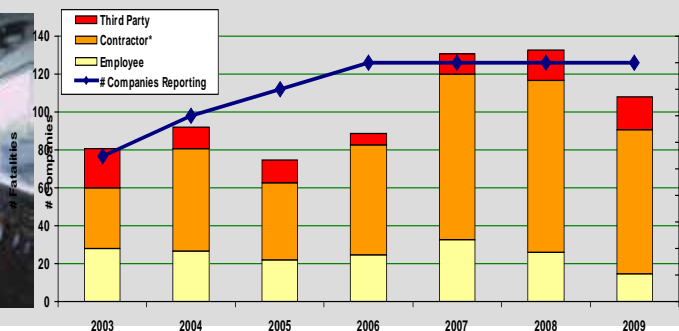




# Cement Sustainability Initiative (CSI)

## TASK FORCE 3 “Health and Safety”

### *Driving Safety Initiative*



*Paul Corbin, CSI TF3 Co-Chair, October 21, 2010*



# CSI Driving Safety Initiative

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- n Launched October 2009 by 18 CSI CEO's
- n Identified together with Contractor Safety as two fatality prevention initiatives needed to improve industry safety performance
- n CEO Recommendation:
  - “to develop a set of driving safety good practices to be adopted and implemented by all CSI member companies”***
- n Practices based on root causes of CSI fatal driving incidents
- n Incorporate international road safety expertise and internal industry good practices
- n Applicable to all cement value chain and light and heavy vehicles
- n Company-wide implementation of the practices across all regions and all activities by 2015
- n Regular public reporting on progress by all companies
- n Leadership commitment – practices signed by all CEO's



## CSI – Fatalities by Root Cause

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- n Root cause analysis of CSI driving-related fatalities (2007, 2008, 2009) showed trends in 4 key areas:
- n **Driver** – Driver behaviour (rule breaking), certification and training
- n **Vehicle** - safety features, loading, pre-trip checks
- n **Journey** – road conditions, signage, journey risk management
- n **Leadership** - Inadequate procedures, supervision and reinforcement of safety rules



# CSI Driving Safety Recommended Practice

## SAFETY ELEMENTS FOR DRIVERS

- ① Staying alert and preventing fatigue
- ② Drugs and Alcohol
- ③ Seatbelts
- ④ Passengers
- ⑤ Loads
- ⑥ Respecting Road Rules and Road Signs
- ⑦ Mobile Phones and Two-way communication devices
- ⑧ Highly Visible Vehicles and Drivers





# CSI Driving Safety Recommended Practice

## SAFETY ELEMENTS FOR MANAGERS

- ① Leadership and Accountability
- ② Driver Qualification & Selection
- ③ Driver Training & Assessment
- ④ Vehicle Selection & Specification
- ⑤ Vehicle Maintenance & Servicing
- ⑥ Vehicle Pre-Start Checks
- ⑦ Vehicle Data Recorder Systems
- ⑧ On-site Road and Traffic Management
- ⑨ Journey Hazard Management





# CSI Driving Safety Recommended Practice

## GUIDELINES

- n Management guidelines are included to assist implementation of the safety elements and ensure they are followed effectively, eg.

### **4** Vehicle selection & specification

- n The following minimum equipment should be installed and securely fixed, where practical / possible, on **light vehicles** purchased as of 1 January 2010:
  - Head rests (all seats)
  - Air bags (at least for driver)
  - Driver and passenger side-mirrors
  - Anti-lock brakes





# Summary

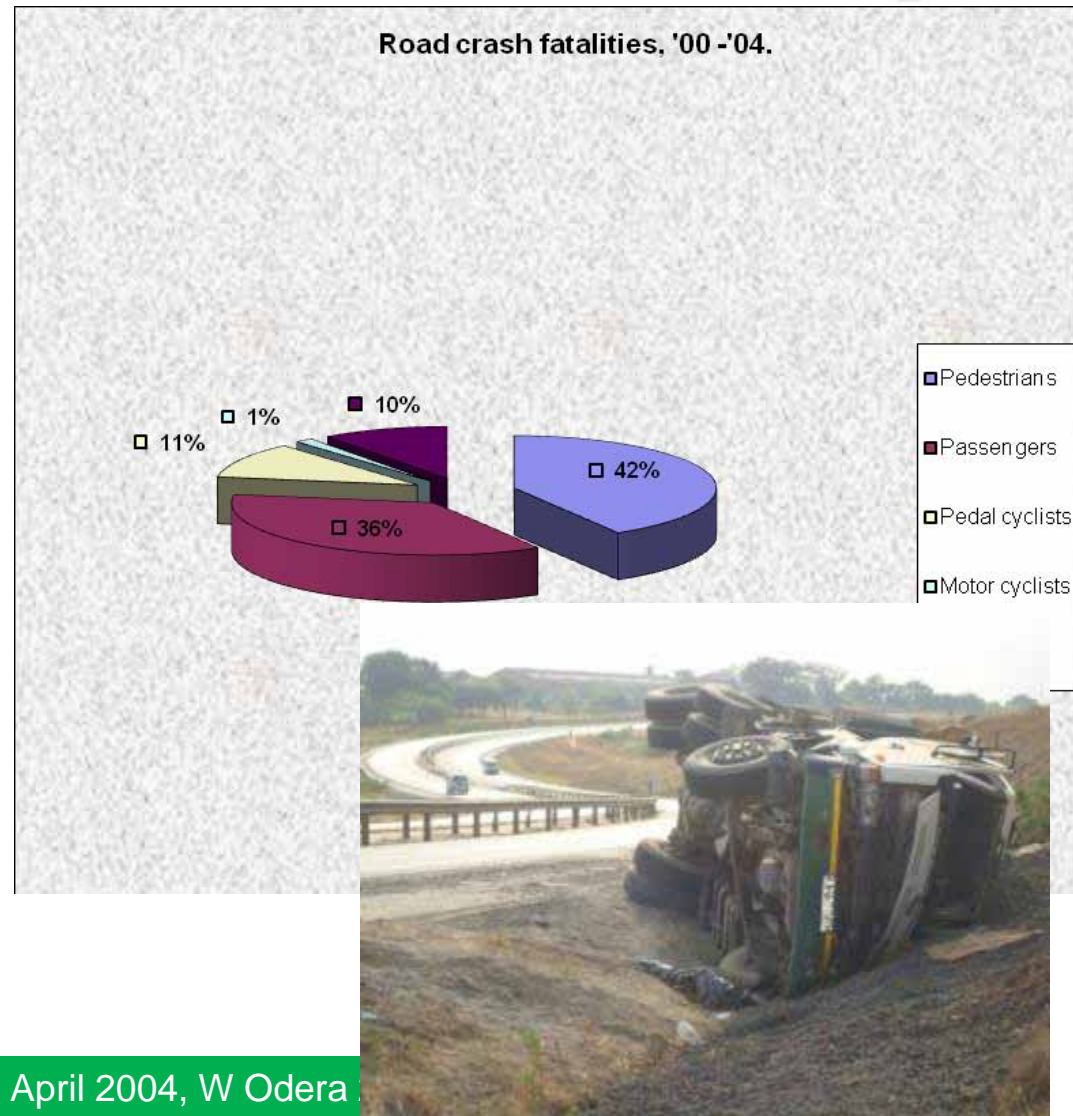
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- n CSI Members continue to make good progress on reduction of lost-time injury rates
- n However the recent trend in fatality rates has been adverse, despite huge safety commitments by CSI Member
- n CSI fatality analysis (2007, 2008 and 2009) reveals that:
  - n By category, Contractors account for nearly 60% of all fatalities, with a Contractor Fatality Rate estimated to be ~10 times that for Employees
  - n Driving (on-site & off-site) accounts for nearly 50% of all fatalities
- n Reduction of both Contractor and Driving-related fatalities presents a significant and urgent safety challenge to CSI Members
- n This challenge may well increase as CSI Members expand further in developing regions
- n Therefore specific CEO-endorsed CSI initiatives on Contractor and Driving-related fatalities are now in place



# Lafarge – Kenya Road Safety Challenge

- n Kenyan economy loses US\$50 million per year due to road accidents.
- n Amongst highest road fatalities in the world
- n 510 deaths per 100,000 vehicles
- n Affects 19-35 year olds
- n Low to middle-income class



Source: WHO World Report on Road Traffic April 2004, W Odera





# Lafarge – Kenya Road Safety Challenge

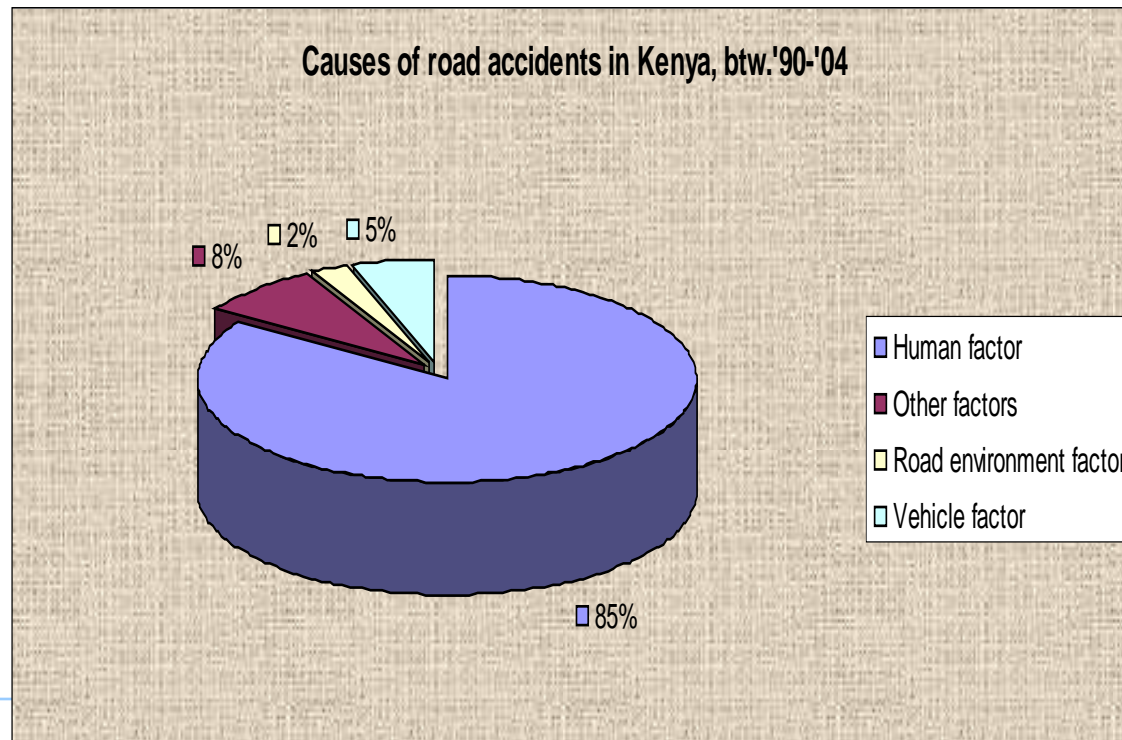
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- n The broad context of the country, influenced performance directly
- n There was no compelling framework to manage road risks
- n Transporters viewed safety negatively - Seen as cost burden!
- n No formal structure existed to drive safety in BCL
- n Poor Attitude/Justification....*We are in a bad environment there is nothing much we can do!!!!*
- n *Comfortable with fatality improvement ..5 fatalities not 6 ...quite an improvement, maybe 4 is achievable.*



# Lafarge – Kenya Road Safety Challenge

- n Driver training insufficient/ non existent
- n Social attitudes: driver behavior
- n Absence of enforcement
- n Poor road network, suddenly transformed into smooth roads





# Lafarge – Kenya Road Safety Challenge



## LEA Distribution Network

Journey s extending to over 1800 Kms through Kenya & Uganda





# Lafarge – Kenya Road Safety Challenge

**2005**

***Awakening***

- **Shift in management focus to prioritize Road Safety**
- **Theme adopted : Road Safety ..... Our Number one Priority !**
- **Began exploring key safety drivers - What Actions & Programs are needed?**
- **Conceptualization of Road Safety framework – *The Tripod***





# Lafarge – Kenya Road Safety Challenge

## Lafarge East Africa Road Safety Conceptual Framework



**Owner**

**Driver**



**Truck**



**The Tripod of the  
conceptual  
framework for  
Road safety**



# Lafarge – Kenya Road Safety Challenge

**2006**

## *Foundation building*

- **Road safety committee set up for LEA**
- **Committee resolved on 2 major actions**
  - q launching safety campaign to drive transporter's commitment
  - q Made a resolution of Defensive driving certification for **clinker drivers**
- **Two Key Outcomes realized :**
  - q Drivers Pass
  - q Site sub- committees, including transporter directors, meeting monthly





# Lafarge – Kenya Road Safety Challenge

**2007-2008**

## *Capacity Building*

**A formal management structure for Road Safety unveiled – Coordinators & Marshalling team**

- Road safety campaigns sustained
- **Mandatory vehicle inspection program started**
- Defensive driving made a requirement for all contracted drivers
- **Spotting of transporters in contractual pre-qualification stage**
- Road Patrols by Lafarge Kenya and later with Transporters
- **Penalty scheme set up and implemented immediately**

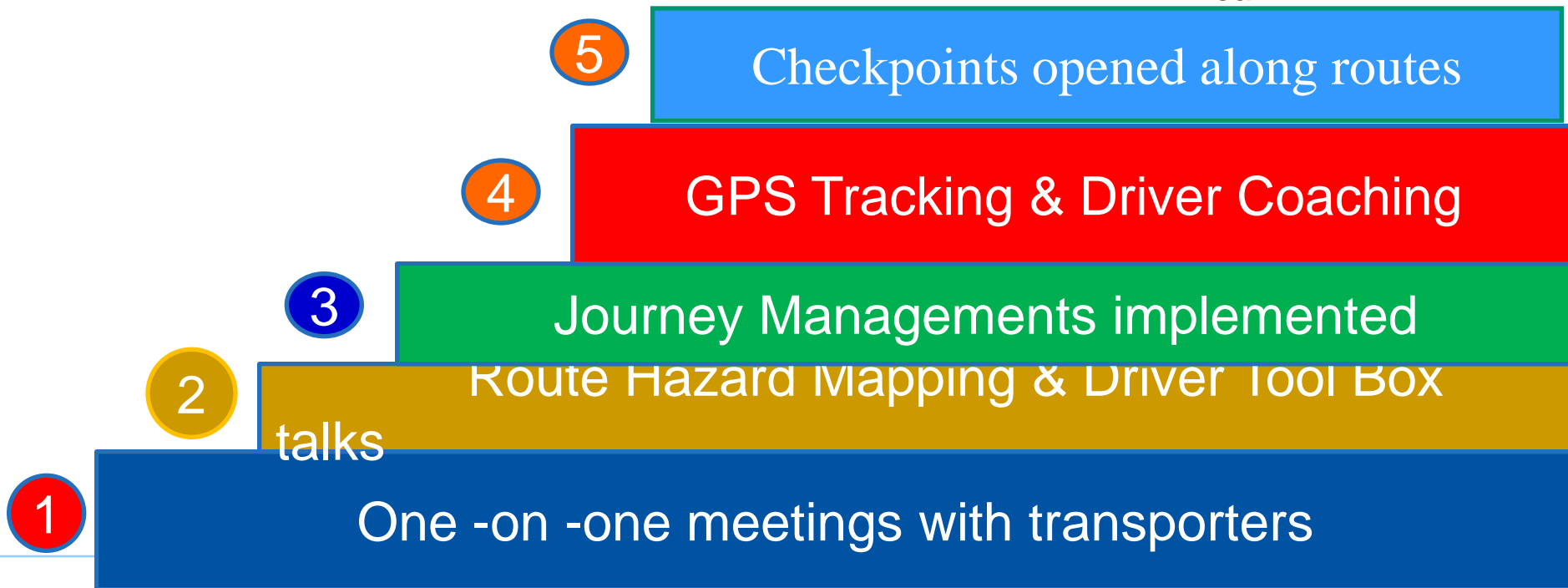




# Lafarge – Kenya Road Safety Challenge

**2009**

*Towards Maturity*







# Lafarge – Kenya Road Safety Challenge

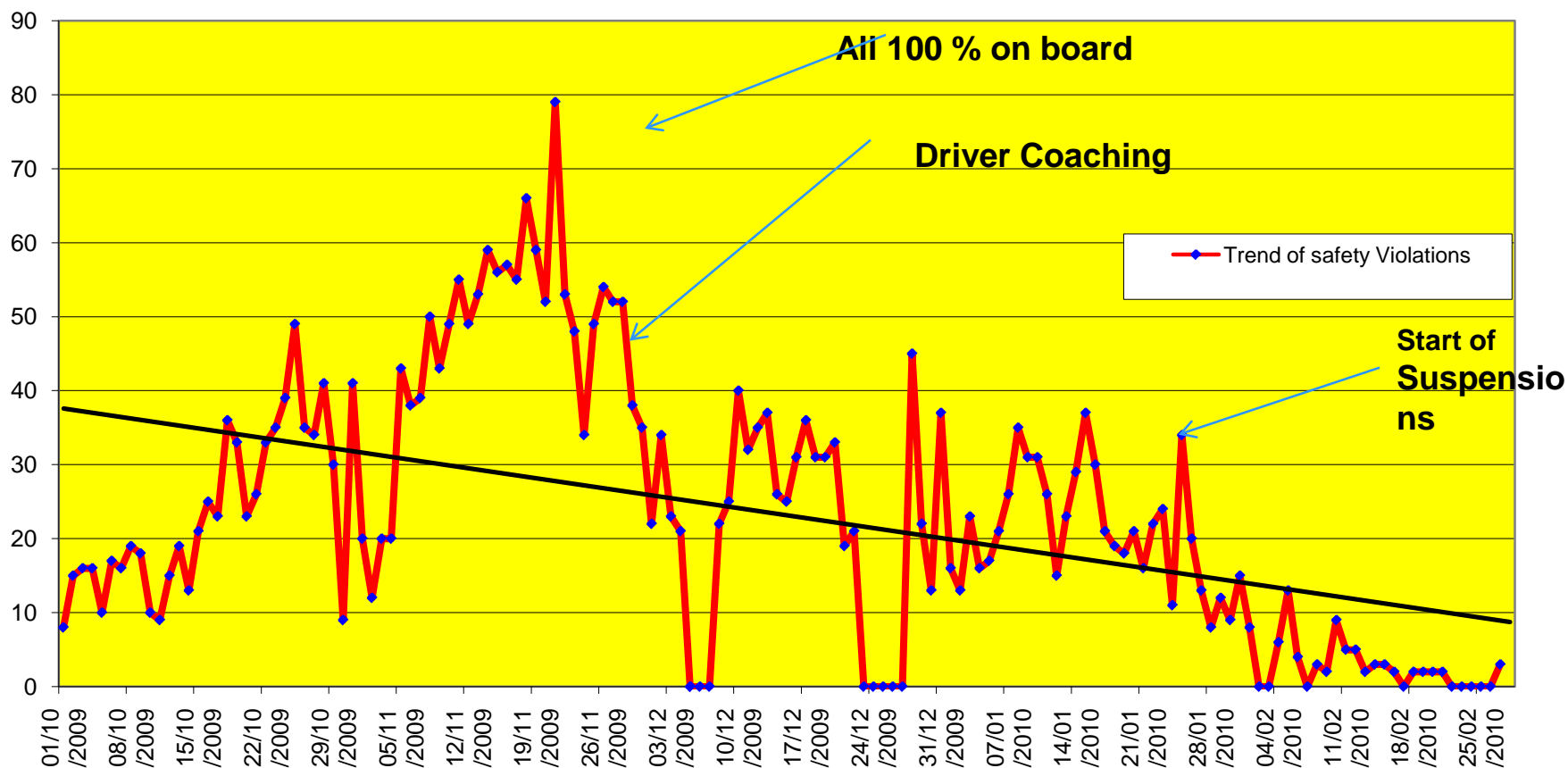




# Lafarge – Kenya Road Safety Challenge

## Managing Driving Violations through GPS

Trend of Violations for all transporters since program Launch



**NB: Links Driver and Truck**

# Lafarge – Kenya Road Safety Challenge



## Road Hazard Mapping program

- Routes mapped for hazards
- Defensive actions for each condition proposed
- Points marked as per global Position
- Road patrols key to updating hazard maps

### Driver



	Risky places	Longitude	Latitude	Distance From Nairobi	No	Defensive Action
1	Mlolongo - Cabanas	<a href="#">1°23'34.75"S</a>	36°56'30.96"E		Abrupt Change From Duo Carriage Way To Single Carriage Way	Keep Left And Adjust Speed To The Condition
2	Kangemi - Waiyaki way	1°15'51.16"S	36°44'58.04"E	12	Traffic congestion Road slippery when wet	Adjust speed to the condition
3	kikuyu	1°14'46.80"S	36°40'48.62"E	22km	Slippery road Poor visibility due to fog Busy with matatu & pedestrians	Keep left Reduce speed
4	Mai Mahiu	0°58'56.72	36°35'08.32"E	54km	Busy With Cyclists, Pedestrians, Motorists And Trucks. Road Surface Slippery When Wet. Recommended Rest And Night Stop Area	<b>Speed limit 30kpm</b> <b>Do not overtake</b> Use the 4keys of defensive driving



# Lafarge – Kenya Road Safety Challenge

## Journey Planning program

- 3 Key elements



üAll deliveries follow designated routes

üMandatory journey planning at point of Loading

üSet checkpoints along the route within 4 hours drive

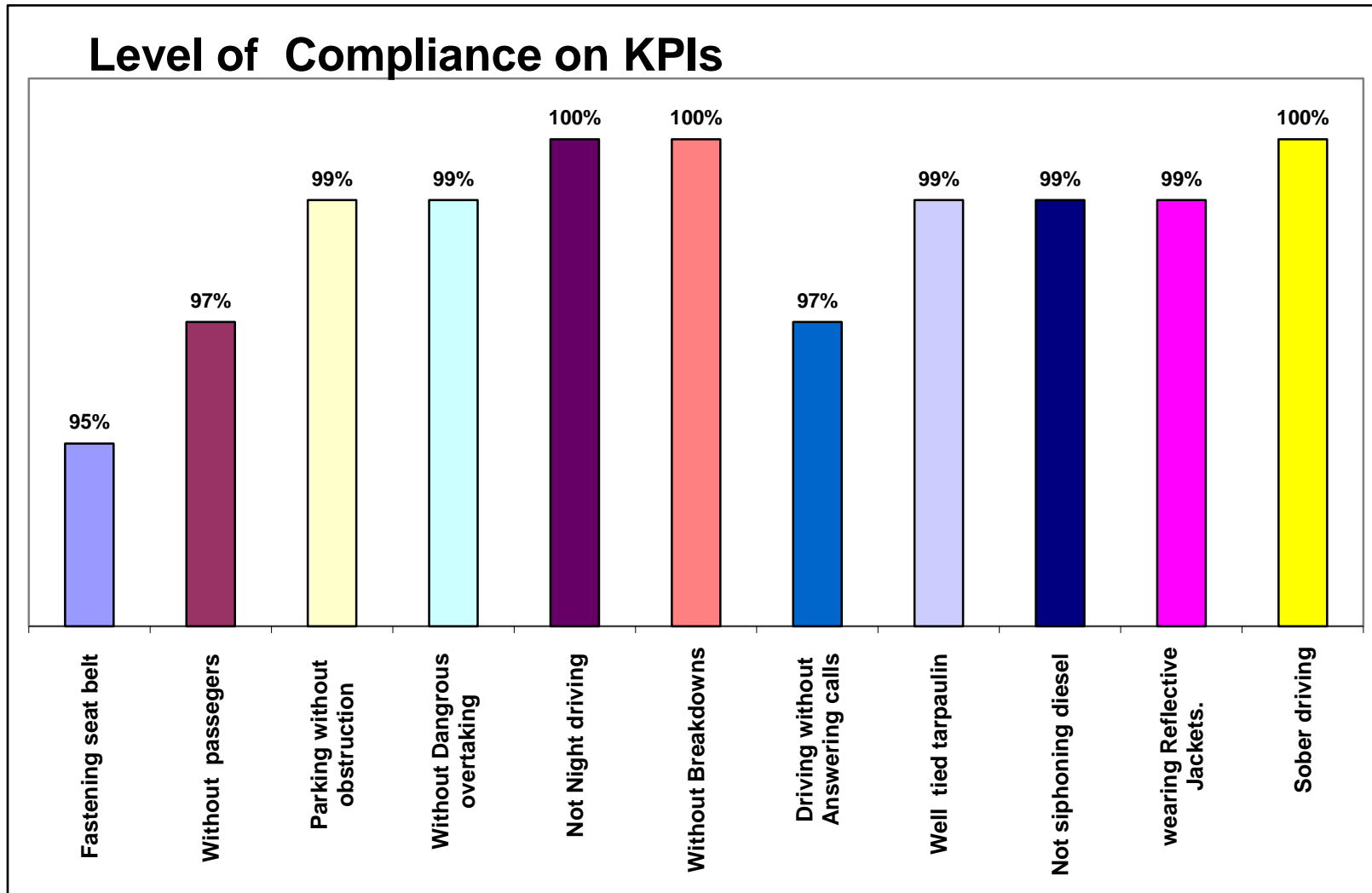
üDriver must take a 15- 30 minutes break after every 4 hours of continuous driving

üTrip Card stamped at every checkpoint



# Lafarge – Kenya Road Safety Challenge

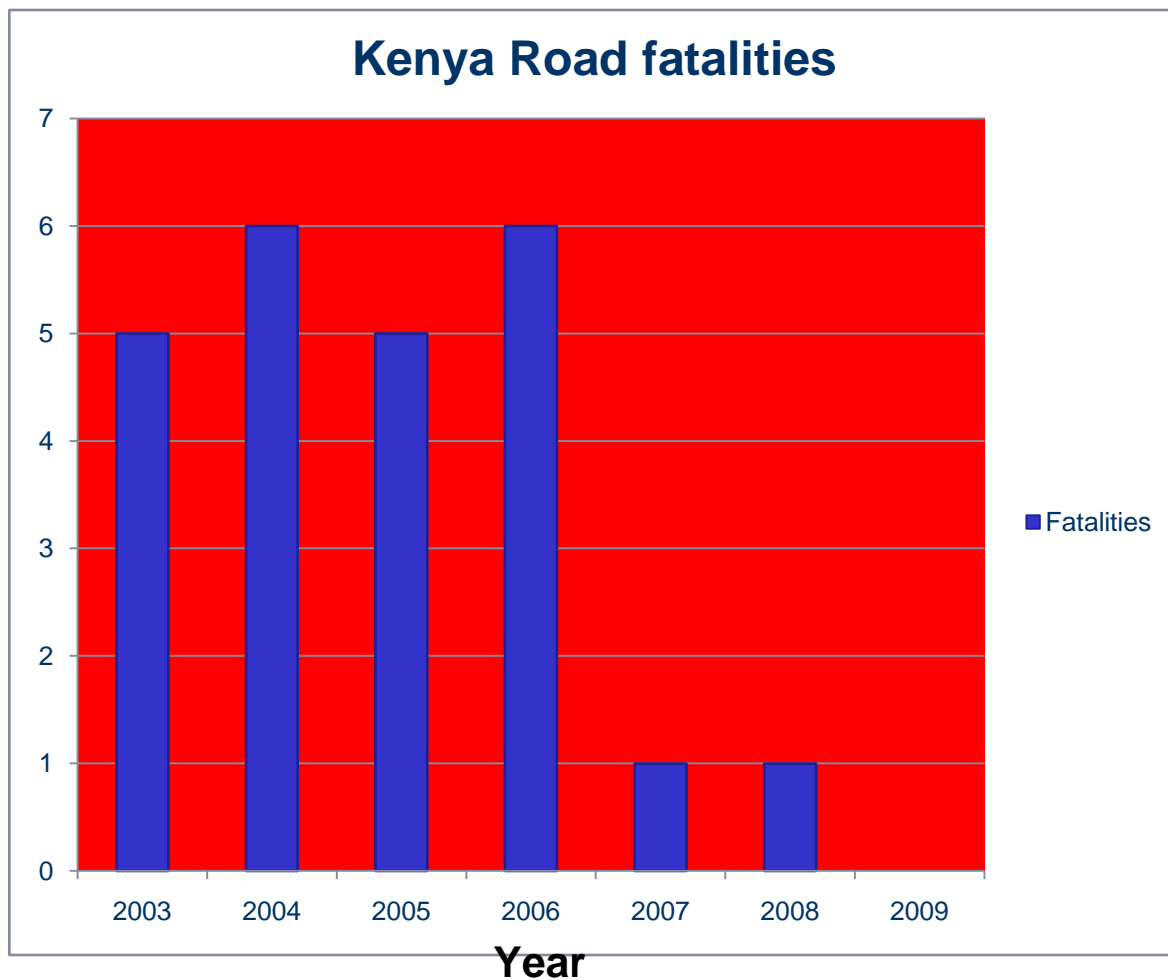
## Analyzing Road Patrol findings





# Lafarge – Kenya Road Safety Challenge

## LEA Historical Safety Challenge





# Lafarge – Kenya Road Safety Challenge

## External Road Safety Campaigns



- q Collaborative exercise
- q Relevant government ministry & national road safety council
- q Media involvement
- q Annual since 2007

- q Caravans convey message to public
- q Banners mounted on trucks
- q Share message in music & dance
- q Stops at major truck packing points

