

# The **VMS Unit**: Work Plan

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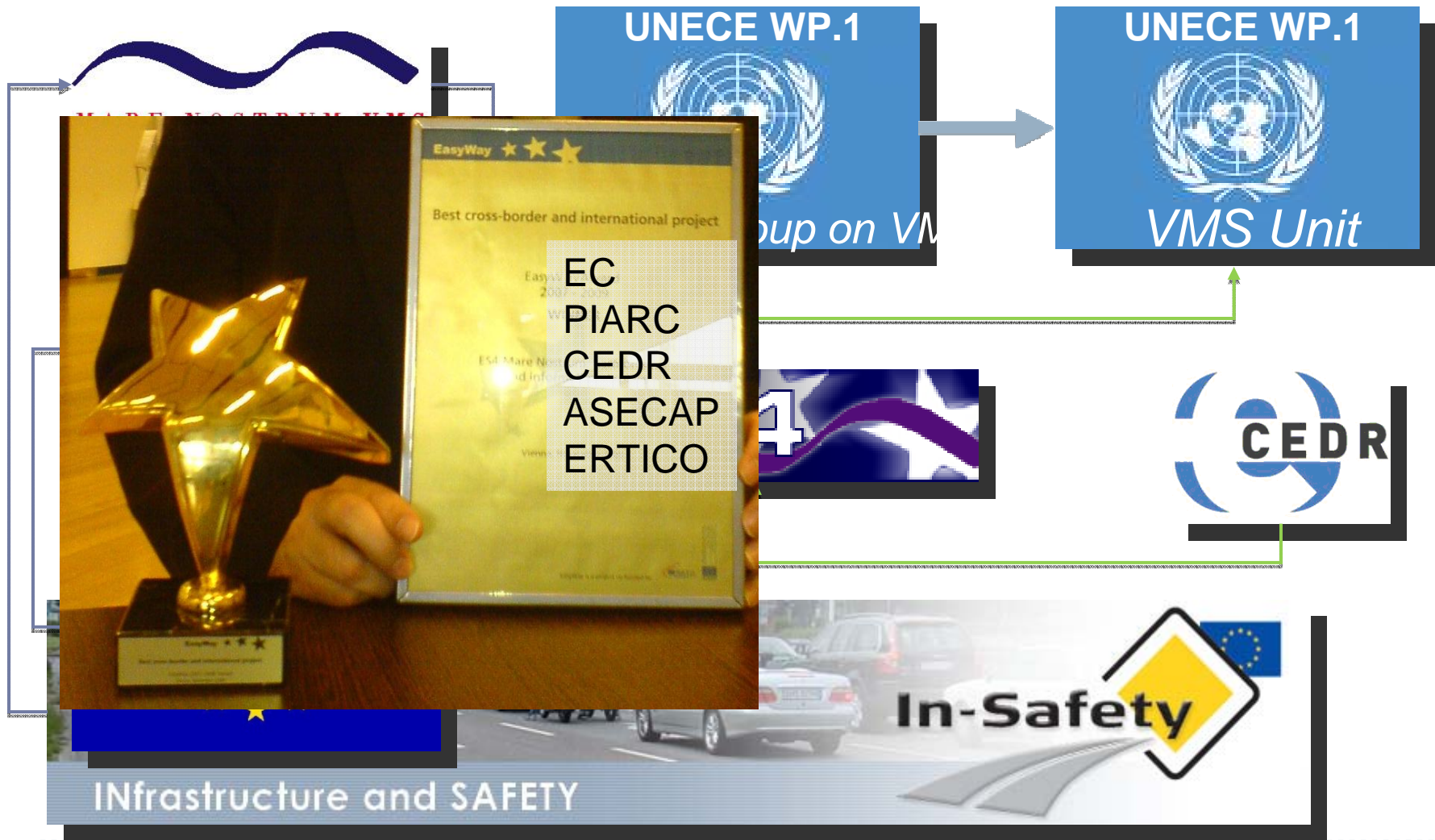


# CONTENTS

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INTRODUCTION	WAY FORWARD	REASONS FOR 3 AXIS	CONCLUSION
	Road markings Posted signs Electronic signs	P vs. VMS: comprehension P vs. VMS: visual P vs. VMS: design parameters Full matrix VMS transfer P vs. VMS: harmonisation	Work Plan sketch

# INTRODUCTION – VMS Unit background



# VMS Unit: THE PERSPECTIVE

## ROAD INFORMATION: A BROADER VIEW IS NEEDED

**Making road networks safer and  
more efficient public spaces worldwide**

**design**

# WHAT KIND OF DESIGN?

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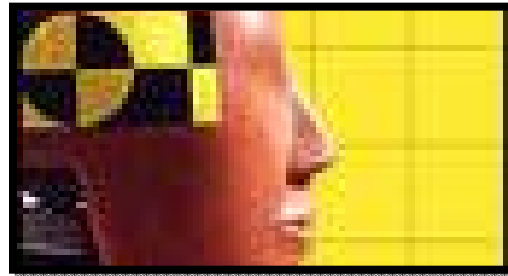
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COMPONENTS



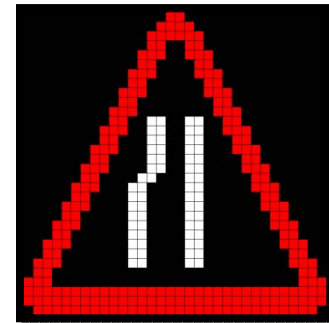
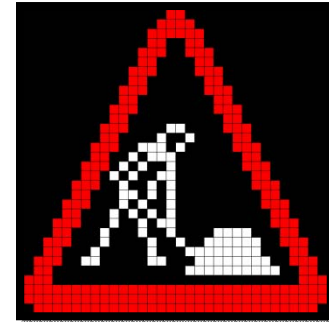
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CONTACT



3

INFORMATION



# VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: A BROADER VIEW IS NEEDED

*flexible,  
essential  
tool*

€ €

*mobility  
safety*





# VMS Unit: THE PERSPECTIVE

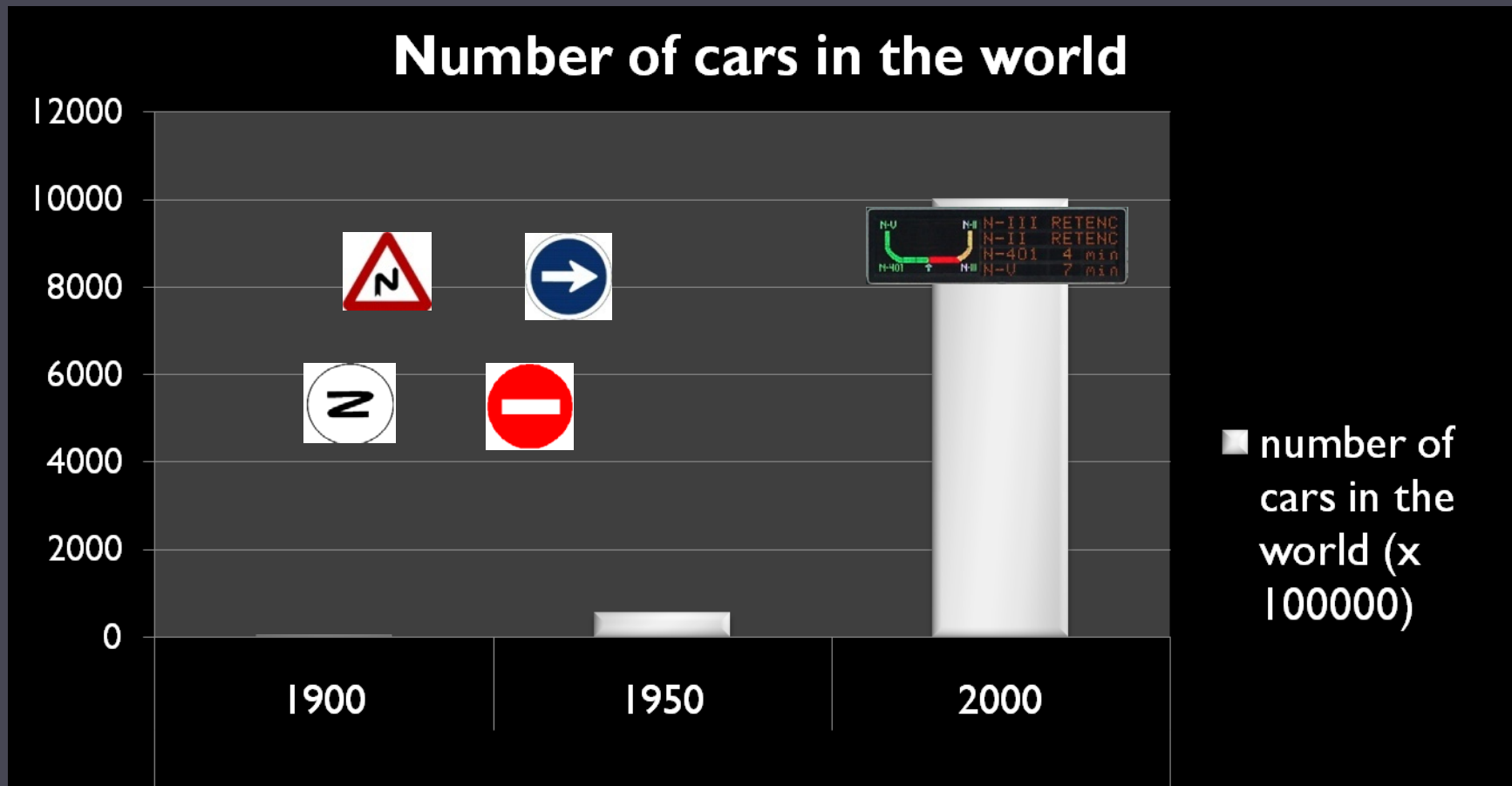
## ROAD INFORMATION:

CLASSICAL, AGE OF CONVENTIONS (1909-1968)



# VMS Unit: THE PERSPECTIVE

## ROAD INFORMATION: NEW DEVICES, MORE PLACES





# VMS Unit: THE PERSPECTIVE

## ROAD INFORMATION: TELEMATIC AGE, FIRST APPLICATIONS



# USE OF INFORMATION: **WHY**

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## ROAD MARKINGS

TO  
**FACILITATE**  
POSITION,  
TRACKING  
AND  
LOCATION ON  
THE ROAD

## POSTED SIGNS

TO **POINT TO**  
DANGEROUS  
OR  
STRUCTURAL  
STABLE  
CONDITIONS  
OF THE ROAD  
**ON SITE**

## POSTED VMS

TO WARN /  
INFORM  
ABOUT  
DIFFERENT  
**CHANGING**  
ROAD /  
TRAFFIC  
EVENTS ON  
AND **OFF SITE**

# VMS Unit: THE PERSPECTIVE

## ROAD INFORMATION: NEW DEVICES, MORE PLACES



# VMS Unit: THE PERSPECTIVE

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# VMS Unit: THE PERSPECTIVE

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## ROAD INFORMATION: NEW DEVICES, MORE PLACES



# USE OF INFORMATION: **WHY**

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AND **OFF SITE**

# USE OF INFORMATION: **ONCOMING**

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## IN-VEHICLE

- ▶ TO WARN / INFORM ABOUT **WHATEVER TRAFFIC INFORMATION**, AT **WHATEVER POINT OR MOMENT**

## INTERNET

- ▶ TO **ACTIVELY SEEK INFORMATION** ABOUT **WHATEVER TRAFFIC RELATED ISSUE**, AT **WHATEVER PLACE OR MOMENT**

# VMS Unit: THE PERSPECTIVE

## ROAD INFORMATION: A CHANGING LANDSCAPE

**from**

**to**

*permanent*

*static*

*one-dimensional*

*passive*

*temporary*

*Variable, ubiquitous*

*multidimensional*

*proactive*

# RELATIVE **IMPACT** OF INFORMATION DEPENDS ON...

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- ▶ **PERCEPTION**
- ▶ **COMPREHENSION**
- ▶ **INFLUENCE**



# Why?

ISSUES AND  
PROBLEMS

KEY POINTS IN  
OUR

PREVIOUS  
THOUGHTS

- ▶ TRAFFIC SIGNS = PUBLIC INFORMATION CONCERNING TRAFFIC
- ▶ TRAFFIC SIGNS = POSTED SIGNS & AND ROAD MARKINGS
- ▶ POSTED SIGNS & ROAD MARKINGS = **THE ONLY** PUBLIC INFORMATION ON ROAD
  
- ▶ **NOT SINCE THE 1980s**

ISSUES AND PROBLEMS

KEY POINTS IN OUR

PREVIOUS

THOUGHTS:

**SYLLOGISMS**

- ▶ POSTED SIGNS HAVE LEGAL IMPLICATIONS
- ▶ LEGAL IMPLICATIONS ARE IMPORTANT
- ▶ POSTED SIGNS ARE IMPORTANT
  
- ▶ VMS HAVE NOT LEGAL IMPLICATIONS

ISSUES AND PROBLEMS

KEY POINTS IN OUR

PREVIOUS


THOUGHTS:

**SYLLOGISMS**

**CONCLUSION: WE (WP.1) ONLY DEAL WITH SIGNS (TRAFFIC INFORMATION) THAT EITHER INVOLVE OR CAN BE SUSCRIBED BY LEGAL AGREEMENTS...**

# VMS Unit: THE PERSPECTIVE

**ROAD INFORMATION: A BROADER VIEW IS NEEDED**

A photograph of a long wooden pier extending into the ocean. The pier is made of wooden planks and has metal railings on both sides. The background shows a beach, some buildings, and a blue sky. A semi-transparent grid is overlaid on the image, and white text is centered over it.

**Making road networks  
safer and  
more efficient  
public spaces worldwide**

# VMS Unit: THE PERSPECTIVE

ROAD INFORMATION: NEW DEVICES, MORE PLACES

**New devices exist that allow for ubiquitous access to information**



**CAN WE IGNORE THEM?  
AT WHAT PRICE?**



## OUR MISSION? OUR WORRY:

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- ▶ THOSE (NEW) DEVICES SHOULD DISPLAY APPROPRIATE INFORMATION (INTERNATIONAL, UNDERSTANDABLE) FOLLOWING WP.1 DESIGN PRINCIPLES AND STYLE (FORMAT, FUNCTIONS, INFORMATIVE ELEMENTS)
- ▶ THAT PROBLEM SHOULD BE SOMEHOW MANAGED BY US
- ▶ ...AT SOME POINT IT WILL HAVE LEGAL IMPLICATIONS...

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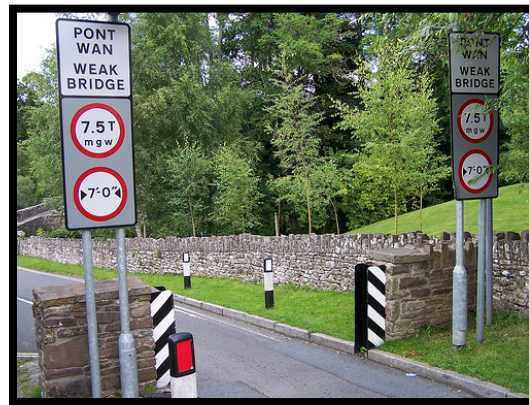
# WAY FORWARD: A PROGRESSIVE SCENARIO

## RE-STRUCTURE 1968 CONVENTION ON ROAD SIGNS AND SIGNALS

ROAD  
MARKINGS



POSTED  
SIGNS



ELECTRONIC  
SIGNS



# WAY FORWARD: A PROGRESSIVE SCENARIO

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- ▶ **Electronic signs (*e-signs*)**
  - ▶ Traffic lights
  - ▶ Traffic signals
  - ▶ VMS
  - ▶ In-vehicle devices
    - ▶ OBU
    - ▶ Navigators
    - ▶ Nomadic
  - ▶ Off-the-road
    - ▶ Road kiosks
    - ▶ Internet

# WAY FORWARD: A PROGRESSIVE SCENARIO

## THE FUTURE IS NOW: RE-ESTRUCTURE 1968 CONVENTION





# PRESENT: INTELLIGENT TRUCK PARKING

AVAILABLE ANYWHERE AND FOR EVERYBODY



fre



**EXAMPLE I: CHALLENGES ALREADY HERE**

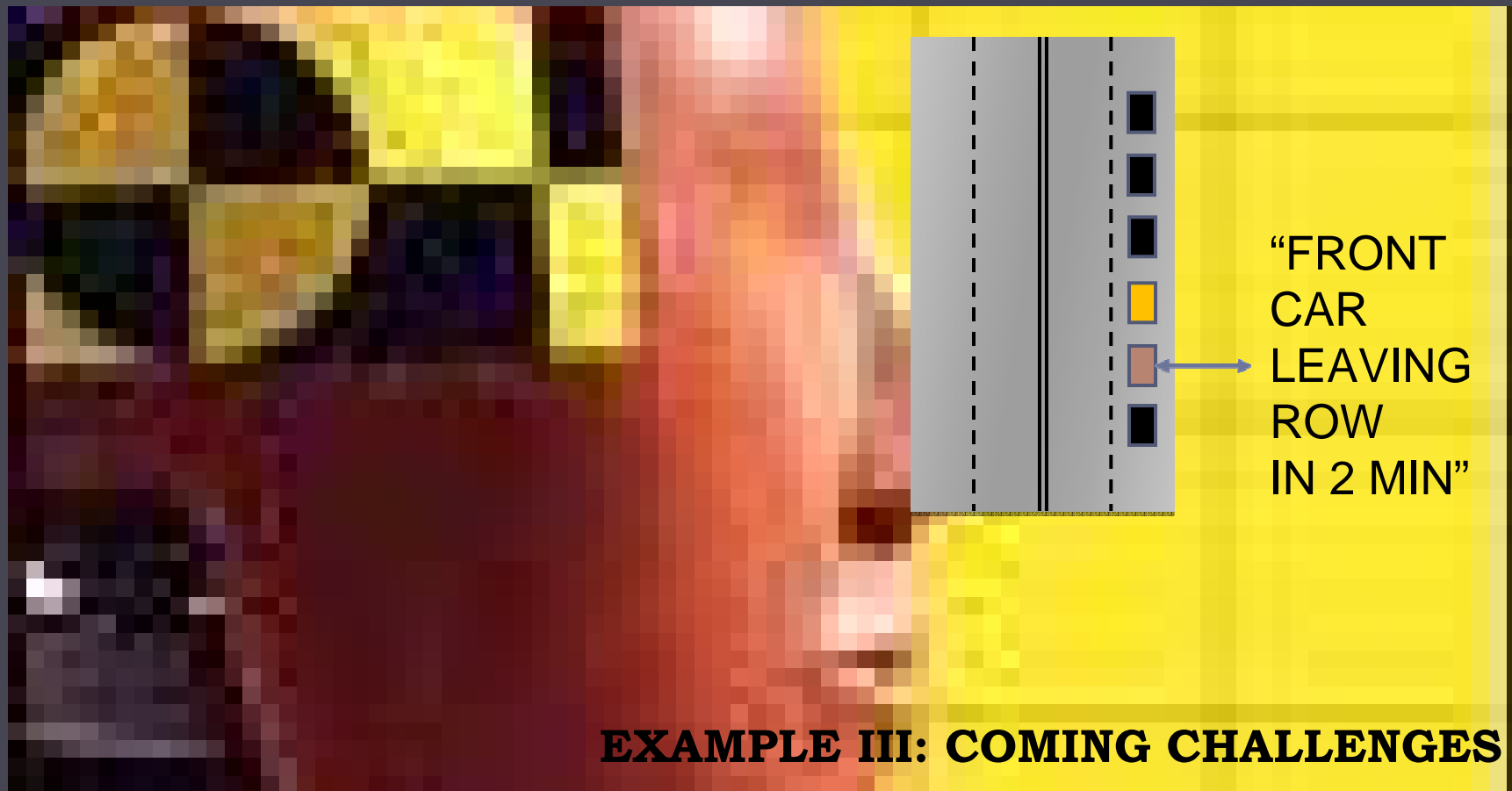
# NEAR FUTURE: GHOST DRIVERS

BEWARE OF THEM - ALSO *IN-CAR*!



# NEAR FUTURE? PLATOONING

## SOCIAL DIVISION OF LABOUR, ON ROAD



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## REASONS FOR 3 AXIS

POSTED AND  
ELECTRONIC  
SIGNS:

*SAME SIGNS,*  
*DIFFERING*

*COMPREHENSION*



Warning:  
You approach  
a swing bridge



Warning:  
swing bridge  
opened



continuous

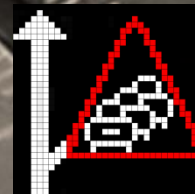
pixel based



*matrix size*



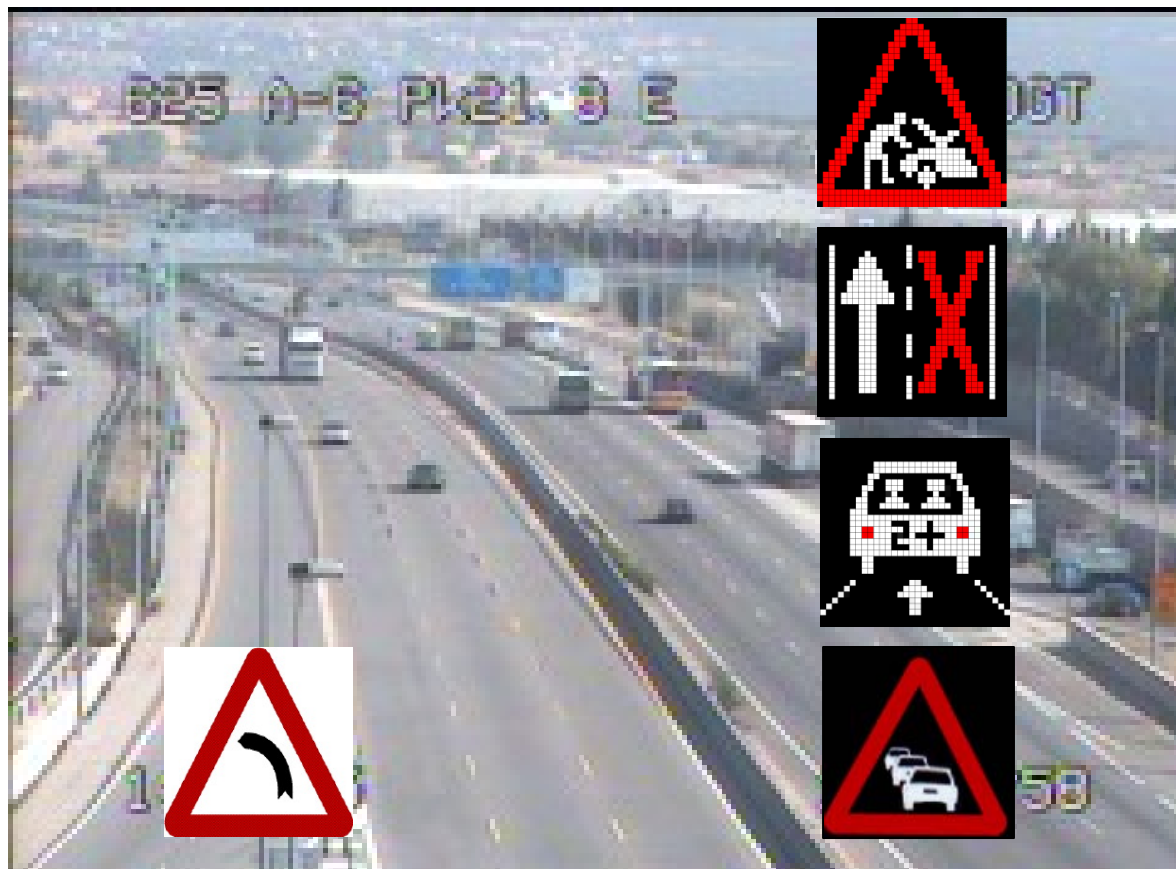
*reshaping*



REASONS FOR 3  
AXIS

NEED TO  
ADMINISTER  
DIFFERING  
VISUAL  
PARAMETERS

*RESPECT*  
*“INDIVIDUAL”*  
*DIFFERENCES*



Posted signs:  
domain of (fixed)  
road conditions

Electronic signs:  
domain of (changing)  
traffic situations

## REASONS FOR 3 AXIS

CONTEXT ,  
REFERENTS  
AND DESIGN  
PARAMETERS

*BOTH ROAD  
SIGNS, BUT  
DIFFERING  
**REFERENTS***

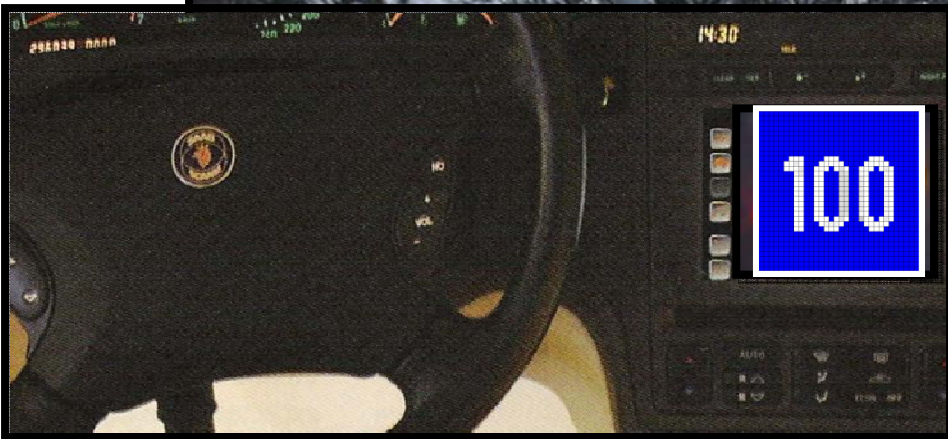
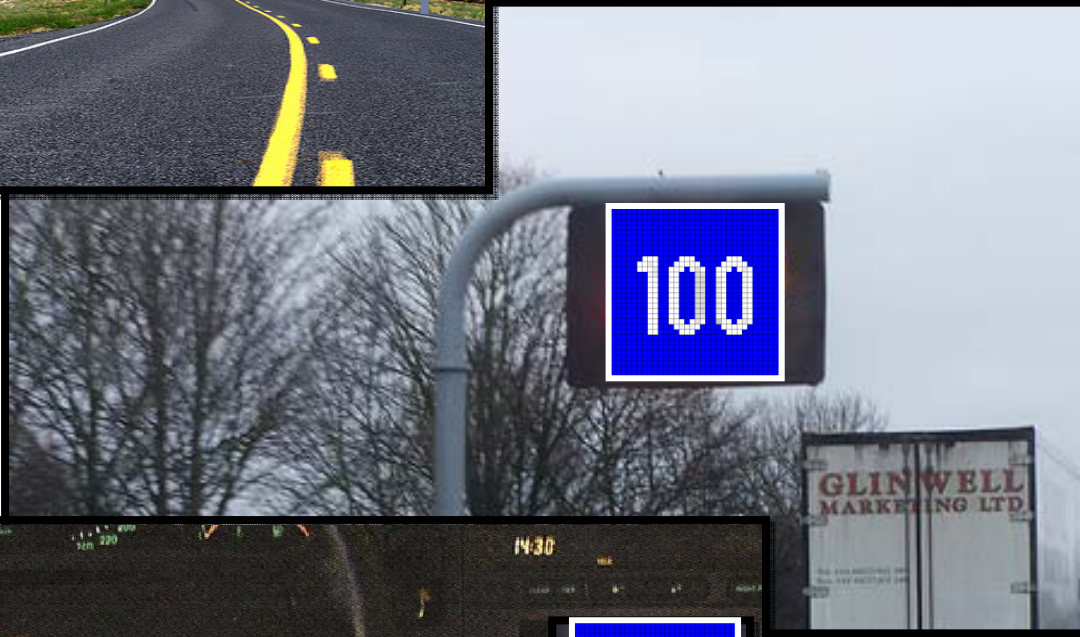


## REASONS FOR 3 AXIS

MAKING THE  
MOST OF **FULL  
MATRIX** VMS:

*AN EASY  
TRANSFER  
PLATFORM OF  
“CORRECT”  
WP.1 DESIGN  
STYLE*





## REASONS FOR 3 AXIS

MAKING THE  
MOST OF **FULL  
MATRIX** VMS:

*NEED TO*

***HARMONISE***

*SIGNS*

*THEMSELVES*

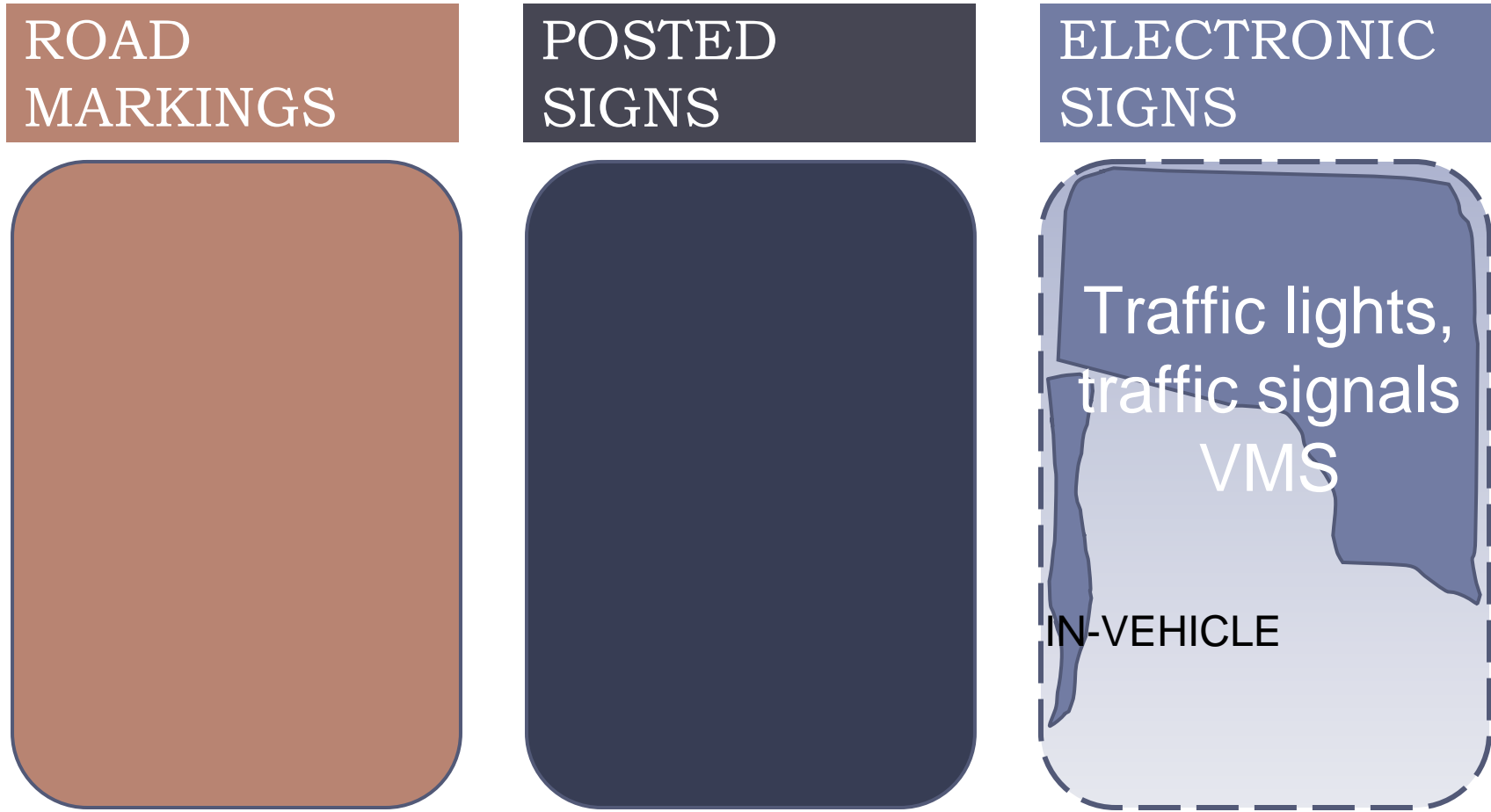
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# THE THIRD BUILDING BLOCK FOR THE 1968 CONVENTION: SLOW PROCESS

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## WAY FORWARD: PROGRESSIVE SCENARIO

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- ▶ **Fill in the gaps progressively** on due time:
  - ▶ Reform following a piecemeal basis
  - ▶ Consider main issues, main pictograms, elevate proposals, etc.
- ▶ **References to follow:**
  - ▶ Previous work done by the Small Group on VMS
  - ▶ CEDR document (issued 2009)
  - ▶ Work done by ES4 (also ES4 Guidelines)
- ▶ **References to be monitored:**
  - ▶ EsOP (Nomadic and in-car displays)
  - ▶ ISO standards, etc.

# WAY FORWARD: PROGRESSIVE SCENARIO

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1. Keep on work on VMS as the **main** contemporary electronic signing device
  1. Look after the correct transference of design principles (previously applied to posted signs) to VMS
2. Be aware of **transference possibilities** of electronic signing coined for VMS (full matrix) to other electronic signage (notably, in-vehicle)
3. **Monitor** the key points on the **evolution** of road **signs** displayed **in-vehicle**
  1. Specific work plan for in-vehicle electronic signage
  2. Identify the signs that will most easily brought to in-vehicle
  3. Propose signs according to WP.1 design style
  4. Worry about structure and development of legal bindings