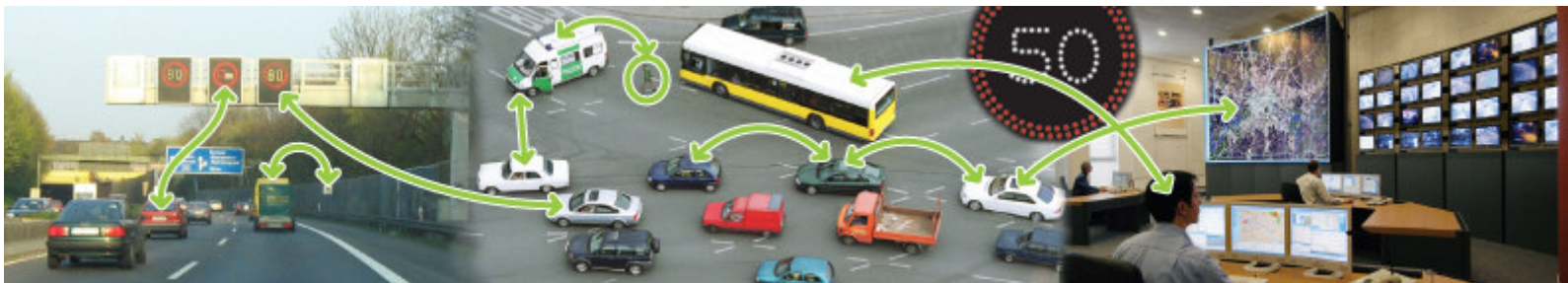




Cooperative Vehicle Infrastructure Systems

End User Acceptance

Mariana Andrade, ERTICO Project Manager





CVIS Vision

“Increase efficiency & safety through **vehicle-infrastructure cooperation**”

“Create a **wireless network** between vehicles & infrastructure”

- By providing an **open architecture** and system concept for real-life cooperative system applications and services for drivers, operators, industry and other key stakeholders
- By combining different positioning and enhanced location referencing techniques, including new map content, to provide **integrity indicators** on resulting positions





CVIS in Brief

European Commission Integrated Project – eSafety Priority “Cooperative Systems for Road Transport”

- Coordinator: ERTICO
- Duration: 4 years from 01/02/2006
- Total budget: €41 Million
- EC contribution: €22 Million
- Consortium: 59 partners,
12 countries

- Public Authorities
- Vehicle OEMs
- Equipment suppliers
- Telcos
- Road operators, Service providers,
- Application software developers,
- Driver associations...

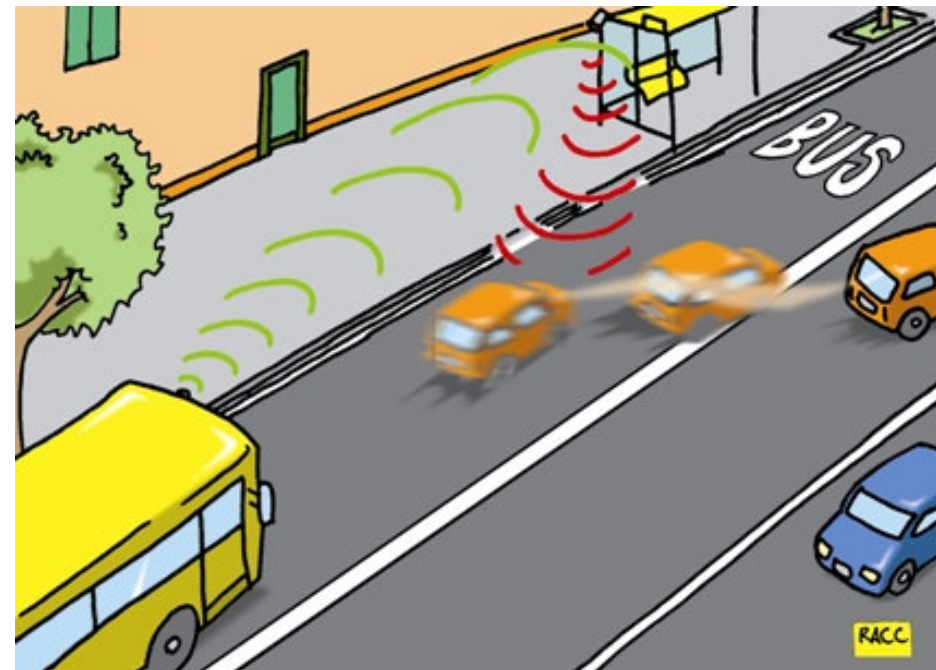




CVIS Applications

URBAN

- Cooperative network management
- Cooperative area destination-based control
- Cooperative acceleration/deceleration
- Dynamic bus lanes



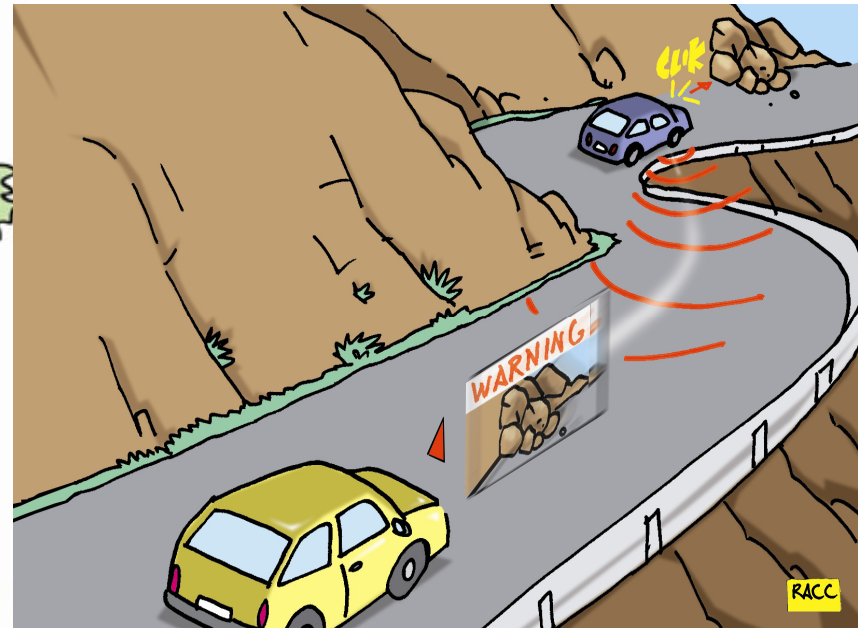
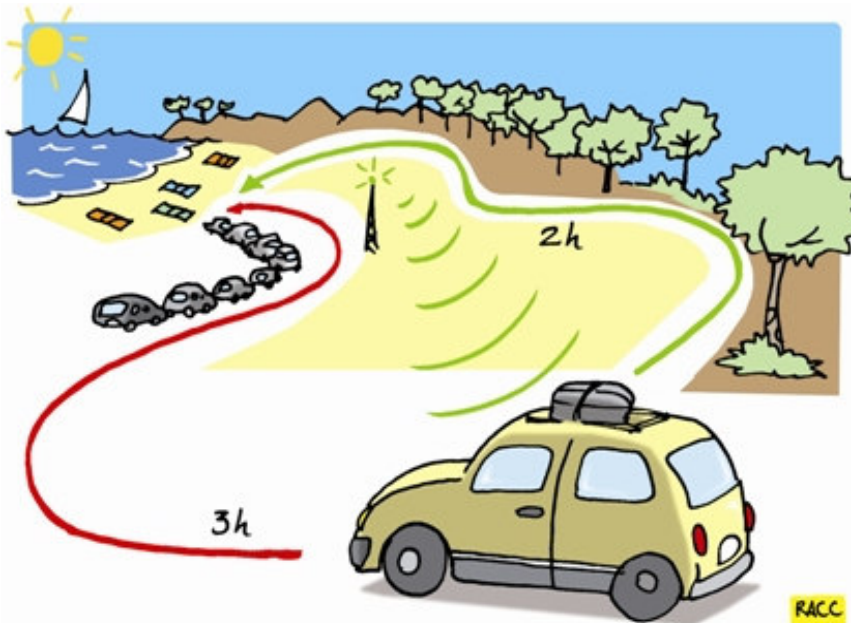


CVIS Applications

INTERURBAN

- Cooperative travellers' assistance
- Enhanced driver awareness

CVIS

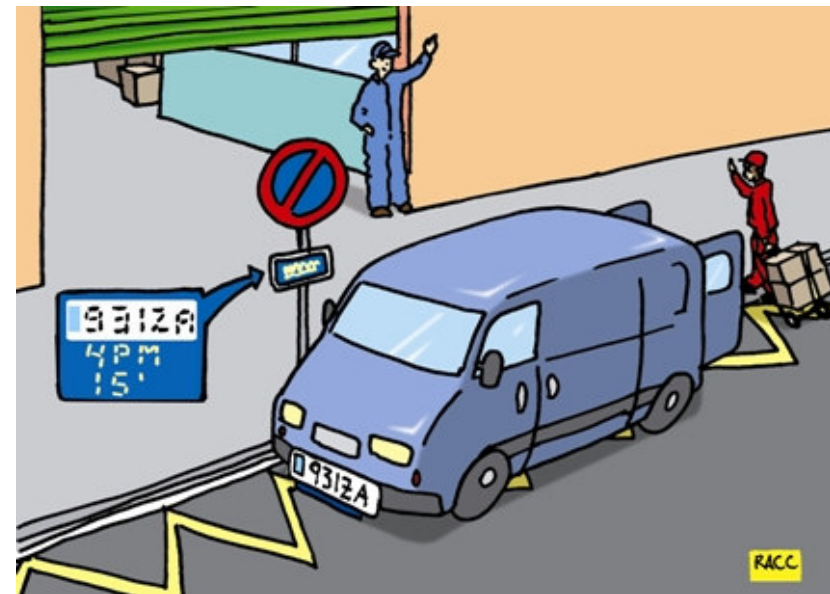
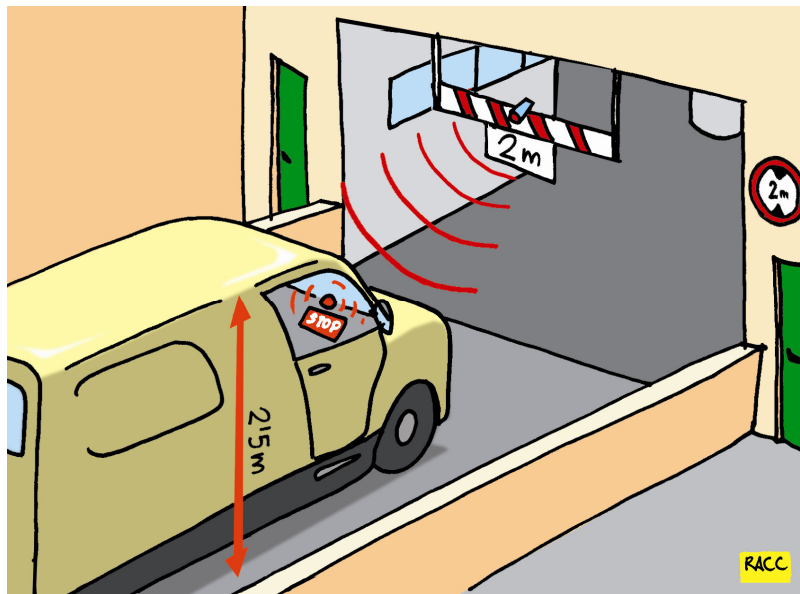




CVIS Applications

FREIGHT & FLEET

- Access control
- Dangerous goods
- Parking booking



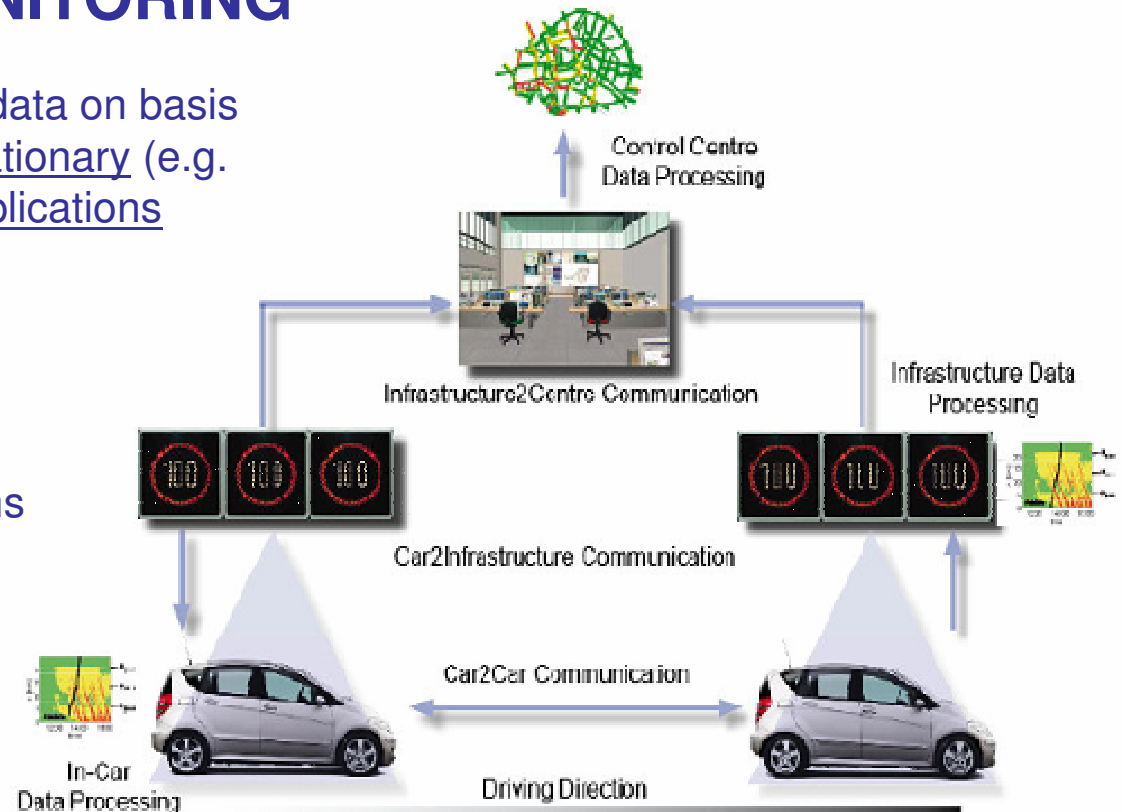


CVIS Applications

COOPERATIVE MONITORING

COMO provides merged traffic data on basis of mobile (XFCD/EFCD) and stationary (e.g. loops) detectors for all CVIS applications

- Network monitoring
- Incident and hazard detection
- Virtual loop detection for traffic control systems
- Local/area traffic state





Enabling CVIS Deployment



- **Openness and interoperability**
- **Safe, secure and fault-tolerant design**
- **Utility, usability and user acceptance**
- **Costs, benefits and business models**
- **Risks and liability**
- **CVIS as policy tool**
- **Deployment road-maps**



End-User Acceptance Survey

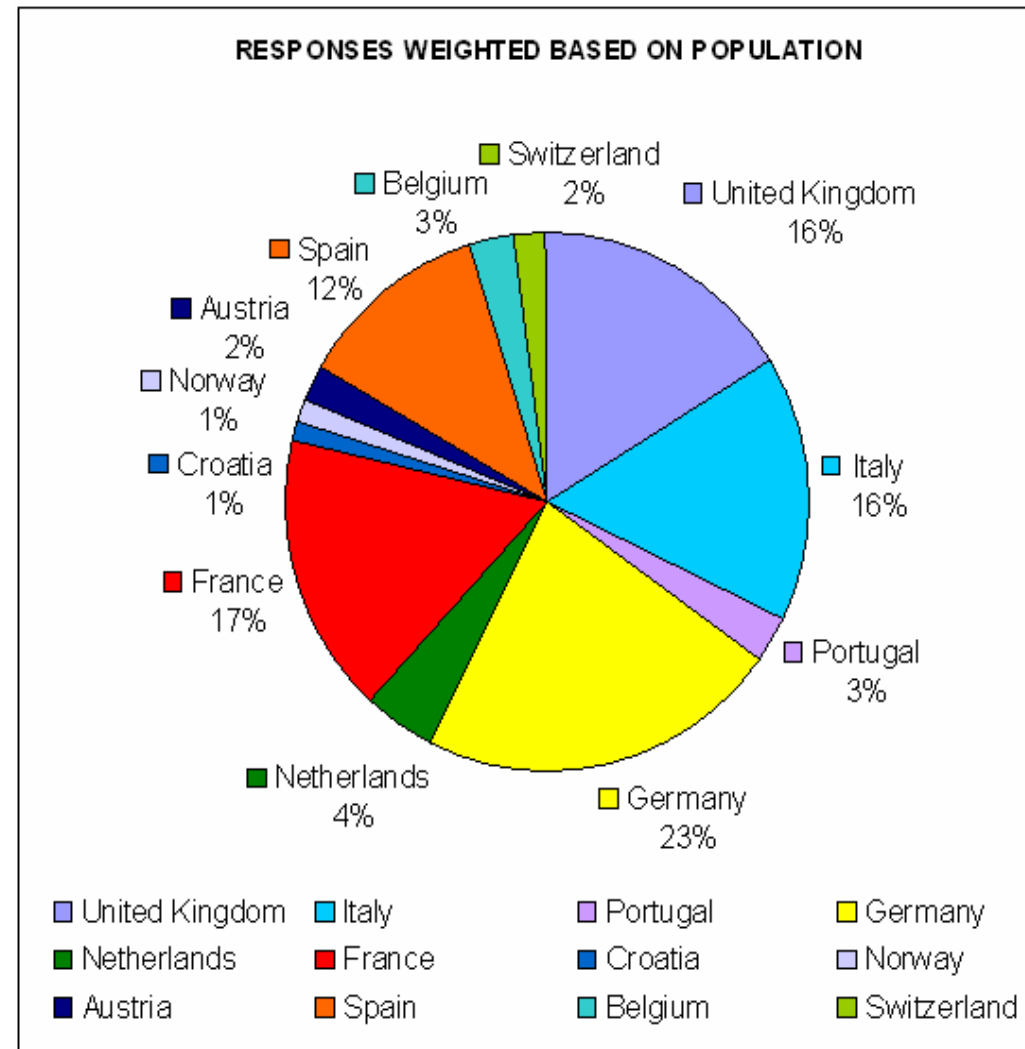


- Internet-based questionnaire
- 8 Weeks
- 13 Automobile clubs – 12 countries
- 10 different languages

- 7,687 European Motorists

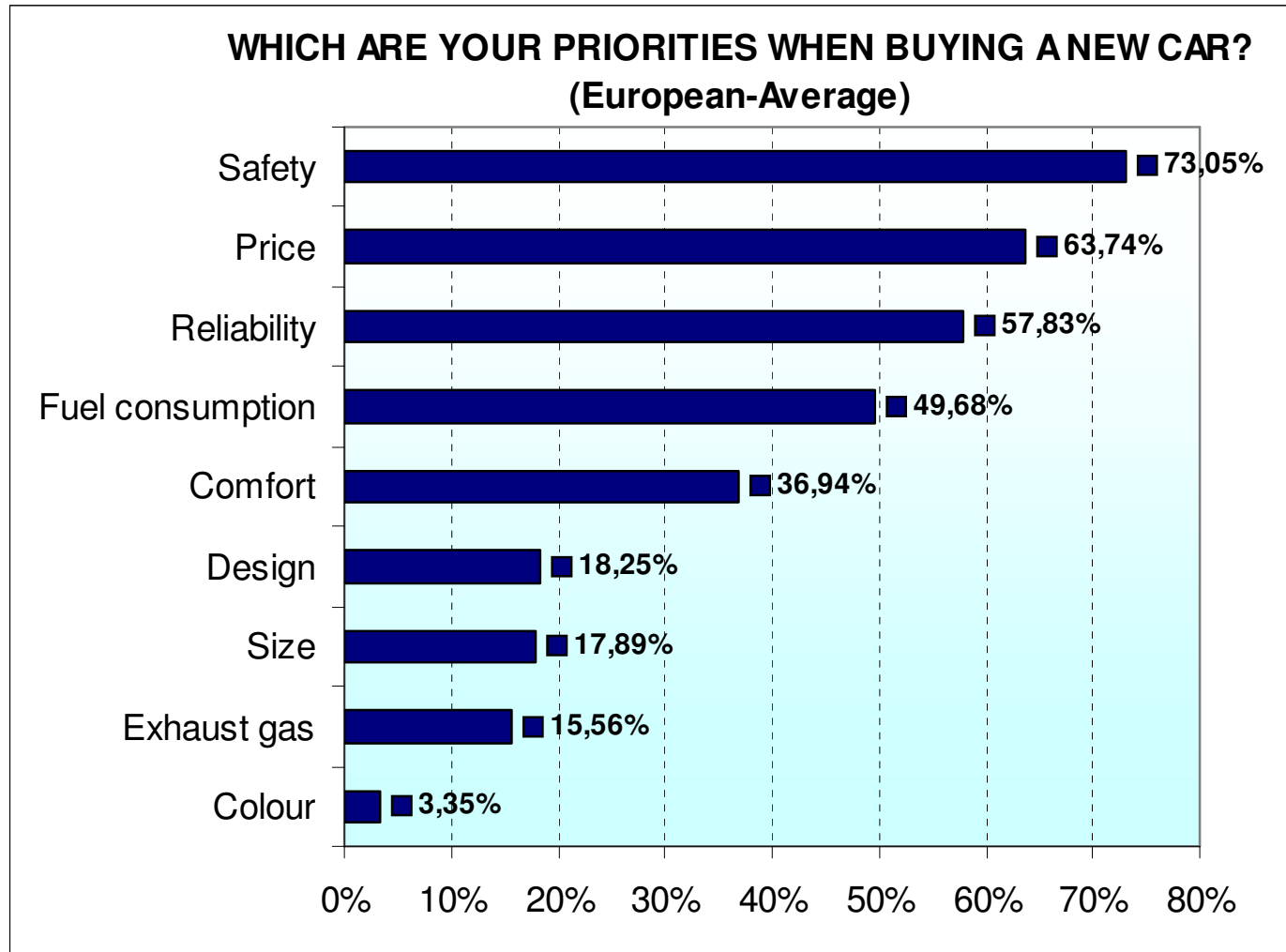


Response Distribution





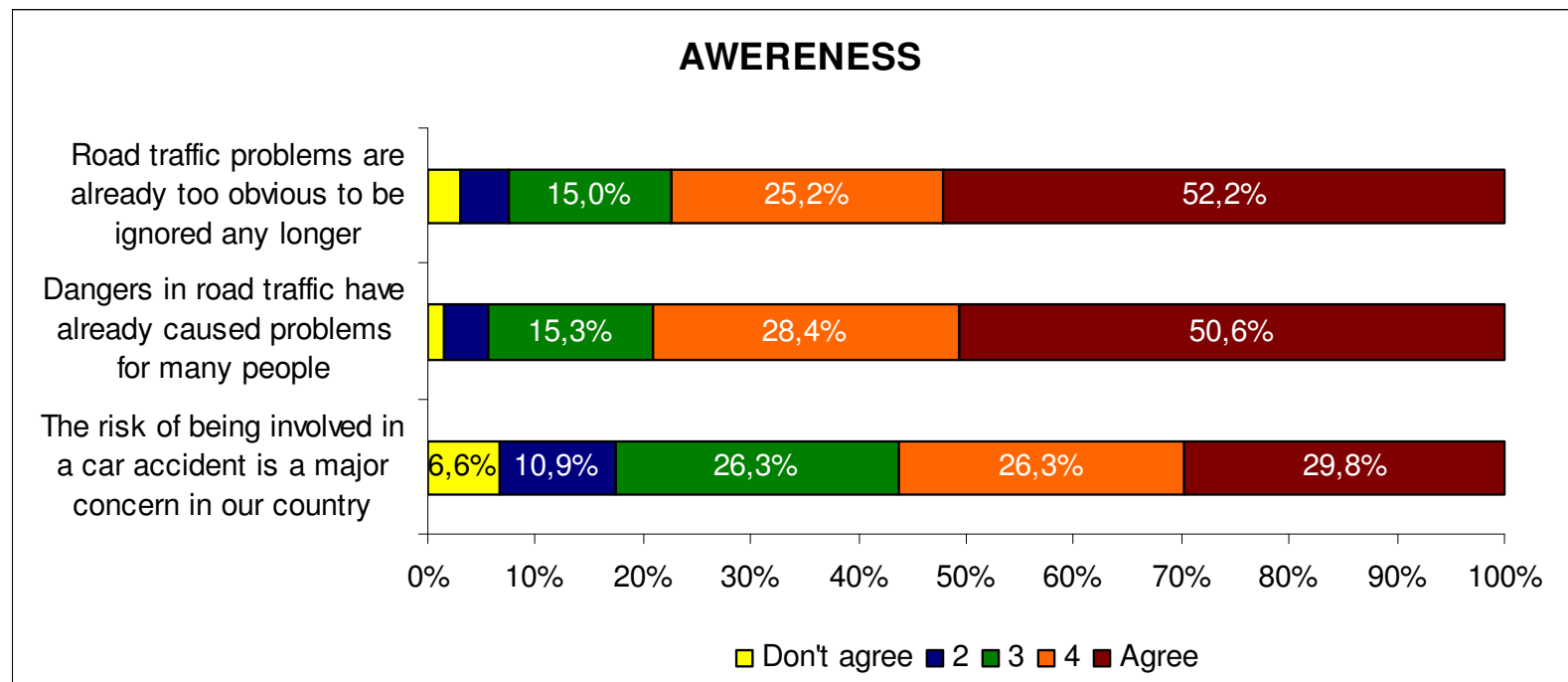
General End User Priorities





Traffic Safety

- Most respondents think that road traffic problems are already too obvious to be ignored any longer and, probably, they have already caused problems for many people.*



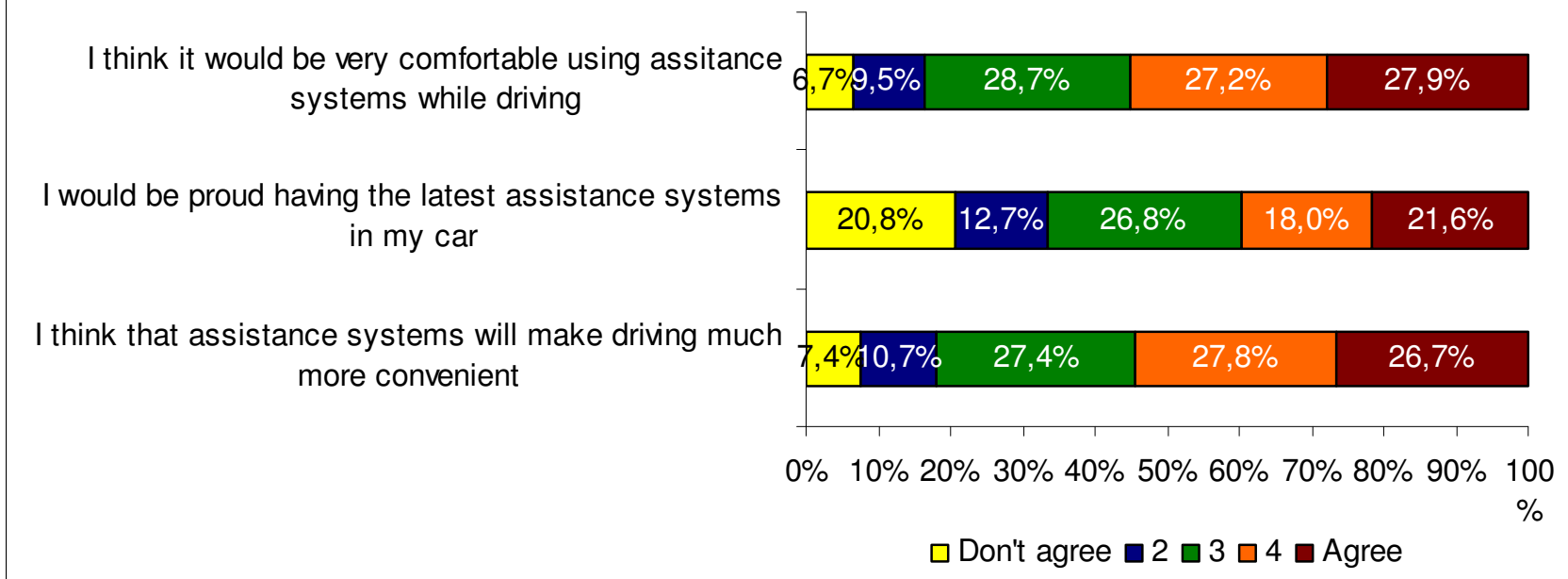


HMI

- Most of European respondents agree with “using assistance systems is very comfortable and it will make driving much more convenient”. Even, most of them think they would be proud to have the latest assistance systems in their car.-*

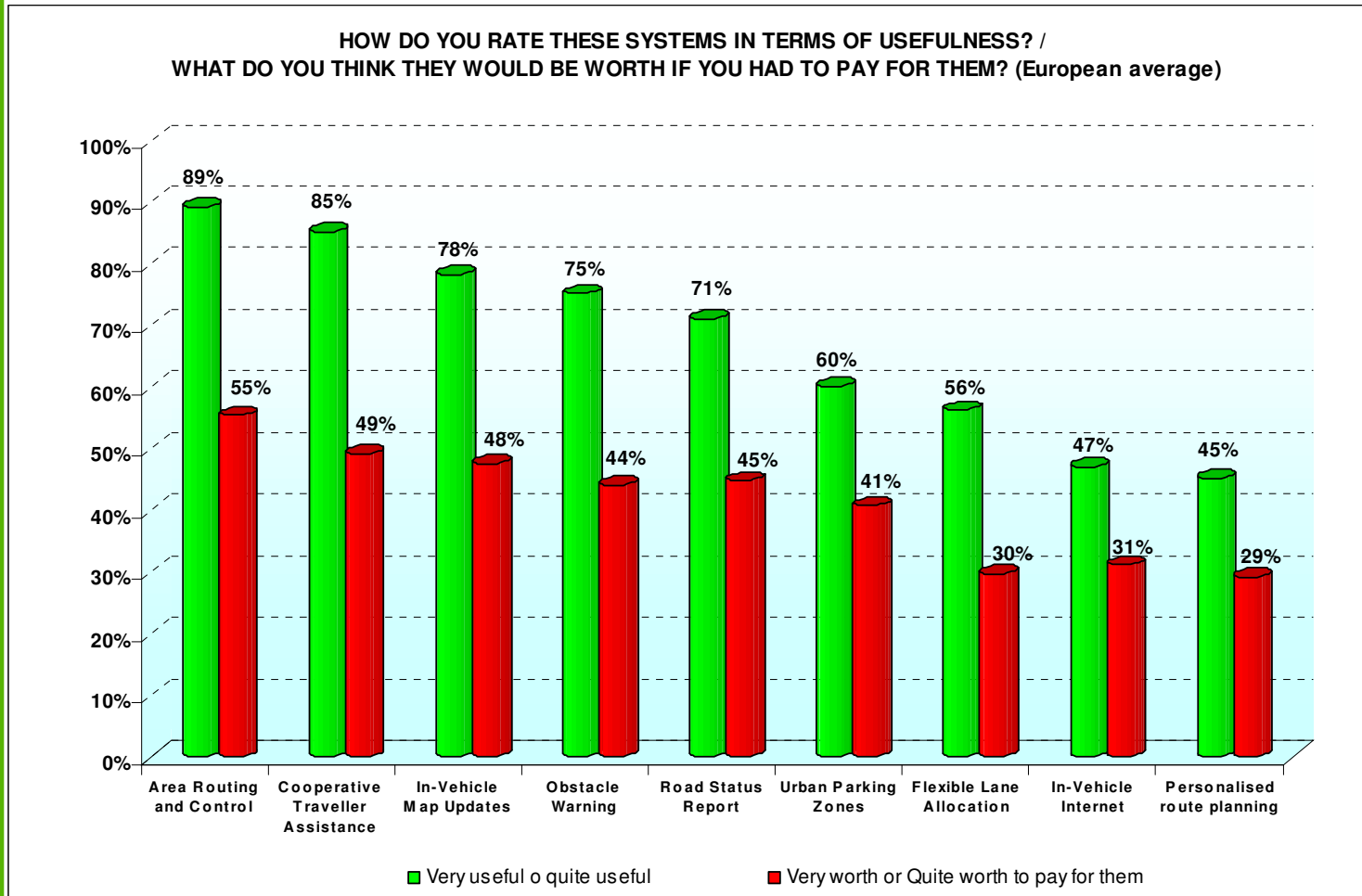


INTERACTION HUMAN-MACHINE (COMFORT)





Usefulness vs Willingness to Pay

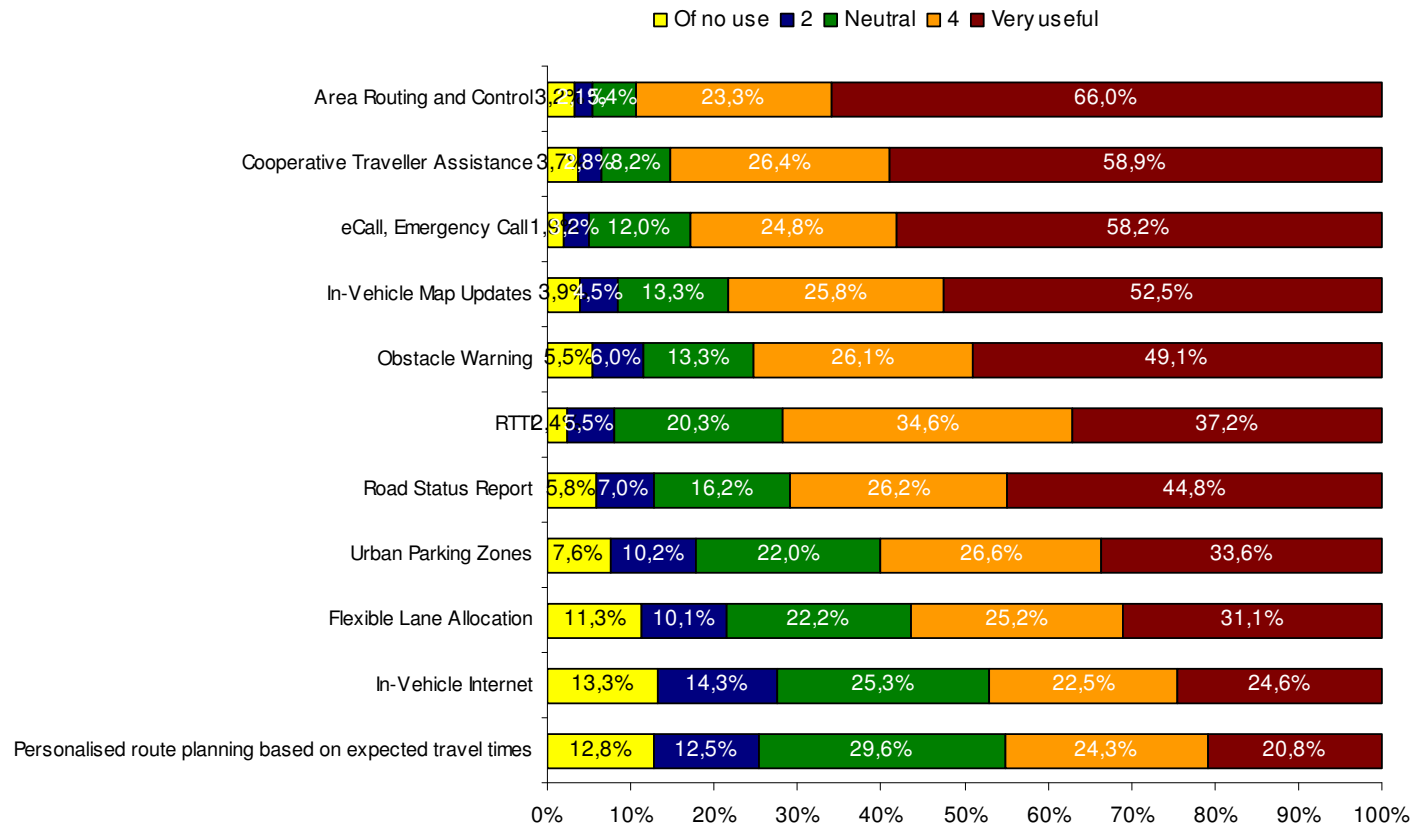




Usefulness



HOW DO YOU RATE THESE SYSTEMS IN TERMS OF USEFULNESS

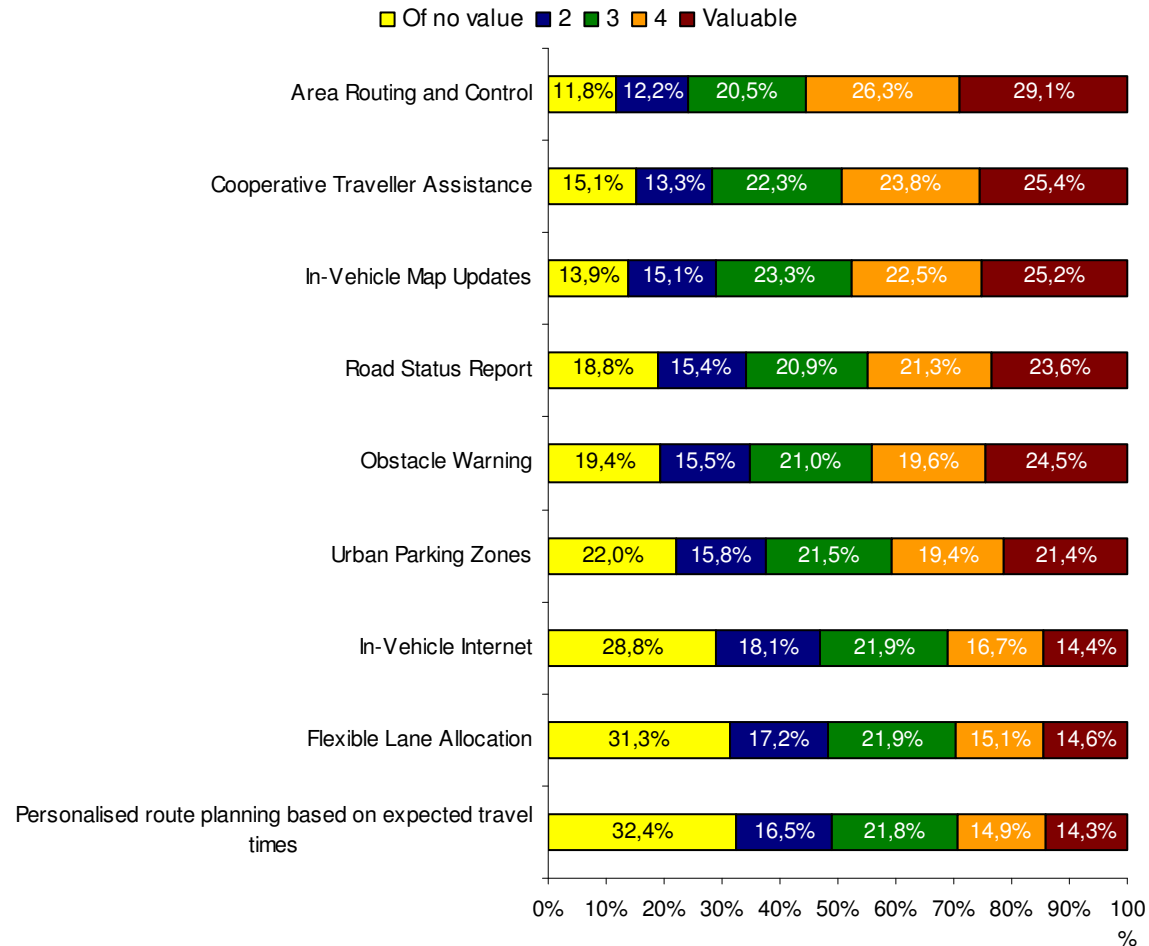




Willingness to Pay

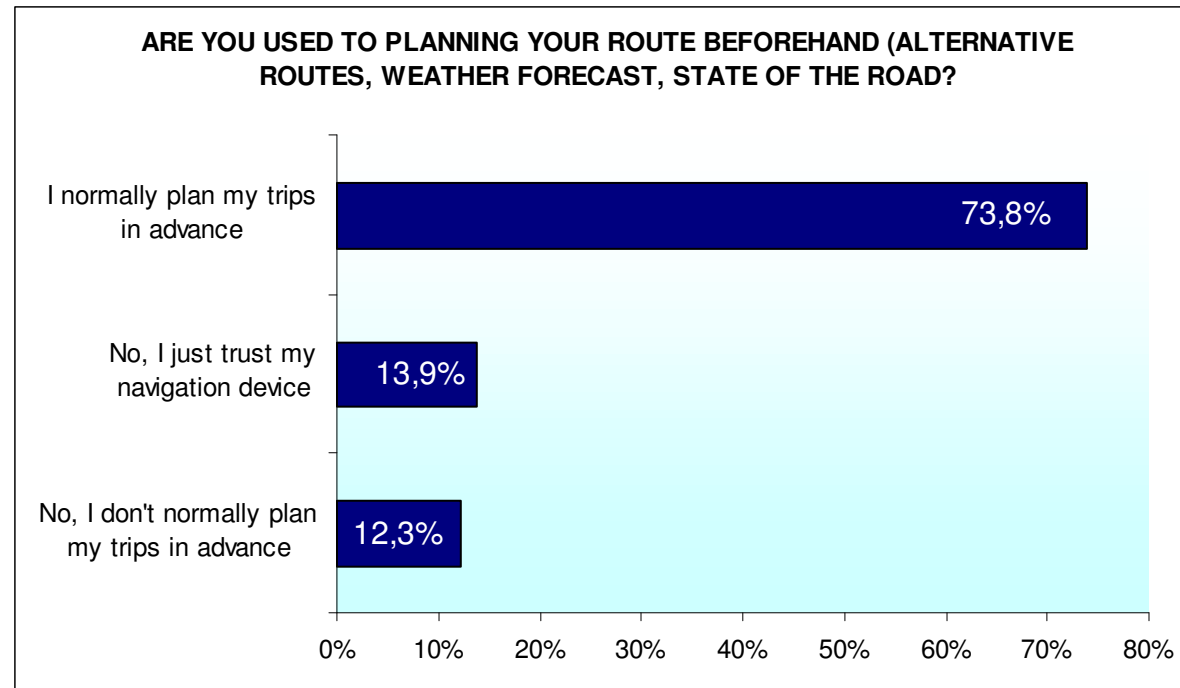


IMAGINE THESE SERVICES ARE AVAILABLE ON THE MARKET, WHAT DO YOU THINK THEY WOULD BE WORTH IF YOU HAD TO PAY FOR THEM?





Planning Habits



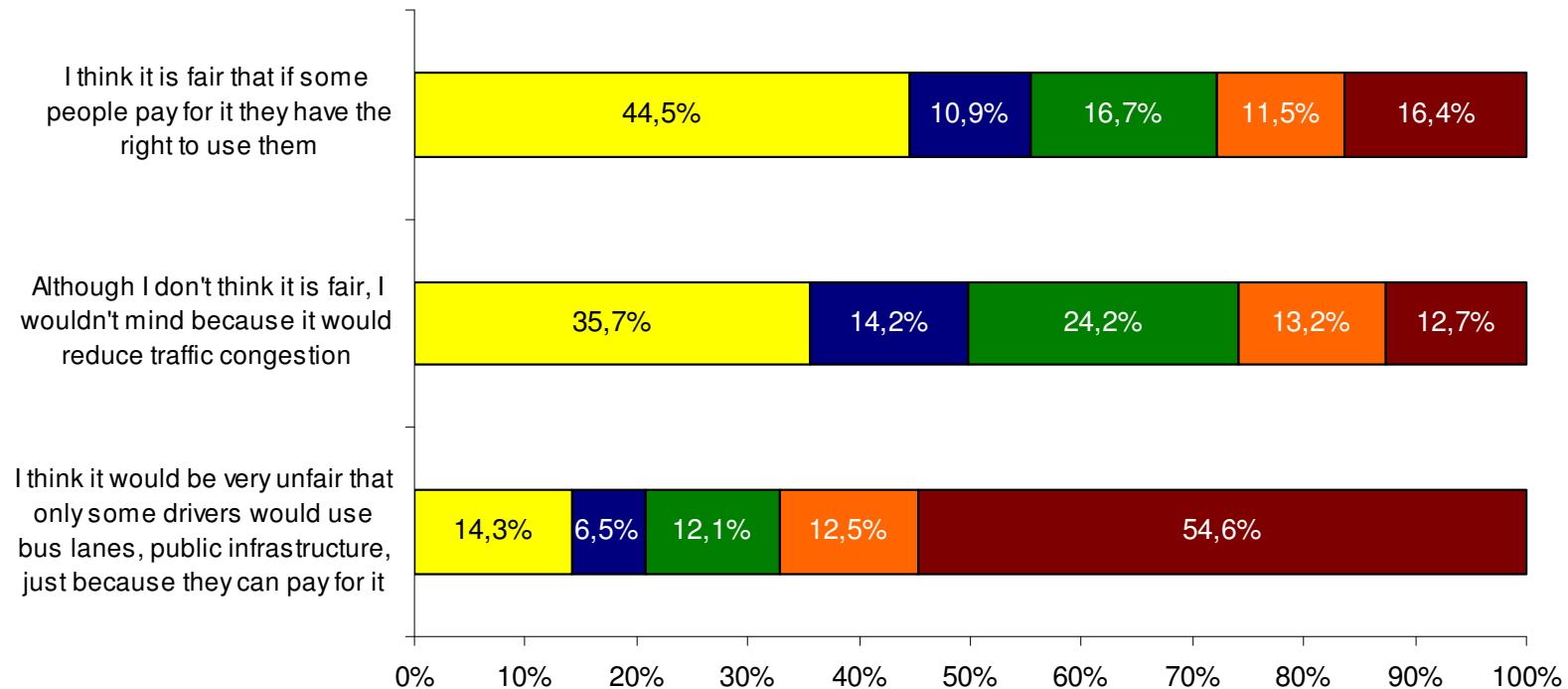


Fairness of dedicated bus lanes



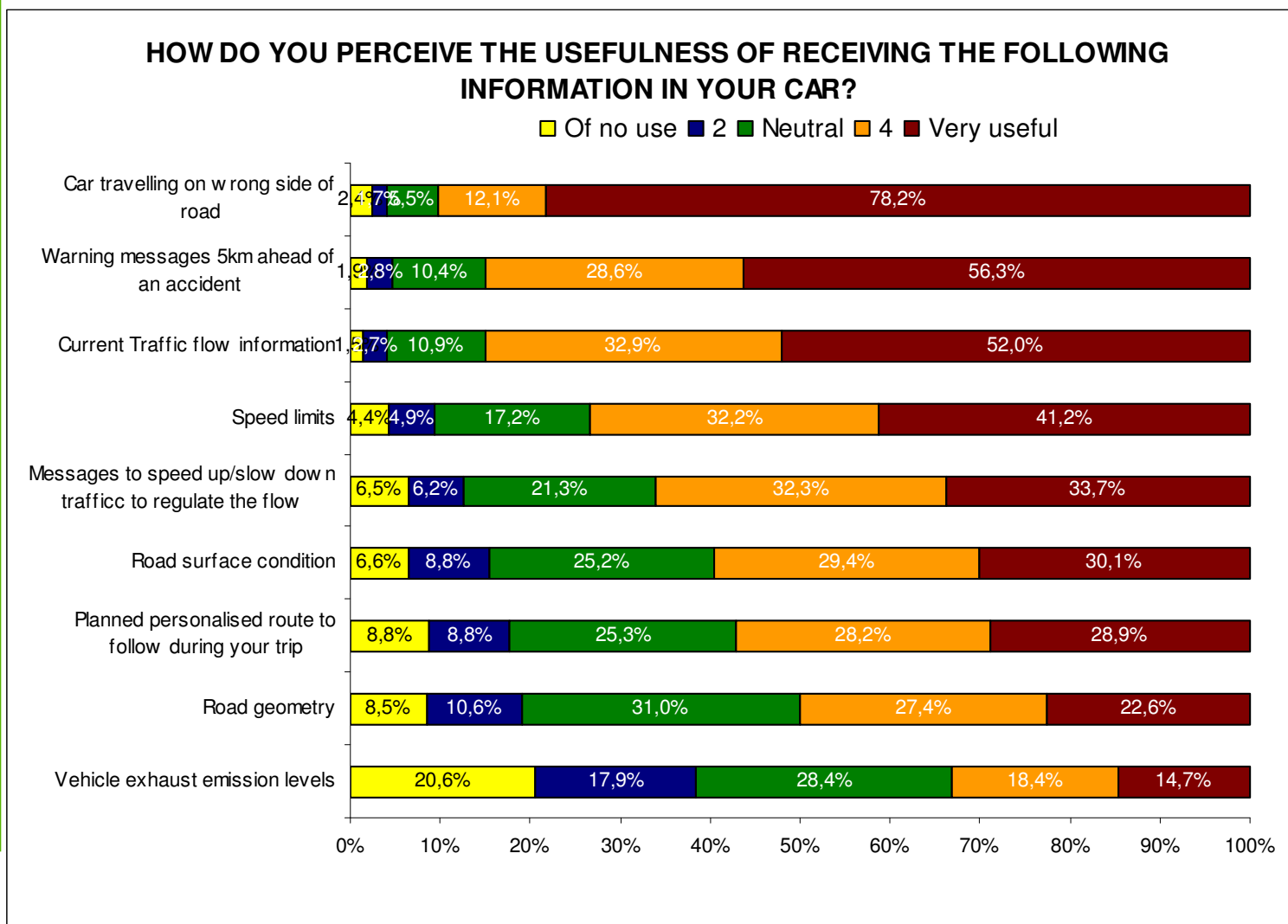
TO WHAT EXTENT DO YOU AGREE ABOUT THE FOLLOWING STATEMENTS RELATED TO THE SERVICE THAT WOULD ALLOW USING BUS LANES AFTER PAYING AN ANNUAL FEE.

■ Don't agree ■ 2 ■ 3 ■ 4 ■ Agree





Utility of information shown



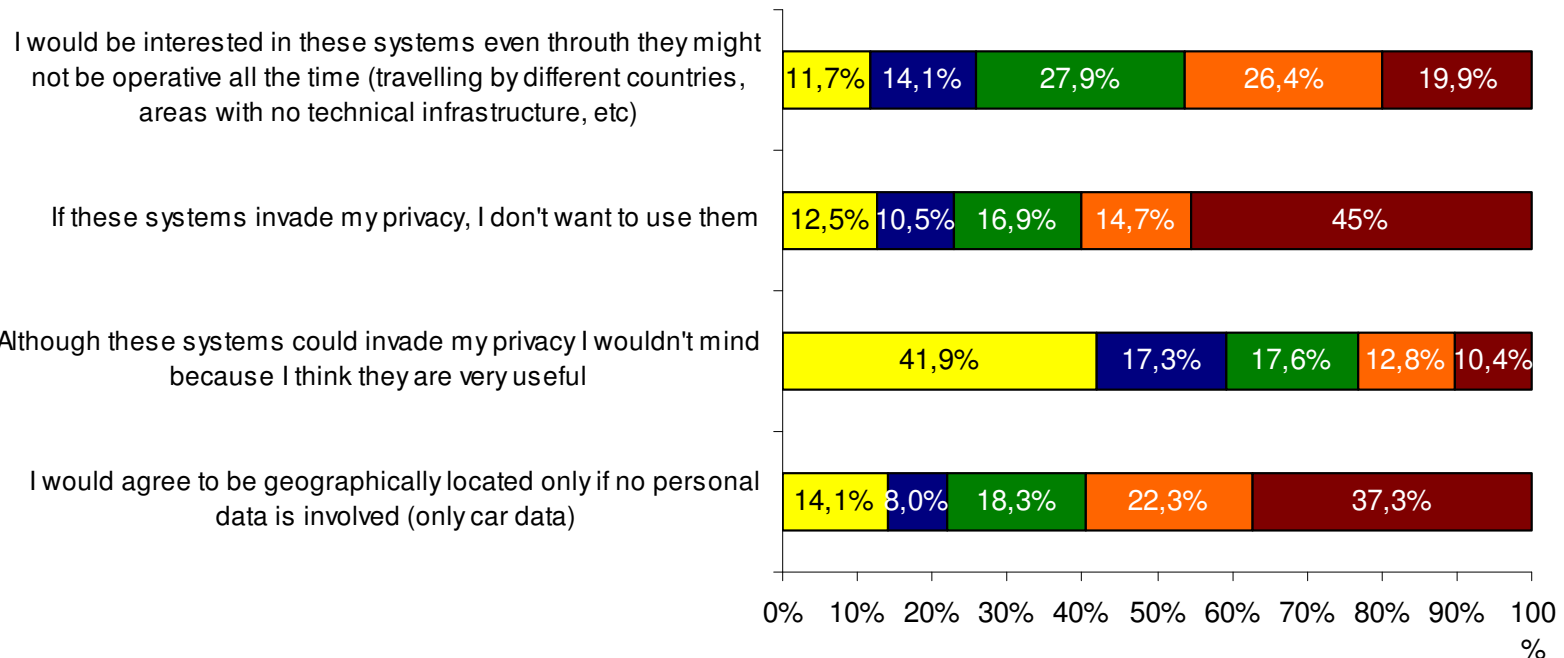


Data Privacy



DATA PRIVACY (I)

□ Don't agree ■ 2 ■ 3 ■ 4 ■ Agree



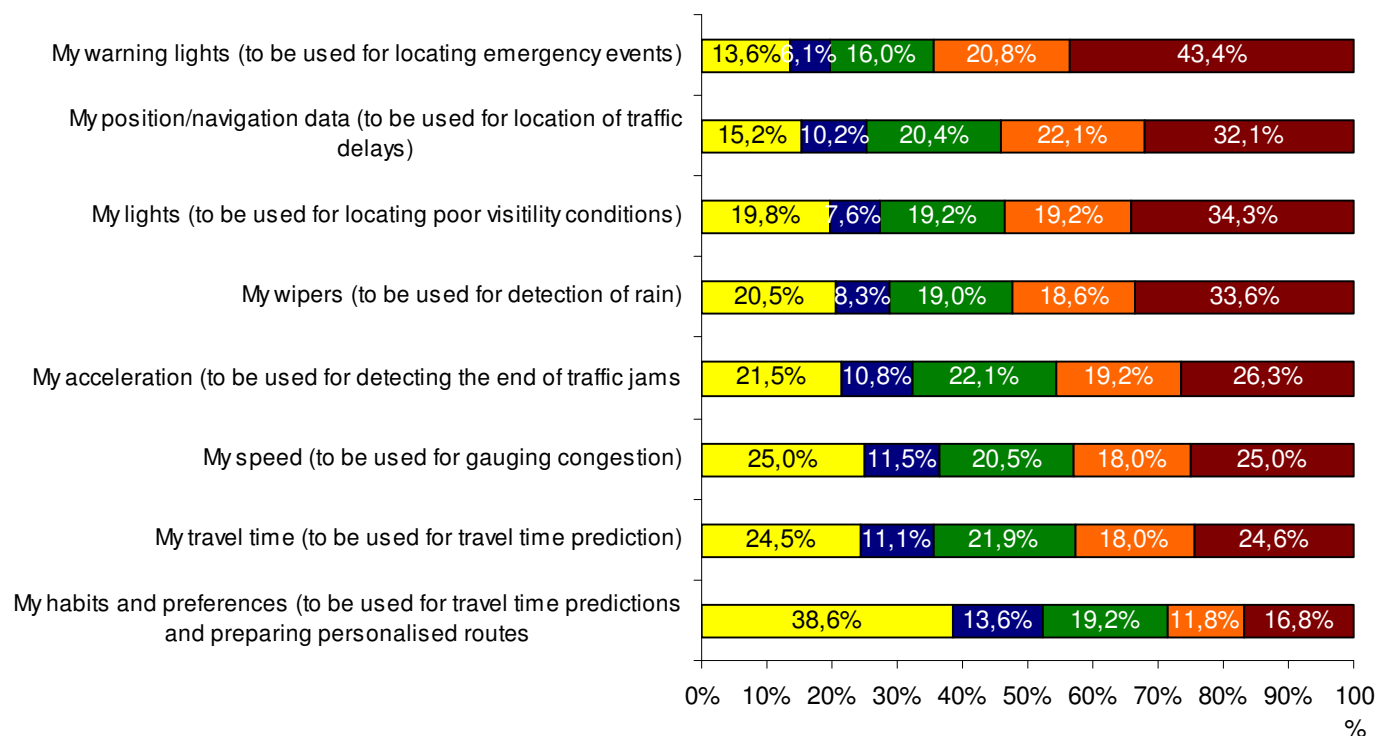


Data Privacy



DATA PRIVACY (II)

■ Not at all ■ 2 ■ 3 ■ 4 ■ Accept



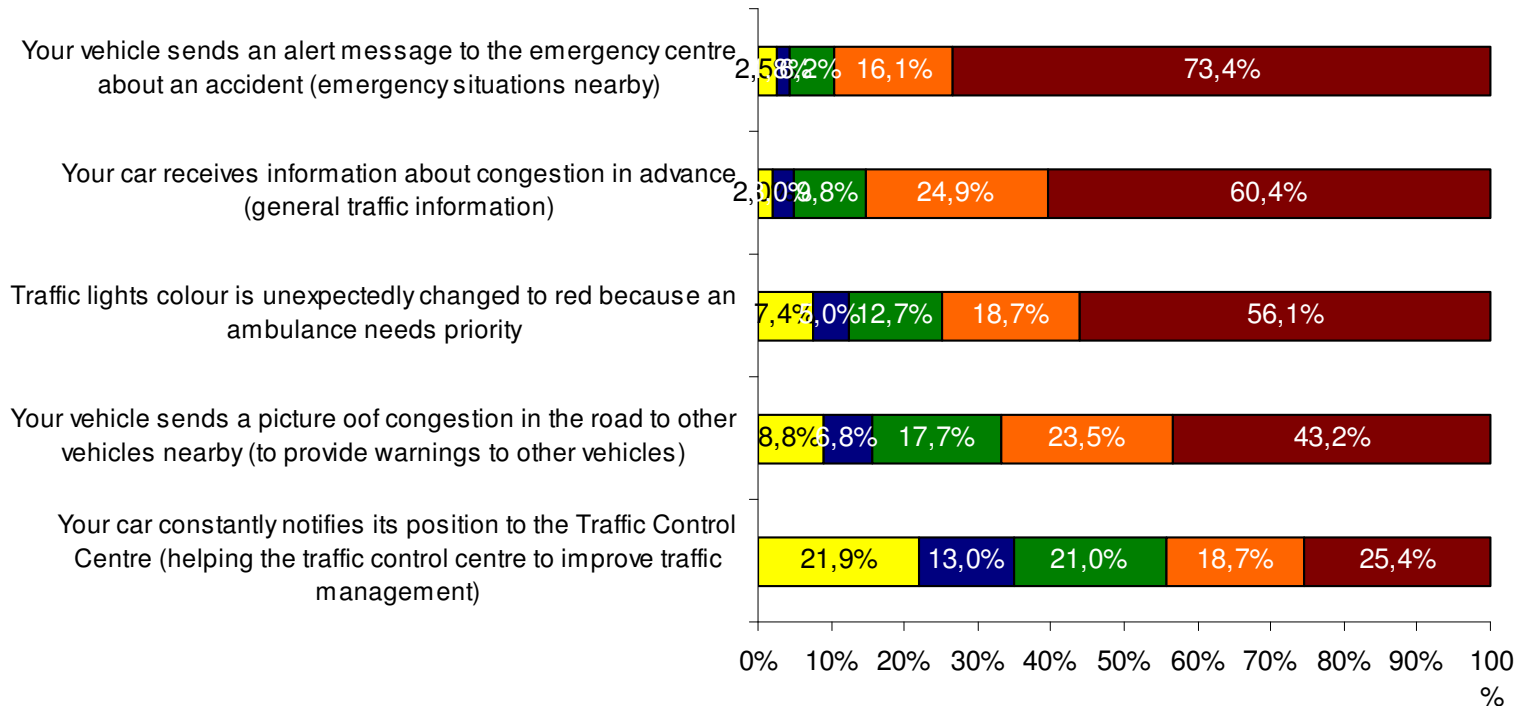


Information Exchange



THESE SYSTEMS WILL NEED SOME EXCHANGE OF INFORMATION BETWEEN YOUR VEHICLE AND THE INFRASTRUCTURE...PLEASE, MARK TO WHAT EXTENT WOULD YOU AGREE WITH THE FOLLOWING SITUATIONS

Legend: Don't agree (yellow), 2 (blue), 3 (green), 4 (orange), Agree (dark red)





Conclusion

- Data Privacy Issues
- Educate drivers on benefits of CVIS applications
- Continued work for User Acceptance





Survey results and more info
at...

www.cvisproject.org

