Federal Ministry
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中国国家标准化管理委员会
Standardization Administration of the P.R.C.

12th Plenary Meeting of the Sino-German Standardisation Cooperation Commission (SGSCC)

16. October 2024 | Bonn, Germany

Start: 8:30 CEST

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Dialogues for Innovation and Trade

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中国国家标准化管理委员会
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Moderation

Mr. Dr. Thomas Zielke

BMWK

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中国国家标准化管理委员会
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Opening Remarks

Mr. Dr. Thomas Zielke

BMWK

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Opening Remarks

Ms. SUN Hua

SAMR/SAC

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Video Message from the Deputy Head of SAMR

Mr. LIU Jun

SAMR/SAC

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国家市场监督管理总局

State Administration for Market Regulation

尊敬的兹尔克博士 温特哈特先生 泰格勒先生

Respected Dr・Zielke Mr・Winterhalter Mr・Teigeler

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Response to Video Message

Mr. Dr. Thomas Zielke

BMWK

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Opening Remarks

Mr. Christoph Winterhalter

DIN

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Opening Remarks

Mr. Florian Spiteller

DKE

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Keynote on the EU-Perspective on Standardization

Dr. Betty XU

SESEC

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SESEC V

EU Perspective on Standardization

Dr. Betty Xu 16 I 10 I 2024

SESEC INTRODUCTION

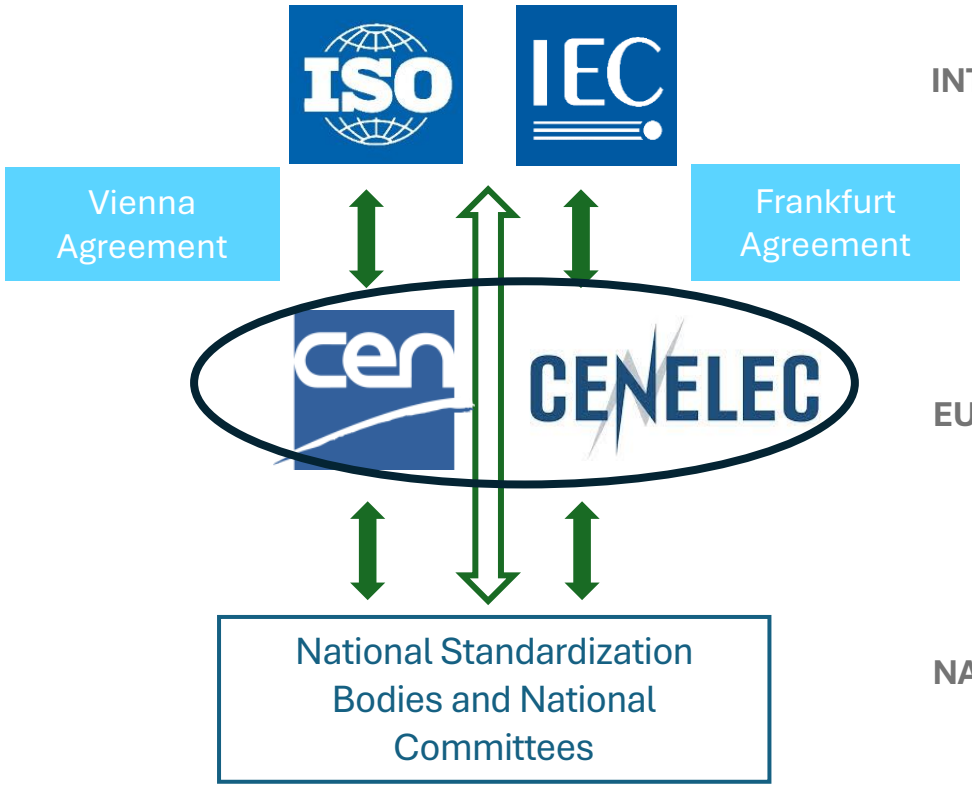
A Project co-funded by EC, EFTA, CEN CENELEC & ETSI

- **Promote** European and International standards in China
- **Improve** contacts between Project Partners and different levels of the Chinese administration, industry and standardization bodies
- **Enhance** visibility and understanding of the European Standardization System (ESS) in China.
- **Gather** regulatory and standardization intelligence
- **Undertake** technical lobbying

Goals

- The SESEC initiative supports **EC policy** and **ESOs strategic objectives** in China.
- Our ultimate goal is the enhancement of **EU-China dialogue and cooperation** in the field of standardization.
- It is notably expected to support the Framework Cooperation Agreement in place **between the ESOs and SAC.**

European standardization organizations (ESOs)



INTERNATIONAL LEVEL

EUROPEAN LEVEL

NATIONAL LEVEL

Standard as a Market Tool

- EN **identically implemented** in 34 countries!
  - Any conflicting national standards to be withdrawn!
- This is technical harmonization by removing national technical barriers to trade!

Standardisation: voluntary activity of private bodies, mostly without a direct regulatory link

- Most standards are developed on industry's initiative, by industry experts, for the use of industry, and using the financial resources of the industry
- European standards have a key role for the competitiveness of the European industry
- Economic contribution of standards to the economies of EU Members States: up to **1% of national GDP**

European standardization supporting EU policies and legislation - Sectors

Mechanical engineering and means of transport

- Cableway installations designed to carry persons
- Equipment for explosive atmospheres (ATEX)
- Gas appliances (GAR)
- Inspection of pesticide application equipment
- Lifts
- Machinery (MD)
- Pressure equipment (PED)
- Rail system: interoperability
- Recreational craft and personal watercraft
- Simple Pressure Vessels (SPVD)
- Unmanned aircraft systems (UAS)

Harmonised Standards - European Commission (europa.eu)

Accessibility

- Websites and mobile applications of public sector bodies

Chemicals

- Chemical substances (REACH)
- Explosives for civil uses
- Fertilising products
- Pyrotechnic articles

Conformity assessment and management systems

- New Legislative Framework (NLF) and Eco-Management and Audit Scheme (EMAS)

Construction

- Construction products (CPD/CPR)

Healthcare engineering

- In vitro diagnostic medical devices (Regulation 2017/746)
- Medical devices (Regulation 2017/745)
- Active implantable medical devices (Directive 90/385/EEC)
- In vitro diagnostic medical devices (Directive 98/79/EC)
- Medical devices (Directive 93/42/EEC)

Measuring technology

- Measuring instruments (MID)
- Non-automatic weighing instruments (NAWI)

Services

- Community postal services

Sustainability

- Packaging and packaging waste
- Plastic caps and lids

Consumers and workers protection

- Cosmetics products
- General product safety
- Personal protective equipment (PPE)
- Toys safety

Energy efficiency

- Ecodesign and energy labelling

Electric and electronic engineering

- Electromagnetic compatibility (EMC)
- Equipment for explosive atmospheres (ATEX)
- Low Voltage (LVD)
- Radio Equipment (RED)
- Restriction of the use of certain hazardous substances (RoHS)

Emerging topics

With matching legislation

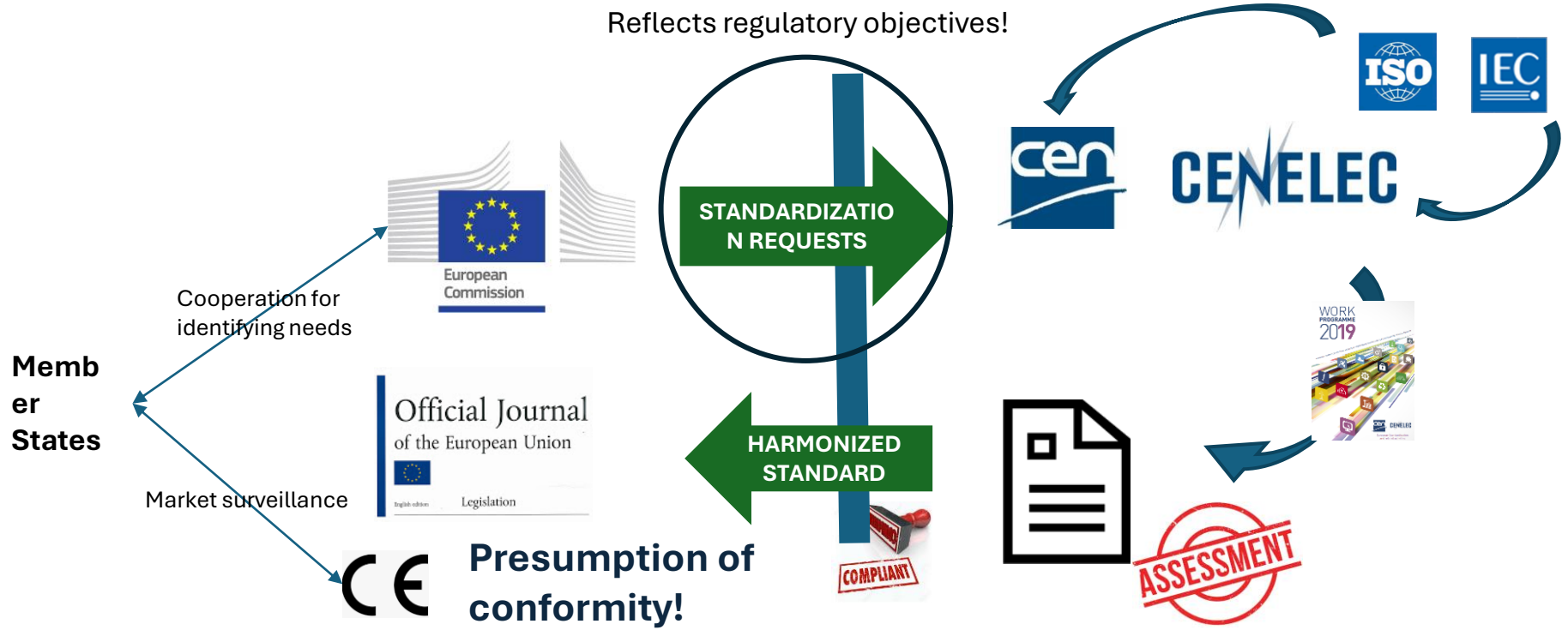
- Cyber Resilience Act
  CEN-CLC/JTC 13 ‘Cybersecurity and data protection’
- Artificial Intelligence Act
  CEN-CLC/JTC 21 ‘Artificial Intelligence’
- Ecodesign for Sustainable Products Regulation
  CEN-CLC/JTC 24 ‘Digital Product Passport – Framework and System’
- Data Act
  CEN-CLC/JTC 25 'Data management, Dataspaces, Cloud and Edge’

Stakeholder driven standardization

- Blockchain and Distributed Ledger Technologies
- Hyperloop systems
- Quantum Technologies

Regulation 1025/2012 – Assessment, citation and Presumption of conformity

Reflects regulatory objectives!



Presumption of conformity!

European Standardization Strategy

The ESS

Strong and important, needs more involvement from governments

Governance

Requests a “modernization” of governance, with less span between big and small, and exclusivity for EEA NSBs in decision making (change of regulation)

Inclusiveness

Stresses the need for participation by all

Global Standards

Prioritizing international standardization

R&D and Education

Close the relationship of standardization with both

High-Level Forum on European Standardisation - Advisory body of EC

- Member States authorities (28)
- European Standardization Organizations (3)
- Industry (19)
- Civil society (4)
- Academia (1)

Sherpa sub-group (representatives with effective expertise in standardization):

- Green
- Digital
- Resilience

Observers (2)- EFTA (free trade), EDA (defense)

Output: AUWP

Seconded European Standardization Expert in China

Dr.. Betty Xu

Seconded European Standardization Expert in China (SESEC)

A project co-funded by CEN, CENELEC, ETSI, EC and EFTA

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Current Developments in GER & CHN Standardization

Dr. Julia Barde

BMWK

Mr. WANG Yu

SAMR/SAC

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Recent developments in standardization in Germany and China

The year 2024 is a key year for further promoting the implementation of the National Standardization Development Outline and realizing the development goals of the Outline in 2025. We insist that standards should strongly lead the construction of modern industrial system and promote standardization to better serve the high-quality development of economy and society.

NEXT STEP

- Promoting the interactive development of standardization and scientific and technological innovation
- Enhancing the standardization level of modern industry
- Improving standardization guarantee for green development
- Accelerating standardization for urban and rural development and social development
- Improving international cooperation in standardization

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Discussions in the Sino-German Standardization Strategy Working Group

Mr. Christoph Winterhalter

DIN

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Annual meeting of the Sino-German Standardization Cooperation Commission 2024

Discussions in the
Sino-German Standardization Strategy Working Group

Report from Christoph Winterhalter

Sino-German Standardization Strategy WG
Setup & Target Scope

Setup

- Exchange between high-ranking officers of SAC, DIN, DKE and BMWK
- Kick-of-meeting: 21 May 2019, Xiamen China
- 9 meetings since its beginning, 2 or 3 meetings per year

Target Scope

- Continuous exchange on the status and further development of standardization strategies in Germany and China as well as the legal and political framework of standardization.
- In-depth coordination on international standardization strategy implementation activities
- Strengthening the professional exchange on research in standardization.
- Exchange on teaching standardization in the educational systems of both countries

Sino-German Standardization Strategy WG
Main Topics

ISO Standardization Strategy 2030 and IEC Strategy (All Electric Society)

- Continuous exchange and alignment on implementation of the strategies
  e. g. ISO measurement framework, IEC Global Relevance Toolbox

SAC/DIN/DKE exchange on SMART standards deployment

- Concept and Roadmap (International and on national level)
- Use Cases
- Supporting Technologies

Current topics

- Activities at COP 29
- National roadmap for OSD/SMART

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Break

Please be back in 20 minutes.

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Results of the Sub-Working Group Industry 4.0 / Intelligent Manufacturing

Dr. Marvin Böll

SCI4.0

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Update on the activities of Sub-Working Group Industrie 4.0/Intelligent Manufacturing

Wang Wenfeng, CESI

Dr. Marvin Böll, SCI 4.0

16 October 2024 | Bonn

SWG I 4.0 / IM
中德智能制造/工业4.0标准化工作组

STANDARDIZATION COUNCIL INDUSTRIE 4.0

国家智能制造标准化总体组

December 2015 Shanghai
2015年12月 上海

May 2019 Xiamen
2019年5月 厦门

- From **May 2015** to now
  从2015年5月至今
- 9 Technical Experts Groups
  9 个任务组
- 6 active Technical Experts Groups
  6 个正在运行的任务组
- Reached 124 cooperation consensus
  达成 124 项共识
- Jointly released **21 publications**
  联合发布 21 项合作成果

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中国国家标准化管理委员会
Standardization Administration of the P.R.C.

中华人民共和国工业和信息化部

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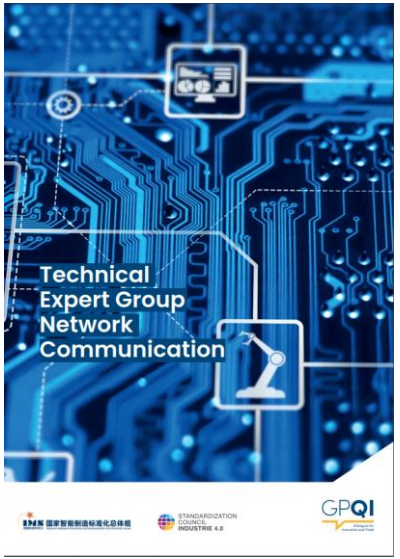
New publications
新成果物发布

Report Standardization of Artificial Intelligence for Industry 4.0
智能制造/工业4.0人工智能标准化研究报告



Technical Expert Group Network Communication
工业通信领域专家组合作展望

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GPQI

Reached consensus
新达成合作共识

STANDARDIZATION COUNCIL INDUSTRIE 4.0

国家智能制造标准化总体组

Other Consensus
其他共识

- Further improve collaboration amongst the TEGs to address the interlinkages amongst the agreed key topics in moving forward
  进一步加强技术专家组之间的合作，来加强已商定的关键议题之间的相互联系
- Based on the results of the technical cooperation, both sides agreed to strengthen their joint efforts in the international technical committees and working groups，such as，IEC SMB, IEC SyC SM, IEC TC 65, ISO SMCC, ISO TC 184, ISO/IEC JWG 21, ISO/IEC JTC 1 AG 11, ISO/IEC JTC 1 SC 27, ISO/IEC JTC 1 SC 41, ISO/IEC JTC 1 SC 42, IEEE, 3GPP, and OPC Foundation as well as IEC SyC COM
  在以下国际技术委员会和工作组中继续加强合作：IEC SMB，IEC SyC SM，IEC TC 65，ISO SMCC，ISO TC 184，ISO/IEC JWG 21，ISO/IEC JTC 1 AG 11，ISO/IEC JTC 1 SC 27，ISO/IEC JTC 1 SC 41，ISO/IEC JTC 1 SC 42，IEEE，3GPP，OPC Foundation及IEC SyC COM

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中华人民共和国工业和信息化部

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Reached consensus
新达成合作共识

15th SWG I 4.0 / IM Plenary Meeting in 2024
第十五次中德智能制造/工业4.0标准化工作组全会

Dr Marvin Böll, Technical Manager at the Standardization Council Industrie 4.0 (SCI 4.0)
马文 博尔博士，工业标准化委员会技术负责人，德国电工电子与信息技术标准化委员会

Ms Nina Stock, Deputy Head of Division Digitisation, Industrie 4.0 at German Federal Ministry of Economic Affairs and Climate Action (BMWK)
尼娜 斯托克女士，德国联邦经济事务和气候保护部（BMWK）工业4.0数字化处

Mr Wang Yu, Director of the Division Transportation, Energy, Resource and Environmental Management, Department of Standards Technological Management in the State Administration for Market Regulation (SAMR)
王宇，国家市场监督管理总局标准技术管理司交通能源与资源环境处

Mr Wang Wenfeng, Vice Director of the IOT center of CESI
National Intelligent Manufacturing Standardisation Administration Group (IMSG)
王文峰，中国电子技术标准化研究院物联网研究中心
国家智能制造标准化总体组

Key notes from industry
工业领域专题报告

Two key notes from industry representatives showed the industrial relevance of standardisation for Industrie 4.0 / Intelligent Manufacturing

Dr. Yan Liyue, CESI
“Latest progress of Standardization for Intelligent Manufacturing “

Mr. Michael Gommel, Siemens
“Semantic vocabularies as enabler for I4.0/IM ”

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谢谢！
Vielen Dank!

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Signing - Sub-Working Group Industry 4.0 / Intelligent Manufacturing

Dr. Marvin Böll

SCI4.0

Mr. WANG Yu

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Results of the Sub-Working Group Electromobility

Mr. Mario Beier

DIN

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Introduction and overview of topics

- Since the last SWG meeting in 2023 it was considered by China and Germany to organize a technical Workshop between experts of both countries based on the topics discussed in 2023.
- Following this considerations, a virtual Sino-German Workshop could be organized on 29th August 2024 to conduct a technical discussion on various topics (Megawatt Charging System, Bidirectional Charging (V2G / V2L), AC/DC Overlay, Adapter Safety).
- In the SWG meeting in October 2024 parts of these topics addressed in the workshop in August as well as further topics have been discussed between experts of China and Germany
  - Bidirectional Charging
  - Battery Technology
  - Charging Technology
  - Loaddump

Workshop on 29th August 2024 - Results

Megawatt Charging System (MCS)

- In 2021 it was agreed to collaborate and to exchange information and experiences regarding the development of a Megawatt Charging System (MCS) for Heavy Duty Vehicles exploring the harmonization potentials

- After further bilateral workshops in 2022 and a status update in the SWG meeting of 2023 a status report has been given in the workshop concerning the progress of MCS projects in China, Germany and on international level

AC/DC Overlay

- Regarding AC/DC Overlay China gave an overview regarding concepts and developments in China

Workshop on 29th August 2024 - Results

Vehicle Adapter

- Regarding vehicle adapter German and Chinese experts exchanged their experiences made in the field

Conclusion for these three topics (MCS, AC/DC Overlay, Vehicle Adapter)

- The given overview could serve as a basis for a further exchange of experiences.
- Following, regarding all topics a continuation of the information exchange and discussions on expert level will take place accordingly to the needs of both, Chinese and German experts

Bidirectional Charging → see separate slides

Results of SWG Electromobility on 14th October 2024

Bidirectional charging

- In 2023 China gave an overview about Vehicle to Grid (V2G) technology, demonstration projects and standardization efforts and a continuation of the information exchange and discussions on expert level accordingly to the needs of both, Chinese and German experts, has been agreed

- German and Chinese experts presented a status regarding V2G (with a focus on AC) and V2L (Vehicle to Load) in a virtual Workshop on 29th August 2024. Main results were presented in the SWG Electromobility meeting in October 2024.

- In the SWG meeting in October 2024 an additional report was given regarding the status of V2G and V2L activities in China

Bidirectional charging

- Based on that comprehensive collaboration efforts in the context of V2G and V2L it was agreed to continue the exchange of information and experiences regarding these both topics

- In particular, it was agreed to arrange a follow-up meeting to continue the exchange on V2L aspects and developments

Battery Technology

- In 2023 Germany and China gave an overview about current developments regarding battery standardization activities in China and Europe and a continuation of the information exchange and discussions on expert level accordingly to the needs of both, Chinese and German experts, has been agreed
- Furthermore, in 2023 is has been agreed in the SGSCC Plenary meeting to integrate topics dealing with battery recycling in the SWG Electromobility
- In the SWG meeting in October 2024
  - Germany gave a presentation regarding “Deep discharge in the recycling process”
  - China gave a presentation regarding the “Progress on EV battery recycling standards in China” and the “Application of retired battery energy storage system”
- A continuation of the information exchange and discussions on expert level will take place accordingly to the needs of both, Chinese and German experts

Loaddump (GB/T 18487.1 and ISO 21498)

- Analog to 2023 and the former exchange regarding loaddump aspects in the SWG meeting in October 2024 an overview has been given concerning the “Current status on developments regarding GB/T 18487.1 / ISO 21498”

- A continuation of the information exchange and discussions on expert level will take place accordingly to the needs of both, Chinese and German experts and according to the informal exchange as it has taken place in the past

Charging Technology

- In the SWG meeting in October 2024 a new topic was addressed as Germany gave a presentation regarding the “Charging Performance of EV - Testing procedure ISO/SAE 12906”

- Furthermore, China gave a status update of the “Charging infrastructure for ships” based on the overview already given in 2023

- A continuation of the information exchange and discussions for these topics on expert level will take place accordingly to the needs of both, Chinese and German experts

Conclusion

- A continuation of the information exchange and discussions will take place accordingly to the individual development of each of the topics and the concrete needs of both, Chinese and German experts (as already conducted in the past)

- This comprises the management and distribution of relevant information to pursue the cooperation regarding international standardization activities and to support the initiation of bilateral actions (e.g. the arrangement of dedicated workshops).

Thank you!

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Standardization Administration of the P.R.C.

Signing - Sub-Working Group Electromobility

Christoph Winterhalter

DIN

Mr. WANG Yu

SAMR/SAC

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Results of the Sub-Working Group Intelligent and Connected Vehicles

Mr. SUN Hang

CATARC

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中汽中心 | 全国汽车标准化技术委员会 National Technical Committee of Auto Standardization

中德智能网联汽车标准化合作情况汇报

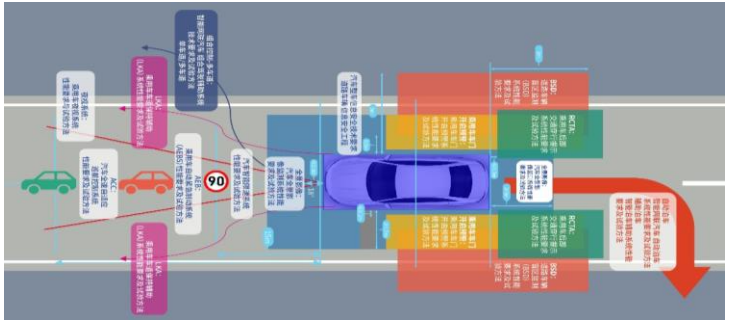
Introduction to the Cooperation on ICV Standardization between China and Germany

SUN HANG
CASRI, CATARC
2024-10-16

目录 Contents

定义：具备环境感知、智能决策和自动控制，或与外界信息交互，乃至协同控制功能的汽车。

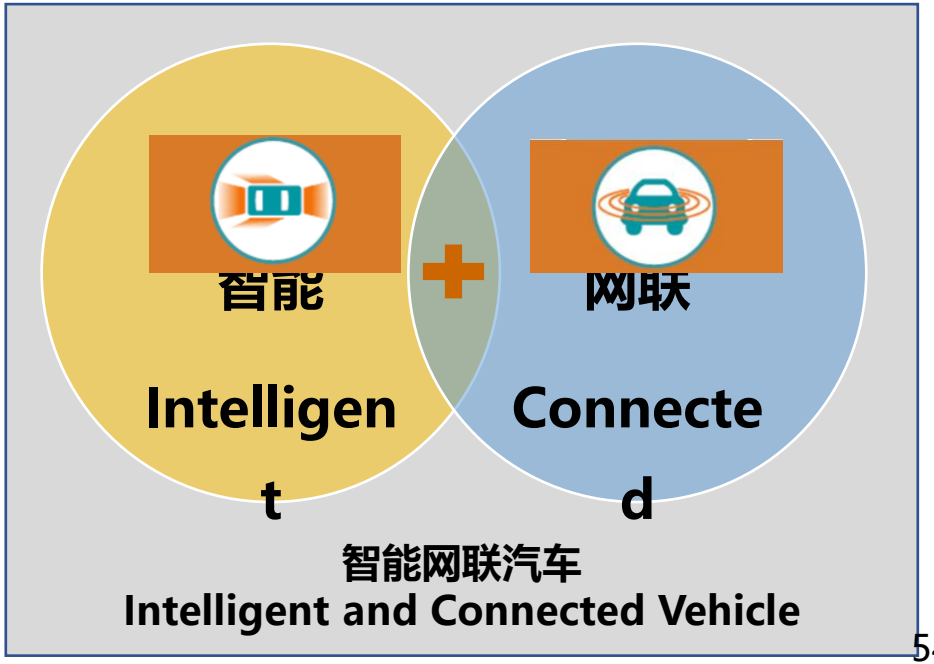
Definition: vehicles that are capable of conducting information interaction with external entities, or designed with advanced features including environmental perception, self-decision-making and automated control, or further to the inclusion of realizing systematic cooperative control.



相似概念 Similar Concepts:

- ✓ Automated driving vehicles
- ✓ Automated and connected vehicles
- ✓ Smart cars
- ✓ Future networked cars

相似但不同 Similar, but Different...



1.2 合作背景
1.2 Background of cooperation

中德智能网联汽车标准化合作是**中德两国产业的共同需要**

The standardization cooperation of ICV between China and Germany is **a common need for the industries of both countries**

两国都将智能网联汽车作为汽车产业未来战略发展方向

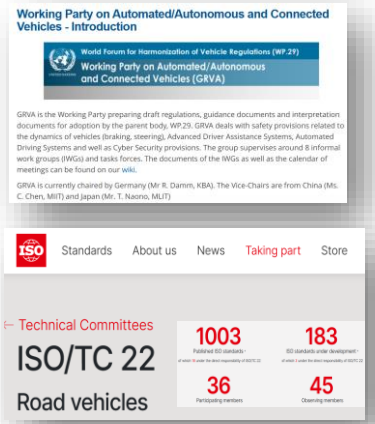
Both countries regard ICV as the future strategic development direction of the automotive industry

两国都高度重视智能网联汽车标准体系规划和建设

Both countries attach great importance to the planning and construction of the standard system for ICV

两国都积极参与智能网联汽车国际标准法规协调

Both countries actively participate in the coordination of international standards and regulations for ICV

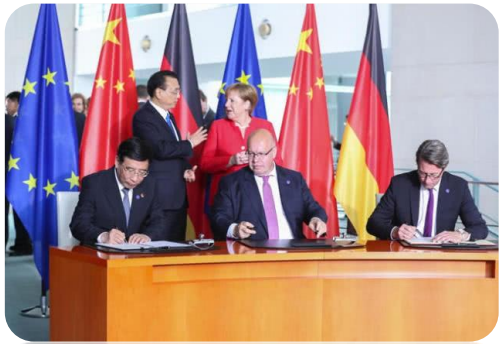


1.2 合作背景
1.2 Background of cooperation

中德智能网联汽车标准化合作是**中德两国政府的共同期望**
The standardization cooperation of ICV between China and Germany is **a common expectation of the governments of both countries**

中德标准化合作委员会
SGSCC

2017年，国家标准委、工信部与德国相关政府部门共同发出成立**中德智能网联汽车标准工作组**的倡议，推动中德智能网联汽车标准法规交流与合作。
In 2017, the SAC, MIIT, and relevant German government departments jointly proposed the establishment of a Sino German ICV Standard Working Group.



中德政府磋商
China Germany Government Consultation

2018年，工信部与德国联邦经济和能源部、联邦交通和数字基础设施部共同签署了**《关于自动网联驾驶领域合作的联合意向声明》，明确开展ICV标准化合作。**
In 2018, the MIIT, together with the BMWK & BMDV, signed a joint statement of intent on cooperation in the field of autonomous connected driving, clarifying the need for ICV standardization cooperation.

1.3 合作历程
1.3 Cooperation History

2018年1月，在国标委、工信部和德国经济部的见证下，中汽中心与VDA签署智能网联汽车标准法规合作备忘录

In January 2018, under the witness of the SAC, the MIIT and BMWK, the CATARC and VDA signed a MoU on ICV standards

2018年7月，中德两国总理共同见证汽标委智能网联汽车分委会与德国汽车标准委员会签署合作谅解备忘录

In July 2018, under the witness of the Chinese and German prime ministers, the signing of a MoU between the SAC/TC114/SC34 and the German Automotive Standards Committee

2018年11月，在国标委、工信部、德国大使馆的见证下，中德智能网联汽车标准法规工作组正式成立

In November 2018, under the witness of the SAC, the MIIT, and the German Embassy, the Sino German ICV Standards and Regulations WG was officially established

2018年至今，每年组织两国汽车企业参加中德标准化合作委员会年会，并汇报智能网联汽车标准化工作成果

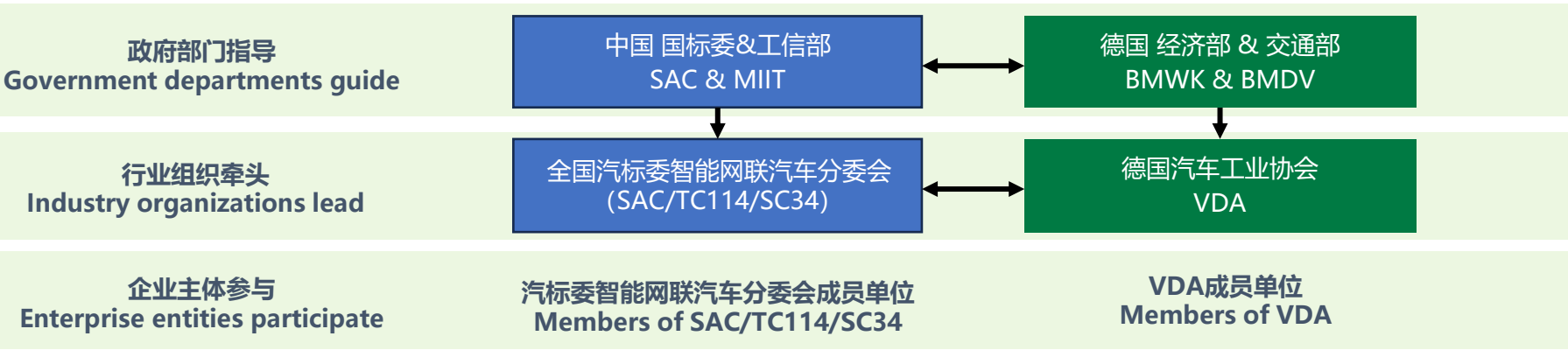
Since 2018, we have organized automobile companies from both countries to participate in the SGSCC and report on the achievements of standardization work for ICV every year

2018年至今，每年组织两国智能网联汽车企业开展1-2次智能网联汽车产业标准、法规和技术交流

Since 2018, organize one or two annual exchanges of standards, regulations, and technologies for the ICV industry between the two countries ICV enterprises

目录 Contents

2.1 合作机制
2.1 Cooperation mechanism



- 同步贯彻落实**中德标准化合作委员会决议和中德自动网联驾驶领域合作的联合意向声明**
- Implement simultaneously **the resolution of SGSCC and the joint statement of intent on Sino-German cooperation in the field of ACD**

- **中德双方政府授权**中汽中心与VDA作为联合组长单位，搭建**行业标准化交流平台**
- **Chinese and German governments authorize** CATARC and VDA as joint group leader to build **an exchange platform for standardization**

- 中方企业由**汽标委智能网联汽车分委会**成员中选择，德方企业由**VDA**会员中选择
- Chinese enterprises are selected from members of **SAC/TC114/SC34**, and German enterprises are selected from members of **VDA**

- 工作组每年向**国家标准委、工信部和德国经济部**等相关政府部门汇报工作进展
- The working group reports working progress to relevant government departments such as **SAC, MIIT, BMWK & BMDV** every year

2.1 合作机制
2.1 Cooperation mechanism

合作业务范畴包括但不限于：标准法规动态交流、标准法规共同研究和制定、国际标准法规协调和合作
The cooperation scope includes but is not limited to: Dynamic exchange, joint research and formulation, coordination and cooperation of international standards and regulations

组长会议
WG leader meeting

- 参与方: 中汽中心（中方）CATARC (China)
  Participant: VDA（德方）VDA (Germany)
- 地点: 中国/德国 （包括网络电话会议）
  Place: China/Germany (Including online meeting)
- 频率 : 视情况而定
  Frequency: Depending on the situation
- 话题 : 与ICV相关的标准法规信息沟通，以及联合研究项目
  Topic: Communication of information on standards and regulations related to ICV, and joint research projects

工作组会议
WG meeting

- 参与方: 汽标委智能网联汽车分委会成员（中方）
  Participant: VDA 及其成员（德方）
  Members of SAC/TC114/SC34 (China)
  VDA and its members (Germany)
- 地点: 中国/德国 （包括网络电话会议）
  Place: China/Germany (Including online meeting)
- 频率 : 1-2次/年
  Frequency: 1-2 times/year
- 话题 : 与ICV相关的标准法规信息沟通，以及联合研究项目
  Topic: Communication of information on standards and regulations related to ICV, and joint research projects

2.2 合作成果1-国际标准
2.2 Cooperation achievement 1 - International standards

中汽中心 | 全国汽车标准化技术委员会 National Technical Committee of Auto Standardization

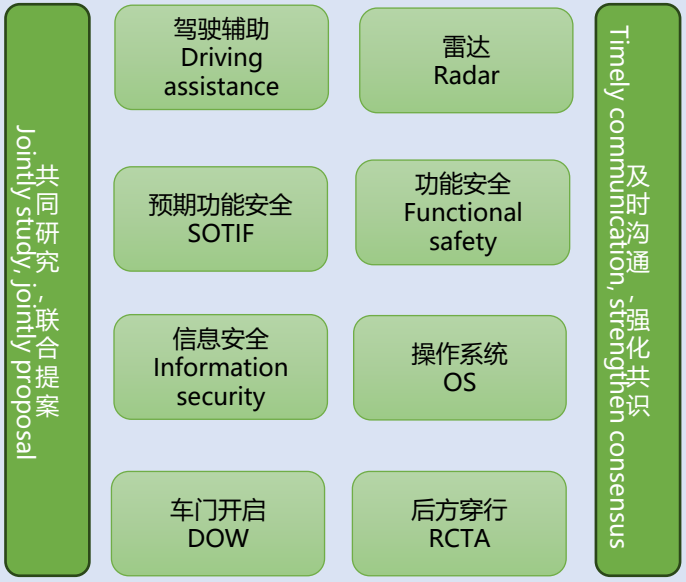
中汽中心和VDA作为两国ISO/TC22对口单位，持续组织两国智能网联汽车产业在国际标准化组织（ISO）框架下加强合作，推动自动驾驶测试场景、功能安全、信息安全、雷达、驾驶辅助等领域国际标准研究与制定。
As ISO/TC22 counterparts of the two countries, CATARC and VDA continue to organize the industry of the two countries to strengthen cooperation under the framework of ISO, and promote the research and formulation of international standards in fields of ADS test scenarios, functional safety, cyber security, radar, and ADAS.

ISO/TC22/SC33/WG9 自动驾驶系统测试场景工作组
Working group on standards for ADS test scenarios

- 中国专家担任工作组召集人，与德国等国家共同推动ISO ADS测试场景标准规划与制定
- Chinese experts serve as the convenor of the WG, and jointly promote plannings and formulations of standards for ADS test scenarios with Germany and other countries
- 德国作为ISO/TC22/SC33秘书处，支持中国组织和推进ADS测试场景国际标准
- As the secretariat of ISO/TC22/SC33, Germany supports China in organizing and promoting international standards for ADS test scenarios

No.	项目名称 Project name	进展 Progress
ISO 34501	道路车辆-自动驾驶系统测试场景术语和定义 Road vehicles — Test scenarios for automated driving systems — Vocabulary	中国牵头 正式发布 China lead, release
ISO 34502	道路车辆-基于安全评估的工程框架与场景生成过程 Road vehicles — Test scenarios for automated driving systems — Scenario based safety evaluation framework	日德联合牵头 正式发布 Japan & Germany lead, release
ISO 34503	道路车辆-自动驾驶系统的设计运行域分类 Road Vehicles — Test scenarios for automated driving systems — Specification for operational design domain	英国牵头 正式发布 UK lead, release
ISO 34504	道路车辆-场景特征及场景分类 Road vehicles — Test scenarios for automated driving systems — Scenario categorization	德荷联合牵头 正式发布 Germany & Netherlands lead, release
ISO 34505	道路车辆-自动驾驶系统的测试场景评测 Road vehicles — Test scenarios for automated driving systems — Scenario evaluation and test case generation	中德联合牵头 制定中 **China & Germany** lead, under formulation

国际标准其他合作成果
Other Cooperation achievements of international standards



2.3 合作成果2-中德智能网联汽车标准路线图对比研究
2.3 Cooperation achievement 2 - Comparison of Standardization Roadmap

中汽中心 全国汽车标准化技术委员会 National Technical Committee of Auto Standardization

2019年，中汽中心和VDA共同组织中德双方汽车行业分析对比中国《国家车联网标准体系建设指南（智能网联汽车）》和德国《自动驾驶标准化路线图》，完成中德智能网联汽车标准化路线图对比研究。

2019, CATARC and VDA jointly organized an analysis and comparison of the automotive industry between China and Germany, comparing China's ICV standard system and Germany's Roadmap for Standardization of AD, completing a comparative study of the standardization roadmaps for ICV between China and Germany.

对比结论 Comparative conclusion

- 双方对标准化在推动、支撑智能网联汽车技术、产业发展方面的作用认识、战略定位高度一致。
- Both sides share a high degree of consensus on the role and strategic positioning of standardization in promoting and supporting ICV technology and industrial development.

- 双方在标准化路线图总体原则、建设目标、技术逻辑、体系框架、重点领域等方面基本一致。
- Both sides are largely in agreement on the overall principles, construction goals, technical logic, system framework, key areas and other aspects of the standardization roadmap.

- 双方了解并尊重彼此因技术、产业发展阶段及标准化法律、制度不同而产生的相关差异。
- Both sides understand and respect relevant differences arising from different technologies, stages of industrial development, standardization laws and systems.

- 双方愿意本着“相互理解、相互尊重、平等自愿、互利互惠”原则加强交流、协调与合作。
- Both sides are willing to strengthen exchanges, coordination and cooperation based on the principles of "mutual understanding, mutual respect, equality and voluntariness, mutual benefit and reciprocity".

2.4 合作成果3-中德智能网联汽车数据合规标准化专项研究
2.4 Cooperation achievement 3 – ICV data compliance standardization

2021-2022年，中汽中心和VDA组织中德双方汽车行业完成《智能网联汽车数据合规标准化专项研究》，研究成果在第八届智能网联汽车技术及标准法规交流会期间发布。

2021-2022, CATARC and VDA organized the Chinese and German automotive industries to complete the "*Specialized Research on ICV Data Compliance Standardization*", and the research results were released during the 8th ICV Technology, Standards and Regulations Exchange Conference.

第一章 汽车数据安全发展现状
Chapter 1 Automobile Data Security Development Status

第二章 数据安全标准政策分析
Chapter 2 Analysis of Data Security Standard Policy

第三章 数据合规管理类标准需求分析
Chapter 3 Analysis of Data Compliance Management Standards

第四章 数据合规技术类标准需求分析
Chapter 4 Analysis of Data Compliance Technical Standard Requirements

第五章 数据合规评估与评价分析
Chapter 5 Data Compliance Evaluation and Evaluation Analysis

系统分析汽车数据处理链中各环节可能引入的数据安全风险
The system analyzes data security risks that may be introduced in each link of the automotive data processing chain

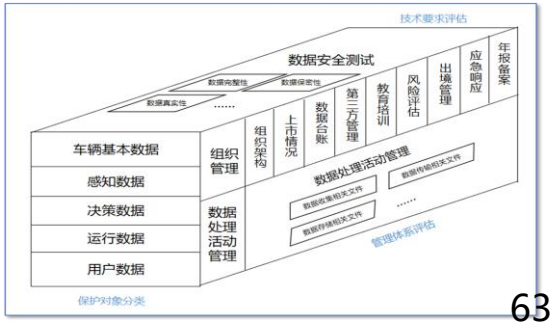
数据收集 data collection → 数据存储 data storaging → 数据使用 data using → 数据处理 data processing → 数据传输 data transmission → 数据提供 data provision → 数据共享与公开 data sharing and public → 数据销毁 data destruction

以审核和测试相结合，构建综合型数据合规评估与评价分析体系
Construct comprehensive data compliance evaluation and evaluation analysis system by combining audit and testing

管理体系审核 Management system audit + 数据安全测试 Data security testing

管理体系标准化 Standardization for management system
管理体系审核标准化 Standardization for management system audit

数据全生命周期安全测试方法标准化 Standardization for test method of data life cycle security



2.5 合作成果4-智能座舱标准体系研究
2.5 Cooperation achievement 4 – Intelligent cockpit standard system

2022-2023年，中汽中心和VDA组织中德双方汽车行业完成《智能座舱标准体系研究》，系统梳理智能座舱技术全景图，形成汽车智能座舱标准体系和路线图。

In 2022-2023, CATARC and VDA organized the Chinese and German automotive industries to complete the "*Research on Intelligent Cockpit Standard System*", systematically analyzed the intelligent cockpit technology panorama, and formed the automotive intelligent cockpit standard system and roadmap.

智能座舱技术全景图 Intelligent cockpit technology panorama

应用/功能 Apps/ Function	功能安全 Functional safety	监测识别 Monitoring identification	多模交互 Multimodal interaction	万物互联 Internet of Everything	出行服务 Mobility services	信息安全 Cybersecurity
		环境交互 Environment interaction	显示交互 Display interactions	语音交互 Voice interaction	手势交互 Gesture interaction	
设备/终端 Device/ Terminal		传感器 sensor	控制器 controller	显示终端 Display terminal	通讯终端 Communicatio n terminal	环境终端 Environment terminal
基础技术 Basic technology		座舱芯片 Cockpit chip	车载操作系统 In-vehicle operating system	云服务 Cloud computing service	网络传输 transit network	

智能座舱标准体系 Intelligent cockpit standard system

基础 Basics	通用规范 Generic specifications	产品及技术应用 Products and technology applications	相关标准 Relevant standards
术语和定义 Terms and Definitions	信息安全 Cybersecurity	硬件终端 Hardware terminal	基础技术 Basic technology
	座舱规范 Cockpit specifications	舱内交互 In-cockpit interaction	
分类和分级 Classification		舱外交互 Extra-cockpit interaction	测试设备 Test device
	测试和评价 Testing and evaluation	安全与服务 Security & Service	接口 Interface

2.6 合作成果5-智能网联汽车标准法规适用性调查分析研究
2.6 Cooperation achievement 5 –Applicability of standards for ICV

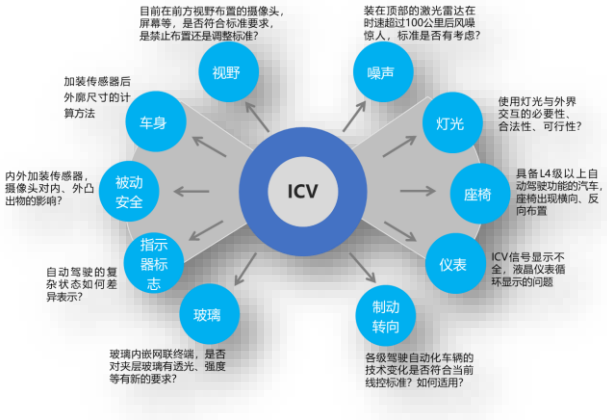
中汽中心 CATRC | NTCAS 全国汽车标准化技术委员会 National Technical Committee of Auto Standardization

2023-2024年，中汽中心和VDA组织中德双方汽车行业开展面向智能化网联化发展的汽车标准法规适用性提升研究，形成面向智能化网联化发展的汽车标准适用性提升研究报告。

2023-2024, CATRC and VDA organized research on improving the applicability of standards and for ICV development in the automotive industry of both China and Germany, and form a research report on improving the applicability of automotive standards for intelligent and networked development.

项目意义 Significance of the project

汽车智能化网联化发展不仅对汽车功能完善和性能提升提出技术创新的需求，也对汽车标准法规适用性提升产生新需求。
ICV' s development not only poses technological innovation demands for improving automotive functions and performance, but also generates new demands for enhancing the applicability of automotive standards and regulations.



成果 Achievements

以是否允许人类驾驶为核心判据切分分析对象，系统分析强制性国家标准及相关推荐性国家标准对分析对象的适用性。
Use whether human driving is allowed as the core criterion to divide analysis objects, and systematically analyze the applicability of mandatory national standards and relevant recommended national standards to the analysis objects.

分析对象 Analysis objects	结论 Conclusion
允许人类驾驶的智能网联汽车 ICV that allow human driving	相关标准仍适用 Relevant standards are still applicable
不允许人类驾驶的智能网联汽车 ICV that do not allow human driving	相关标准需要进行一些适应性修改 Relevant standards require some adaptive modifications

2.7 合作成果6-汽车软件标准体系
2.7 Cooperation achievement 6 – Automotive software standard system

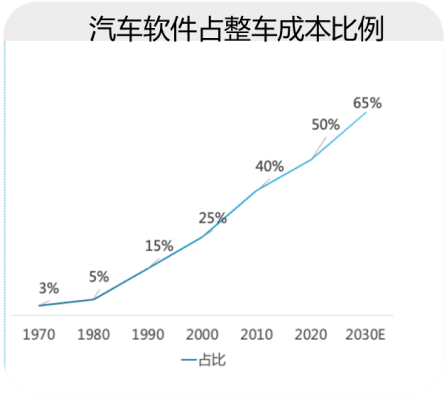
中汽中心 CATARC | NTCAS 全国汽车标准化技术委员会 National Technical Committee of Auto Standardization

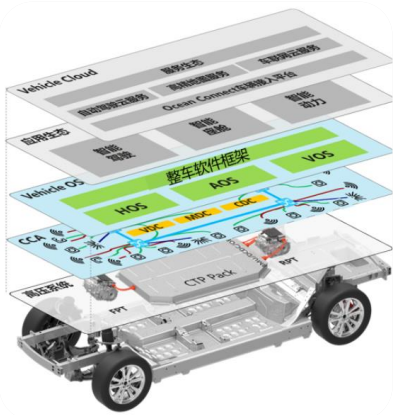
2023-2024年，中汽中心和VDA组织中德双方汽车行业新启动研究《汽车软件标准体系》，系统梳理汽车软件分类，合理规划汽车软件标准体系。

2023-2024, CATARC and VDA organized the Chinese and German automotive industries to research "*Automotive Software Standard System*", systematically analyze the classification of automotive software, and rationally plan the automotive software standard system.

项目意义 Significance of the project

软件定义汽车成为重要发展趋势，汽车软件对汽车安全性影响逐步提升，急需标准进行约束和规范。
Software-defined automobiles have become an important development trend, and the impact of automotive software on automotive safety has gradually increased, so there is an urgent need for standards to constrain and regulate.





成果 Achievements

系统分析汽车软件技术逻辑，将汽车软件归纳为5种分类：操作系统软件、应用软件、数据软件、工具软件和质量与测量软件。
Through systematic analysis of automotive software technological logic, automotive software can be categorized into 5 types: operating system software, application software, data software, tool software, and quality and measurement software.

目录 Contents

ICV小组建议就以下原则继续合作
The SWG ICV suggests continuing cooperation on the following principles

1. 双方持续加强在ICV标准法规方面的交流与合作，共同推动双方关注的国际标准法规制定与协调
Both parties will continue to strengthen exchanges and cooperation on standards and regulations ICV, and jointly promote the formulation and coordination of international standards and regulations that both parties are concerned about

2. 后续由CATARC或VDA持续向SGSCC汇报中德ICV标准法规合作进展，也包括2024年《联合声明》下的合作情况
Subsequently, CATARC or/and VDA will continue to report to SGSCC on the progress of Sino German ICV standard and regulatory cooperation, including cooperation under the framework of the 2024 Joint Declaration

3. ICV工作小组建议在2026年将该工作小组从中德标准化合作委员会中关闭
The SWG ICV recommends to close itself as an active unit under DCKN in 2026


CATARC
中汽中心
NTCAS
全国汽车标准化技术委员会
National Technical Committee of Auto Standardization

Federal Ministry
for Economic Affairs
and Climate Action

中国国家标准化管理委员会
Standardization Administration of the P.R.C.

Signing - Sub-Working Group Intelligent and Connected Vehicles

Mr. Egbert Fritzsche

VDA

Mr. WANG Yu

SAMR/SAC

GPQI
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中国国家标准化管理委员会
Standardization Administration of the P.R.C.

Cooperation on plenary topics
Civil Aviation

Ms. Petra Scharf

DIN

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Civil Aviation

The aim of the bilateral cooperation is to

- build a bridge to the European standardization system and
- to jointly prepare, initiate and develop projects at international level.

➢ A regular bilateral exchange on joint project proposals has been successfully established.

Civil Aviation

ISO/TC 20/SC 4: *Aerospace fastener systems*

- Both countries support each other in the development of new standardization projects.

- Very good progress could be achieved in the cooperation of some projects, e.g.:
  - May 2024: Publication of the standard ISO 6397 *Aerospace - Test bolts, hexagonal head, metallic material, coated or uncoated*

    (Chinese standardization proposal, supported by German experts)

- In 2024: Support from China for the appointment of Ralf Schomaker, Airbus Operations, as Convenor of ISO/TC20/SC 4/WG 3 *Supporting documents*.

➢ **Continuation of the successful cooperation.**

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中国国家标准化管理委员会
Standardization Administration of the P.R.C.

Comments from CHN side

Civil Aviation

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1) Civil Aviation

Progress over the past year

- In July, DIN proposed to explore more cooperation with CAPE in aviation maintenance with a positive feedback from CAPE.

Next Step

- China actively support and suggest to carry out more workshops and meetings for technical exchanges, so as to promotes standardization cooperation in civil aviation.

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Standardization Administration of the P.R.C.

Cooperation on plenary topics

All Electric Society

Mr. Florian Spiteller

DKE

GPQI
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All Electric and Connected Society
Current activities & next steps

Current activities

- **Kick Off Meeting** 24.& 25. January 2024 in Frankfurt (shifted from IEC GM Oct. 2023)
- Online Meetings: 21 March, 17 May, 24 July, 23 Sept

- **Working Groups**
  - First Basic Communication
    Lead: Gabriela Ehrlich
  - Mapping
    Lead: Johannes Stein, DKE
  - Gap Analysis
    Lead: Khaled Masri, Nema
    in cooperation with AC's and SyC´s e.g.

Next Steps

- F2F-Meeting IEC GM in Edinburgh, 20 Oct. 2024
- Mapping Matrix
- Technical Report
- Questionnaire or similar
- Creation of European committee on the All Electric Society on European activities

All Electric and Connected Society
Mapping Matrix

[Mapping platform | SG 14 - All Electric and Connected Society (iec.ch)]

https://mapping.iec.ch/#/maps/183

Federal Ministry
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and Climate Action

中国国家标准化管理委员会
Standardization Administration of the P.R.C.

Comments from CHN side

All Electric Society

GPQI
Dialogues for Innovation and Trade

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2) All Electric Society

Work Progress

- Proposal on the development of grid intelligence sensing technology at the SG14 plenary meeting and proposal to IEC on establishment of a new technical field on power system sensing technology,

  Progress: Discussed at the SMB meeting in June this year and received attention from various countries and relevant TCs.

Next Step

Further communicate with German experts and seek German experts' support on this proposal, especially TC65 and TC57, for Germany takes the Secretariat or Chair.

Strengthen cooperation in grid smart sensing technology in IEC, study and develop a series of standards in this field , such as common sensors for the grid and sensor configuration principles.

Federal Ministry
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Cooperation on plenary topics

Geometrical Product Specification (GPS)

Ms. Petra Scharf

DIN

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Geometrical Product Specifications (GPS)

The ISO GPS standards system

- represents a complex, comprehensive system of standards that is relevant for all types of manufacturing industry, from precision mechanics to plant engineering and construction;
- in principle, maps the rules, symbols and requirements for the description of features in technical drawings;
- guarantees a clear description of a workpiece from the design phase through to production and quality control.

➢ Great interest on the part of German industry to understand how the ISO GPS system is implemented in Chinese industry and standardization.

Geometrical Product Specifications (GPS)

Objective: To create a common understanding of the basic rules of ISO GPS.

- 2024-01-08: Kick-off meeting /Exchange of expertise on the topic GPS between Chinese and German delegates

- 2024-05-22: Third online meeting with the core topics:
  - Coordination of expectations for a possible White Book on Chinese-German ISO GPS standardization;
  - Definition and development of the topics to be dealt with and estimation of the time required.

- 2024-07-02: Fourth online meeting
  - Update on the White Book on Chinese-German ISO GPS and coordination of the next steps;
  - Discussions on training concepts for ISO GPS in education as well as the possibilities for supplementing training material with specific Chinese content, including supplementary certification.

Geometrical Product Specifications (GPS)

Next steps:

- Complete translation of the draft White Book and addition of content by German experts;
- Collection and provision of information on relevant topics for which a need for coordination between China and Germany has been identified

- Next meeting: Planned in November 2024

➢ **Further deepening of the bilateral exchange.**

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Comments from CHN side

Geometrical Product Specification (GPS)

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3) Geometrical Product Specification

SAC consideration

SAC hope to strengthen exchanges and cooperation with DIN and relevant departments in GPS standard support technology research, standards discussions and development, standards dissemination and training,

and jointly publish a white paper on GPS standards when appropriate, to jointly promote the development of standards in this field, and to promote the research and promotion of the application of GPS standards in China and Germany.

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Cooperation on plenary topics
Battery Recycling / Deep Discharge

Ms. Henrike Gördes

DKE

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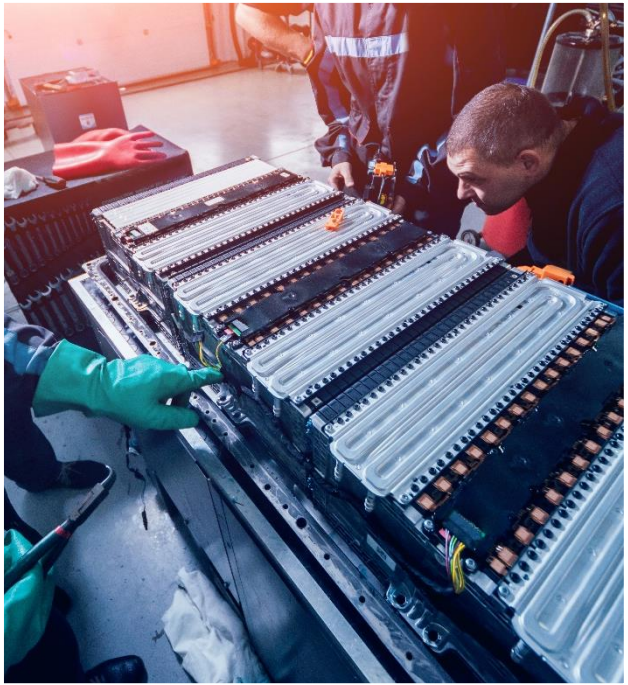
Battery Recycling – Deep Discharge



- Last SGSCC meeting it was decided to strengthen the cooperation in the field of Battery Recycling
- Battery Recycling is a very broad area which consists of different sub-topics (e.g. transportation, dismantling etc.)
- Therefore, DKE proposes to focus on one specific topic and drive it at IEC
- DKE is active on Deep Discharge standardization on national level (e.g. pre-standard development) and has recently created a national committee on this topic
- **DKE Proposal**: Further expert exchange within the Sub-Working Group *Electromobility* with the goal of submitting a NP on Deep Charge to IEC

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Battery Recycling / Deep Discharge

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6) Battery Recycling

For battery recycling

Jointly formulate the work program, work plan and division of tasks of the strategic group, and actively organize preparatory meetings to jointly promote the establishment and operation of the IEC strategic group on power battery recycling and utilization for electric vehicles.

SAC hope that experts from both sides can carry out technical exchanges on the scope of work and work plan of the strategic group, and strive to form a detailed work plan before the next Annual Meeting and submit for consideration.

4) Battery Recycling

For deep discharge

We agree with the German side's proposal to jointly submit relevant new work items under IEC/TC21.

We suggest that both sides designate contact person to enhance communication at the working level, exchange views on the details of the joint proposal and discuss through videoconferencing, etc..

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Cooperation on plenary topics
IEC global relevance toolbox

Mr. Florian Spiteller

DKE

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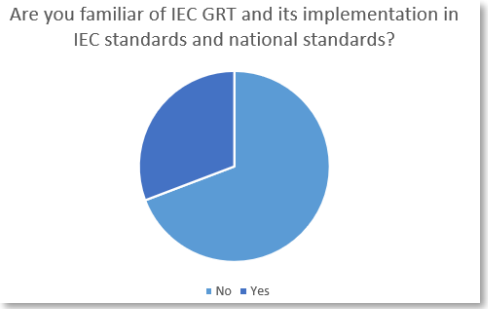
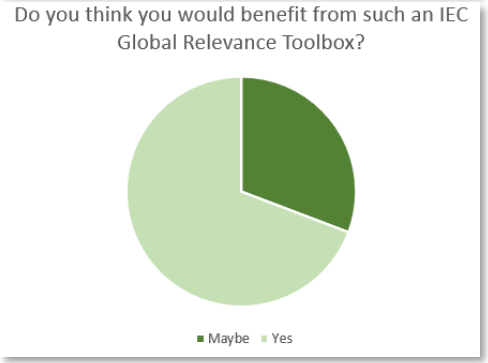
IEC Global Relevance Toolbox (GRT)





- The purpose of the IEC GRT is to increase transparency
- In order to do this, the idea of the IEC GRT is:
  - To demonstrate which NC has implemented which IEC standard
  - If a standard has been implemented by the NC, are there national deviations?
- IEC SMB supports the IEC GRT and defined the following task:

1. **Promotion of the IEC GRT**: In June 2024, DKE held a presentation on the IEC Global Relevance Toolbox during the Nanjing Forum in June. According to the survey conducted, more promotion is needed
2. **Implementation of the Adoption database:** SAC and DKE agreed on driving a pilot. They choose a standard with German and Chinese deviations and then reach out to IEC in order to implement it in the adoption database.

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IEC global relevance toolbox

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5) IEC Global Relevance Toolbox

Work progress

- China and Germany have carried out a collaborative study on the Global Relevance Toolbox, and released a concept paper during the International Standardization (CHILIN) Forum held in Nanjing in June, this year, and shared research results achived by now.

- Experts from both sides intend to select 5 to10 Chinese or Germany MOD standards in several fields for pilot studies based on scheme for indication of national diffferences in standards used by IECEE.

Next Step

Experts from boths sides are collecting problems found when filling the scheme and will submit the research results to IEC when finished.

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Cooperation on plenary topics
Education on Standardization

Ms. HUANG Manxue

Shenzhen Technology University

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6) Education about Standardization (EaS)

YP activities

National Level

- 8th China IEC YP Programme
- in April and June, 2024
- **1,000+** participants (2017-2024)

Regional level

- **2nd Asia Pacific Regional YP Campaign** in 2024

  27 YPs from **9** countries, including Singapore, Malaysia, Thailand, Viet Nam, etc.
- **3rd Asia Pacific Regional YP Campaign** in Shenzhen

  early July 2025 in Shenzhen --**Warmly welcome**

6) Education about Standardization (EaS)

China International Standardization Leadership Elite & IEC YP (China) Program

2024.04.15-20：Training on International standardization + 1st round selection
2024.06.24-25：2nd round seletion

6) Education about Standardization (EaS)

2024 Asia-Pacific Regional YP Campaign

Join us in July, 2025 Shenzhen,China

29 YPs from **9** countries

China, Cambodia, France, Malaysia, Myanmar, Russia, Singapore, Thailand, Vietnam

6-day activity

June 25-30, 2024

6) Education about Standardization (EaS)

EaS

Work progress

Standards and Quality Courses Embedded into the Teaching Plan

11 colleges **25** majors **3000** students

Eas courseware

50+ under development

13 national standards proposal (Approved)

First Course Development Guide for EaS (EN version)

Explore EaS at primary, secondary and postgraduate education

Next Step

SAC hope to jointly develop a work plan for cooperation in EaS under the framework of the Sino-German Cooperation MOU, and to promote the cooperation of both EaS and YP activities.

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Comments from GER side

Education about Standardization (EaS)

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Education on Standardization

- DKE Next Generation (NG) organizes frequently „round tables“ with young professionals. Experienced experts are invited in order to initiate active discussions on specific topics
- DKE supports 4 Young Professionals to go to the IEC General Meeting in Edinburgh. DKE is currently investigating the possibility to connect German YPs with Chinese YPs during the IEC General Meeting (e.g. dinner, coffee break or similar). **Would SAC support this initiative?**
- In 2025 DKE is organizing again the DKE YP Camp. Chinese participants are welcomed, as usual

Education on Standardization

Objective: To promote bilateral exchange on *Education on Standardization*

- 2024-09-25/26: „Getting started with Standardization" – Second Interactive Conference on Education about Standardization at DIN (in cooperation with DKE and VDI)
- Participants: Teachers of all kinds and subjects, professors, guest lecturers, etc. from educational institutions, as well as attendees who offer seminars in associations, train young people in their own company or want to pass on standardization knowledge as consultants
- SAC was kindly invited.

➢ **Further deepening of the bilateral exchange.**

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Cooperation on plenary topics
AI in medical devices

Ms. Henrike Gördes

DKE

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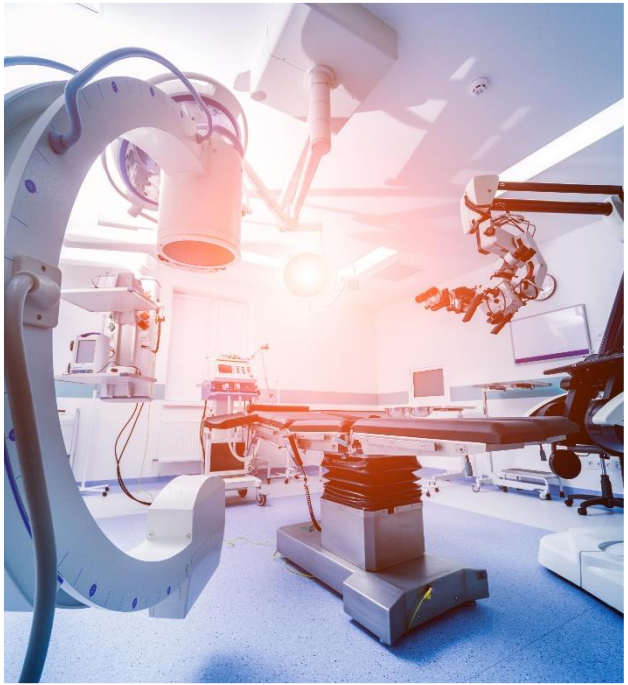
AI in Medical Devices



- AI gains strong importance in the field of medical devices
- Some meetings have been realized between DKE, experts and National Institutes for Food and Drug Control, NIFDC *(last meeting 27 September 2024)*
- The objective is to exchange on new standardization activities in the area, as well as to define together standardization activities which shall be initiated at the respective IEC TC 62 „Medical equipment, software, and systems”
- In the last meeting a mapping and gap analysis of IEC TC 62 standards and its work program was done

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Comments from CHN side

AI in medical devices

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7) AI in Medical Devices

Work progress

Continous and periodic communication and exchanges have been conducted between NIFDC and DKE.

Next Step

We look forward to working more closely with DKE in IEC/TC62 to jointly promote the establishment and optimization of an AI-related international standards structure to better support IEC/TC62 and its SCs in carrying out related work. As a next step, we hope that China and Germany will continue to strengthen exchanges and further deepen cooperation in this area.

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Update on the Decarbonization of the Automotive Value Chain

Mr. Thomas Frisch

BMWK

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Decarbonization of the automotive value chain

- With increasing electrification of transport, emissions from production and the supply chain are increasingly coming into focus in the automotive industry
- The correct recording, calculation, collection and reporting of greenhouse gas emissions are central to decarbonize of supply chains.
- The BMWK's Expert Group on the Transformation of the Automotive Industry (ETA) developed recommendations for the Federal Government
  - Central: International harmonization of the calculation methodology

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GER-CHN Exchange on Decarbonisation of Automotive Value Chains

- First workshop at the IAA in Munich in September 2023: Exchange on the current status with representatives from CHN (CATARC)
- DCKN annual conference in November 2023: Exchange with CATARC. Resolution of a joint expert workshop
- March 2024: Workshop at CATARC in Beijing. From the GER side, BMWK, the lead authors of the ETA paper and representatives from Catena-X took part
  - Resolution: Working group with the aim of comparing the calculation methods of CATARC and Catena-X using a concrete example
- June 2024: BMWK and MIIT decided to establish a sub-working group under the working group “Decarbonization of Industry” as part of the “CHN-GER Climate and Transformation Dialogue”.

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Group photo

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Lunch break
12:00 – 13:30

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New Topics for Collaboration
Hydrogen Technology

Mr. WANG Yu

SAMR/SAC

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1) Hydrogen Technology

Considering the sound cooperation between China and Germany in hydrogen technology, SAC propose to **establish standardization working group on hydrogen**, and focus on the following aspects:

01 Cooperative research on evaluation methods and standards for green hydrogen (renewable hydrogen)

02 Research on hydrogen fuel quality requirements and testing and analyzing methods

03 Research on hydrogen transmission pipeline standard system

04 Research on liquid hydrogen fueling protocols

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Comments from GER side

Hydrogen Technology

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Hydrogen Technologies

- DIN and DKE welcome very much the topic Hydrogen Technologies.
- DIN appreciates the exchange with SAC on this topic, however, DIN suggests to focus and bundle activities at international level.
- DKE invites SAC to an expert exchange on fuel cells with the objective to discuss national activities in each country.

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New Topics for Collaboration
Reused and repurposed batteries

Ms. Henrike Gördes

DKE

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Reused and repurposed batteries

- There have been recent activities on reused and repurposed batteries
- New IEC standards IEC 63330 and 63338 on this topic were published at IEC TC 21
- DKE would like to invite to an expert exchange on experiences and best practices with Chinese experts
- Topic of the exchange could be:
  - Current situation and activities in both countries regarding reused and repurposed batteries
  - future activities in the area of reused and repurposed batteries

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Comments from CHN side

Reused and repurposed batteries

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2) Reused and repurposed batteries

SAC agree with the proposal of the German side to **jointly submit a new work proposal at IEC/TC 21**. We suggest that both sides designate a **contact person** to strengthen communication **at the working level**, to exchange views on the details of the joint proposal and to discuss them through videoconferencing.

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New Topics for Collaboration Semiconductors

Florian Spiteller

DKE

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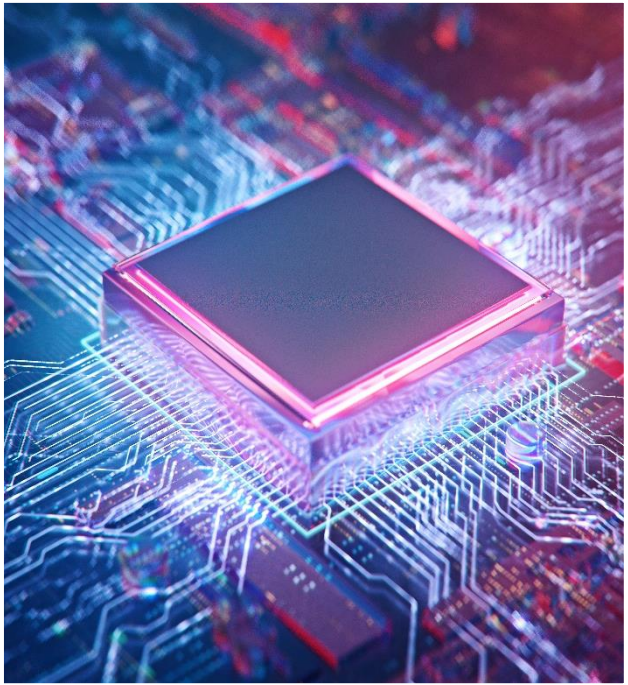
Semiconductors



- Semiconductors are used in almost every sector worldwide
- The semiconductor industry in Germany is globally active. Therefore, international standards are important for the German semiconductors industry
- DKE would like to invite to an exchange between semiconductor experts, in order to exchange of national and international activities/structure, as well as future IEC activities
- **Question to SAC**: Would SAC like to exchange about national and international semiconductor future standardization activities

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Comments from CHN side

Semiconductors

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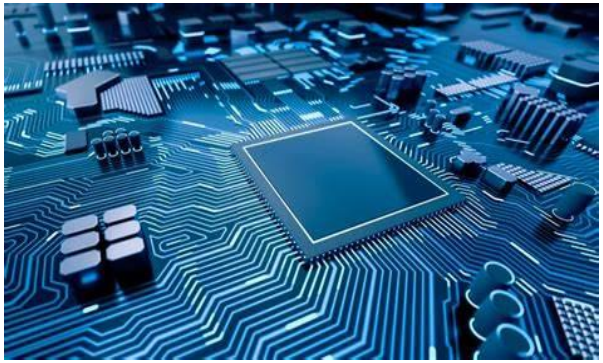
3) Semiconductor



- SAC is willing to engage in exchanges with the German side regarding the development of national and international standards in the semiconductor field.
- SAC will provide the contact information of two experts in the field for further communication.

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Closing Remarks

Mr. Dr. Thomas Zielke

BMWK

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Closing Remarks

Ms. SUN Hua

SAMR/SAC

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持续推进中德标准化合作！

Continuously Advance Sino-German Standardization Cooperation!

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Thank you!
Danke!
谢谢！

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