

MultiDisciplinary Crash Investigation (MDCI)

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Important preconditions for accident investigation

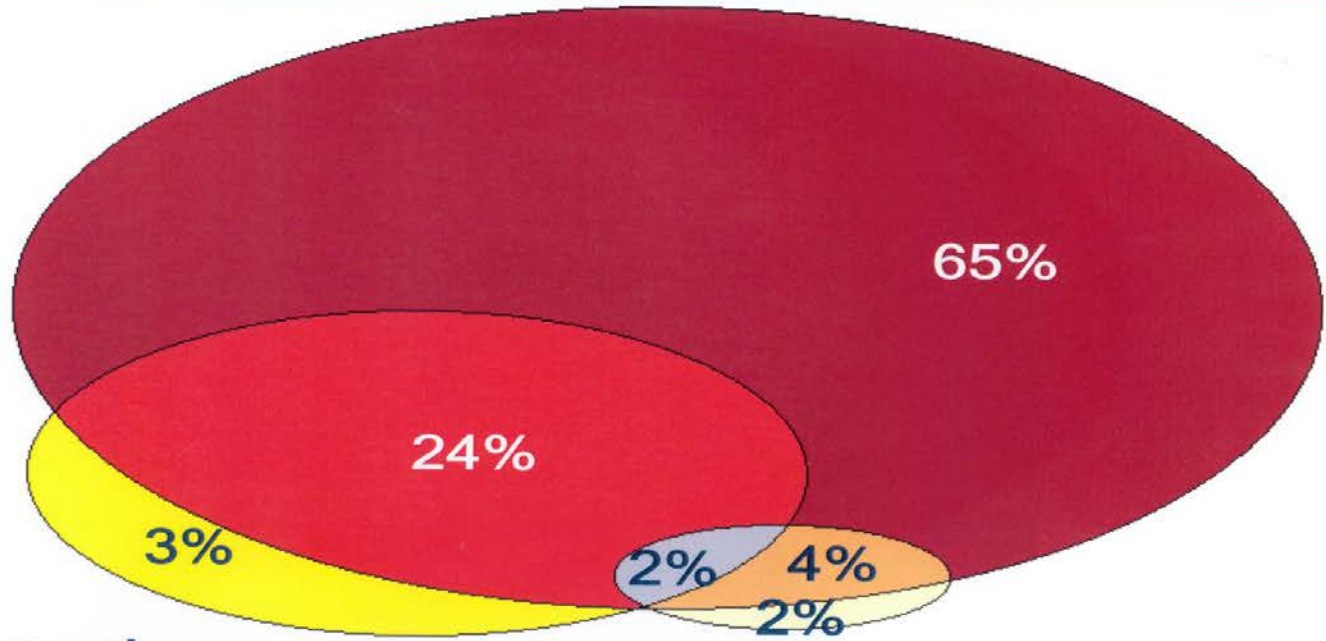
- Approach to human error
- The purpose of the investigation

Human error – Individual approach

Accident Factors

Road Directorate
Ministry of Transport Denmark

Human factors (95%)



Road Environment factors (29%)

Vehicle factors (8%)

Human error – Human Factors Approach

- Human error is not a cause of failure. Human error is the effect, or symptom of deeper trouble.
- Human error is not random. It is systematically connected to features of people's tools tasks, operating and organisational environment.
- Human error is not the conclusion of an accident investigation. It is the starting point.

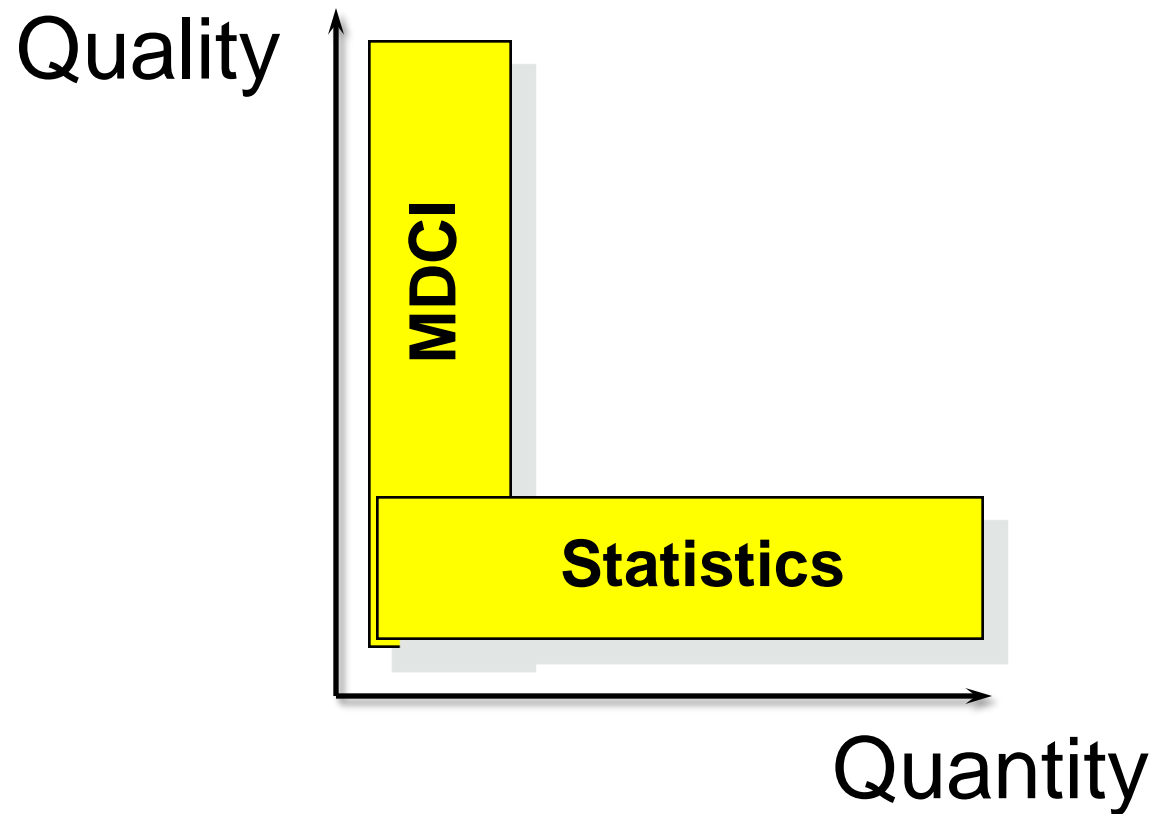
A systems perspective

It is necessary to adopt a **systems perspective** where individuals, technology and organisational aspects should be seen as interacting parts which cannot be isolated from each other.

Purposes of MDCl

- Identifying direct causes and contributing factors causing the accident *or its consequences*.
- Learning in order to prevent future accidents and/or their consequences *not to apportion blame or liability*.
- Not another tool for statistical data.

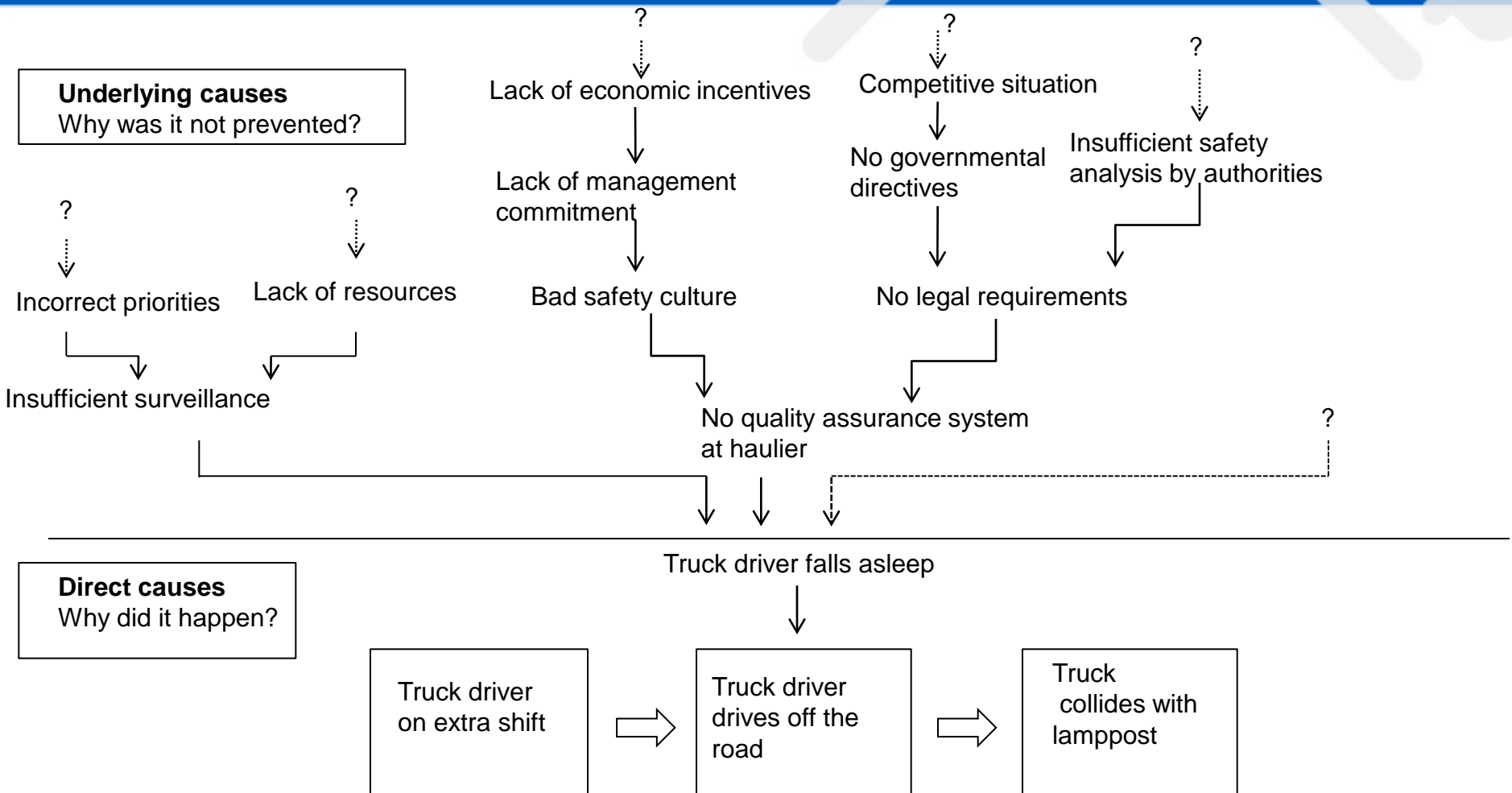
MDCI vs. statistics



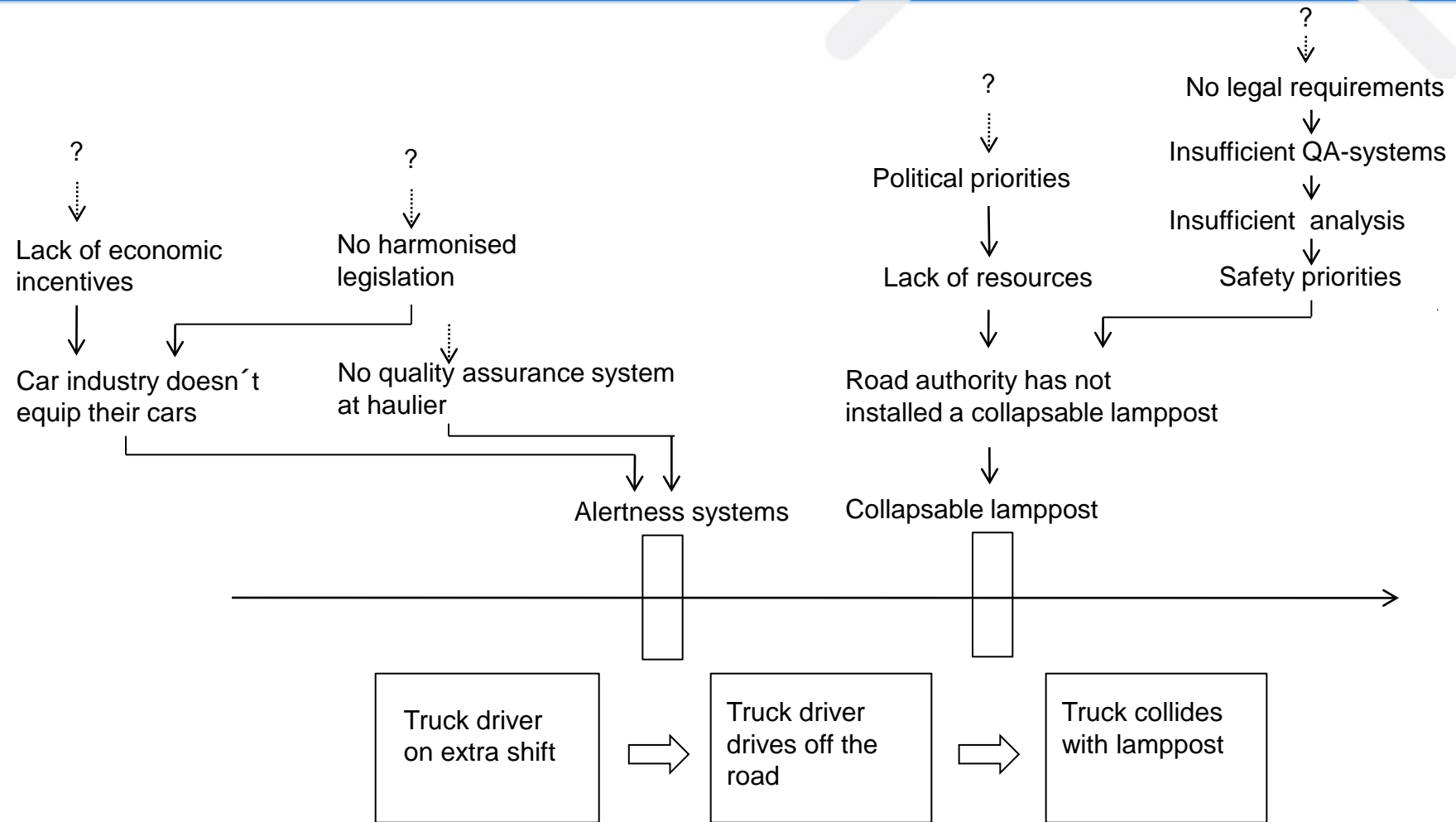
MDCI-analysis of road traffic accident

- Professional truck driver driving on a straight road
- Speed limit 70 km/h
- The driver falls asleep
- The truck drives off the road
- The truck hits a rigid lamppost
- The truck driver is killed

Event-cause analysis



Barrier analysis



Contact

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