

The Roads Between Us

Call: 29.09.2016

‘Technology in Road Safety: Global Best Practice and the Challenges for LMICs’



Together we can
save millions
of lives.

The Global Road Safety Partnership is hosted by:



International Federation
of Red Cross and Red Crescent Societies



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Roads Between Us: Agenda

TIME: Thursday 29 September, 1530-1630 CEST (Paris Time)
THEME: 'Technology in Road Safety: Global Best Practice and the Challenges for LMICs'

CALL AGENDA

1530-1540	Welcome to Roads Between Us: Michael Chippendale, GRSP
1540-1555	1. MARTIN SMALL, 'Vehicle Safety Technology Challenges in LMICs'
1555-1610	2. CARL McFARLANE, SmartDrive
1610-1625	3. ANDREW PRICE, Zurich
1625-1630	Questions / Discussion and proposed next topic 'Road Safety in the SDGs – 1 Year In'



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Roads Between Us: Events

- **Roads Between Us Conference: 4-5 October, Kuala Lumpur, Malaysia**
<http://www.grsroadsafety.org/news/3rd-roads-between-us-conference-4-5-october-2016-registration-site-now-open>
- **Insurance and Road Safety Workshop: 27 October, Paris, France**
<https://www.ivvy.com/event/Ins16/>
- **5th Africa Road Safety 2016: 31 Oct-2 Nov, Durban, South Africa**
<https://www.ivvy.com/event/ars16/>



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Vehicle Safety Technology Challenges in Low and Middle Income Countries

Martin Small

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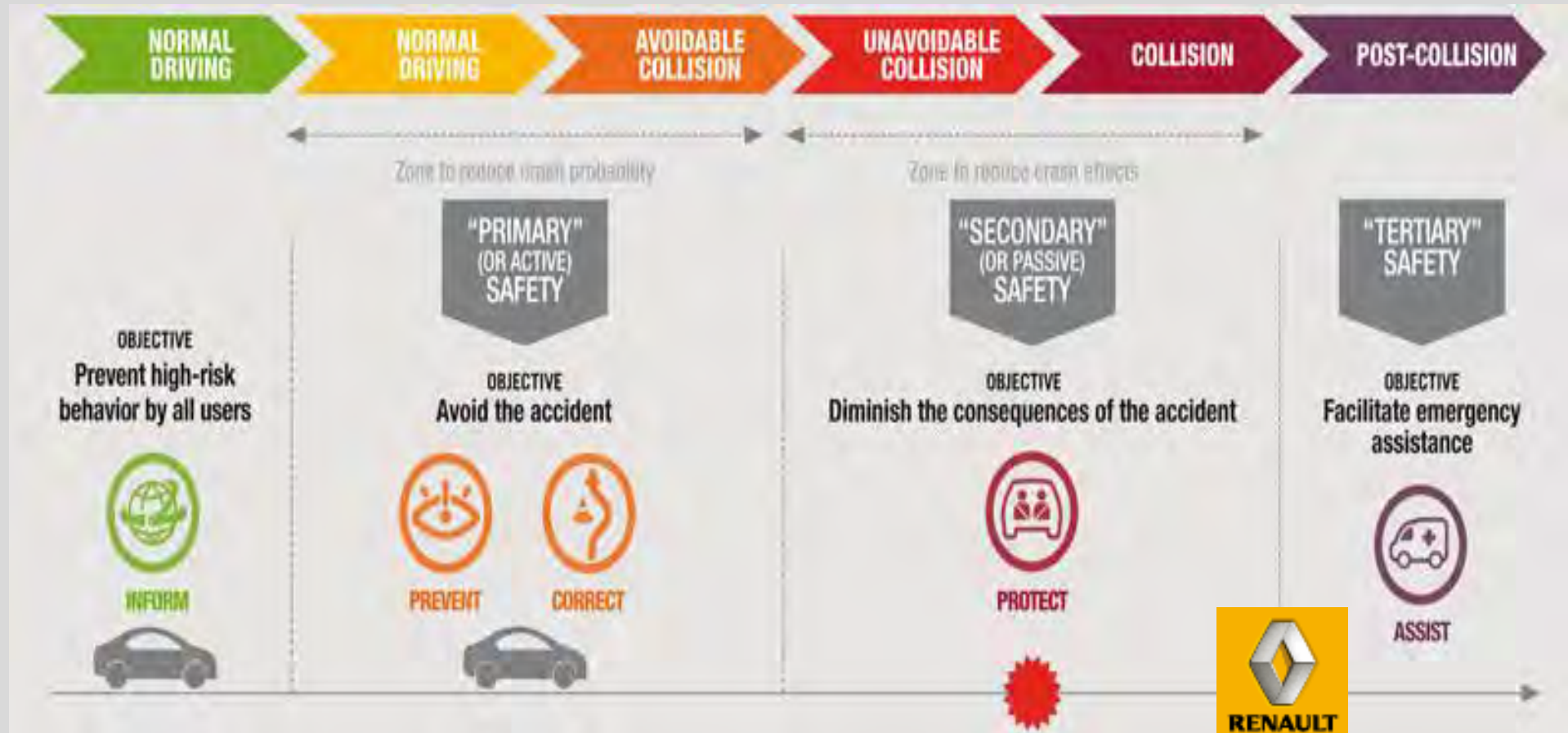
Roads Between Us: Technology in Road Safety

September 2016

Impact of Sustainable Development Goals on transport safety

- Road safety is now properly recognised as a major development issue, set within overall public health and sustainable transport frameworks
- This suggest significant public policy and investment focus on mass transit and non-motorised users
- While an overall policy imperative may be to reduce or constrain the growth motor vehicle trips (particularly in cities), we must focus up on the safety technology deployed in each trip

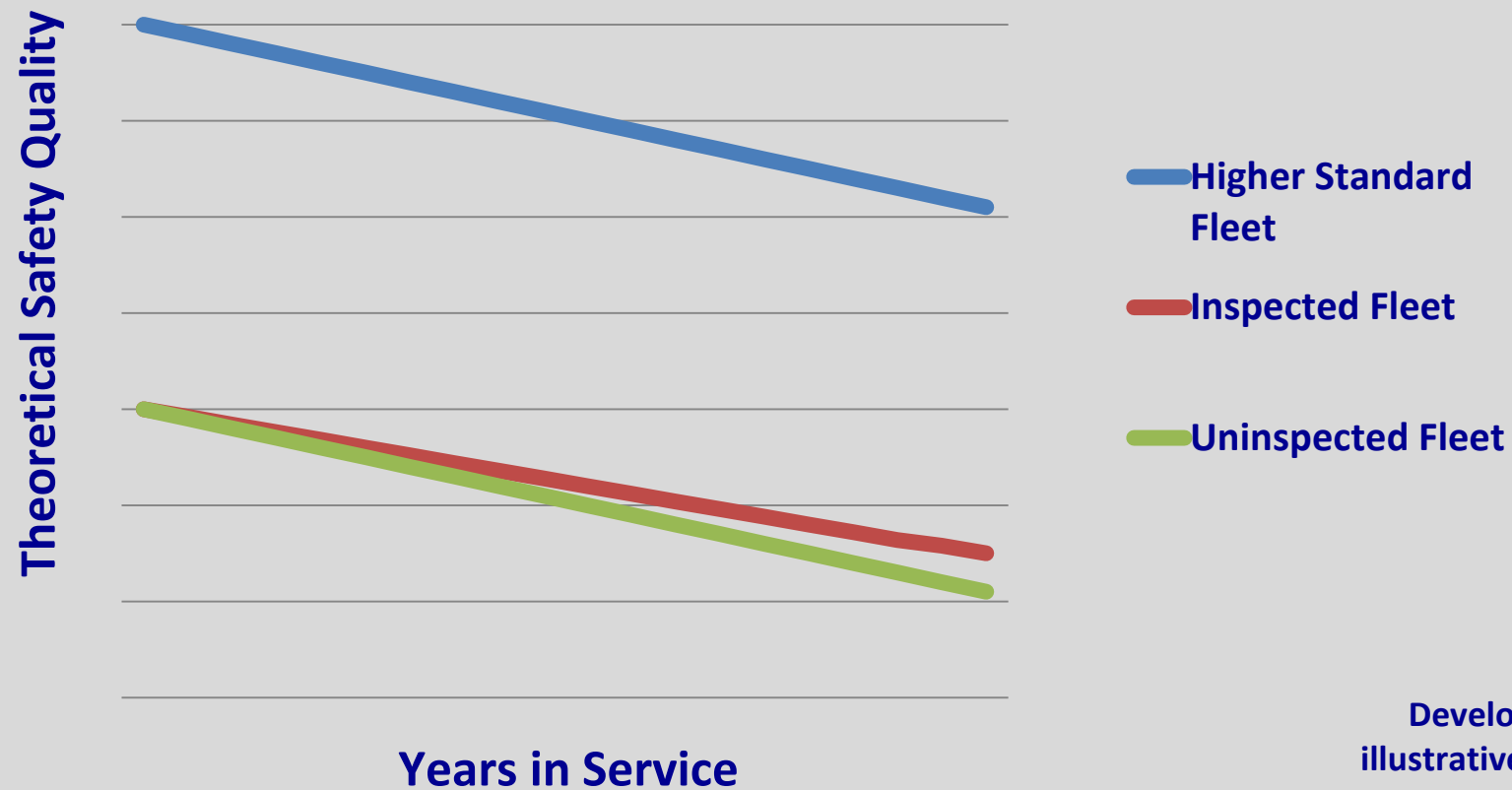
Motor vehicle manufacturers and their customers are generating extraordinary safety opportunities through technology



New Car Assessment Programs have been vital in this progress, but are at least somewhat reliant on regulation

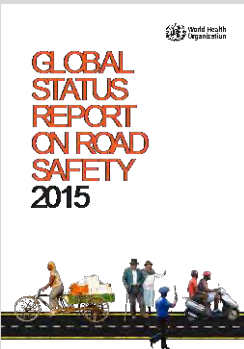
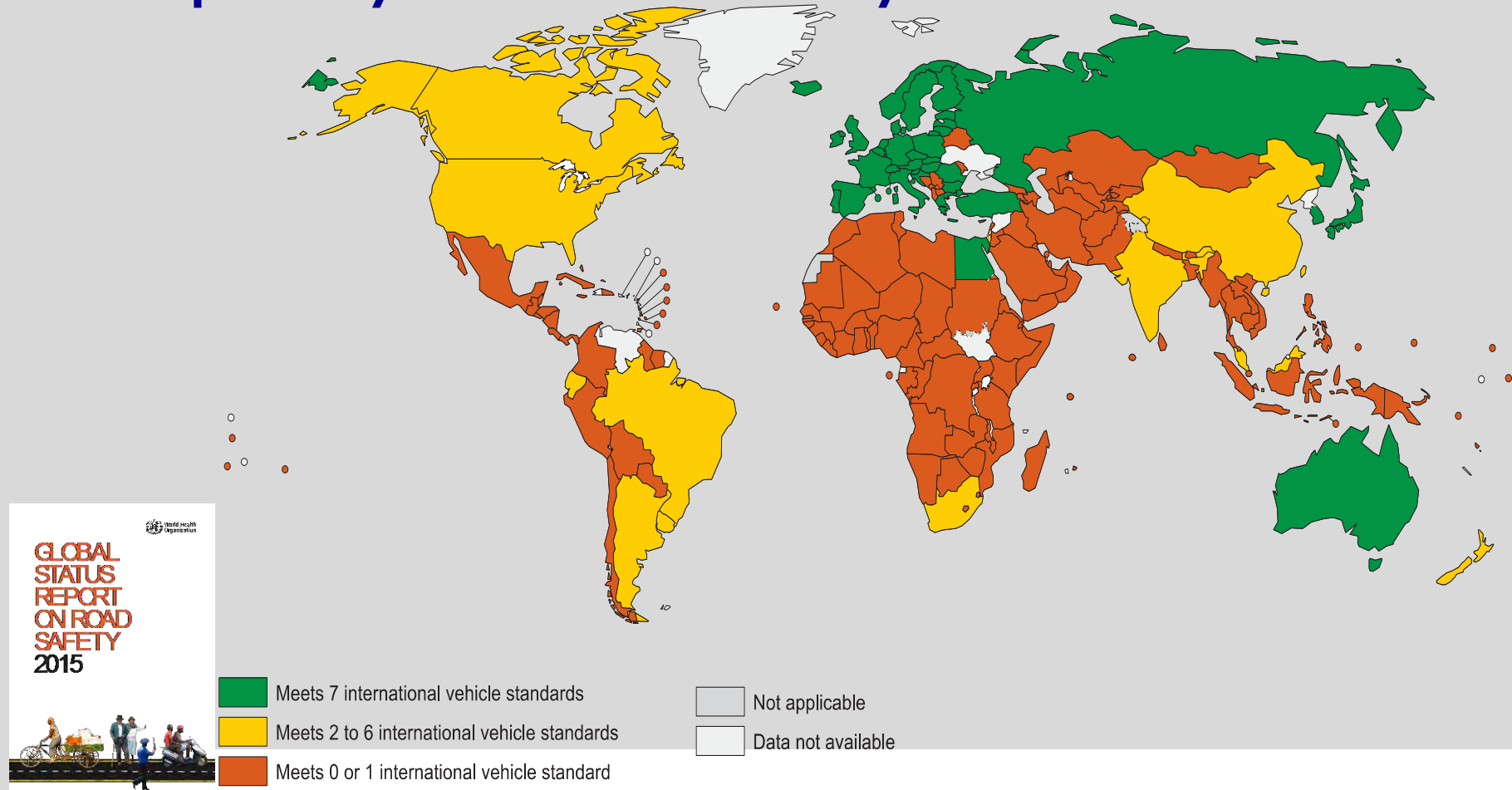


Focus is needed on increasing safety technology as vehicles enter the fleet, and not on maintaining old technology

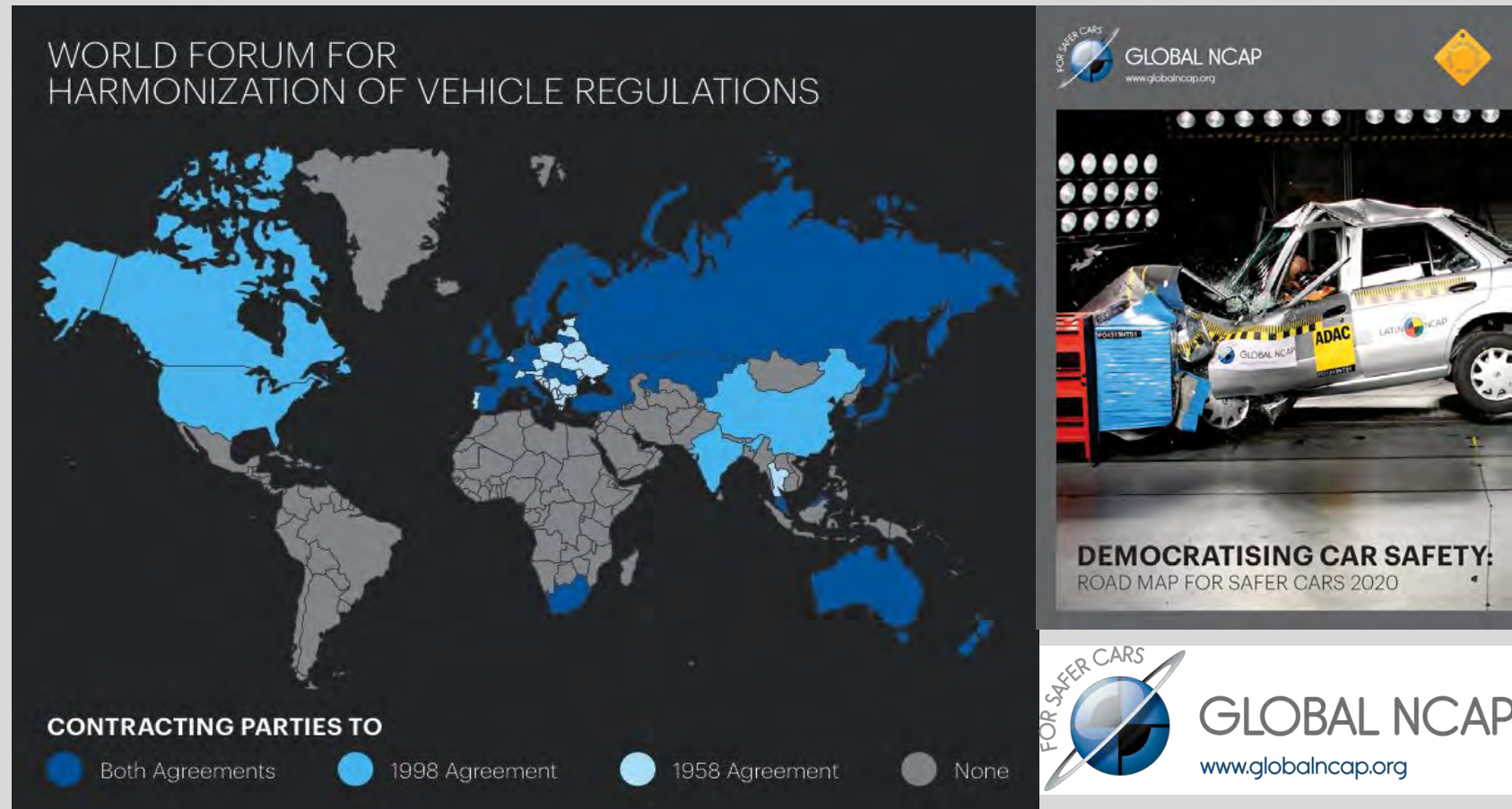


Developed for
illustrative purposes
only

The specification of 7 key international regulations begs the question about the capacity of national systems to deliver



A relatively sophisticated regulatory approach needs to be developed within low and middle income countries



Some challenges ahead

- Where does an LMIC start when a country places no safety regulation controls on vehicles entering a country?
- How does an LMIC manage used vehicle imports, and new vehicle imports, and locally produced vehicles?
- What are the necessary processes and projects that need to be established and delivered to get from zero to some basic level of control?

Some starting thoughts for LMICs

- World Forum for Harmonisation of Vehicle Regulations (UNECE Working Party 29)
- Political awareness, professional and consumer advocacy, and respectful engagement with industry
- Institutional development and refocusing of automotive engineers beyond inspections
- Sustained technical assistance, using safety-focused, regulatory-competent, expertise
- Sustained goodwill amongst Governments, Regulators, Industry, and Consumers

Summary

The level of safety technology in the vehicle fleets of low and middle income countries needs to significantly increase

This will require alignment with UN vehicle safety standards and significant investment in national regulatory systems



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Driver Risk Management

Reducing collisions and risky driving

September 2016

SmartDrive Systems



Global innovation leader in video based driver safety performance programmes

Founded 2004 | Employees 450+
130% growth YOY

150,000,000+ COMMERCIAL DRIVING EVENTS RECORDED
The world's largest and fastest-growing database of risky driving events.



Top 100 Companies in
North America



Top 25 venture-backed
companies to watch



Food Logistics Top 100 Software
and Technology Providers



Ranked Number on Deloitte's
2015 Technology Fast 500™

In the last 15 years, video, data and mobility have fundamentally changed the way we communicate, interact, and do business.

Video Based Driver Risk Management

Taking 'bad costs' out of your business



**Your driver is still the most
advanced technology on the truck**



Ask yourself...do you really know?



Who are your riskiest drivers?



Resultant 'bad costs' generated in your business?



Who are your best drivers? And why?



True root cause of their incidents and collisions?

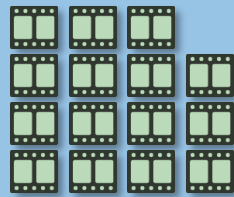


The damage to your brand and reputation?



Video based driver risk management – what it is

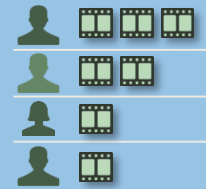
A standardised process, consistently applied



Videos
captured



Consistent
expert review
and scoring
verifies risk



Drivers
and risk
prioritised



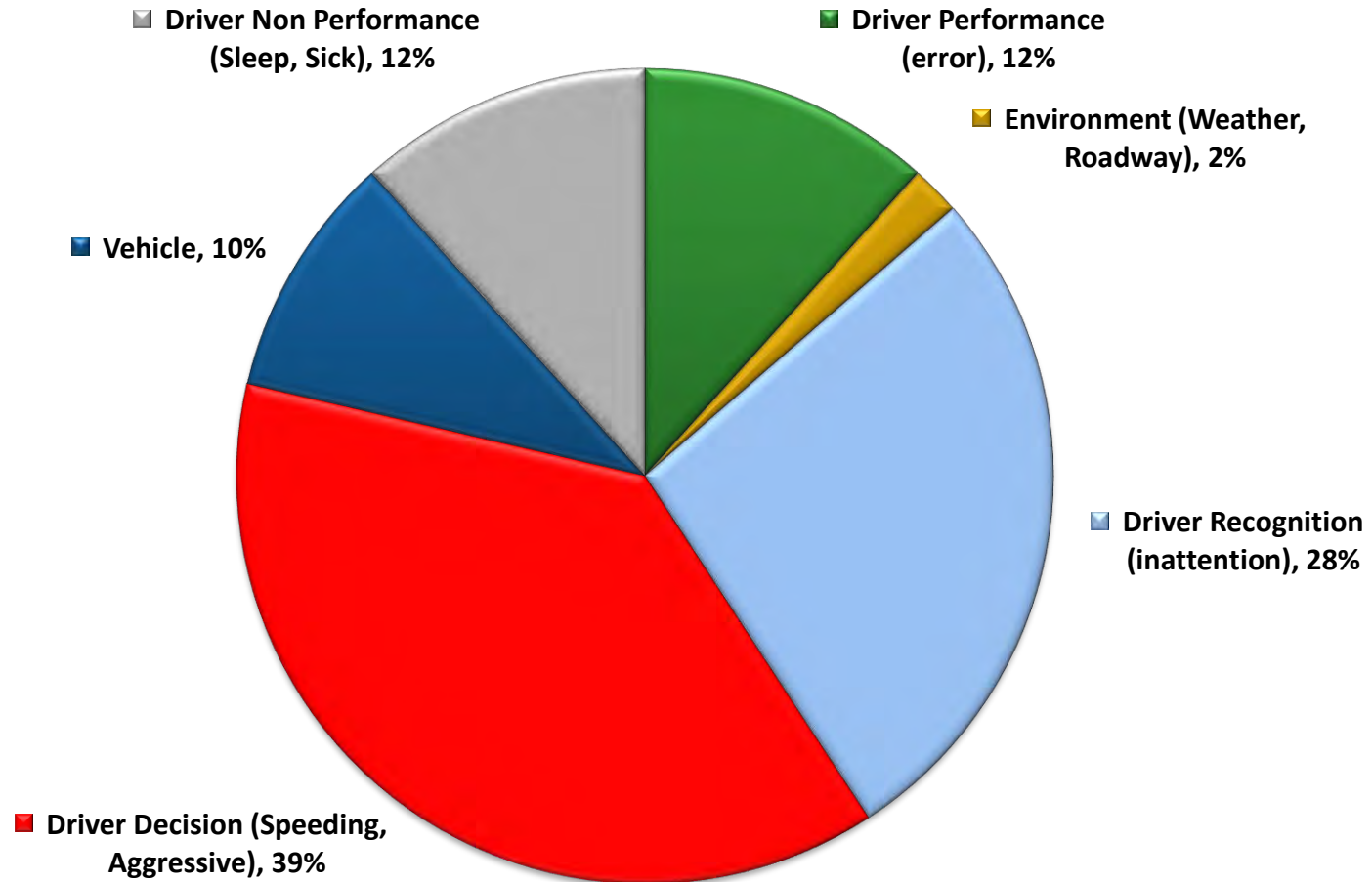
Your
coaching
sessions

Risky Driver Behaviour

Some facts!

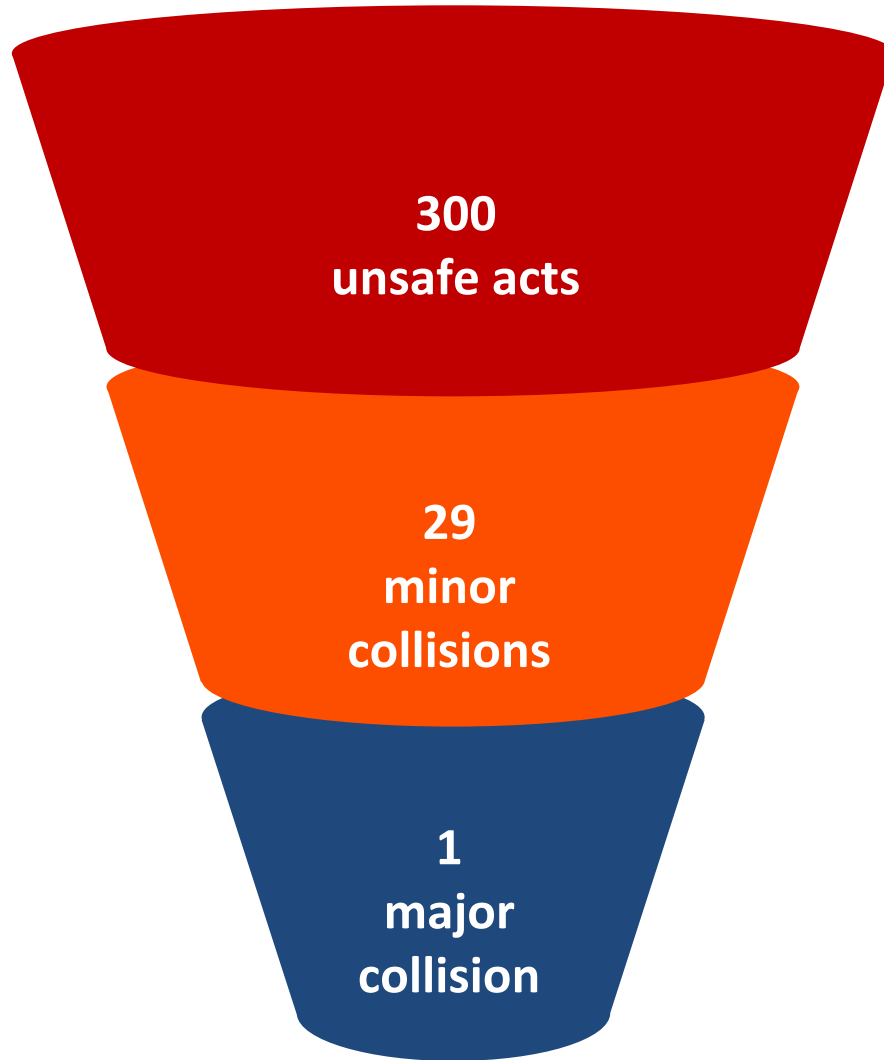


88% of collisions can be avoided through improved driving skills



Source: Virginia Tech Crash Causation Study

Eliminate major collisions by tackling unsafe driving behaviour



A driver risk management programme addresses unsafe acts and driver distraction to reduce collision frequency

Correlation between crash risks and driver activity

- **Taking long glances away** from the road **doubles** likelihood of crashing
- Risk of crash increases **sixfold** when driver is **dialing a cell phone**
- **Writing** on a pad, notebook, etc. increases risk of crash by **nine times**
- **Text messaging** increases the risk of a crash or potential collision by **twenty three times!**

Source: Virginia Tech Crash Causation Study

Implementing video based driver risk management
How do you really know what's happening on the road?



Telematics can only tell you so much



A hard braking incident...

- Why did it happen?
- What was the outcome?

What do you think
might have happened?

You've only got the drivers word for it!

Adding video to the equation – forward facing camera



- Why does the vehicle come to a hard stop at the zebra crossing?
- Why does the pedestrian to the left stop before crossing?

You've still only got the drivers word for it!

Are you changing your mind
on what you think might
have happened?

Adding video to the equation – forward and interior cameras



This is
what really
happened!

- Using mobile
- No seatbelt

Video based driver risk management exoneration



A managed service- consistent expert video reviews

Fundamental Driving Errors

Unprofessional Driving

- Unsafe Backing
- Unsafe Braking
- ✓ ▪ Unsafe Lane Change / Merging / Passing
- Unsafe Railroad Crossing
- Unsafe Turning
- Lane Departure/Straddling Lanes
- Competitive/Aggressive Driving
- Driving the Wrong Way - On Roadway
- Driving the Wrong Way - Off Roadway
- Curb Check/Jumped Curb

Vehicle Control

- Driving with Two Hands off Wheel
- Unattended Moving Vehicle

Stopping

- Incomplete Stop at Light
- Incomplete Stop at Stop Sign
- Failure to Attempt to Stop at Light
- Failure to Attempt to Stop at Stop Sign
- False Start
- Failure to Yield to Pedestrian(s)
- Failure to Yield to Vehicle(s)

Speeding

- Moderate Speeding (≤ 10 mph Over Limit)
- ✓ ▪ Excessive Speeding (> 10 mph Over Limit)
- Exceeded Maximum Fleet Speed

Situational Awareness

- Unsafe Following (≤ 1 second)
- Unsafe Following (1.25 - 2 seconds)
- Unsafe Following (2.25 - 3 seconds)
- Unsafe Following (3.25 - 4 seconds)
- Not Checking Mirrors
- Not Scanning Road Ahead
- Not Scanning Intersection



A managed service – management reporting and KPIs

Safety
Score

364
TARGET 400

3%
BETTER
WK/WK

% of Events
Coached

78%
TARGET 80%

15%
BETTER
WK/WK

Coaching's
Impact on
Score

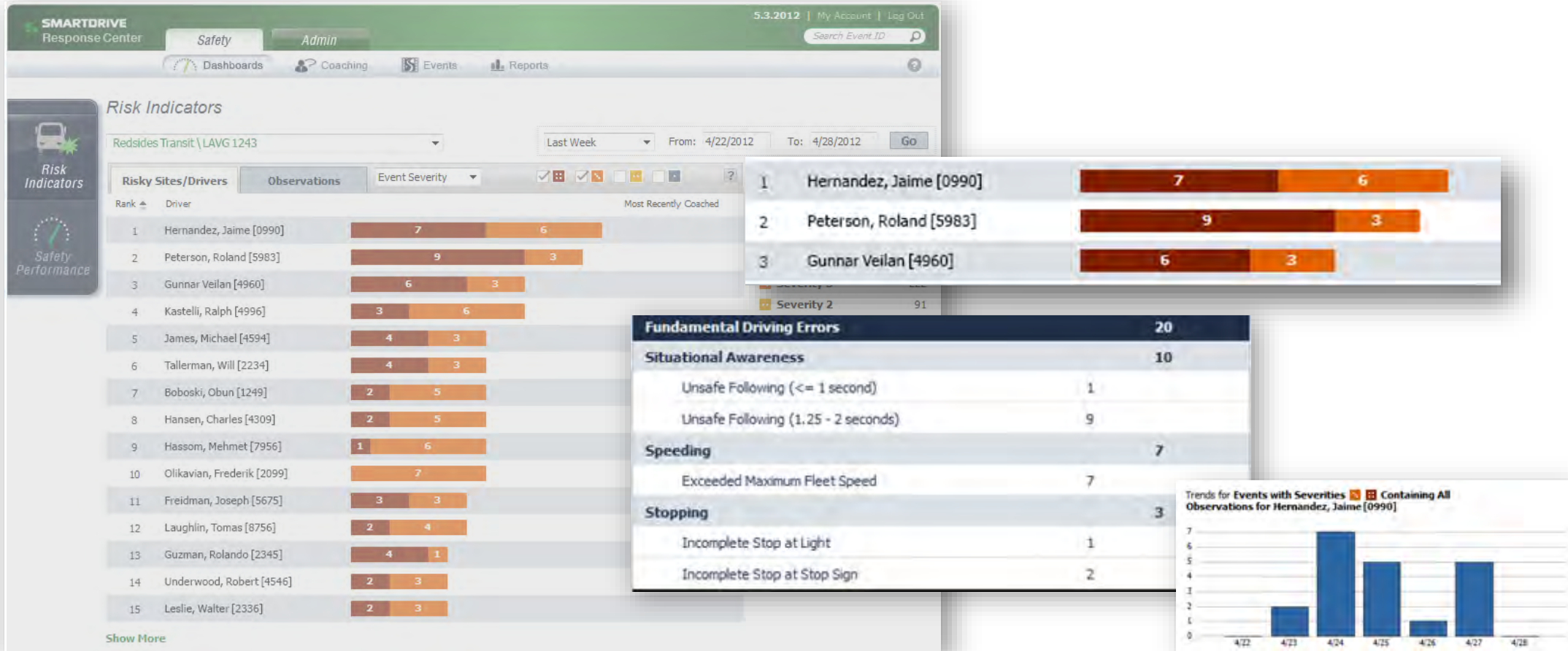
40%
OVER 4 WEEKS

Robust metrics, reports and interactive dashboards measure overall program performance

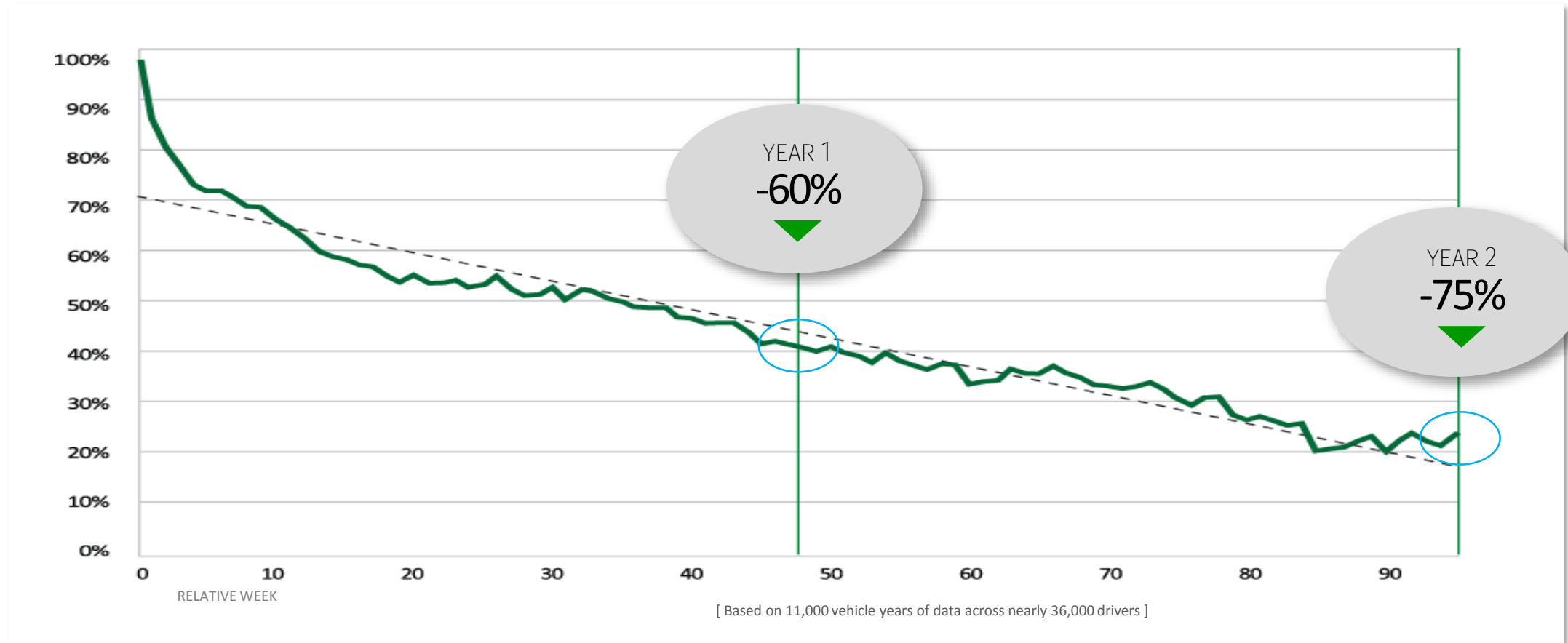
- Target the right information to the right person at the right time
- Emphasise what is most important for improving safety
- Provide clear comparison metrics to measure safety across sites, drivers
- Quickly identify areas for improvement
- Fast drill-down for root cause analysis



DRM – drill down to driver performance profiles



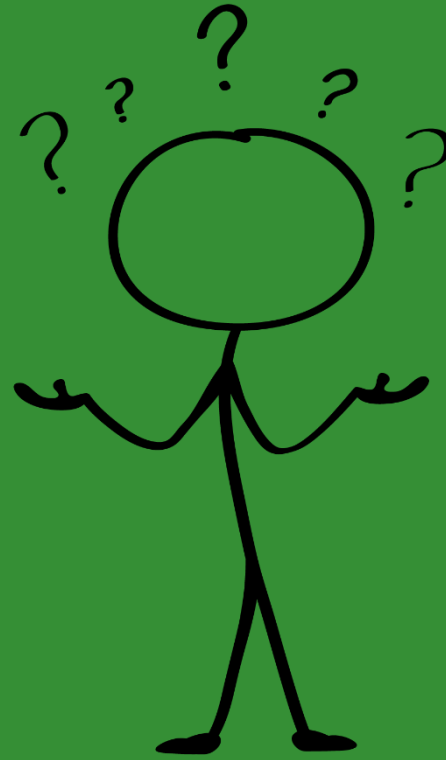
Overall reductions in risky driving



10% improvement in safety score = 8.2% reduction in collision frequency

THANK YOU FOR YOUR ATTENTION

ANY QUESTIONS?





THE SMARTDRIVE PROMISE

We put our customers first.

We deliver video in minutes, not days.

We safeguard your drivers and business in every collision.

We will save you the most money in the shortest time.

We protect your investment with a solution you won't outgrow.



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Technology in road safety – ADAS



Where do most collisions occur?



Autonomous Emergency Braking (AEB)



VW Golf mark VII



Prince Michael International
Road Safety Awards



Where does this technology fit in with the Decade of Action and the Sustainable Development Goals?



**SUSTAINABLE
DEVELOPMENT**

GOALS

Summary





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Next Call: 1 December 2016

SDGs – 1 year In

- **What progress has been made?**
- **Who is doing what?**
- **Are we coordinating well enough?**
- **What are the next steps?**

Speaker suggestions to michael.chippendale@ifrc.org

Global Road Safety Partnership Secretariat

c/o International Federation of
Red Cross and Red Crescent Societies

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