



VI-GRADE

SIMCENTER NETWORK

START. EXPERIENCE. GROW.



EXPERIENCE
ACCELERATED
AUTOMOTIVE
DEVELOPMENT



*"The VI-grade SimCenter network offers a global, unique and state-of-the-art environment where automotive design engineers can push the design envelope to **accelerate their product development process**. Employing the full-range of **VI-grade's industry-leading Driving Simulators and simulation software** allows for a quicker, safer and simpler development process which results in improved ROI and a direct competitive advantage."*

Diego Minen
CTO VI-grade

START. EXPERIENCE. GROW.

Where do new concepts come from?
How do you inspire design breakthroughs?
How are they conceived and tested?

It's critical for development engineers and designers in the automotive industry to have quick access to reliable data so they can easily evaluate the various options early in the design phase. Only VI-grade bridges the gap between testing and simulation, so you can accelerate your development process.



"The technology that VI-grade has been able to develop with their Driver-in-Motion system is extraordinary and Multimatic couldn't be more excited to bring DiM250 to the United States."

Michael Guttilla
Vice President of Engineering
Multimatic
NORTH AMERICA





THE RIGHT NETWORK TO ACCELERATE YOUR PRODUCT DEVELOPMENT

CHALLENGES

Driving simulators are today's state-of-the-art tool for vehicle product development:

It's the ultimate virtual design tool, empowering automotive companies, suppliers and research institutes to bridge the gap between physical testing and simulation. But driving simulators are more than just another tool.

They inspire designers and managers to find new ways to develop vehicles that align with contemporary vehicle trends so they can get to market quicker, more efficiently and more profitably.

If you're looking for an experienced and collaborative partnership to help you push your development envelope and for a maximized collaboration between design engineers and test drivers, look no further than VI-grade.

Only VI-grade empowers you to bridge the gap between physical testing and simulation.



START
DEVELOPING
NEW CONCEPTS
OF YOUR
VEHICLE

VI-grade SIMCENTERS



EFFICIENCY

PROCESS

minimize development costs and maximize performance of the design process.



SPEED

DEVELOPMENT

quick and responsive development tools able to adapt your project to market needs and trends.



ACCESS

ON-DEMAND

powerful simulation tools to extract maximum simulation capabilities while avoiding a steep learning curve.

THE UNIMAGINABLE NOW POSSIBLE

SOLUTION

Unfortunately, automotive designers don't always have access to a Driving Simulator to advance their design more quickly. That limitation is now gone, thanks to VI-grade's network of SimCenters: an expanding, global cluster of engineering sites aimed at giving you access to state-of-the-art technology and expertise helping you transition from physical testing to simulation.

VI-grade's SimCenters give you direct access to our full range of Driving Simulators (DESKTOP, COMPACT, STATIC, DiM) as well as to our software and hardware development engineers. All in a single, integrated facility.





**BRING YOUR IDEAS
TO THE NEXT
LEVEL**

EFFICIENCY

It's all about fine-tuning your chassis, developing the right balance, selecting the right tires, tuning the transmission and setting up seamless control systems to achieve the best driver experience.

VI-grade Driving Simulators, simulation software, and services help you wade through the sea of options. Our Driving Simulators lead the market in capability for OEM development and our software is uniquely designed to take advantage of our simulator's capabilities. For steering feel, limit handling, or ADAS controls, VI-grade's solution ecosystem is here to help you evolve to the next generation of vehicle product development.

Accelerated, easier and affordable: VI-grade Driving Simulators bridge the gap between physical testing and simulation, giving you a competitive edge so you can get to market faster.



SPEED

Test different solutions, make A to B comparisons and drive on different tracks, all at the speed of a mouse click.

It's not just about saving time. VI-grade knows you need to innovate quicker so you can develop better products. Driving Simulators give you that competitive edge so you can test hundreds of variants in less time. Because the driven vehicle is represented through a mathematical model, engineers can rapidly test solutions that normally would be time consuming and difficult to validate on a real physical prototype.

Different tracks can be used to test your vehicle all in the same driving session, without leaving the laboratory and without incurring costly and lengthy travels. This makes it easier to find the right compromise between contrasting targets, as is often the case between various applications, such as Ride & Handling. Easily testing different sets of tires, springs, dampers or several different drivetrain configurations, testing various controller tunings or multiple race setups is simply a matter of a few mouse clicks. Pre-prepared configuration files can be easily loaded and promptly tested on the Driving Simulator.



ACCESS

Our global network of SimCenters means there is a location near you. All SimCenters offer state-of-the-art VI-grade technology and know-how you can leverage to quickly make progress in your development process.

VI-grade SimCenters are open year-round and are always available for your test sessions without requiring lengthy preparation work. Simply book your session at the nearest SimCenter and prepare your models. Our VI-grade experts assist you before, during and after the session, ensuring you gain maximum value from your session.

VI-grade can also support you in preparing models and tests before your session. During your session, our Driving Simulator engineers will make sure you get the most value out of your stay, and support you in the analysis and processing phase of your results afterwards.

Dedicated meeting rooms next to our Driving Simulators let you plan your test drives and give you a convenient place to process detailed feedback from your factory drivers immediately after the driving sessions. Most of our SimCenters feature several different types of simulators that can be used in sequence during your visit so you can prepare, fine-tune, and optimize your vehicle models.



"SimCenter Millbrook, specialized in NVH applications, is ideal for experiencing and assessing vehicle NVH from various road surface types and road impact events, engine/ powertrain vibration issues or any other NVH event or phenomena."

Mark Allman-Ward
NVH Solutions Technical Expert
VI-grade
UNITED KINGDOM



EXPERIENCE
THE INNOVATIVE
PLACE WHERE
TO DEVELOP
YOUR IDEAS

VI-grade SIMCENTERS



UDINE | DETROIT | MILLBROOK | TOKYO

**THE FUTURE
HAS A NEW
HOME**



SIMCENTER UDINE - ITALY



FULL RANGE OF DRIVING SIMULATORS

UDINE

VI-grade's SimCenter Udine, located in the northeast of Italy, offers direct access in a single facility to our full range of Driving Simulators (DESKTOP, COMPACT, STATIC, DiM) as well as to our software and hardware engineers.

Reserve a dedicated session at SimCenter Udine and experience the opportunity to perform Ride & Handling, NVH, ADAS/AV, HMI and Motorsports simulations using your own vehicle model and components. Experiment and improve your products by driving our simulators and integrating with our software developers.

Driving Simulators play a crucial role in the automotive development process. Motorsport teams, car manufacturers and suppliers, universities, research and development institutes are transforming their engineering activities by using Driving Simulators.



AVAILABILITY

- Immediate access to simulation tools, with support and preparation from the VI-grade expert staff.
- SimCenter Udine is primarily dedicated to customers from EMEA. Other SimCenters are located in North America, Japan and UK. More SimCenters are planned in the near future.

CUSTOMIZATION

- Use your own model and tracks.
- Personalized sessions let you make the best use of your time.
- On-site support lets you easily make changes on-the-fly.

EFFICIENCY

- Access all available types of simulators at the facility on a pay-per-use basis.
- Hold confidential meetings in dedicated rooms.
- Optimize your design by partnering with our software and hardware experts.

A detailed view of a sophisticated automotive test rig, likely for engine or drivetrain testing. The rig is a complex assembly of black metal frames, hydraulic cylinders, and various sensors. It is positioned in front of a large, curved projection screen that displays a realistic driving environment: a two-lane asphalt road with yellow dashed lines, bordered by green trees and a blue sky. The rig's base is mounted on a heavy-duty platform with visible leveling screws. The overall scene is well-lit, highlighting the industrial nature of the equipment.

SIMCENTER DETROIT - USA



A UNIQUE, STATE-OF-THE-ART DEVELOPMENT CENTER IN NORTH AMERICA

DETROIT

Multimatic and VI-grade have joined forces in developing SimCenter Detroit, a state-of-the-art vehicle development and driving simulation center in the greater Detroit area. The virtual world of driver-in-the-loop simulation greatly helps to reduce the duration and cost of vehicle development.

SimCenter Detroit features the highly acclaimed DiM250 DYNAMIC Driving Simulator featuring a unique, 9-degrees-of-freedom motion platform. Its ability to accurately reproduce both high-frequency and large motion in longitudinal, lateral and yaw directions makes VI-grade's DiM250 a truly singular engineering tool. The DiM250 lets you virtually evaluate and experience vehicle Ride & Handling as never before.

SimCenter Detroit also houses VI-grade's COMPACT Simulator, which allows model integrity verification prior to implementation on the DiM250.



AVAILABILITY

- Immediate access to simulation tools, with support and preparation from the Multimatic and VI-grade teams of experts.
- SimCenter Detroit is primarily dedicated to customers from the Americas. Other SimCenters are located in Europe and Japan. More SimCenters are planned in the near future.

CUSTOMIZATION

- Personalized sessions let you make the best use of your time.
- On-site support lets you easily make changes on-the-fly.

EFFICIENCY

- Access all available types of simulators at the facility on a pay-per-use basis.
- Hold confidential meetings in dedicated rooms.
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A black Bentley Continental GT is shown from a rear three-quarter view, driving on a road. The car's rear light is illuminated. The background features a green landscape with trees and a blue sky with clouds.

SIMCENTER MILLBROOK - UK



INTERACTIVE NVH DRIVING EXPERIENCE

MILLBROOK

SimCenter Millbrook features a new STATIC NVH Simulator installation based on a Bentley Continental GT full vehicle, completely instrumented for detailed and immersive NVH investigation. The STATIC NVH Simulator creates an interactive driving experience of a vehicle's interior noise, vibration and harshness (NVH), bringing sound and vibration data into the real world, so it can be experienced by engineers and test drivers. Leveraging NVH Simulator and Software technology and expertise formerly from Brüel & Kjær and now part of the VI-grade family, the STATIC NVH simulator provides superior authenticity, displaying a track in front of the vehicle that is equipped with headphones, speakers and shakers.

A VI-grade DESKTOP NVH Simulator is also available, equipped with a steering wheel and pedals so that drivers can interact with the vehicle and experience its sound in real-time. Highly accurate vehicle sound is played through headphones or speakers, allowing drivers to experience the sound of a vehicle throughout all of the dynamic aspects of driving, like changing gears and accelerating, or changing from smooth to coarse to rough road surfaces. This immersive context for sound evaluations helps engineers and non-experts select appropriate sounds and compare alternative designs.



AVAILABILITY

- Immediate access to simulation tools, with support and preparation from the VI-grade expert staff.
- SimCenter Millbrook is primarily dedicated to NVH customers and applications. Other SimCenters dedicated to other applications (like Ride&Handling, ADAS and Motorsports) are located in Europe, North America and Japan. More SimCenters are planned soon.

CUSTOMIZATION

- Personalized sessions let you make the best use of your time.
- On-site support lets you easily make changes on-the-fly.

EFFICIENCY

- Access all available types of simulators at the facility on a pay-per-use basis.
- Hold confidential meetings in dedicated rooms.
- Optimize your design by partnering with our software and hardware experts.

SIMCENTER TOKYO - JAPAN





AVAILABLE FOR **RIDE & HANDLING, NVH AND HMI INVESTIGATION**

T O K Y O

SimCenter Tokyo features a new installation of a COMPACT Simulator, completely instrumented for detailed and immersive Ride & Handling and HMI investigation. The COMPACT Simulator creates an interactive vehicle driving experience and is equipped with active seat, active belts, headphones & soundcard and dedicated software (VI-DriveSim, VI-GraphSim, VI-WorldSim, VI-SimSound and BIOTELEMETRY equipment).

A VI-grade DESKTOP NVH Simulator is also available, equipped with a steering wheel and pedals so that drivers can interact with the vehicle and experience its sound in real-time. Highly accurate vehicle sound is played through headphones or speakers, allowing drivers to experience the sound of a vehicle throughout all dynamic aspects of driving, like changing gears and accelerating, or changing from smooth to coarse to rough road surfaces. This immersive context for sound evaluations helps engineers and non-experts select appropriate sounds and compare alternative designs. Software-in-the-Loop and hardware-in-the-Loop capabilities enable integration with other vehicle systems, such as performance models and active sound design solutions.



AVAILABILITY

- Immediate access to simulation tools, with support and preparation from the VI-grade expert staff.
- In addition to SimCenter Tokyo, other SimCenters dedicated to other applications are located in Europe and North America. More SimCenters are planned soon.

CUSTOMIZATION

- Personalized sessions let you make the best use of your time.
- On-site support lets you easily make changes on-the-fly.

EFFICIENCY

- Access all available types of simulators at the facility on a pay-per-use basis.
- Hold confidential meetings in dedicated rooms.
- Optimize your design by partnering with our software and hardware experts.

EXPAND
YOUR
OPPORTUNITIES
IN THE
AUTOMOTIVE
INDUSTRY





*"We look forward to our
Japanese customers taking
advantage of SimCenter Tokyo
to experience VI-grade
simulators and software."*

Toru Yoshii
Country Manager
VI-grade
JAPAN





RENT A PLACE TO DEVELOP YOUR IDEAS

In a single facility, our SimCenters offer direct access to our full range of Driving Simulators (DESKTOP, COMPACT, STATIC, DiM) as well as to our expert software and hardware engineers. Reserve a dedicated session in one of our SimCenters and you will get the opportunity to perform Ride & Handling, NVH, ADAS/AV, HMI and Motorsports simulations using your own vehicle model and components.

Experiment and improve your products by driving our simulators and partnering with our software developers.





BRIDGING THE GAP
BETWEEN TESTING AND SIMULATION
INTERNATIONAL VI-grade CONFERENCE

THORSTEN
HÄNNER

16.03.12

JOIN
THE VI-grade
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BRIDGING THE GAP BETWEEN TESTING AND SIMULATION



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