

# LOW LEVEL ACCESS VS LADDERS

*UNDERSTANDING THE BENEFITS OF LLA WITH REGARDS TO SAFETY, PRODUCTIVITY AND COST SAVINGS*

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# What Could Go Wrong?

- A simple work at height must be performed at less than 3m
- A ladder or step is used to perform the task
- Most sites do not require a risk assessment for heights under 3m



# Global Statistics

What do you think are the statistics for Southeast Asia?

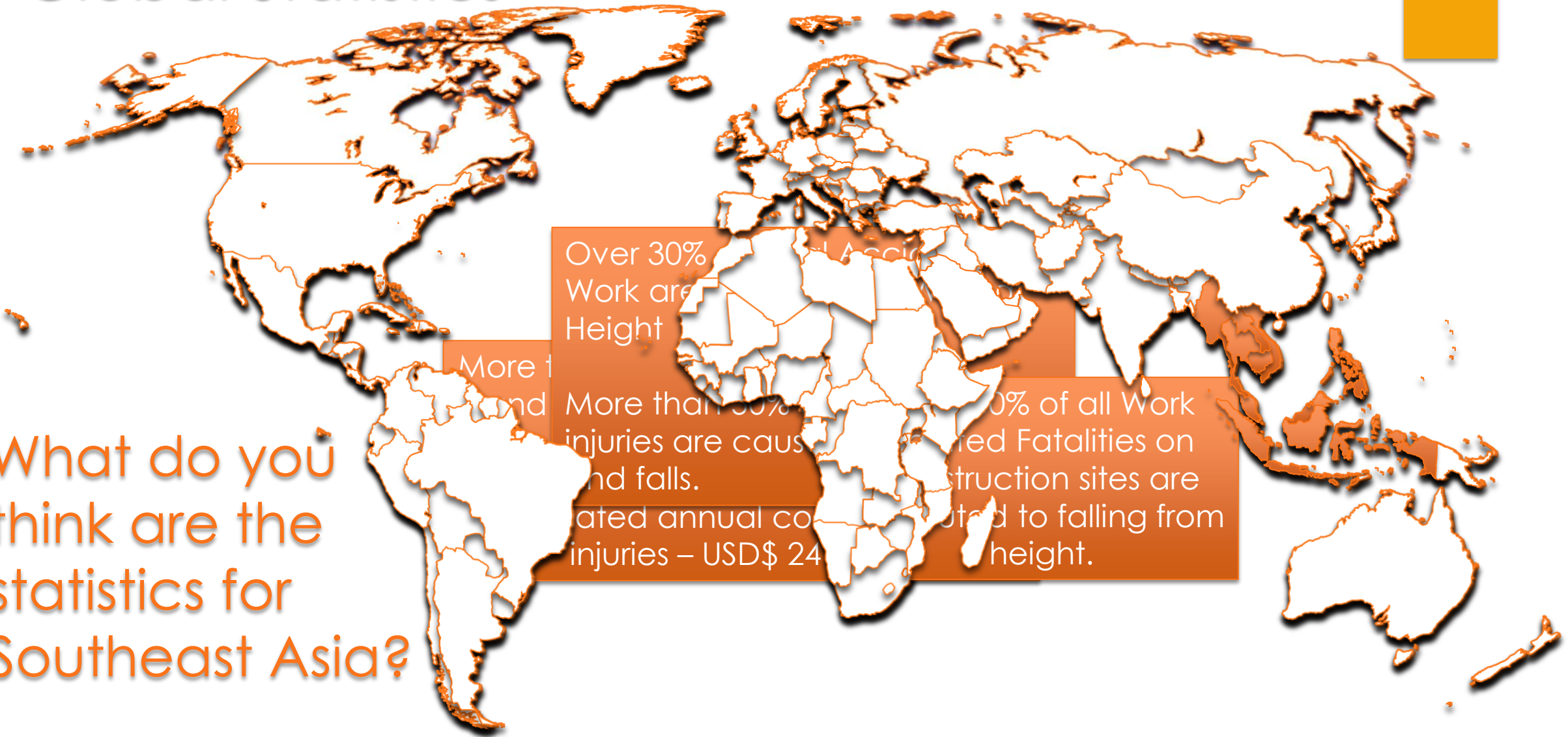
Over 30%  
Work are  
Height

More than

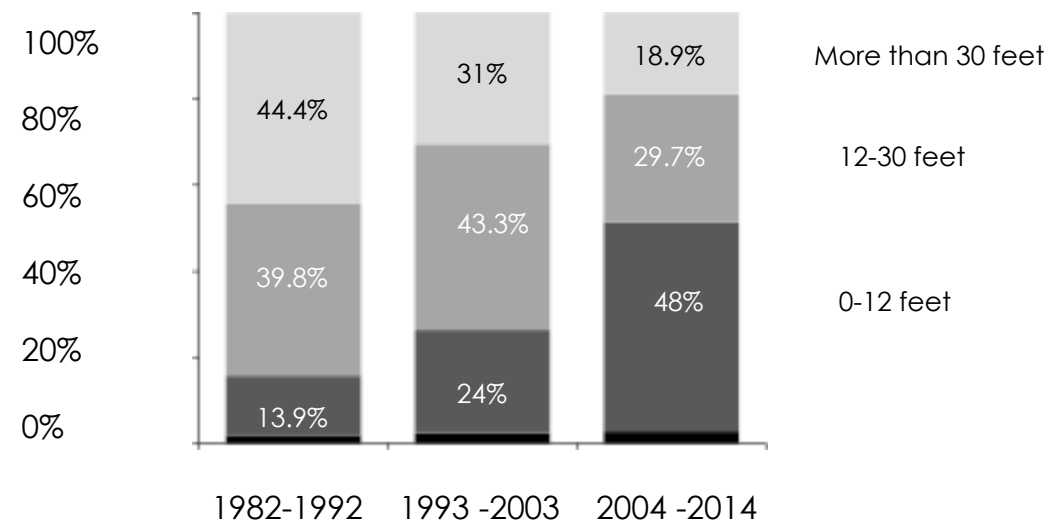
More than 30%  
injuries are caused  
and falls.

Estimated annual cost  
injuries – USD\$ 24

70% of all Work  
Fatalities on  
construction sites are  
attributed to falling from  
height.



# Malaysia accident analysis



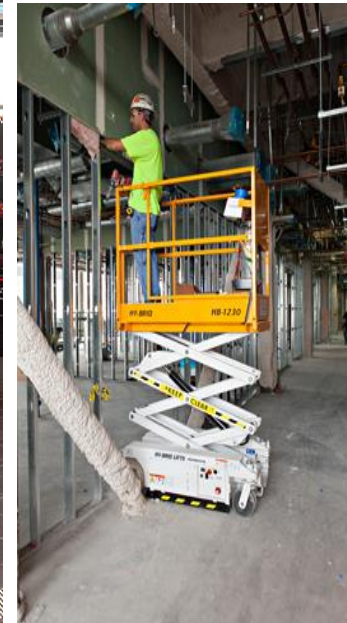


# Examples of unsafe Work at Height



## What is LLPA?

A range of light weight, push around, and self propelled machines that allow work to be completed safer, faster, and with less resource when compared to using steps, ladders or mobile scaffolds up to a height of 6 meters.





# Time and Motion Study



- ▶ Date : 12<sup>th</sup> February 2016
- ▶ Project : Al Amal Hospital
- ▶ Main Contractor : CSCEC
- ▶ When using mobile scaffold towers there are 3 labourers and 1 semi skilled labourer required.
- ▶ 2 additional labourers required to assist in dismantling, moving components and re-assembly of the mobile tower.
- ▶ When using Low level powered access (LLPA) only 1 labourer and 1 semi skilled labourer are required
- ▶ Labour rates used for this cost study are labourer \$163 per week Semi skilled labourer \$177 per week

# Breakdown of Method used in Time and Motion Study

## Breakdown of Scaffolding

- ▶ The following figures are used for scaffolding:
- ▶ 60 hours per week
- ▶ Labour cost \$163 per week
- ▶ Semi Skilled labour \$177 per week
- ▶  $3 \times \$163 = \$489 + 1 \times \$177$   
Total weekly cost = \$666
- ▶  $\$666 \times 52 \text{ weeks} = \$34,632$
- ▶  $\$34,632 / 12 \text{ months} = \$2,886 \text{ cost per month}$

## Breakdown of LLPA

- ▶ The following figures are used for LLPA
- ▶ 60 hours per week
- ▶ Labour cost \$163 per week
- ▶ Semi skilled labour \$177 per week
- ▶  $1 \times \$163 + 1 \times \$177 = \$340 \text{ per week}$
- ▶  $\$340 \times 52 \text{ weeks} = \$17,680$
- ▶  $\$17,680 / 12 \text{ months} = \$1,473 \text{ per month}$



# Labour Cost Comparison

This chart explains the reduction in manpower required using LLPA and the cost savings it incurs.

	Number of laborers	Number of semi skilled laborers	Total monthly cost USD\$	Monthly labor saving using 1x LLPA
Mobile scaffold towers	3	1	\$2,893	
Low level power access	1	1	\$1,475	\$1,418

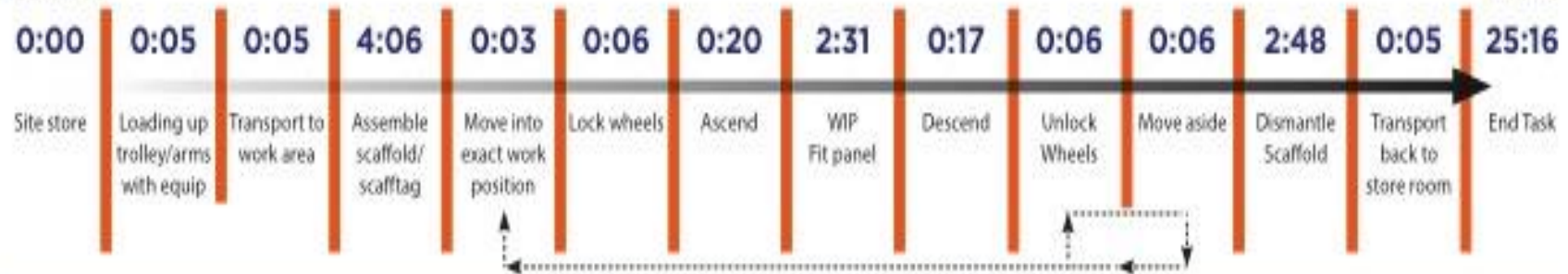
## Case Study: Efficiency

These 2 case studies look at Scaffold Tower vs LLPA with regards to time taken to complete a task.

### Case Study 1. Scaffold Tower

Operators: 2  
WIP: Panel unit installation  
Ceiling Height: 2.7m  
Ceiling Grid: 2.4m

START



### Case Study 2. Low-level Powered Access

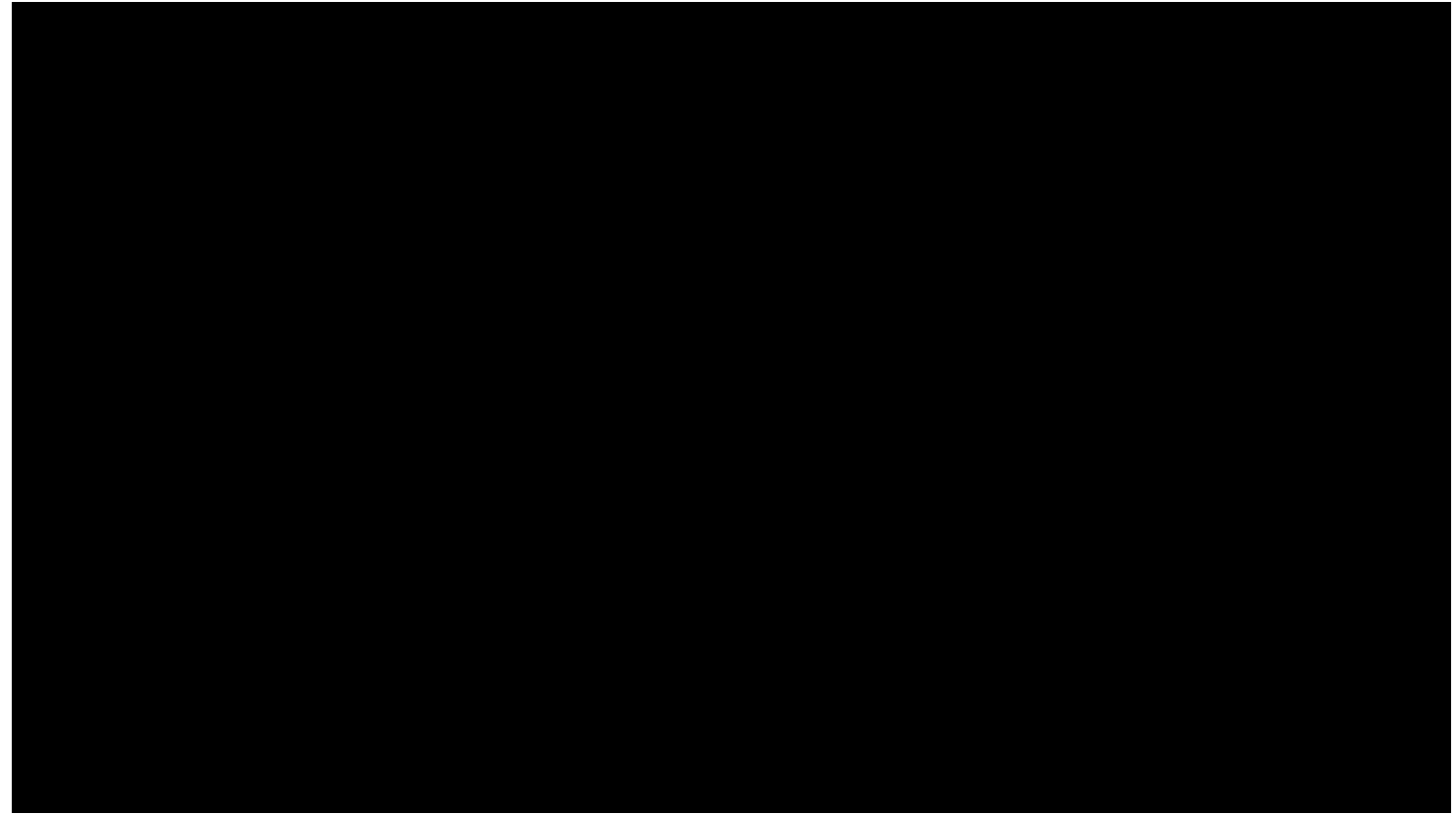
Operators: 1  
WIP: Cable ties for ductwork. Daily visual check.  
Height: 2.7m  
Slab to Slab: 3.9m

START



## Time and Motion Study Video

These 2 case studies  
look Scaffold Tower  
vs LLPA with regards  
to time taken to  
complete a task.



# Summary of cost savings using LLPA

Number of LLPA Units	Labour Saving	Efficiency Saving	Sub Total USD\$	Monthly Rental LLPA	Total Saving using LLPA per month
1	\$1,416	\$885	\$2,301	\$517	\$1,784
5	\$7,080	\$4,425	\$11,505	\$2,585	\$8,920
10	\$14,160	\$8,850	\$23,010	\$5,170	\$17,840
25	\$35,400	\$22,125	\$57,525	\$12,925	\$44,600
50	\$70,800	\$44,250	\$115,050	\$25,850	\$89,200



# Target Market Sectors

**Multi-storey projects: New build & refurbishment**

**Hospitals**

**Universities, colleges, schools**

**Commercial offices**

**Hotels & retail**

**Apartment blocks**

**Airports, Rail stations**

**Other multi-storey**

**Facilities maintenance:**

**All above facilities.**

**Oil & gas**

**Key customer/user types**

**Construction: Mechanical & Electrical contractors,  
heating and ventilation, fire protection, dry-lining & insulation**

**Shop fitting and retail refit**

**Facilities maintenance**



# Health and Safety Advantages of LLPA

- Handrails always in place; operator protected from ground up
- Permanent toe boards
- Automatic braked wheels on elevation
- Emergency lowering from the ground
- Operator fatigue is minimised; no erecting, dismantling or climbing
- Significant reduction in number of personnel on site
- Slips, trips and falls reduced to **ZERO**



# The Opportunity



- ✓ New Market Sector
- ✓ New Customers
- ✓ Over 25,000 LLPA products in use UK since 2006
- ✓ Around 1,000 LLPA products in use GCC since 2014
- ✓ Increase in PAV - IPAF certificates



Questions?





# Thank You

Peter Ellis

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