



## Senses for Safety

Driver assistance systems help save lives

## Advanced Driver Assistance Systems

Deep Thought - an AI project for autonomous driving

IBM Spectrum Scale Strategy Days 2020

*Robert Thiel*



# Business Unit ADAS – Continental

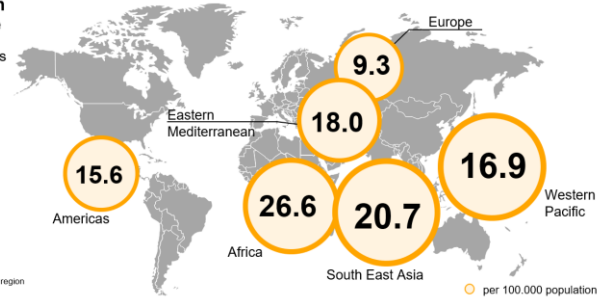
## Business Unit ADAS



## Our Motivation in our Daily Work: Reduce the number of fatalities and those injured

Over **1,35** million people die in road accidents every year

A further **50** million are injured.



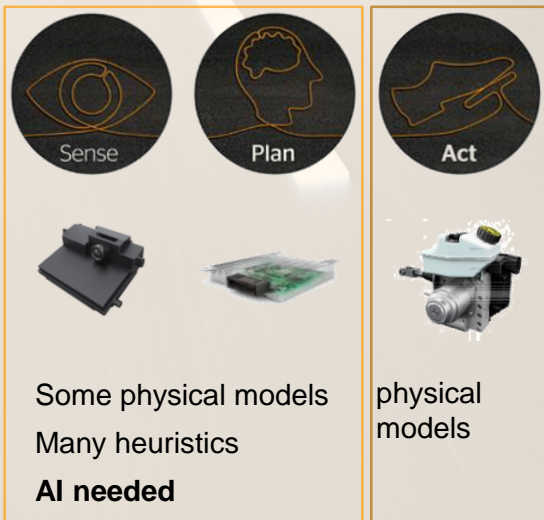
Data Source:  
Global Status Report on Road Safety 2018  
World Health Organization  
Road traffic fatality rates per 100 000 population by WHO region

○ per 100.000 population

# Artificial Intelligence

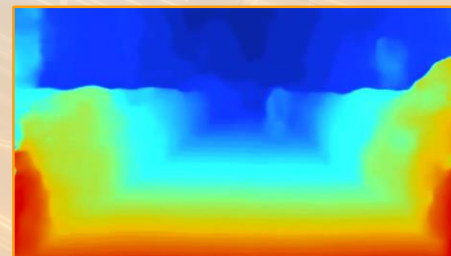
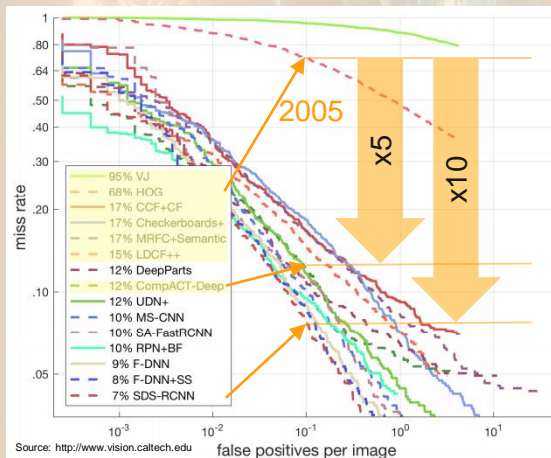
## Business Unit Advanced Driver Assistance Systems

### ADAS Principle



### AI is better than classical SW Examples

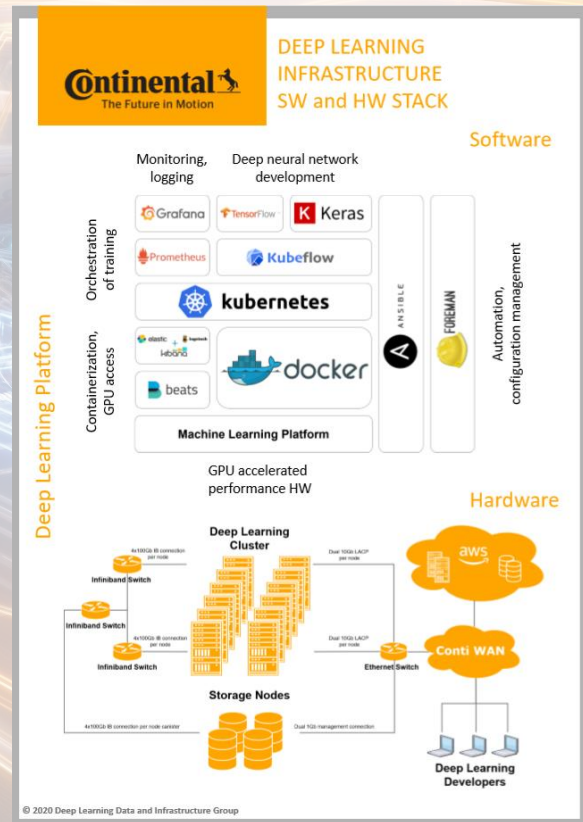
Example Pedestrian Detection (*caltech pedestrian dataset*)





# Project Deep Thought

- › Multi Node GPU Cluster DGX1/DGX2
- › NonBlocking Infiniband 400Gbit/s or 800 Gbit/s per node
- › ESS3000 Storage >200GB/s Write
- › AI Ready Data Center
- › Reduce Training times – from weeks to days
- › Experiments/Month increased by the factor of 14
- › MultiNode Training available



# Thank you

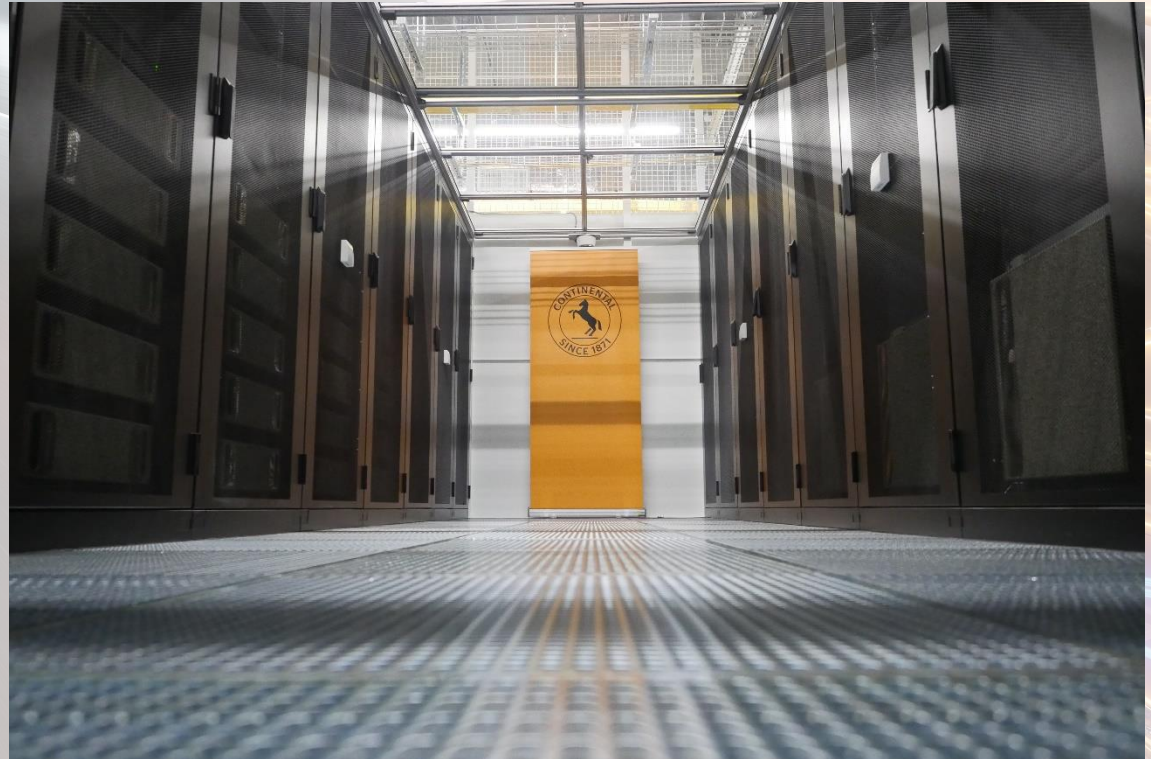


Robert Thiel  
Head of Artificial Intelligence

BU Advanced Driver Assistance Systems

Continental  
Autonomous Mobility and Safety (AMS)

 [robert.thiel@continental.com](mailto:robert.thiel@continental.com)



Technical contacts: David Enenkel / IT / [david.enenkel@continental.com](mailto:david.enenkel@continental.com) - Viktor Pal / Architect / [viktor.pal@continental.com](mailto:viktor.pal@continental.com)