10th VDV Conference
Electric Buses – Market of the Future!
ElekBu 2019

5–6 February 2019 in Berlin

MAIN TOPICS
– Framework conditions, environmental protection
– Financing and support programme
– Design of depots and workshops
– Intelligent charging infrastructure
– Field reports from public transport companies
– Development of the battery technology
– Standardisation

www.ebuskonferenz.de

ElekBu 2019
Electric Mobility Trade Fair
Ten years ago, the founders of our Electric Bus Conference had a good idea: If we want to make the novel electric bus technology socially acceptable, we have to move it from the scientists’ research centres to the public transport sector and to discuss its prospects within public transport in Germany as well as the challenges arising with the introduction of electric buses with representatives from the public transport sector. Certain terms should not be used too often, but from today’s point of view this idea, which finally led to Germany’s biggest conference on electric buses, was absolutely visionary.

Unlike ten years ago, nobody now doubts that it is meaningful to operate electric buses within public transport. The former “Market of the Future” with its imponderability has been a “Market of the Presence” for quite some years now. At present, about 50 German public transport companies test or operate electric buses in line service. And that’s only the beginning: More and more VDV member companies organise themselves in a nationwide procurement initiative to purchase big batches of electric buses in the next few years. Meanwhile, the manufacturers have also got good vehicle portfolios (as regards the German market one is tempted to say “finally!”). Step by step, going by bus gets electric in Germany. And that’s an important development in view of the challenges that the public transport sector faces with the impending bans on driving diesel-powered vehicles in many cities.

Electric mobility, and that is far more than electric buses, is a way of realising the zero-emission mobility, which is a worldwide objective according to the Paris Agreement on Climate Change. Quickly changing political, social and ecological conditions are a big challenge to the transformation of the transport sector. Therefore, it is still important after these ten years – perhaps more than ever – that representatives of the public transport sector meet decision-makers from policy and representatives from industry and exchange experience with them to further improve and promote the young electric bus technology. The original subjects are not today’s subjects, but there are still many open questions: How can public transport, and especially the bus, contribute even more to achieving the environmental and climate change objectives and which further solutions can it realise? Which steps have to be taken to further improve electric buses? When can a full-scale production of electric buses begin? Which financing models exist? How can we succeed in transforming transport so that more mobility can be realised with environmentally friendly transport modes?

I look forward to discussing the answers to the most important questions on electric buses within German public transport with you at our next VDV Electric Bus Conference, which will be the biggest ever, and at the parallel ElekBu trade fair. As already mentioned, it is the tenth time that we meet in this way and, therefore, we do not only want interesting discussions at this year’s conference, but also to celebrate this anniversary with you in the form of an informal anniversary celebration, to which I also cordially invite you.

**Conference languages**
German and English (simultaneous translation)

Your moderator

**Martin Schmitz**
Managing Director, Engineering Business Unit, Association of German Transport Companies (VDV)
Forum für Verkehr und Logistik e.V.
## Programme - Tuesday, February 5, 2019

### Admission and registration

9:00

### Welcome, Association of German Transport Companies (VDV)

10:00

### Opening speech by the Association of German Transport Companies (VDV)

10:05

Ingo Wortmann, President of the VDV

### Thematic block: Depot design, charging management and power supply

13:30

Introduction of an intelligent availability system for electric buses – Example of the Hamburger Hochbahn

Johanna Ahrens, expert for the depot management system and for the load and charging management system, Hamburger Hochbahn AG

13:45

Shifting KVB’s bus fleet to electric drives

Jörn Schwarze, Board Member, Kölner Verkehrs-Betriebe AG

14:00

Shifting to electric drives at Mainzer Mobilität in consideration of the local power supply and the integrated energy

Björn Kalter, Mainzer Verkehrsgesellschaft mbH

14:15

Experience with fleet transition and depot reconstruction as well as the further development

Toralf Müller, Director, Verkehrsbetriebe Hamburg-Holstein GmbH

14:30

Presentation of the electric bus strategy of the Berliner Verkehrsbetriebe (BVG)

Torsten Mareck, Manager of the Bus Department, Berliner Verkehrsbetriebe AöR

14:45

Discussion and questions

### Thematic block: Political and social framework conditions

10:15

Opening lecture by the German Federal Ministry of Transport and Digital Infrastructure (BMVI)

State Secretary Guido Beermann, German Federal Ministry of Transport and Digital Infrastructure

10:30

Introductory key-note

Christian Hochfeld, Managing Director, Agora Verkehrswende

10:50

Federal funding programme

Thorsten Herbert, Divisional Head Transport and Infrastructure, NOW GmbH, National Organisation Hydrogen and Fuel Cell Technology

11:00

Panel discussion and Q&A session concerning the challenges with the realisation

The following representatives will participate in the discussion:

- State Secretary Guido Beermann, German Federal Ministry of Transport and Digital Infrastructure
- Ingo Wortmann, President of the Association of German Transport Companies (VDV)
- Ulf Middelberg, Speaker of the Management Board, Leipziger Verkehrsbetriebe (LVB) GmbH
- Axel Volkery, Policy Officer – DG MOVE B4 – Sustainable and intelligent transport European Commission
- Paul Hemkentokrax, Managing Director, Aktiv Bus Flensburg GmbH

### Opening of the trade fair | trade fair tour | lunch break

12:00

### Thematic block: Depot design, charging management and power supply

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Discussion and questions

14:50

Coffee break at the trade fair
10th VDV Electric Buses Conference - Market of the Future!
Programme - Tuesday, February 5, 2019

**Thematic block: Exchange of experience among the public transport companies**

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Company/Role</th>
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</thead>
<tbody>
<tr>
<td>16:25</td>
<td>Interactive lectures by public transport companies</td>
<td></td>
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<tr>
<td>16:30</td>
<td>Rhein-Neckar-Verkehr GmbH</td>
<td>Stefan Prüfer, Product Management/Corporate Development, Rhein-Neckar-Verkehr GmbH</td>
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<tr>
<td>16:40</td>
<td>Göttinger Verkehrsbetriebe GmbH</td>
<td>Thomas Zimmermann, Operating Manager, Göttinger Verkehrsbetriebe GmbH</td>
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<tr>
<td>16:50</td>
<td>Stadtwerke Osnabrück AG</td>
<td>Prof. Dr. jur. Stephan Rolfes, Board Member, Stadtwerke Osnabrück AG</td>
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<tr>
<td>17:00</td>
<td>ESWE Verkehrsgesellschaft mbH</td>
<td>Frank Gäfgen, Managing Director, ESWE Verkehrsgesellschaft mbH</td>
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<tr>
<td>17:10</td>
<td>Kraftverkehrsgesellschaft mbH Braunschweig</td>
<td>Axel Gierga, Managing Director, Kraftverkehrsgesellschaft mbH Braunschweig</td>
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<tr>
<td>17:20</td>
<td>Münchner Verkehrsgesellschaft mbH (MVG)</td>
<td>Alexander Wolf, Transport Division, Stadtwerke München GmbH</td>
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<td>17:30</td>
<td>Flixbus</td>
<td>Daniel Zellinger, Product Management, FlixMobility Experience GmbH</td>
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**Thematic block: Development of the batteries**

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<thead>
<tr>
<th>Time</th>
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<th>Topic</th>
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<tbody>
<tr>
<td>17:40</td>
<td>Battery technology trends</td>
<td>Lithium Ion in rapid transformation. Prices, manufacturers and new technological developments. Nächste Schritte von der Zelle zum Batteriesystem</td>
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<td></td>
<td>Sven Bauer, CEO, Batterien-Montage-Zentrum GmbH (BMZ)</td>
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18:00   End of day 1

ab 19:00 Dinner in the trade fair area with networking
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Welcome, Association of German Transport Companies (VDV)</td>
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<tr>
<td>8:35</td>
<td>Lecture by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety</td>
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<td></td>
<td>State Secretary Jochen Flasbarth, Federal Ministry for the Environment, Nature Conservation</td>
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<td></td>
<td>and Nuclear Safety</td>
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<tr>
<td>8:55</td>
<td>State of the battery technology / battery market</td>
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<td></td>
<td>Prof. Dr. rer. nat. Dirk Uwe Sauer, Institute for Power Electronics and Electrical Drives</td>
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<td></td>
<td>(ISEA), RWTH Aachen University</td>
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<td>9:15</td>
<td>Battery systems for e-buses – from prototyping to mass production</td>
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<td></td>
<td>Sven Schulz, CEO and major shareholder, AKASOL AG</td>
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<tr>
<td>9:30</td>
<td>Lithium Ion Batteries – Concentrated Electric Power under Control</td>
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<td></td>
<td>Robert Sonnenschein, Managing Director, REMONDIS Industrie Service GmbH &amp; Co. KG</td>
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<td>9:45</td>
<td>The answer to emission-free mobility – The e-Citaro</td>
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<td></td>
<td>Alexander Pöschl, Head of Strategy &amp; Future Topics Daimler Buses, EvoBus GmbH</td>
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<td>10:00</td>
<td>Overview of the offers and the technical concepts</td>
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<td>Dieter Hanke und Kirsten Krämer, Omnibusspiegel</td>
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<tr>
<td>10:15</td>
<td>Discussion and questions</td>
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<tr>
<td>10:20</td>
<td>Coffee break at the trade fair</td>
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<tr>
<td>11:20</td>
<td>Boulevard of ideas – Presentation of ideas by the industry – Part I</td>
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<td></td>
<td>New ideas by the industry, short presentations at the trade fair.</td>
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<td></td>
<td>The exact presentations are listed in the separate thematic overview.</td>
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<tr>
<td>11:40</td>
<td>Lunch break at the trade fair</td>
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<td>13:20</td>
<td>Boulevard of ideas – Presentation of ideas by the industry – Part II</td>
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<td>13:40</td>
<td>Coffee break at the trade fair</td>
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<tr>
<td>15:05</td>
<td>Field report from London</td>
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<td>Claire Mann, Director of Bus Operations at Transport for London</td>
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<tr>
<td>15:20</td>
<td>Field report from Zurich</td>
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<td>David Sorg, Head of E-Bus-Strategy, Verkehrsbetriebe Zürich</td>
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<tr>
<td>15:35</td>
<td>Field report from Denmark</td>
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<td>Victor Hug, Project Manager, Movia Public Transport</td>
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<tr>
<td>15:50</td>
<td>Field report from Turin</td>
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<td>Marco Zanini, Project Technical Management, GTT Gruppo Torinese Trasporti</td>
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<td></td>
<td>Flavio Balsi, Project Technical Manager, GTT Gruppo Torinese Trasporti</td>
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<tr>
<td>16:05</td>
<td>Résumé of the event</td>
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<tr>
<td>16:10</td>
<td>End of the conference</td>
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</tbody>
</table>
10th VDV Electric Buses Conference – Market of the Future!
Boulevard of Ideas – Wednesday, February 6, 2019

The idea behind: To give participants and companies the opportunity to present themselves and ask questions in a relaxed atmosphere. Each participant can make his/her own programme that fits exactly his/her interests and priorities. The lectures are brief to reduce the contents to the essential facts. Compile your own “mini conference” and follow the colour system in the hall.

Please note that the presentations here are not subject to simultaneous translation. English presentations will be marked with a *.

Time | Speakers Corner red | Speakers Corner orange | Speakers Corner green | Speakers Corner blue
--- | --- | --- | --- | ---
Vernetze Systeme im elektrischen Stadtbus zur Optimierung des Energiebedarfs | Nachrüstung elektrischer Antriebssysteme im ÖPNV | Nachrüstung elektrischer Antriebssysteme im ÖPNV – Ihr Fahrplan von der Idee zur Realisierung | VDN Akademie
Dr.-Ing. Frank Steinert | Gerhard Ros | Fabian Kozok | Matthias Rogge & Ingo Wannerthal
Innovation and new technologies in charging infrastructure | Der erfolgreiche Umstieg in der Elektromobilität beginnt im Planungsprozess | Batterie- und Brennstoffzellenbus – rivalisierende oder supplementäre Technologien? | Koen van Haperen
Lily Safiullina | Johannes Käppeler | Alan Przylebski | Martin Guassowski & Christian Soffel
12:00-12:15 | IMPACT Clean Power Technology Deutschland | MAN Truck & Bus AG | IVU Traffic Technologies AG | E4you
Batterietechnologie für den ÖPNV | Ganzheitliches Konzept für Elektromobilität im ÖPNV | Erfahrungen und Lösungsvorstellung bei heterogenen Flotten mit unklaren Schnittstellen und unsicherer Reichweite | Siegfried Nowak
Jürgen Langwost | Florian Rott | René Rothe |
12:20 Lunch break in the trade fair area
Grün, intelligent und selbstlernend: Das BMS der Zukunft | Rapid scale-up of charging infrastructure for e-buses | Thermomanagement für Batterien von Elektrobussen | Einblick in das Antriebs- system der Sileo Elektrobusse
Florian Scheffer | Koen van Haperen | Dr.-Ing. Christoph Hipp | Sven Bohnstedt
13:40-13:55 | Ferrostaal Equipment Solutions GmbH/Irizar | Iveco * | Voltabox | ViriCiti
Elektrobussen Amiens – Linienumstellung auf Gelenkbusse mit Gelegenheitsladung | HEULIEZ: a sustainable solution for our cities | Advanced modern lithium ion technology and its applications | Smart Charging und Telematik für den optimierten Elektrobusbetrieb
Dennis Herrmann | Giandomenico Demartini | Dr. Patrick Ries | Alexander Schabert
14:00-14:15 | Valeo Thermal Bus Systems | Siemens AG | The Mobility House GmbH | EBUSCO
Heizen im Elektrobus | Wie kann man durch gemanagtes Laden die Anschlusskosten und administrativen Aufgaben begrenzen? | Elektrobussen richtig laden: Herausforderungen und Lösungen auf dem Weg zur optimalen Ladinfrastruktur | Efficient system integration of electric public transport
Frank Färber | Andreas Laske | Mona Litz | Peter Bijvelds
14:20 Coffee break in the trade fair area
Presenting companies at the Boulevard of Ideas
Your speakers

Johanna Ahrens  
Hamburger Hochbahn AG

Sven Bauer  
Batterien-Montage-Zentrum GmbH (BMZ)

State Secretary Guido Beermann  
German Federal Ministry of Transport and Digital Infrastructure

Peter Bijvelds  
Ebusco

Sven Bohnstedt  
Sileo GmbH

Giandomenico Demartini  
Iveco

State Secretary Jochen Flasbarth  
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Frank Färber  
Valeo Thermal Bus Systems

Giovanni Foti  
GTT Gruppo Torinese Trasporti

Frank Gäfgen  
ESWE Verkehrsgesellschaft mbH

Axel Gierga  
Kraftverkehrsgesellschaft mbH Braunschweig

Dieter Hanke  
Omnibusspiegel

Paul Hemkentokrax  
Aktiv Bus Flensburg GmbH

Thorsten Herbert  
NOW GmbH, Nationale Organisation Wasserstoff- und Brennstoffzellentechnologie

Dennis Herrmann  
Ferrostaal Equipment Solutions GmbH/Irizar

Dr. Christoph Hipp  
MAHLE Industrial Thermal Systems GmbH & Co KG

Christian Hochfeld  
Agora Verkehrswende

Fabian Kozok  
ZF Friedrichshafen AG

Victor Hug  
Movie Public Transport

Björn Kalter  
Mainzer Verkehrsgesellschaft mbH

Johannes Käppeler  
in it plan GmbH

Arno Kerkhof  
UITP

Fabian Kozok  
ZF Friedrichshafen AG

Kirsten Krämer  
Omnibusspiegel

Jürgen Langwost  
IMPACT Clean Power Technology Deutschland

Andreas Laske  
Siemens AG

Mona Litz  
The Mobility House GmbH

Claire Mann  
Transport for London

Torsten Mareck  
Berliner Verkehrsbetriebe AöR

Ulf Middelberg  
Leipziger Verkehrsbetriebe (LVB) GmbH

Toralf Müller  
Verkehrsbetriebe Hamburg-Holstein GmbH

Siegfried Nowak  
E4you

Alexander Pöschl  
EvoBus GmbH

Stefan Prüfer  
Rhein-Neckar-Verkehr GmbH

Alan Przyłębski  
Solaris Bus & Coach S.A.

Martin Guassowski  
VCDB VerkehrsConsult

Dr. Patrick Ries  
Voltabox

Matthias Rogge  
ebusplan GmbH

Prof. Dr. jur. Stephan Rolfs  
Stadtwerke Osnabrück AG

Gerhard Ros  
VDL Bus & Coach

René Rothe  
IVU Traffic Technologies AG

Florian Rott  
MAN Truck & Bus AG

Univ.-Prof. Dr. rer. nat. Dirk Uwe Sauer  
Institute for Power Electronics and Electrical Drives (ISEA), RWTH Aachen University

Lily Safiullina  
Ekoeenergyka

Alexander Schabert  
ViriCiti

Florian Scheffler  
PSI Transcom GmbH

Martin Schmitz  
Association of German Transport Companies (VDV)

Sven Schulz  
AKASOLAG

Jörn Schwarze  
Kölner Verkehrs-Betriebe AG

Christian Soffel  
VCDB VerkehrsConsult

Robert Sonnenschein  
REMONDIS Industrie Service GmbH & Co. KG

David Sorg  
Verkehrsbetriebe Zürich

Dr. Frank Steinert  
eBus-Cluster

Koen van Haperen  
hiellox

Axel Volkery  
European Commission

Ingo Wassermthal  
SPIE SAG GmbH

Alexander Wolf  
Stadtwerke München GmbH

Ingo Wortmann  
Association of German Transport Companies (VDV)

Marco Zanini  
GTT Gruppo Torinese Trasporti

Daniel Zellinger  
FlixMobility Experience GmbH

Thomas Zimmermann  
Göttinger Verkehrsbetriebe GmbH