

AVL 

Reimagining Motion

For a greener, safer, better world of mobility.

“

We are driven by a passion to examine the science, mechanics and philosophy of movement. To help create a world that is climate-neutral and one that makes **safe, comfortable, green mobility** a reality for everyone.

”

Helmut O. List

Chairman and CEO
AVL List GmbH

Reimagining Motion

Contents

AVL – the Home of Innovation	04
About Us	06
Our Mission and Vision	10
Why Customers Choose Us	12
Turning Visions Into Reality	14
Our Global Footprint	18
We Owe It to the Planet	22
Bridging Art and Science	24
Next Generation Vehicles	26
E-Mobility	30
Software, AI and Data Intelligence	34
Automated and Connected Mobility	38
Integrated and Open Development Platform	42
Future ICE Solutions	43
AVL RACETECH	44
Looking Beyond the Limits of Technology	47

AVL – the Home of Innovation

At AVL List GmbH ('AVL'), we are one of the world's leading mobility technology companies for development, simulation and testing in the automotive industry, and in other sectors such as rail, marine, and energy. Drawing on our pioneering spirit, we provide concepts, solutions and methodologies for a greener, safer and better world of mobility and beyond.

Our role as technology provider means we support customers' mobility ambitions, continuously expanding our portfolio of high-end methodologies and technologies. With a holistic approach – from ideation phase to serial production – we cover vehicle architectures and platform solutions including the impact of new propulsion systems and energy carriers.

To achieve the vision of climate-neutral mobility, we are zealous in our pursuit of innovative and affordable solutions for all applications – from traditional to hybrid to battery and fuel cell electric technologies. As a global technology provider, our offerings range from simulation, virtualization and test automation for product development to ADAS/AD and vehicle software.

Through state-of-the-art and highly scalable IT, software and technology solutions, combined with enviable application know-how, we deliver the tools for Big Data, Artificial Intelligence (AI), Cybersecurity or Embedded Systems.

Against this backdrop, we are forging a safer and more comfortable driving experience for everyone, sharing a comprehensive understanding of assisted and automated driving functions across multiple vehicles and environments.

In addition, we support companies in energy-intensive sectors on their way to a greener and more efficient energy generation and supply.

Our passion is innovation. With our 12,200 employees at more than 90 locations and with 50 Tech and Engineering Centers worldwide, we lead the ranking of newly registered patents in Austria year after year. Our 2,200 active patents, as of 2023, and our numerous R&D activities, are testament to our pioneering spirit.

And to our ability to create a greener, safer and better world of mobility and beyond. For everyone.



About Us

1948

Founded

29

Countries represented

12,200

Employees worldwide

10 %

Turnover invested in inhouse R&D

2.05 Bn €

Turnover in 2023

75+

Years of experience

50

Global Tech and Engineering Centers

68 %

Engineers and scientists

2,200

Granted patents in force

97 %

Export quota





**Mobility Technologies
Are at the Center
of Everything We Do**

Our Mission and Vision

Sustainable. Affordable. Connected. Intelligent.

We provide leading technologies and superior services to our customers for sustainable mobility in a better world.

Our Core Values

Our values are the guiding force behind our everyday work. They have shaped our corporate culture since the very beginning and are demonstrated throughout our business activities.

Pioneering Spirit

Turning visions of the future into reality with courage and expertise. We have cultivated the ability to recognize important breakthrough targets early on and reach them ahead of the market. Because only the courageous look beyond the horizon and make discoveries that lead to outstanding innovations.

Customer Orientation

Our success can only be measured by that of our customers. True understanding of customers and their needs, combined with experience and a global view, allows us to create innovative solutions. Expertly conceived, uniquely tailored and efficiently carried out – a shared success.

Problem-Solving Competence

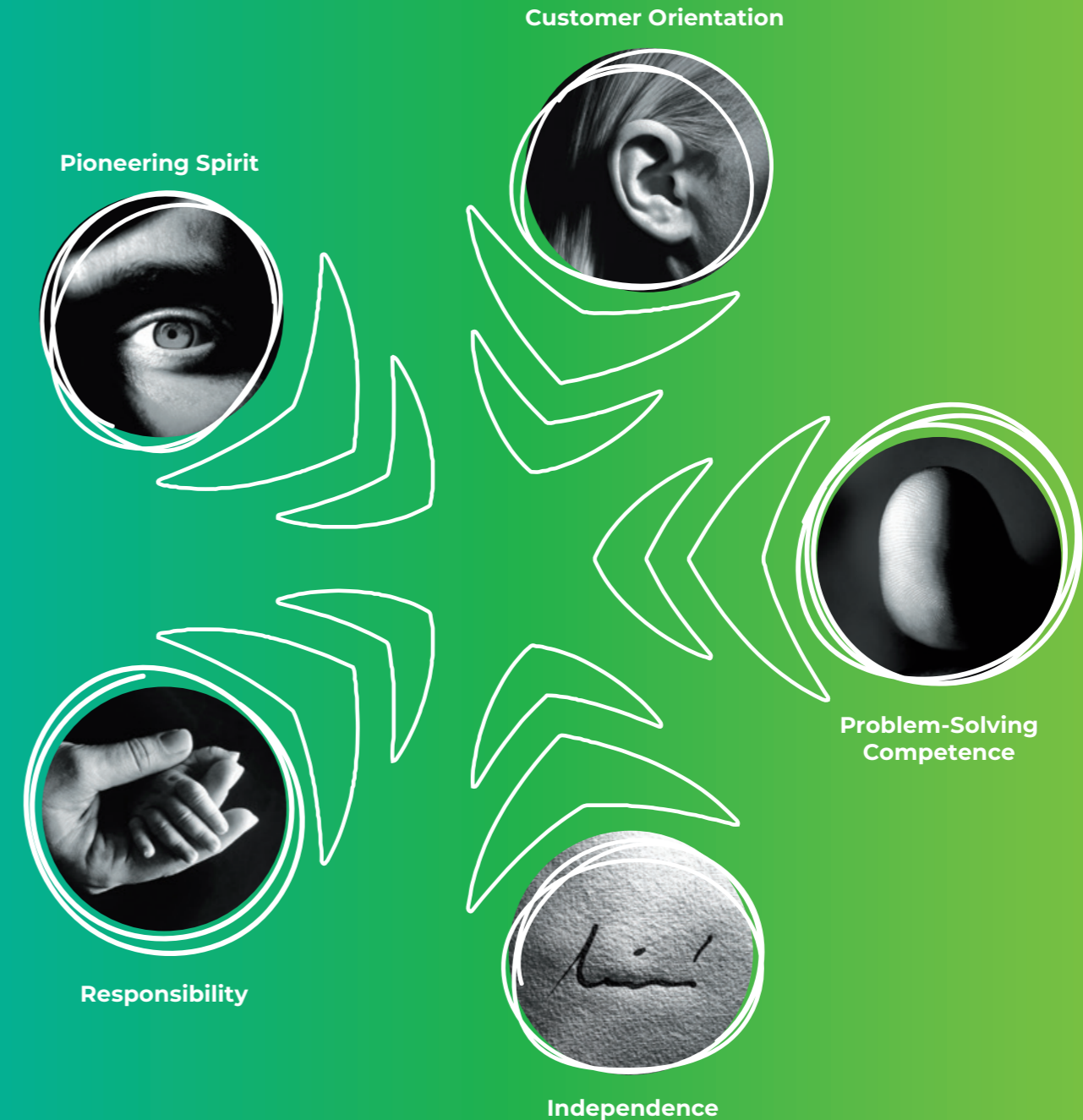
It is a demanding world. Focused research, cutting-edge technological developments and clear product orientation are fundamental requirements for global competitiveness. With multi-disciplinary teams, we offer expertise, creativity, innovative thinking and effective project management to support professional solutions.

Responsibility

Modern mobility represents progress only when its goal, its form and its requirements respect nature. Our work at AVL reflects a deep understanding of the responsibility we share for our society, for mankind and for the world's achievements. We want to ensure that our world is one we can live in – now and in the future.

Independence

AVL is a company with personality. Embodied in Helmut List and reflected in our work. A personality rooted in a life-long pursuit of knowledge, characterized by a deep sense of responsibility and expressed in the company's independent status.



Why Customers Choose Us

Agility and speed in adapting to a changing industry

Combined engineering, testing and simulation know-how

Reliable partner from ideation to serial production

Long-term experience applied across different industries

Global footprint and expert network

Our passion for innovation

Industry-Wide Value Creation

With future-proven tools, products and systems augmented by our global network of experts and facilities, we support OEMs and Tier1s to shape current and future technologies for all industries.

Passenger Cars

Commercial Vehicles

Racing

Agriculture

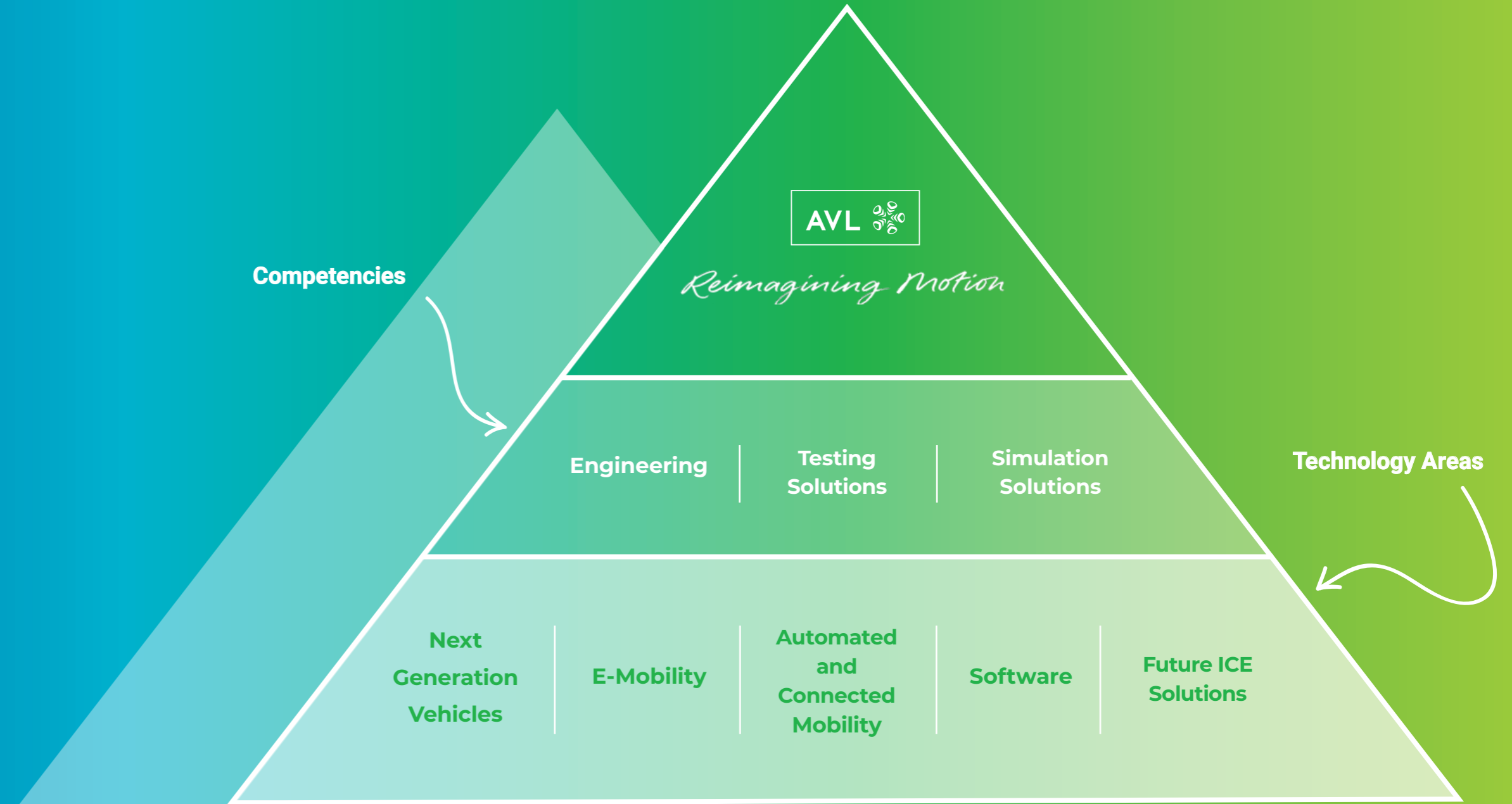
2 and 3-Wheelers

Industrial Energy

Marine

Rail

Aviation





Turning Visions Into Reality



Engineering

AVL is a key player in providing mobility engineering services. Our key competences lie in design and development services for electrified and fully electric propulsion systems. That means everything from hybrid and battery electric to fuel cell electric and hydrogen combustion engines, and the integration into the vehicle.

We focus on functional vehicle development and electrical and electronics for the next generation vehicle. Innovations towards a more automated and connected mobility engineering are part of our daily work, and we constantly push the limits of what is possible.

Beyond automotive, we cover system development and integration for stationary and marine applications and a broad consulting portfolio for countless technology applications.

Testing Solutions

As a global pioneer, we have innovated automotive test systems for decades. We provide advanced tools and methodologies to ensure an energy-efficient, fast, and reliable development, testing and validation for various applications and industries.

Our offering comprises a great variety of solutions connecting different development environments. AVL and third-party products, systems and software can be seamlessly integrated and tailored to the workflow of the user.



Simulation Solutions

As a proven and much-trusted partner in delivering efficiency gains through virtualization, we provide a wide range of simulation solutions for all propulsion systems and phases of the vehicle development process.

Our experience and expertise allow us to share high-definition insights into the behavior and interactions of components, systems and entire vehicles.





Our Global Footprint

Our International Network of Experts

Our strong global presence through a worldwide affiliate network allows AVL to work with our customers locally from project start to a long-term partnership.

AVL is close to you, anywhere in the world.

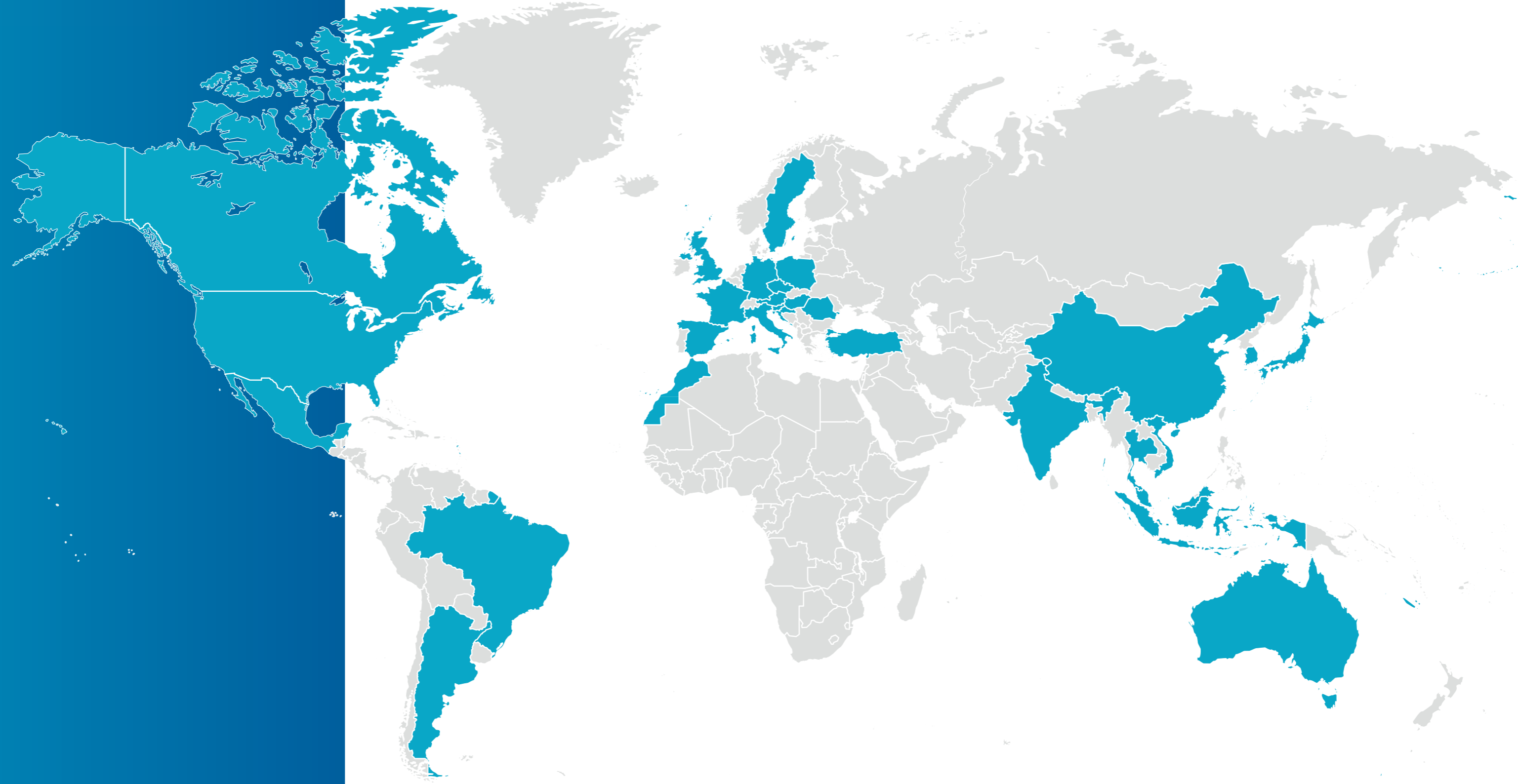
Global structure and organization

Global project execution

Local engineers as part of a global team

Global pool of expertise

Global supply chain management



Worldwide Locations

Austria, HQ | Argentina · Australia · Brazil
· Canada · China · Croatia · Czech Republic
· France · Germany · Hungary · India · Indonesia
· Italy · Japan · Malaysia · Mexico · Morocco
· Poland · Romania · Slovenia · South Korea
· Spain · Sweden · Thailand · Türkiye
· United Kingdom · United States · Vietnam

We Owe It to the Planet

It is our passion as an organization to contribute to the resolution of social, cultural and global issues – especially with regards to environmental protection, sustainability and global emission reduction.

Environmental Sustainability

At AVL, our comprehensive environmental policies underscore our commitment to the planet. We have received a variety of certificates and awards in recognition of our work in this area. Our energy consulting practice allows us to share our expertise with other organizations. Our goal is to reach climate neutrality at our headquarters and subsequently across our global operations.

Certificates

- ISO 14001
- ISO 9001
- ISO 27001
- ISO 45001

To achieve this, we drive numerous actions:

- Global energy consumption and GHG monitoring
- 100 % renewable electricity
- Solar facility (>3,300 m²)
- System for infrastructure waste heat recovery
- >50 % electric or hybrid vehicles in our internal carpool
- Use of a heat pump to replace fossil fuel heating
- ISO 21434
- ISO 17025
- ECOPROFIT ®
- Ford Q1 Award



Employee Empowerment

We are committed to helping our employees develop professionally, as well as helping them achieve a better work-life balance. We are active in employee engagement and social dialogue, alongside our healthcare and occupational safety programs.

Community and Culture

We take our role in society seriously, and it extends far beyond our automotive work. We frequently collaborate with institutions and universities, supervise and support students completing their Master’s theses and support artists whose work bridges the gap between art and science.

Supply Chain and Business Ethics

It is our belief that an organization should strive to be as ethical as possible. Which is why we maintain the strictest possible compliance rules and supply chain management practices. Our commitment to data and information security means that our customers can be sure we will always work ethically and in their best interests.

Bridging Art and Science

The AVL Cultural Foundation supports projects that bridge the gap between art and science to explore and embrace human creativity and innovation. Our projects examine the relationship between technological and cultural issues.

Our global footprint gives us the perfect platform to engage the international art community and its audience. But we're not just funding it – we're taking part in it, by instigating and facilitating creative conversations that cross borders, disciplines, topics and areas of expertise.

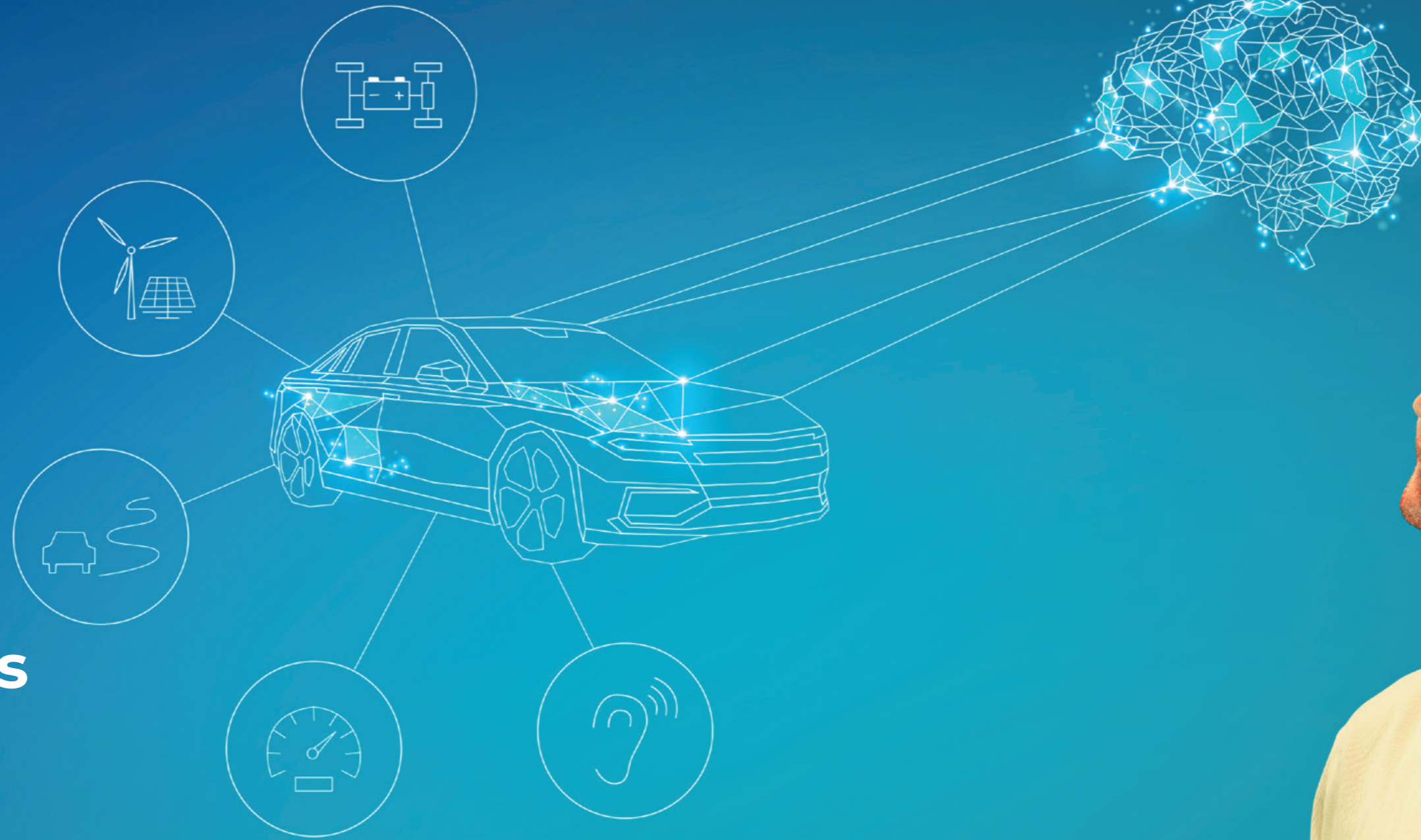
We want to challenge ourselves, the creative community, and the wider public, to think differently about the world of tomorrow – a world that we are all building through the actions we take today.

Through the AVL Cultural Foundation, we are engaging an international community of artists, engineers and audiences in our constellation of artistic spaces, both within and outside of AVL, at the amazing Helmut List Halle, on our digital platforms and through our diverse calendar of events.



Next Generation Vehicles

Engineering a Better Future



Engineering a Better Future

We have a comprehensive technological know-how in all vehicle systems and vehicle functions. With our many years of experience in the implementation and use of virtual development methods, we support our customers in managing complexity.

That means a complete and trusted service when it comes to development, engineering, services and products and a key partner for your development targets and attributes.

The automotive industry is facing multiple challenges: decarbonization, new energy carriers, enhanced driving comfort, automated driving and digitalization. We are supporting the entire automotive industry towards a new era of mobility, whether it's passenger cars or commercial vehicles on and off-road, by balancing existing and new technologies.

Customer and consumer expectations are at the center of our work. We are your preferred partner for functional vehicle development and vehicle system integration, and offer a broad set of solutions in the entire development process.

Why AVL:

Global service and development partner with full on-site support

Functional centric development

Acknowledged engineering competence

Maximum customer focus with aligned competences and processes

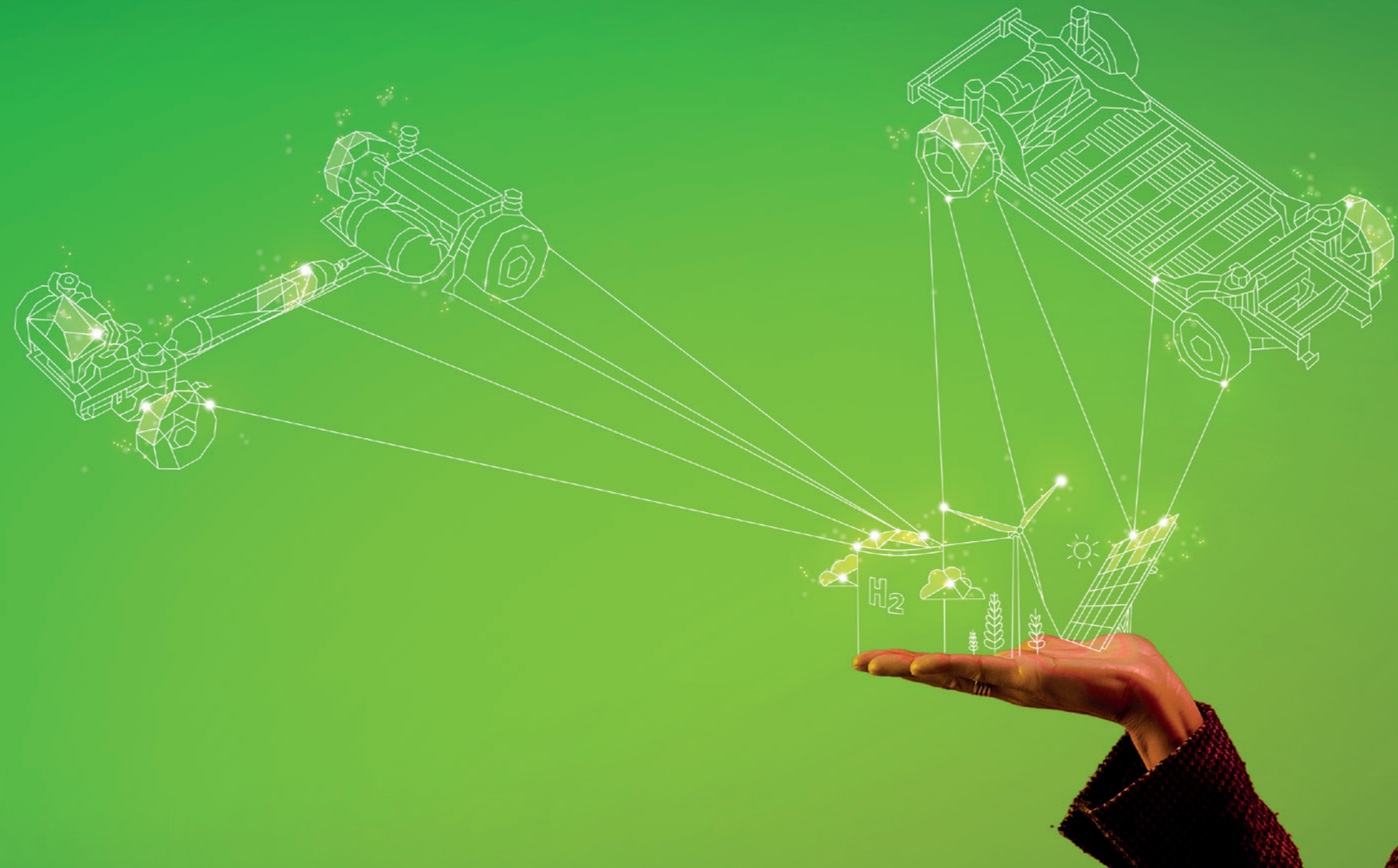
Virtual vehicle development

Broad partner network



E-Mobility

Redrawing the Lines of Electrification



Redrawing the Lines of Electrification

We are relentlessly striving towards climate neutral mobility. And not just by increasing the efficiency of multiple propulsion systems, but by pioneering energy from green resources. From battery to fuel cell technologies, we are paving the way for e-mobility.

20+

Years of experience

5,700+

E-mobility experts

6

Fuel cell tech centers

650+

Fuel cell engineers

900+

Executed battery projects



Battery Innovation Center



Our center of excellence focuses on the development, implementation and validation of new, and highly efficient battery production processes.

Hydrogen and Fuel Cell Test Center



The new center is one of the largest and most advanced test sites for fuel cells and electrolysis systems in the world.

Automated and Connected Mobility

Technology Designed for the Human Journey



Technology Designed for the Human Journey

Mobility is changing. As technologies such as assisted and automated concepts gain focus, we face a paradigm shift in the way vehicles are designed, built and used. This requires new approaches in development, system testing, as well as validation and certification. We are your professional and reliable partner for high demanding technology solutions within ADAS/AD system development.

15+

Years of experience

19

Competence centers

90+

Automotive customers

400+

Customer projects

450+

ADAS/AD experts worldwide

Comprehensive and constantly evolving partner ecosystem



AVL ZalaZONE Proving Ground



250-hectar vehicle proving ground specifically designed for development and validation tests of autonomous and electric vehicles. The largest smart city in Europe allows numerous traffic, technical (NCAP / GSR / V2X) and dynamic test scenarios.

Mobility and Sensor Center Roding



The sensor technology of future automated driving functions and advanced driver assistance systems must work safely in all weather conditions.

In order to be able to test weather effects independent from real outdoor conditions, AVL established an indoor sensor center for the verification and validation of sensors for driver assistance systems.



Software, AI and Data Intelligence

Driving the Now, Defining the Next



Software, AI and Data Intelligence

Driving the Now, Defining the Next

New generation mobility is software-defined. At AVL we place innovation at the heart of development. Our software is both ready for today and designed for tomorrow's challenges. Our solutions range from simulation, virtualization, and test automation (for vehicle development) to ADAS/AD and car software.

We are pioneering advancements in the realm of software-defined vehicles to ensure readiness for the future of automotive innovation.

Reimagining Motion

Application Know-how

- Propulsion systems
- Next generation vehicles
- Automated and connected mobility
- Electrification of functions

20+

Software development and support centers

20+

Mio. vehicles using AVL technologies

40+

Software products and solution suites

100+

Data engineers and scientists

3,000+

Software experts and engineers

6,500+

Test automation systems

Embedded Software Development

- E/E platforms and integration
- Advanced Driver Assistance Systems (ADAS) and Autonomous Driving (AD)
- Functional safety and cybersecurity
- ASPICE compliant development

Simulation, Test Software and Methodology

- Design and simulation solutions
- Functional testing (MiL, HiL, SiL)
- Lab and process management
- Test automation and virtualization

Cloud Software Development

- Customized data pipelines
- Scalable analytics
- Automated CI/CD pipelines

Artificial Intelligence Solutions

- LLM utilization for Requirements
- Data analytics for development and fleet data
- Anomaly Detection
- Failure prediction
- Root Cause Analysis

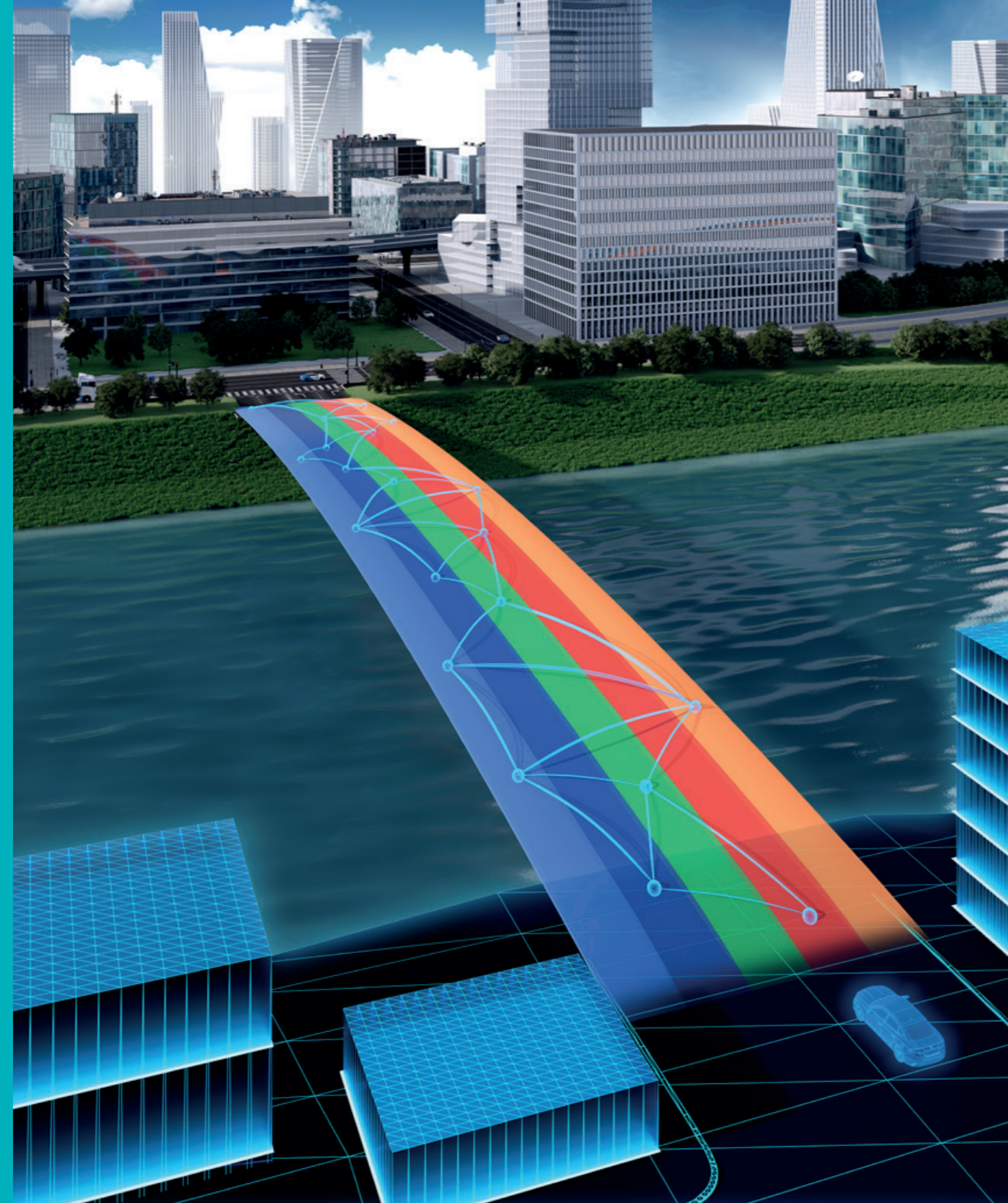
Integrated and Open Development Platform (IODP)

Orchestrating Development Excellence

We bridge the gap between the virtual and the real world, connecting simulation and testing for a continuous and functional view of your product throughout the development process. We pursue our vision of an integrated and open development platform that seamlessly integrates into your development ecosystem and is open to third-party tools.

What's more, we have the expertise and experience to make this vision a reality. With our Process Innovation Services and Connecting Solutions, we help you build your own IODP tailored to your specific needs.

Reimagining Motion



Future ICE Solutions

Creating a cleaner and greener future.

To achieve climate-neutrality, we are committed to support OEMs with mobility solutions that help to improve the performance and efficiency of traditional powertrains, as well as their electrification.

- ICE-based powertrains
- Hybrid-based powertrains
- RDE / ISC and WLTP
- Alternative fuels
- Emission legislation

AVL RACETECH

Innovate. Accelerate. Lead.

Our global motorsport division provides state-of-the-art technology and services in the fields of engineering, testing, simulation, and manufacturing. We are a key supplier for teams, series and drivers. From Formula 1, as well as NASCAR or Moto GP.

We believe in, and utilize, motorsport as the platform for innovation. We transfer this know-how into road car development for future generations of mobility.

20+

Years of experience in motorsport

17

Race series worldwide with AVL RACETECH involvement

110

Employees across business units

Reimagining Motion



Our Global Tech and Engineering Centers

We run best-in-class test facilities across the globe. By offering leading solutions and methodologies, we meet customer's demands while ensuring highest quality and robust results throughout the entire development process.

50+

Locations in 21 countries

2

Test tracks including ADAS infrastructure

300+

Testbeds operated worldwide:

- 95 ICE- based powertrains
- 81 Electrified powertrains
- 82 Vehicle and transmission systems
- 57 HiL and virtual testbeds



Reimagining Motion

Looking Beyond the Limits of Technology

From our holistic approach to propulsion system development and vehicle integration, through to automated driving and our commitment to reducing CO₂ emissions, we are actively shaping the mobility of tomorrow, today.

Passion for Innovation

Together with an international network of experts and with 50 Tech and Engineering Centers worldwide, we drive sustainable mobility trends for a greener future.

10 %

Of turnover invested in inhouse R&D

100+

University cooperations

200+

Projects within European programs for RTD

2,200

Granted patents in force



Find out more

AVL List GmbH
Hans-List-Platz 1
8020 Graz
Austria

Phone: +43 316 787-0
E-mail: info@avl.com

www.avl.com



Reimagining Motion