

Informal document No. GRSG-94-32,
agenda item 12



The VERONICA Projects
UNECE GRSG WP 29
Geneva, 23-04-08

EC EDR Policy History

§ **SAMOVAR Drive Project, Safety assessment monitoring on-vehicle with automatic recording, 1995, EC co-funded**

§ **DG Tren White Paper on Transport, 2001**

"One of the means ... is a broader implementation of vehicle accident-event data technology".

§ **BIANCA-Project proposal and grant request, 2002 or 2003**

including journey and incident data recording

Proposal drafted by a police consortium but not accepted by DG Tren

§ **Road Safety Action Programme, 2003**

" [devices] ... which help explain the causes of accidents,"

§ **Call for Proposals DG Tren /SUB/02-2004**

A.3 Action required to draft legislative proposals

A.3.1 Accident Data Recorders

§ **VERONICA Project, 2005-2006, EC co-funded**

Drafting basic technical and legal requirements for accident data recording

§ **VERONICA II Project, 2007-2009, EC co-funded**

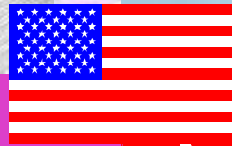
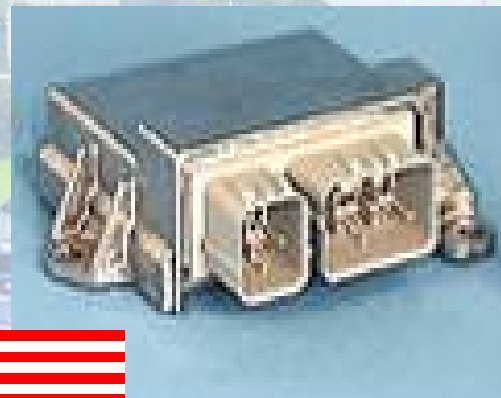
Drafting Technical and Legal Implementation Standards



15+ years of ADR experience in Europe – No law



15+ years of EDR experience in North America - No standard



Central airbag control unit for front and side airbag and seat belt pretensioner



Veronica I: (7/2004)-1/2005-12/2006

Budget: 1,1 Mio €; 47% EU-Com, 53% Partners

Main Contractor: SIEMENS VDO Automotive AG

Partners: Aprox. 30

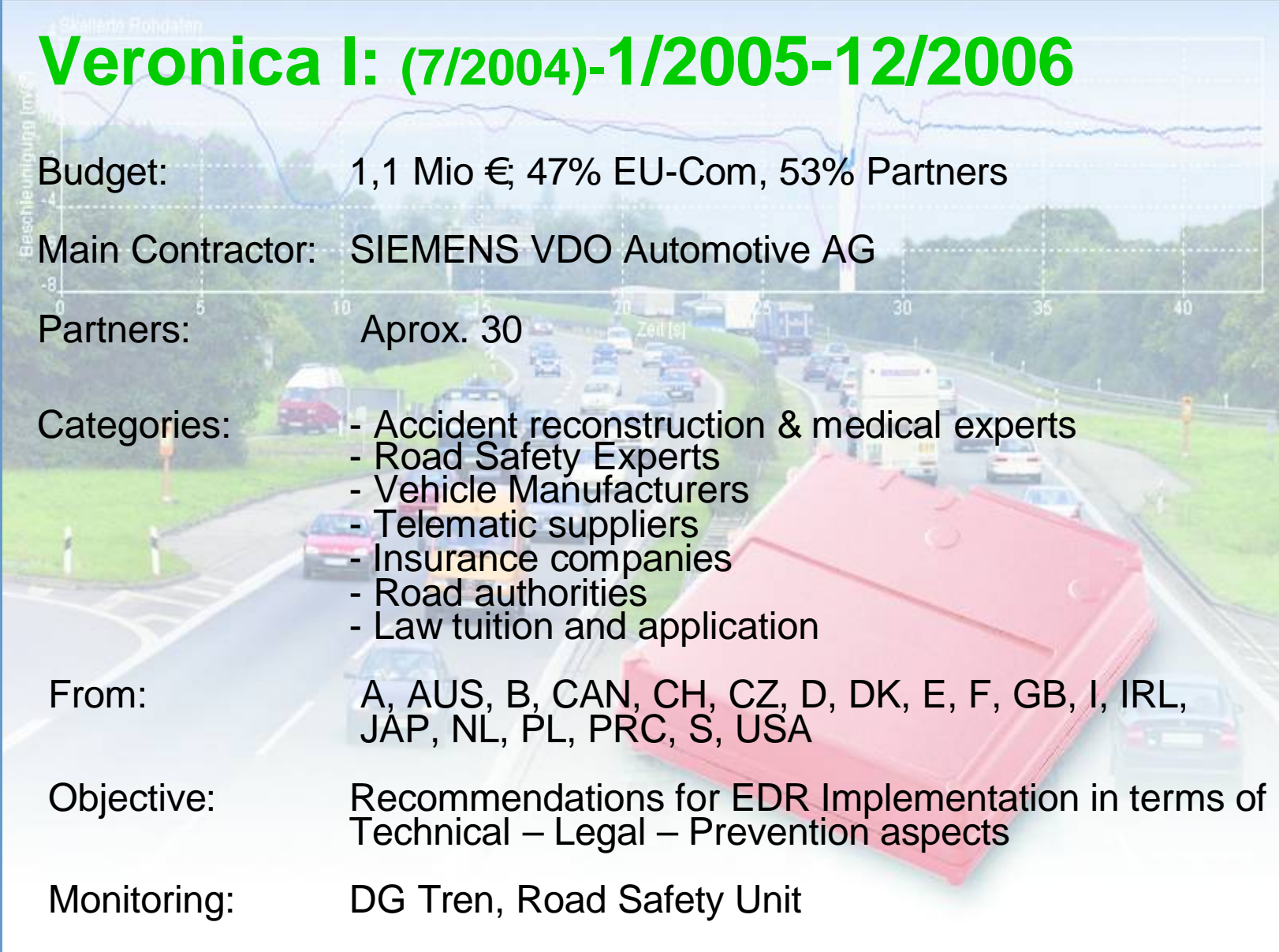
Categories:

- Accident reconstruction & medical experts
- Road Safety Experts
- Vehicle Manufacturers
- Telematic suppliers
- Insurance companies
- Road authorities
- Law tuition and application

From: A, AUS, B, CAN, CH, CZ, D, DK, E, F, GB, I, IRL, JAP, NL, PL, PRC, S, USA

Objective: Recommendations for EDR Implementation in terms of Technical – Legal – Prevention aspects

Monitoring: DG Tren, Road Safety Unit



Results of VERONICA I:

- Agreed purposes of European EDRs
- Agreed legal and data privacy provisions
- Agreed general accident definition: **See extra chart**
- Agreed information principles
- Agreed target groups: **See extra chart**
- Identification of synergies
- *Specification and Standardization required*
- *Data use provisions required*

Follow-up project
"VERONICA II"

Event Definition

Agreed accident definition

" 'Accident' means an unwanted or unintended sudden event or a specific chain of such events which have harmful consequences."

(Taken from the EC Railway Safety Directive)





Agreed Target Groups

I. TCO- and other professional vehicles

1. Hazardous goods transports, buses and coaches
2. Other Commercial vehicles > 3,5 t
3. Light transporters (vans)
4. Emergency service vehicles

II. Private vehicles

1. Motorcyclists
2. Young drivers



Veronica II, 5/2007 - 4/2009

Budget: 2,1 Mio €, 50% EU-Com, 50% Partners

Main Contractor: VDO Automotive AG

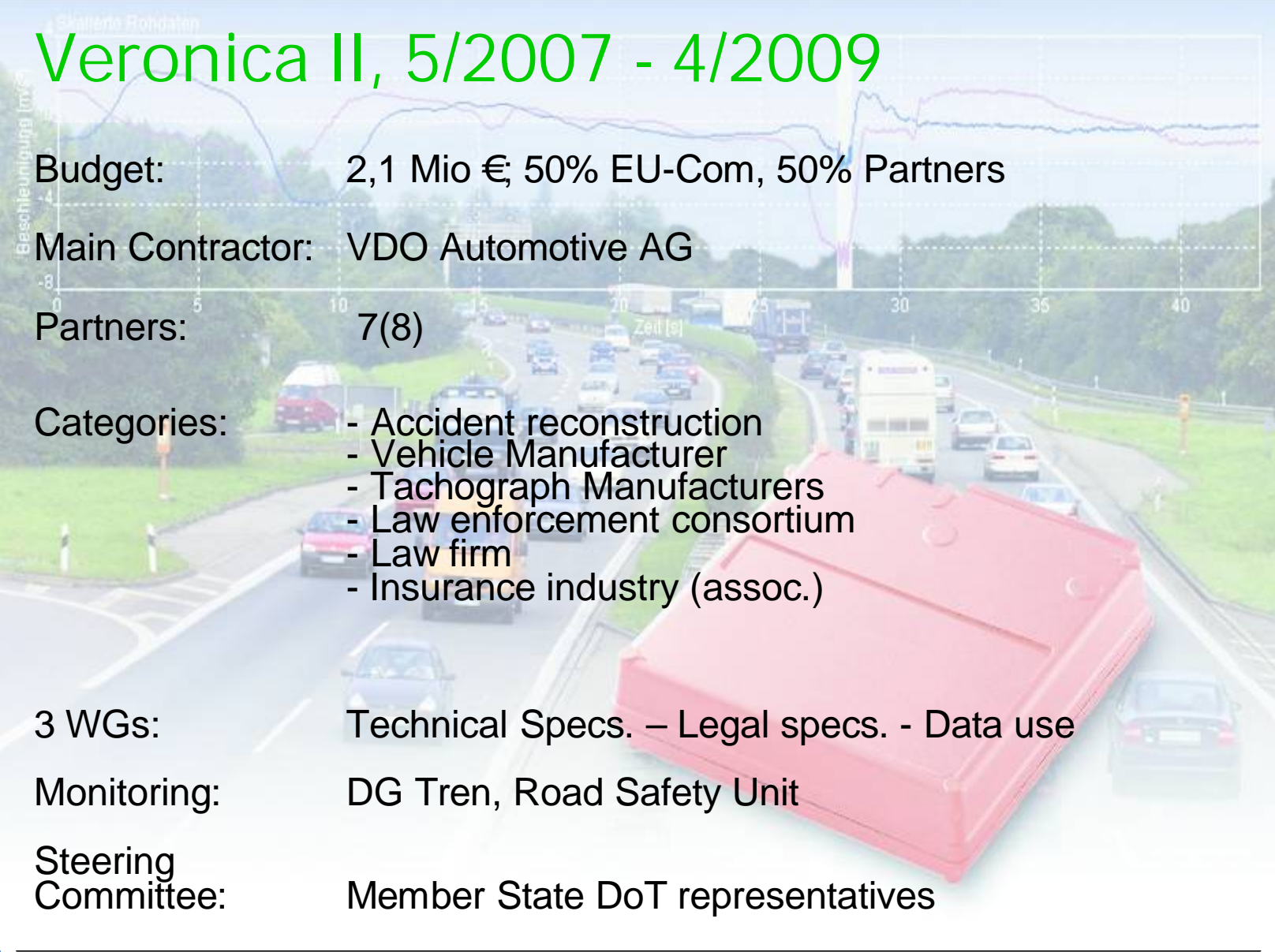
Partners: 7(8)

- Categories:
- Accident reconstruction
 - Vehicle Manufacturer
 - Tachograph Manufacturers
 - Law enforcement consortium
 - Law firm
 - Insurance industry (assoc.)

3 WGs: Technical Specs. – Legal specs. - Data use

Monitoring: DG Tren, Road Safety Unit

Steering Committee: Member State DoT representatives

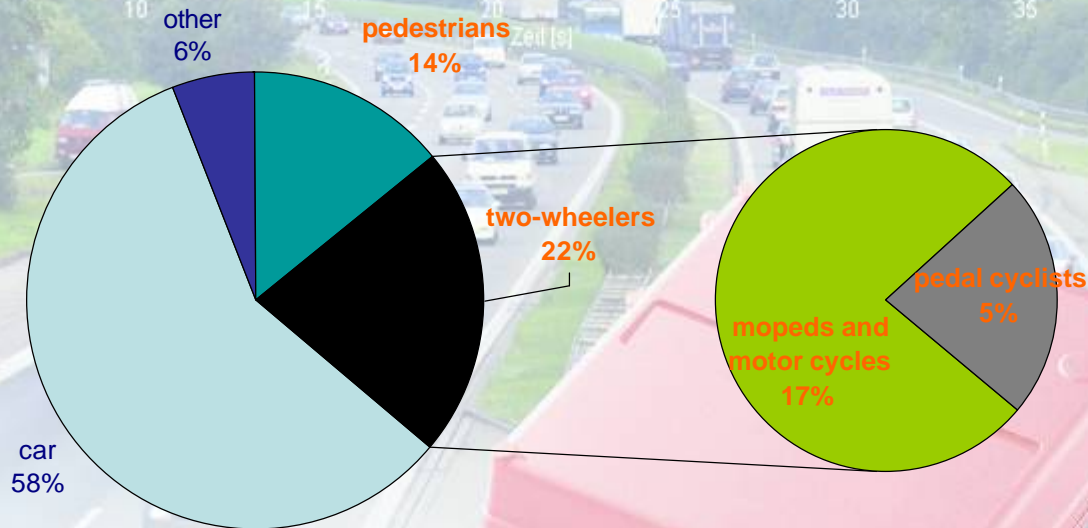


Event Definition

Event Definition

(Deliverable – Veronica II)

EU-15 fatalities all ages (2004)

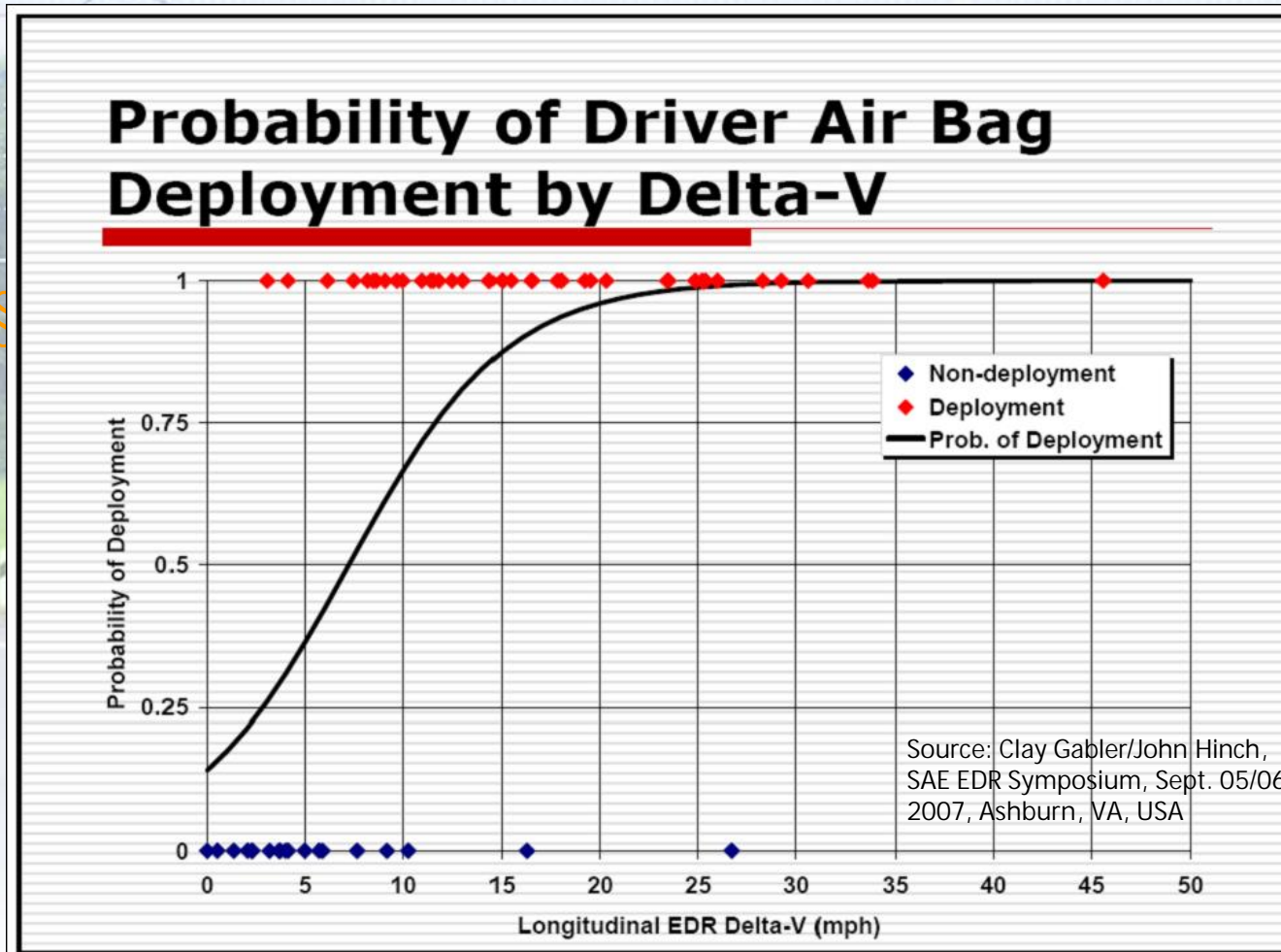


Source: CARE and national data according to "Commission Staff Working Document, European Road Safety Action Programme – Mid Term Review, SEC (2006) 221"

⇒ Vulnerable road users are **relevant** for road safety !
 ⇒ Typical accidents are urban low • v collisions !

Trigger Definition

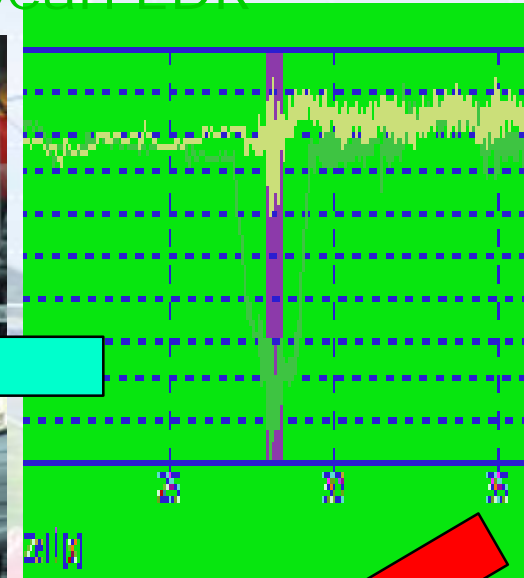
Results from US Research on EDR



⇒ Airbag triggers are unreliable in low •v collisions !

Trigger
Definition

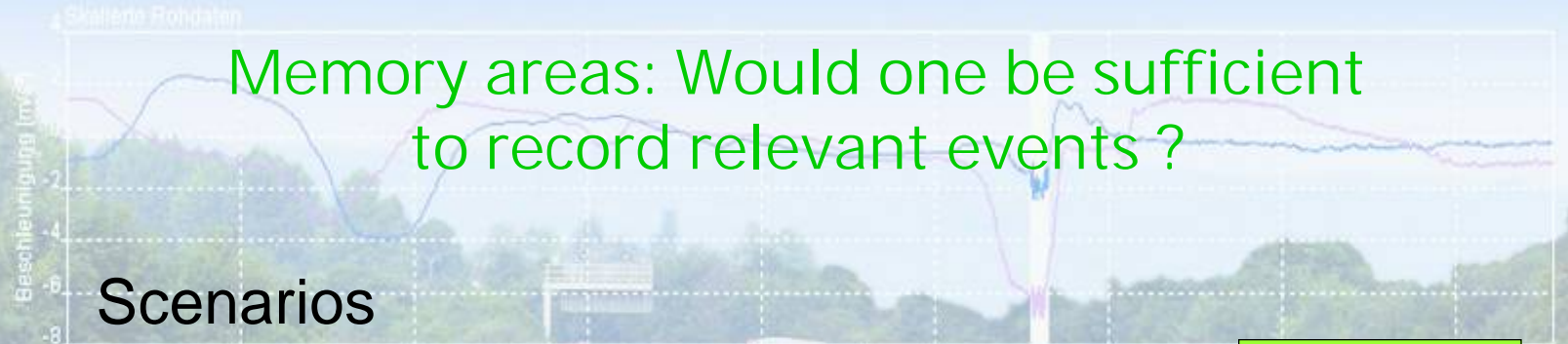
Practical Experiences with European EDR



Crash between ambulance and bicycle

- n Severe damages at vehicle
- n Pedalist deadly injured
- n No airbag-deployment: NHTSA-EDR would not have recorded
- n Crash recorded by European state-of-the-art-type EDR

Event Recording



Scenarios

- 1 event + immediate download: No problem
- 1 + x events + no immediate download: Data loss
- Timely separate events (pile-up-collisions): Data loss
- Continued driving after accidents in police chases or rescue deployments: Data loss
- Long distance haulage without immediate download possibility: Data loss
- Hit&run collision + subsequent deliberate event: Data loss

⇒ EDR with only one memory area:
Data loss in many typical accident scenarios !

Conclusions



Conclusions from event definition specification

- ⇒ **Soft object collisions are road safety relevant**
- ⇒ **A simple delta-v trigger is not sufficient**
- ⇒ **Intelligent triggers and dual use sensors to be considered**
- ⇒ **More than one memory area necessary**
- ⇒ **More reqs. for reliable collision investigation identified**



Thank you for your attention!

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www.vdo.com/aboutus/projects/veronica/