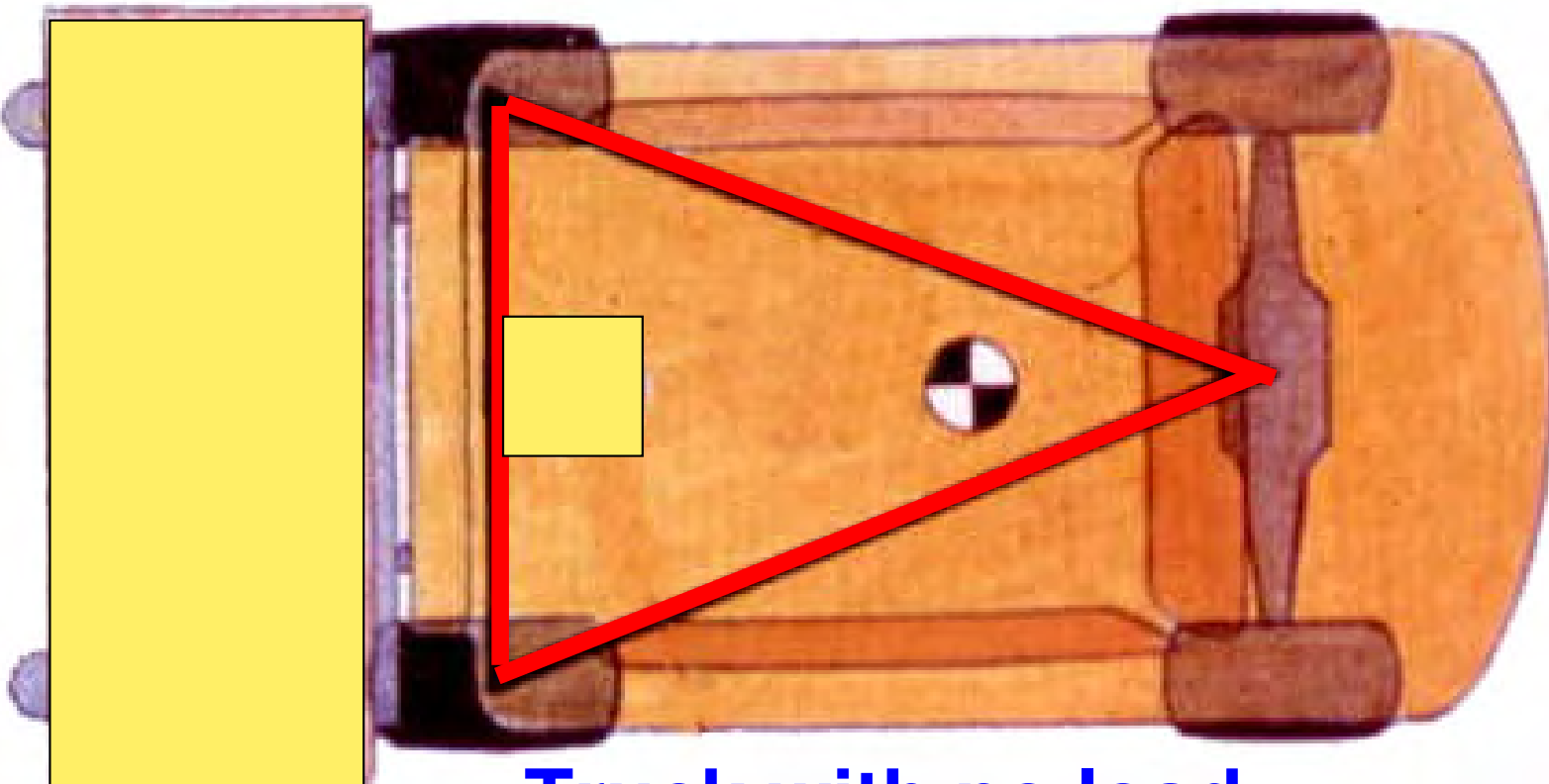


What makes the forklift less stable ?

- Narrow wheelbase
- High centre of gravity
- Carries load outside supporting base
- Small wheels with only 2 braking wheels
- 3 point suspensions



3 point suspensions

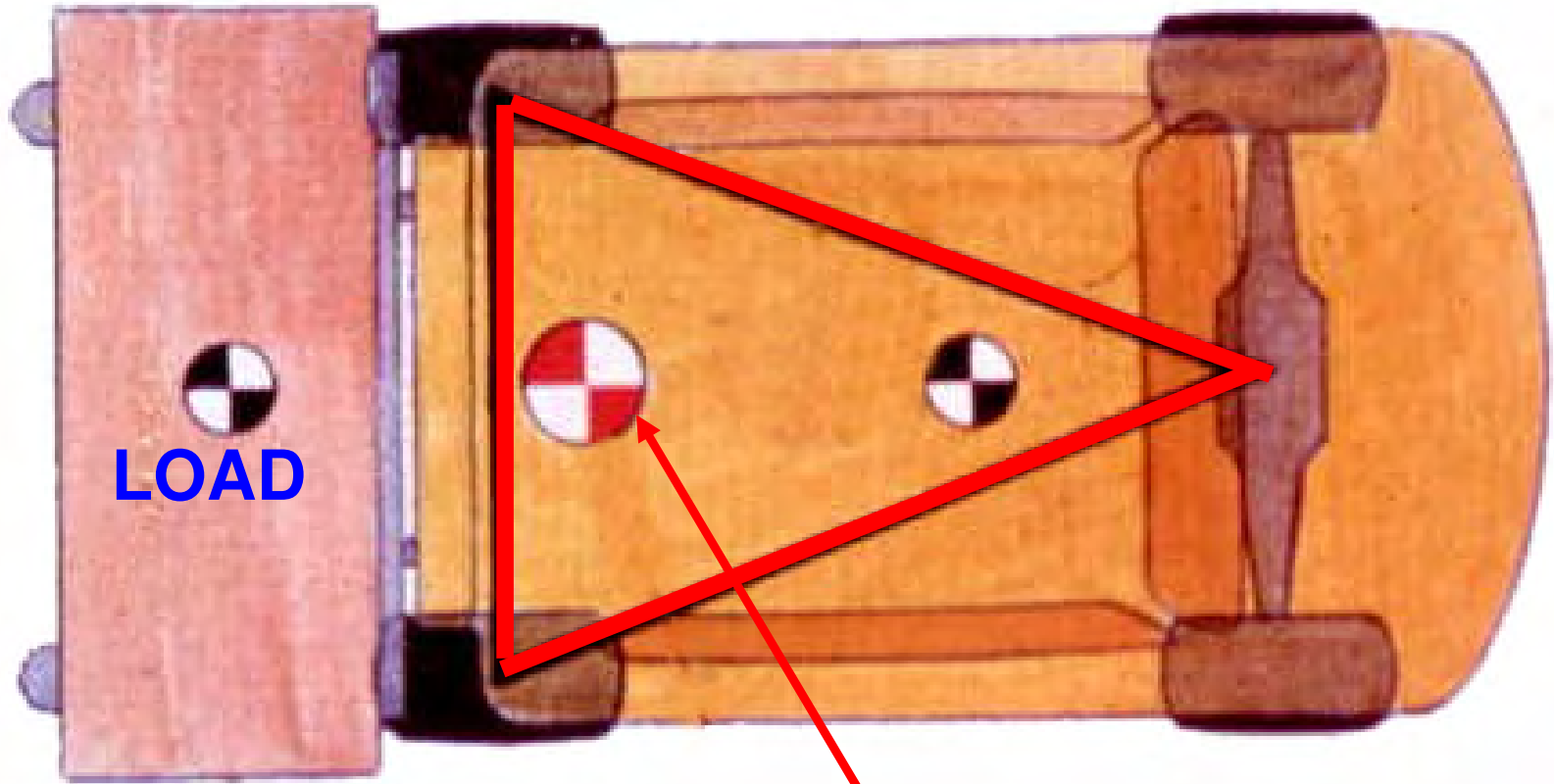


Truck with no load

The Stability Triangle



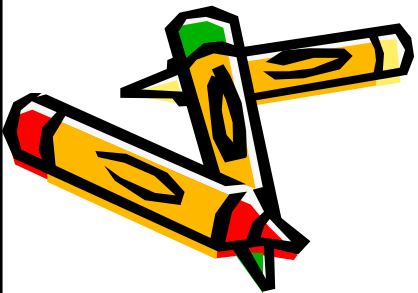
Truck with load



LOAD

Combined Centre
Of Gravity

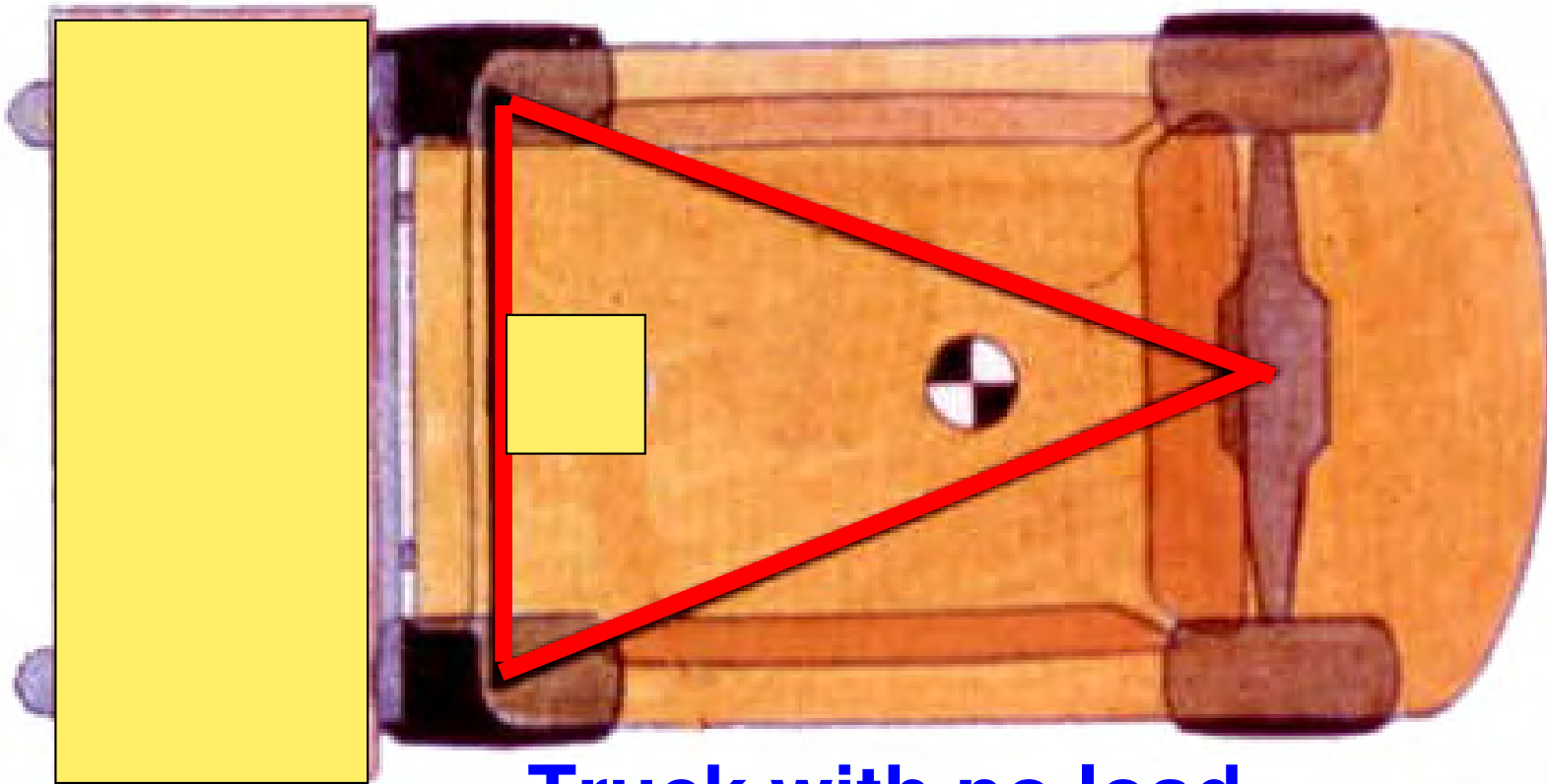
The Stability Triangle



Did you know that...

A forklift with no load is less stable than a loaded forklift ?



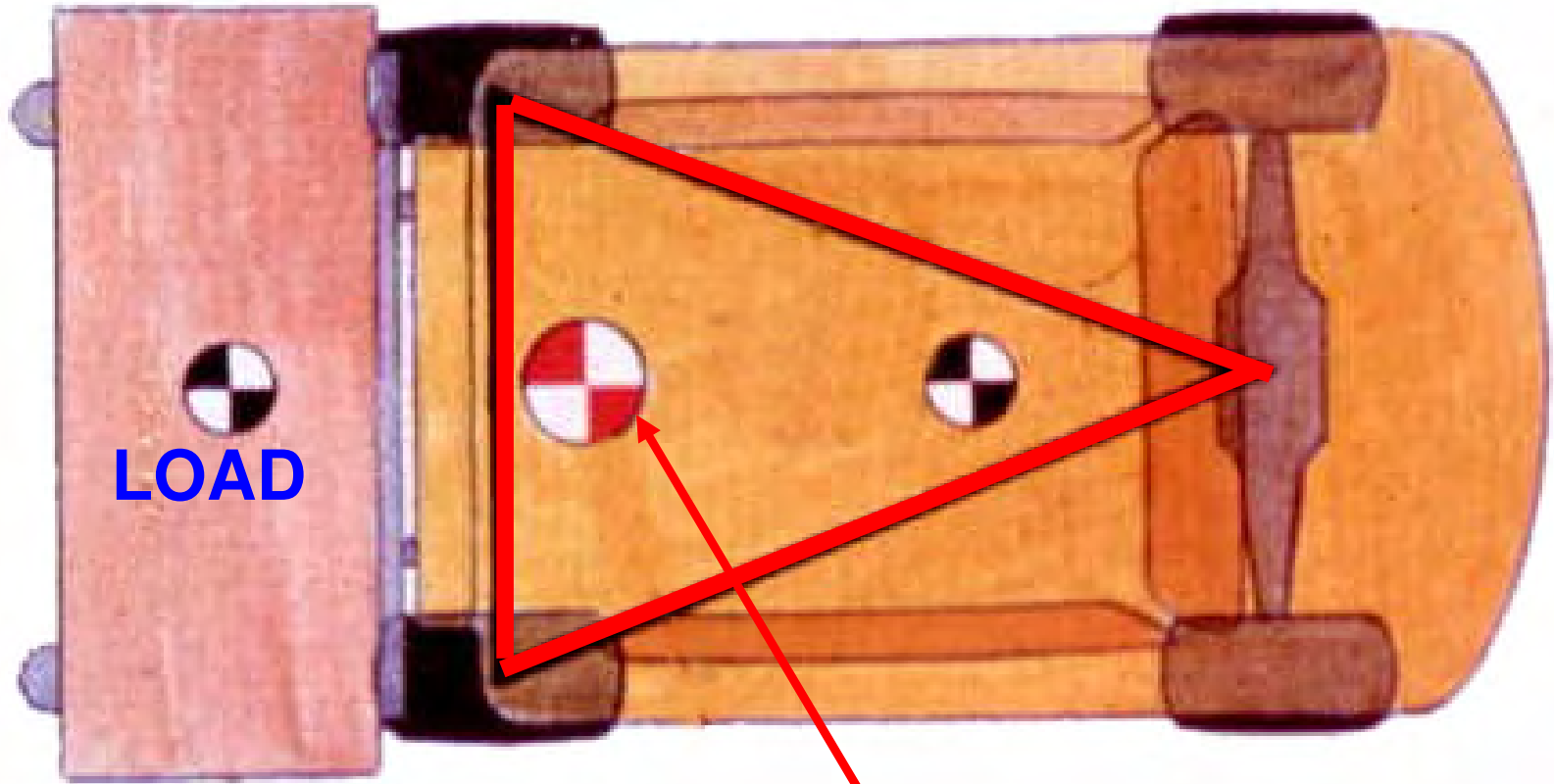


Truck with no load

The Stability Triangle



Truck with load



LOAD

Combined Centre
Of Gravity

The Stability Triangle



Pedestrian Safety : Clause 3.3.3



Pedestrians and forklifts don't mix



- Pedestrians account for the highest percentage of forklift injuries and fatalities
- Essential that pedestrians be kept at safe distance from working forklifts
- Requires decisive action to prevent, not discourage pedestrians and forklifts coming into close proximity
- Even at low speeds, unexpected movement of forklift can crush a bystander against fixed structure or another vehicle



Forklift traffic management plans

Safety of pedestrians, most important aspect of forklift traffic management plan

- Study the way forklifts, pedestrians move.....or need to move around the workplace
- Identify potential places for collisionsforklifts > pedestrians, forklifts > other vehicles, columns, racking, etc



Forklift traffic management plans



- Consider the way forklift mast, load obstruct operator's view
- Consider the braking distance of laden forklifts, distance loads could fall, factors affecting forklift stability
- Consider the most efficient route for traffic flows and reduced interaction with hazards



Forklift traffic management plan controls could include:



- Changing the workplace layout to minimize cross flow of traffic, intersections, blind spots, separating pedestrians from forklift traffic and operations
- Clearly defining forklift operating areas as “Pedestrian Exclusion Zones”, pedestrian walkways and work areas as “Forklift Exclusion Zones”
- Providing physical barriers around pedestrian walkways and work places. Painted lines, signage, high-visibility vests may not be good enough



Forklift traffic management plan controls could include:



- Basing forklift speed limit and boundaries of pedestrian and forklift exclusion zones on braking distance of laden forklifts, distance loads could fall, factors affecting forklift stability
- Conducting workplace proficiency training for forklift operators which include procedures to stop work if pedestrians enter a pedestrian exclusion zone
- Providing Forklift Traffic Safety to all Employees, Visitors involved in work at the operations areas



Forklift traffic management plan controls could include:

- Maintaining good area lighting, ground condition
- Ensuring pedestrians wear high visibility clothing
- Marking forklifts, obstructions, low beams, doorways edges, drains etc with high-visibility colours



THANK YOU

