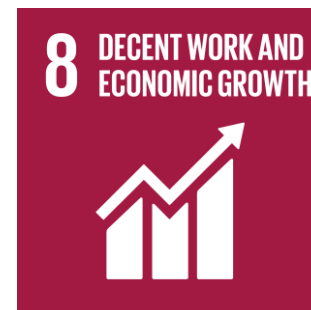


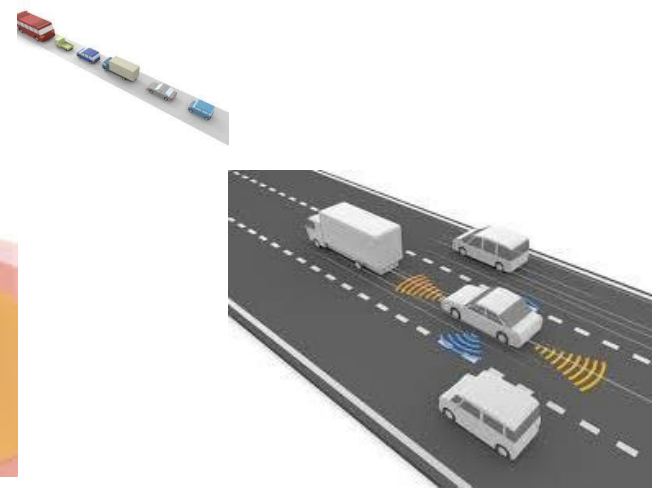
International standardization activities on Automated driving

At PASC 41st Workshop

ISO/TC22/SC32 Chairperson
Susumu AKIYAMA
DENSO CORPORATION



Social demands on automotive industry



Safe, efficient and low environmental loaded automobile is demanded

Automated driving

No traffic accident



No traffic jam



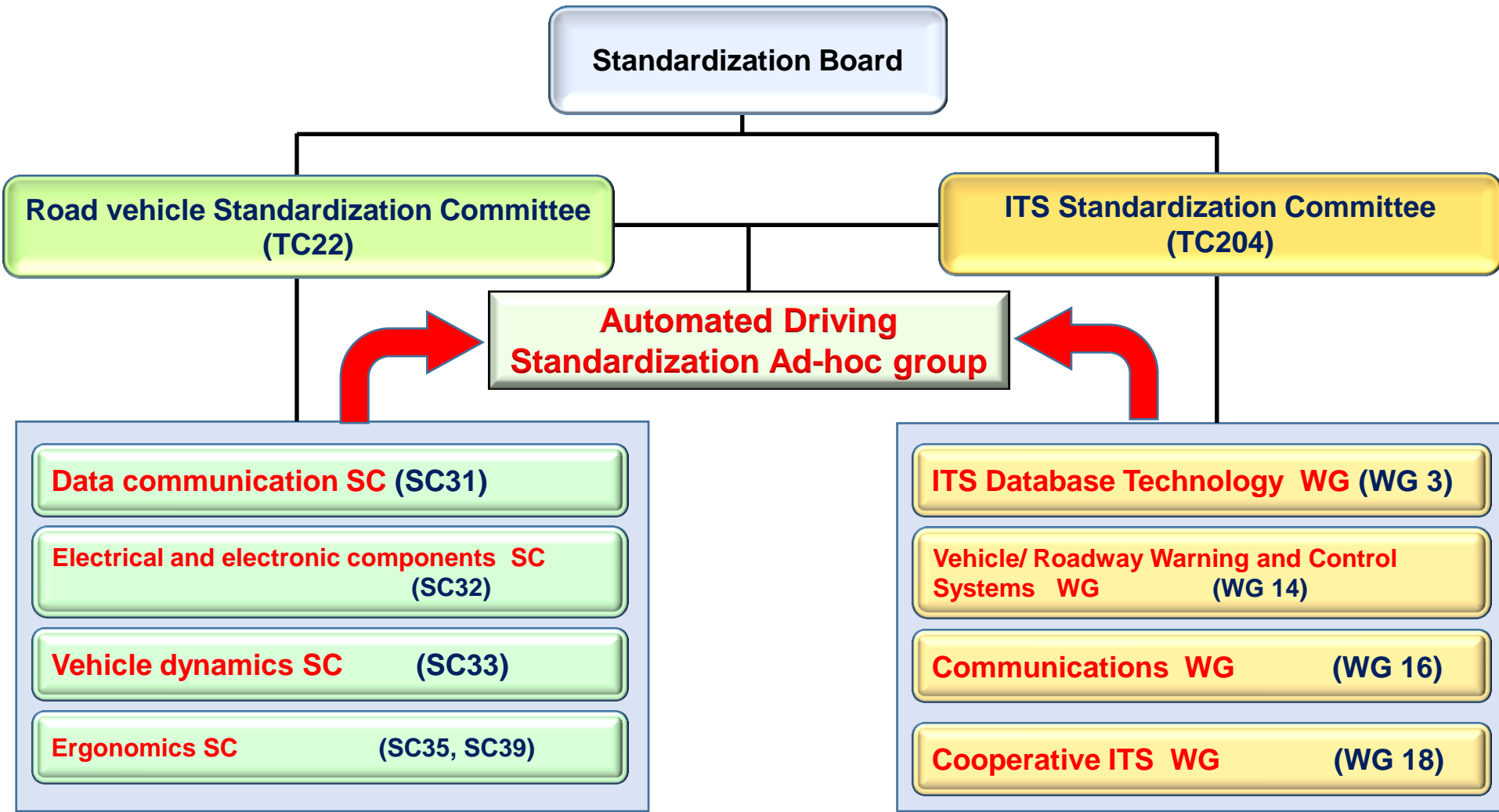
Easy to drive



Efficient transportation



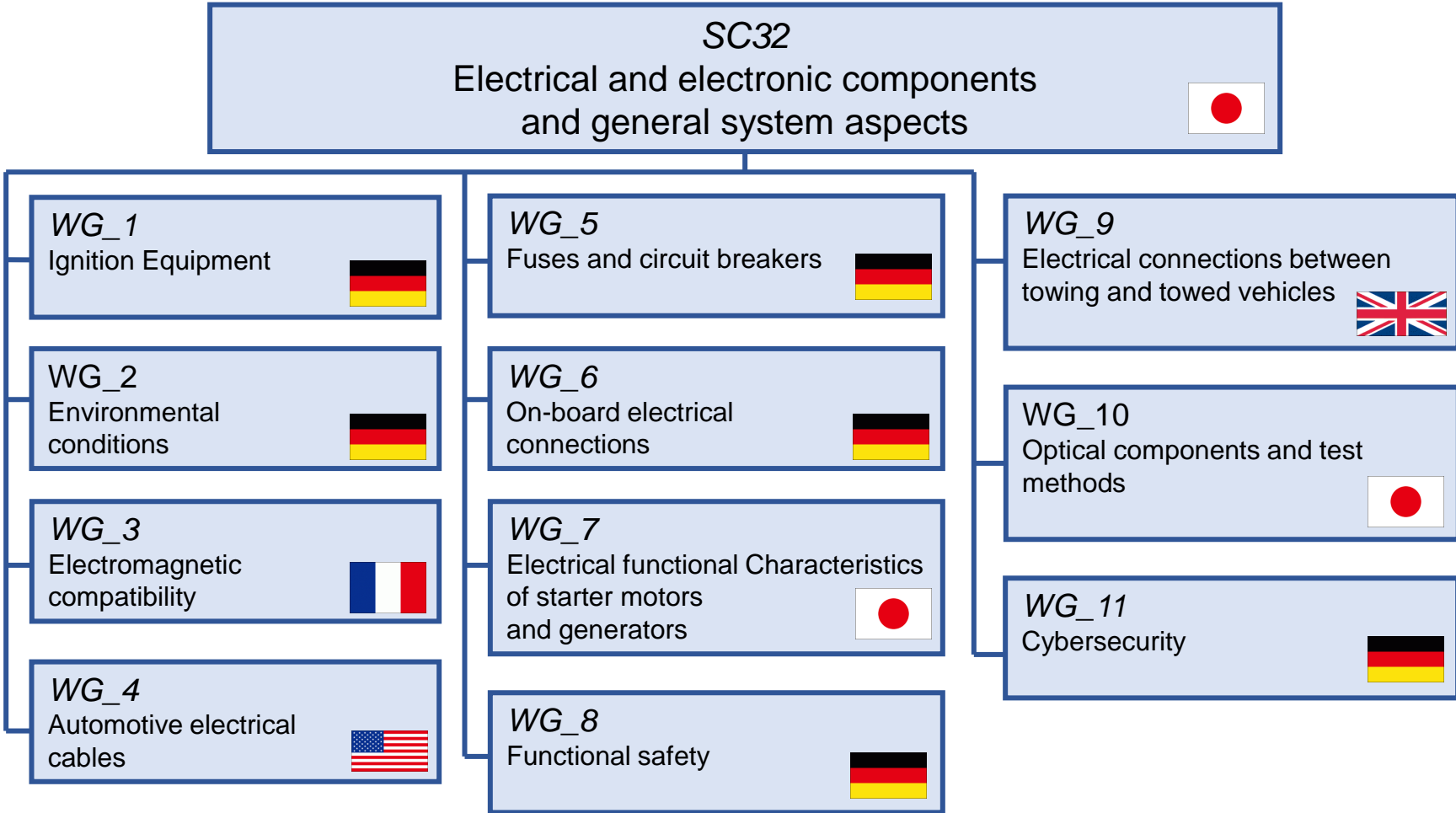
Organization for automated driving standardization in Japan



TC22 and TC204 collaborate in standardization for automated driving



SC32 organization



SC32 widely covers electrical and electronic components and general system aspects



Standardization projects in SC32 for automated driving

Estimated hazard in automated driving



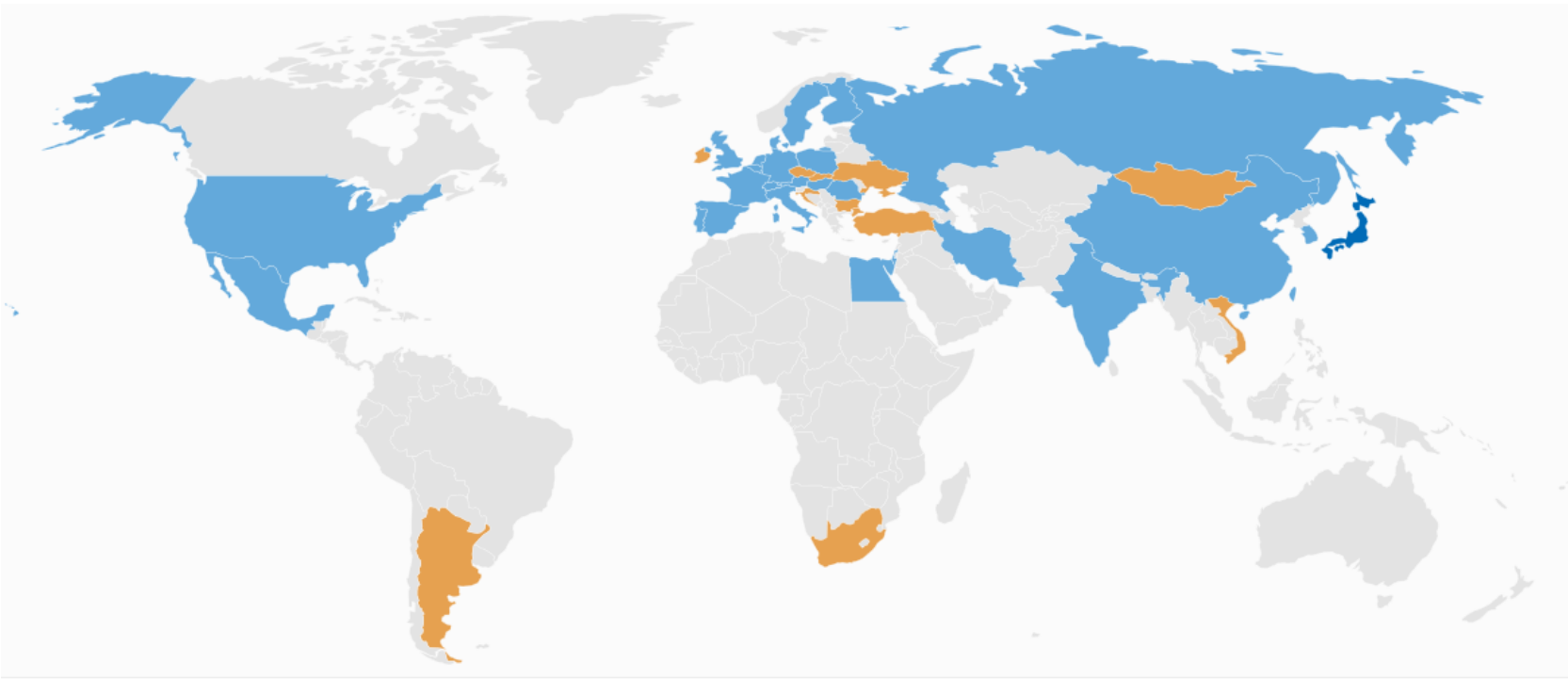
Hazard	Standard	WG in charge
System failure	ISO 26262:2011 "Functional Safety" (published)	WG8
	ISO/FDIS 26262 (2nd edition under development)	
Performance limit	ISO/WD PAS 21448 " Safety Of The Intended Functionality"	
Fail operation		
Cyber attack	ISO/SAE/AWI 21434 "Cybersecurity"	WG11

SC32 contributes to early realization of automated driving through standardization



Issues to be solved in SC32

SC32 Member bodies (as of Apr.2018)



Secretariat ■	Denmark (DS)	India (BIS)	Korea, Republic of (KATS)	Russian Federation (GOST R)	Observing Members (11) ■	Mongolia (MASM)
Japan	Egypt (EOS)	Iran, Islamic Republic of (ISIRI)	Mexico (DGN)	Spain (UNE)	Argentina (IRAM)	Slovakia (SOSMT)
Participating Members (27) ■	Finland (SFS)	Ireland (NSAI)	Netherlands (NEN)	Sweden (SIS)	Bulgaria (BDS)	South Africa (SABS)
Austria (ASI)	France (AFNOR)	Israel (SII)	Poland (PKN)	Switzerland (SNV)	Croatia (HZN)	Turkey (TSE)
Belgium (NBN)	Germany (DIN)	Italy (UNI)	Portugal (IPQ)	United Kingdom (BSI)	Czech Republic (UNMZ)	Ukraine (DSTU)
China (SAC)	Hungary (MSZT)	Japan (JISC)	Romania (ASRO)	United States (ANSI)	Luxembourg (ILNAS)	Viet Nam (STAMEQ)



Presence of Pacific Asia in SC32 is low

SC32 activities to solve the issue

SC32 1st plenary meeting in Kyoto
(June 15-16)

- Could you kindly think about sending a staff/member to

Holding 1st SC32 plenary in Kyoto, 2015
(Now in preparation for holding 4th SC32 plenary in Busan, 2018)



INTRODUCTION OF ISO TC22 SC32

AT PASC 38TH MEETING

ISO TC22 SC32 Chairperson
Susumu AKIYAMA

Making presentation at PASC 38th

Visiting national standardization body in Malaysia, Thailand, Korea, China, India, Mexico and Canada



SC32 have been making efforts to improve presence of Pacific Asia

Standardization status in TC22

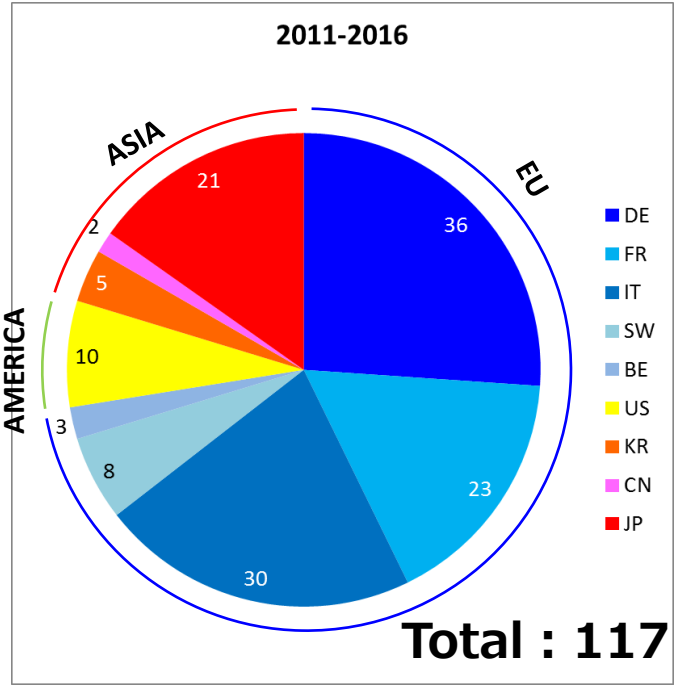


Fig.1 Total number of New Work Item Proposals in TC22

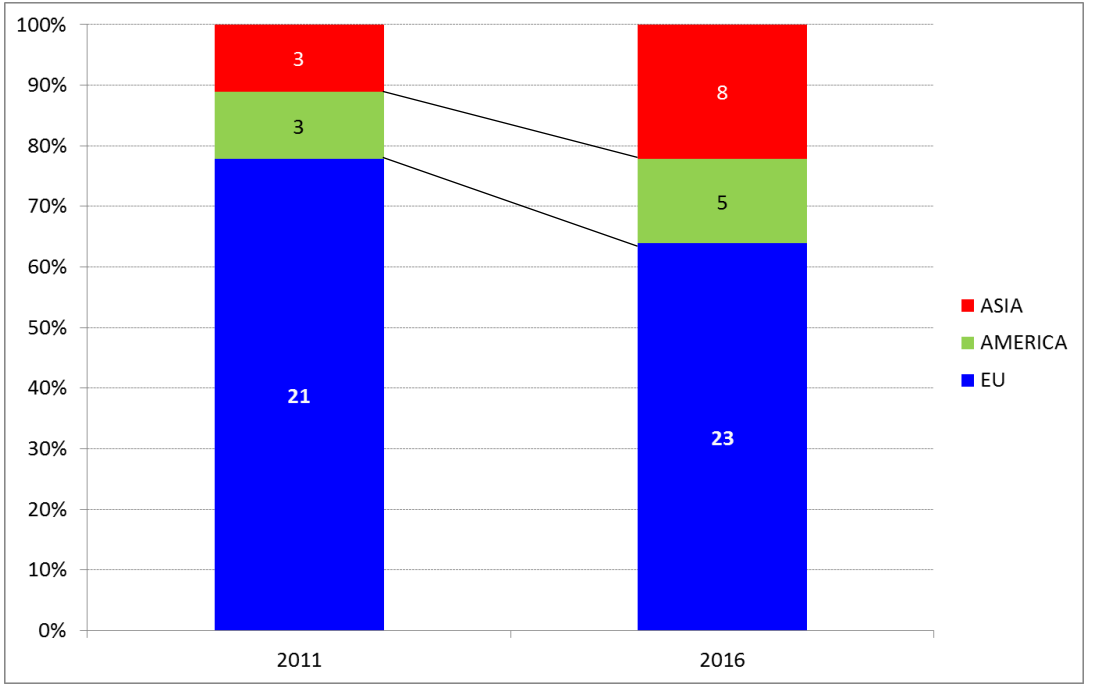


Fig.2 The number of New Work Item Proposals according to region in 2011 and in 2016

In recent 5 years New Work Item Proposal from Pacific Asia is increasing, but Europe still grasps initiative



How you can get benefits by participating in SC32 activities

- ✓ Showing your stronger contribution to the global standardization activities in the automotive industry
- ✓ Getting stronger connection with other member bodies by participating in TC22 SC32 plenary meeting
- ✓ Getting state-of-the-art technology information such as automobile electrical and electronic components and related regulations. (e.g. EMC evaluation methods or latest functional safety advanced design methodology)
- ✓ Enabling PASC members countries to play in the same ground with European countries that are leading ISO activities in TC22 area



Conclusion

- ✓ **Safe, efficient and low environmental loaded automobile is demanded**
 - ✓ **TC22 and TC204 collaborate in standardization for automated driving**
 - ✓ **SC32 contributes early realization of automated driving through standardization**
 - ✓ **In recent 5 years New Work Item Proposal from Pacific Asia is increasing, but Europe still grasps initiative**
- ✓ **SC32 will have been strongly promoting standardization for automated driving**
 - ✓ **SC32 expects more contribution from Pacific Asia countries**



Thank you for your attention